TR

NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

TRANSPORTATION ASSESSMENT REPORT

HO LU
REGIONAL LIVABILITY PLAN
TR ED

TR

Table of Contents

Introduction

The Transportation Assessment Report is one of four reports prepared as part of the overall Regional Livability Plan effort undertaken by the North Central Wisconsin Regional Planning Commission. Each Assessment Report focuses on the foundational topics of Housing, Economic Development, Transportation, and Land Use. These four reports along with demographic data will form the basis of the overall North Central Wisconsin Regional Livability Plan.

Transportation is a crucial component of livability and provides a basis for the formulation of policy to coordinate transportation facilities with a sustainable pattern of development. This Assessment Report examines transportation on a regional scale. The existing network, from roads to rails, needs to be coordinated to maximize efficiency for the overall system. The connection between home and work is an important part of any transportation system. A range of transportation alternatives should be supported, including walkability wherever possible. Perhaps the greatest challenge in the North Central Wisconsin Region is in developing an efficient and cost effective rural transportation system to serve what is likely to be the continuing trend of development of second and retirement homes in amenity-rich rural areas.

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

1 Background

The regional transportation system consists of Interstates, U.S. and State Highways, County Highways, Rustic Routes, Rural Roads and Local Streets. Roughly 1,010,000 passengers rely on the Region's transit system which includes 3 fixed route urban bus systems, 5 shared-ride taxi services, and two intercity routes serving. Non-automobile transportation incorporates hundreds of miles of bicycle and walking trails, 517 miles of railroad, and 19 public use airports. The Region's rural make-up results in a high dependence on automobile transportation to move individuals between their homes, employment, services, and activities. The Region's highways are also a significant component of freight flow supporting the regional economy. The principle truck routes within the Region are primarily U.S. and state highways, linking the Region's main economic centers with the rest of the state and the nation. Local truck routes often branch out from these major corridors to link local industry with the main truck routes and to distribute commodities within the local area. This reliance further exasperates the Region's transportation dependency.

Wisconsin's historical trend of being automobile dependent began to change in 1991 with the passage of the federal Intermodal Surface Transportation Efficiency Act, commonly known as ISTEA. The Act mandated that states take a broader "multimodal" approach to transportation. Now bicycle, transit, rail, air, and other modes of travel must also be included in statewide planning. Following ISTEA, other federal transportation legislation has built on this multimodal framework. The Transportation Equity Act for the 21st Century, or TEA-21, increased funding for transit and expanded the role of local participation in transportation planning for rural areas. SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act- a Legacy for Users, brought more emphasis on safety and efficiency.

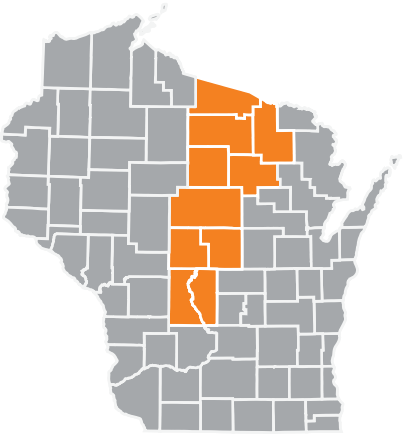
The current federal legislation is MAP-21, Moving Ahead for Progress in the 21st Century. MAP-21 creates a streamlined and performance-based surface transportation program and builds on many of the highway, transit, bike, and pedestrian programs and policies established under the previous transportation acts. In response to the new federal transportation requirements, the Wisconsin Department of Transportation (WisDOT) created Translinks-21 in 1995 as its first overall plan to coordinate all modes of travel. WisDOT then developed a series of more detailed modal plans that included in-depth analysis of each specific mode and its relationship with other modes of transportation. In 2009, WisDOT adopted its current long-range, multimodal transportation plan: Connections 2030. This plan addresses all modes of transportation over a 20-year planning horizon: highways, local roads, air, rail, water, bicycle, pedestrian, and transit. At the Federal level, the transportation reauthorization bill is currently working its way through the political process.

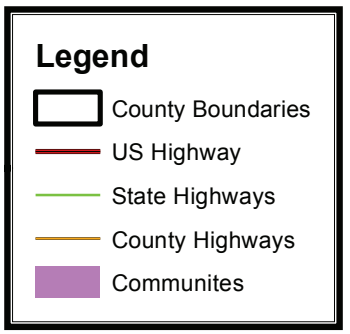
Regionally, the need to create additional modes of transportation to accommodate the rural environment has been emphasized since 1981. The Region's first comprehensive plan emphasized street and highway construction and called for expanded "passenger transportation alternatives". That sentiment was again stated in the 2003 Regional Comprehensive Plan (RCP).

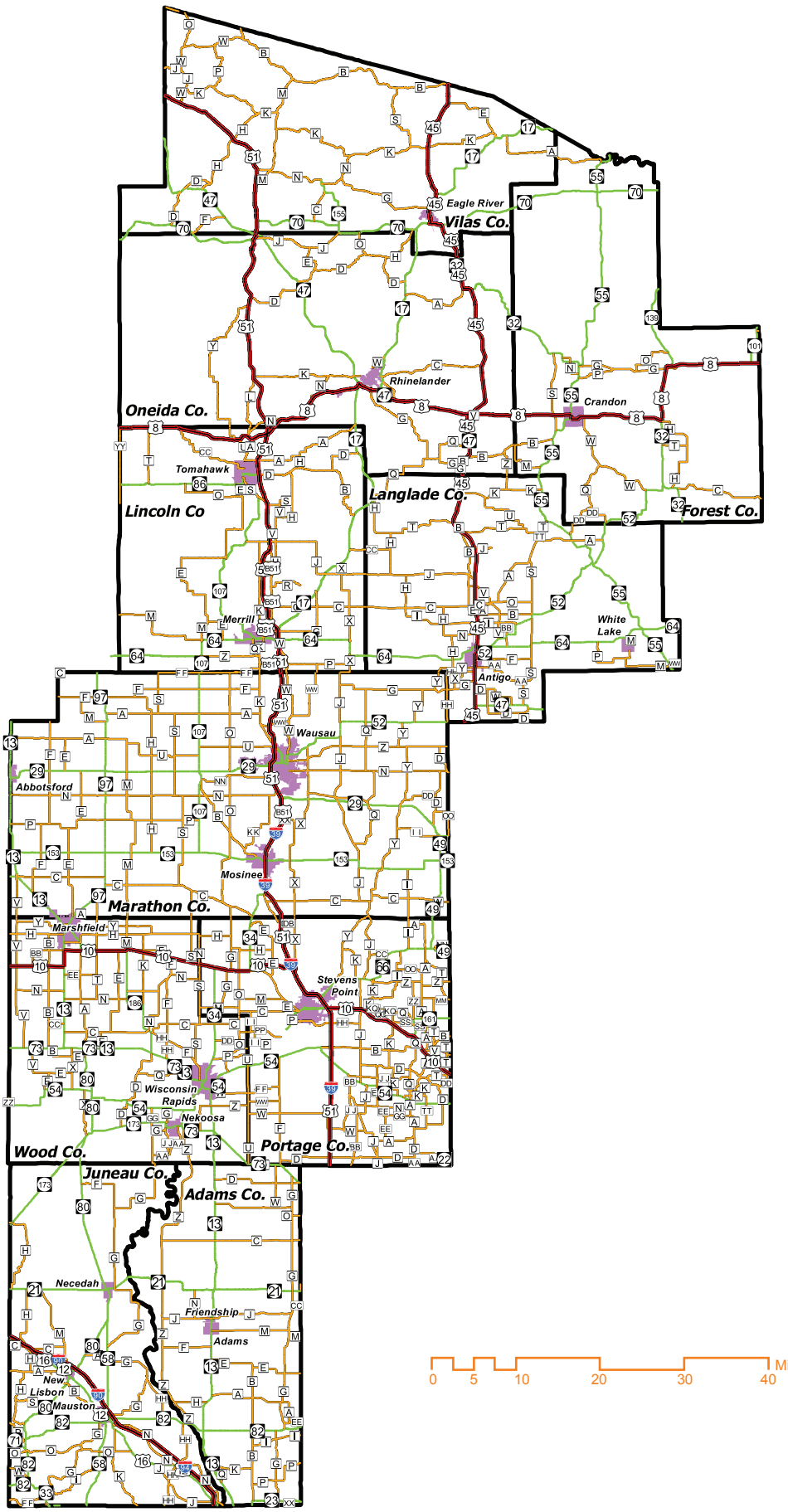
A Highway and Road Network

The highway and road network is comprised of state, county and local roadways. In the Region, this network encompasses a combined 18,500 miles of road, including 445 miles of Interstate and U.S. Highways, 1,218 miles of state highways, 2,860 miles of county highways, and 13,047 of miles of local streets (see Table 1). In addition, there are nearly 1,000 miles of miscellaneous other roads, such as forest roads, fire lanes, and other roads not used for general travel purposes (see Map 1). Where road jurisdictions overlap, the mileage is counted toward the higher class to avoid overstating the total miles of pavement within the system.

[1] Urban Land Institute. "What's Next? Real Estate in the New Economy." 2011







This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.

1. Interstate and Federal Highways:

The Region is served by Interstates 39 and 90/94 and several U.S. Highways (USH): 51, 45, 12, 10 and 8. These serve as principal arterial roads with the exception of USH 12 which parallels I-90/94 across the extreme southwestern corner of the region through Juneau County and the City of Mauston. Due to its proximity to I90/94, USH 12 serves as a two-lane minor arterial and alternate route for the interstate.

Other major East-West connections include USH 10 through Portage and Wood Counties, which connects Stevens Point and Marshfield, and USH 8 through Forest, Oneida and Lincoln Counties, connecting the City of Rhinelander and other Northwoods communities to the Twin Cities. Currently, USH 8 is a two-lane facility with a four-lane bypass at Rhinelander, and USH 10 is four-lanes from the Fox Cities to Marshfield.

Major North-South routes include I-39/USH 5 and USH 45. I-39/USH 51 is the major north-south artery connecting the Northwoods, Wausau, Stevens Point and the rest of the Region with I-90/94 and Madison, Milwaukee and Chicago. North of Tomahawk, USH 51 is two-lanes through Oneida County, expands to four lanes at Minocqua and back to two lanes through western Vilas County. USH 45 parallels USH 51 with two lanes flowing through Antigo and Langlade County, eastern Oneida County, and Eagle River and Vilas County.

All the interstates and U.S. highways within the Region are part of the Corridors 2020 system, with the exception of USH 12 and a few remote stretches of USHs 45 and 10. Interstate 90/94 and I-39/USH 51 are backbone routes, except that USH 51 north of USH 8 is designated as a connecting route. USH 10 is a backbone route east of I-39/USH 51 and a connecting route west of I-39/USH 51 to STH 13 (Veterans Parkway) in Marshfield. West of STH 13 and Marshfield, USH 10 is not part of the Corridors 2020 system. The other U.S. highways, including USHs 45 and 8, are designated as connecting routes except for USH 45 north of Eagle River.

2. State Highway System:

The region is also served by a number of state trunk highways (STH). These are primarily two-lane routes with some four-lane urban sections that serve as minor arterials. Two significant exceptions include STHs 29 and 54. STH 29 is a major east-west connection for the region and is a Corridors 2030 backbone route, traversing Marathon County and intersecting with I-39/USH 51 in Wausau. STH 29 is now entirely four-lane and serves as a principal arterial. The major section of STH 54 is a four-lane connecting Wisconsin Rapids to I-39 and Plover. Major east-west connections include STH 70 across northern Forest and Oneida Counties and southern Vilas County through Eagle River; STH 64 through Langlade and Lincoln Counties including the Cities of Antigo and Merrill; and STHs 21 and 82 across Adams and Juneau Counties.

Major north-south routes include STHs 13, 34, 55 and 80. The Cities of Wisconsin Rapids and Marshfield are served by STH 13. North of USH 10, STH 13 is a Corridors 2020 connecting route. Another Corridors 2030 connecting route is STH 13/34 between USH 10 and Wisconsin Rapids. The remainder of STH 34 runs between USH 10 and I-39 at Knowlton. STH 80 runs through Juneau and Wood Counties (from STH 13). STH 55 carries traffic through Langlade County, Forest County and the City of Crandon.

The Region's highways are a significant component of freight flow supporting the Region's economy. The principal truck routes within the region are primarily U.S. and state highways linking the Region's main economic centers with the rest of the state and the nation. Local truck routes often branch out from these major corridors to link local industry with the main truck routes as well as for the distribution of commodities within the local area. Mapping these local routes is beyond the scope of this study, and local issues such as safety, weight restriction and noise impacts play significant roles in the designation of local truck routes.

3. County Highways:

An extensive network of county trunk highways (CTH) connects the region's rural areas. Most of these roadways are classified

as collector roads, which serve as major rural routes providing connections between smaller communities and urban areas. They also distribute the traffic to the arterial system. County trunk highways serve an important role in linking the region's agricultural and forestry resources to the region's cities and major highways.

4. Local Roads:

Every town, village and city maintains a local road network, which is part of the overall regional network. These roads provide access to local land uses including residential, commercial/industrial and recreational areas.

5. Functional Classification:

The public highway and road network is also classified by function. The functional classification system is divided into four main categories that include principle arterials, minor arterials, collectors (major and minor in rural areas) and local roads. For purposes of the Regional Livability Plan, the function of each type of street or highway is as follows:

Principle Arterials
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
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 on access to the system.

Collectors
Collect traffic from local roads and provide links to all remaining smaller communities, locally important traffic generators and higher function roads.

Local Roads
Provide access to adjacent land and provide for travel over relatively short distances. All roads not classified as arterials or collectors are local function roads.

TABLE 1 | Miles of Roadway by Jurisdiction in North Central Wisconsin

Jurisdiction	State	County	Local	Other	Total	Persons Per Mile
ADAMS	98	234	1,215	220	1,767	11
FOREST	150	108	840	22	1,120	9
JUNEAU	204	237	1,159	10	1,610	15
LANGLADE	146	273	717	83	1,219	17
LINCOLN	196	272	923	61	1,452	20
MARATHON	238	593	2,572	51	3,454	36
ONEIDA	169	168	1,589	10	1,936	19
PORTAGE	178	445	1,319	34	1,976	34
VILAS	136	204	1,392	478	2,210	10
WOOD	148	326	1,321	21	1,816	42
REGION	1,663	2,860	13,047	990	18,560	23
NORTH	797	1,025	5,461	654	7,937	15
CENTRAL	564	1,364	5,212	106	7,246	37
SOUTH	302	471	2,374	230	3,377	13
STATE	11,819	19,624	77,492	2,565	111,500	48

SOURCE: NCWRPC

B Travel Patterns

1. Vehicle Miles Traveled

The Federal Highway Administration (FHWA) recently released a national monthly travel-volume trend summary, which shows that for the first quarter of 2013, aggregate national vehicle miles traveled (VMT) was down 0.8 percent and per-capita VMT was down 1.5 percent, compared to the same quarter of 2012. Rolling 12-month figures were also down in both categories. This is just the latest evidence that Americans are driving less on average than they were a decade ago. Even with population increases, total VMT is flat to slightly declining.

In 2012, total vehicle miles traveled in the Region was close to 6.1 billion, a 7.6 percent increase from 2003 (see Table 2). Seven of the ten counties experienced an increase in vehicle miles traveled over the ten year period. Forest County experienced the greatest percent growth from 2003 to 2010 with a 70 percent increase in total miles traveled. Marathon County continues to experience significant vehicle miles traveled, increasing the total number of miles traveled from 1.56 billion miles traveled to 1.65 billion miles traveled, a 5.7 percent increase. Only Oneida County experienced a higher net change over the 10 year period with just less than 111 million more vehicle miles traveled, a 23.3 percent increase. Juneau, Lincoln and Wood Counties experienced a decrease in total vehicle miles traveled from 2003 to 2010. Wood County had the largest net change decrease in miles traveled (-44,243,065) and the largest percent decrease at -6.5 percent.

TABLE 2 | Total Vehicle Miles Traveled

County	2003	2010	2012	Net Change 2003 - 2012	% Change 2003 - 2012
ADAMS	246,000,000	241,291,280	322,505,970	76,505,970	31.1%
FOREST	125,000,000	125,001,915	212,551,545	87,551,545	70.0%
JUNEAU	752,000,000	643,943,585	725,308,290	(26,691,710)	-3.5%
LANGLADE	228,000,000	219,374,125	271,739,215	43,739,215	19.2%
LINCOLN	462,000,000	411,731,680	443,427,550	(18,572,450)	-4.0%
MARATHON	1,561,000,000	1,595,352,585	1,649,954,395	88,951,395	5.7%
ONEIDA	475,000,000	510,512,360	585,785,945	110,785,945	23.3%
PORTAGE	811,000,000	859,659,680	878,907,955	67,907,955	8.4%
VILAS	342,000,000	325,425,970	388,497,970	46,497,970	13.6%
WOOD	683,000,000	679,309,530	638,756,935	(44,243,065)	-6.5%
REGION	5,685,000,000	5,611,602,710	6,117,435,770	432,435,770	7.6%

SOURCE: WisDOT

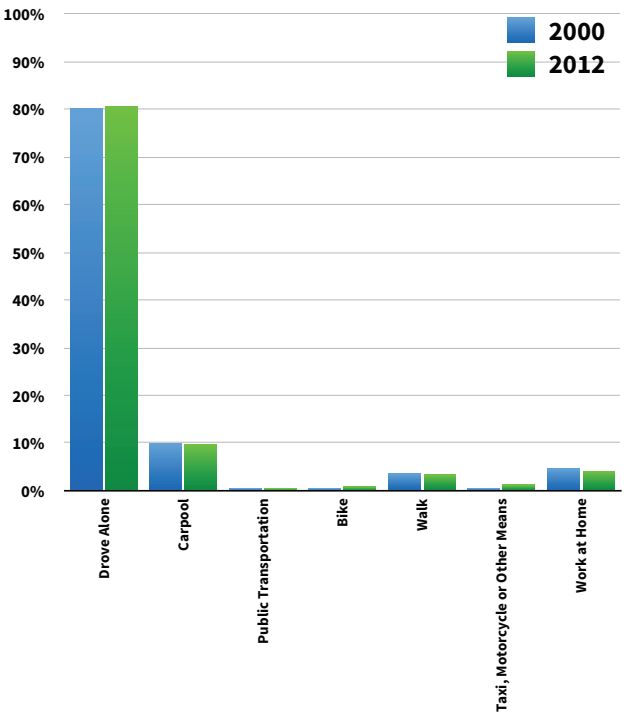
From 2003 to 2010, six of the ten counties experienced a decrease in total vehicle miles traveled. Forest, Marathon, Oneida and Portage Counties experienced an increase in total vehicle miles traveled from 2003 to 2010. In comparison, between 2010 and 2012, only Wood County experienced a decrease in vehicle miles traveled. The improvement in employment rates and the economy in 2010 created more drivers on the road commuting to and from work, resulting in more vehicle miles traveled. In addition, the increase in employment and a stronger economy enabled more people to travel and vacation to the region.

Congestion problems are most noticeable on highways where traffic volumes exceed the current highway design capabilities. According to WisDOT, increases in traffic volumes can be attributed to several factors: household size, and job, services, and residential locations. As the number of households in the region increase, combined with household sizes decreasing, the number of trips made per household increases, resulting in more vehicle miles traveled per year. “The location of residential areas, jobs, and other services affect travel choices and can place greater demands on the transportation system. People who do not live in urban areas must travel to more populated areas for shopping and other activities” (WisDOT 2030 Connections). Providing more transportation options and improving the location of residential areas in relation to jobs and services, the region can reduce total vehicle miles traveled.

2. Modes of Transportation

Table 3 shows the different means used by the workforce, age 16 and older, to get to and from work. The percentage of workforce in the Region driving alone to work on a daily basis (80.66%) is in line with the State's percentage of 79.9 percent. Six out of the ten counties have witnessed the percentage of workers driving alone to work increase from 2000 to 2012. Only Vilas County has experienced a decrease (-3.8%) in the percentage of people commuting alone to work in the past 12 years. Wood County has the highest percentage of workforce driving alone to work with 82.2 percent choosing this means of transportation. Forest County has experienced the largest increase in workforce driving alone increasing the percentage of workers from 73.6 percent in 2000 to 77.8 percent in 2012. However, Forest County also has the least number of workers driving alone, due to the smallest workforce in the Region. Marathon County, which has the largest workforce in the region, experienced the highest number of workers driving alone to work with over 55,000 workers commuting alone.

FIGURE 1 | Transportation Modes to Work



SOURCE: US Census, ACS 2008-2012

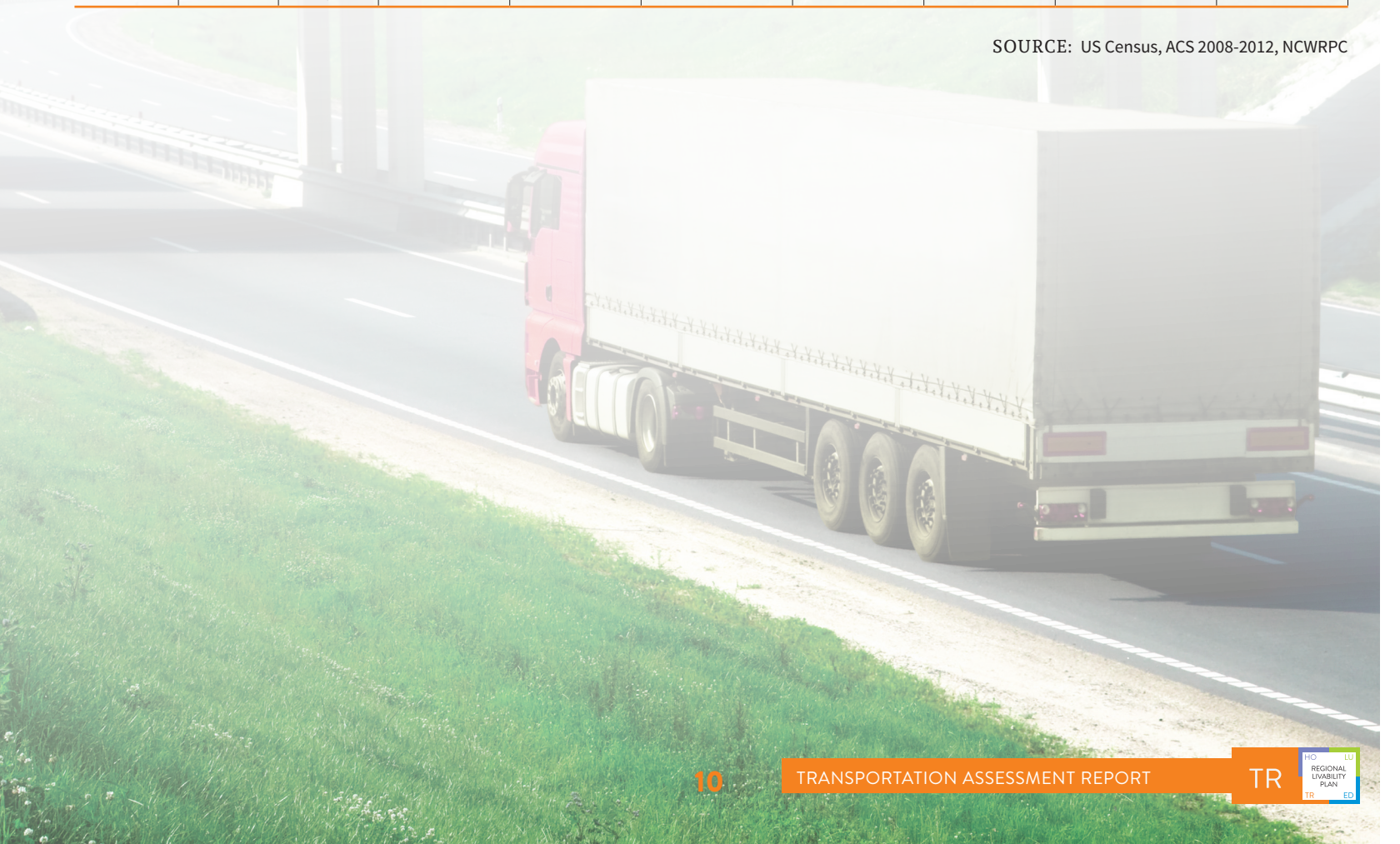
The Region experienced an increase in the number of workers carpooling on a daily basis to work, increasing from 9.98 percent to 10.21 percent. However, this increase is the result of fewer workers walking and using public transportation. The Region's workforce choosing to walk to work decreased 0.44 percent over the 12 year period and the share of workers using public transportation decreased from 0.49 percent to 0.42 percent. The lack of public transportation options in the Region is shown in that none of the counties experience more than 0.80 percent of their workforce using public transportation to get to work. Portage and Vilas Counties have the most workers choosing to walk to work, 5.3 percent and 5.7 percent respectively. Langlade and Vilas Counties were the only counties with an increase in workers who walk to work, increasing by 0.8 percent and 0.9 percent respectively.

Forest County experienced the largest decrease in workers choosing to walk to work decreasing from 6.1 percent in 2000 to 2.6 percent in 2012. However, Forest County also experienced the largest increase in carpooling, increasing by 9.5 percent over the 12 year period. Adams County experienced a 2.1 percent decrease in the number of people who walk to work, but experienced a 1.5 percent increase in the number of people who bike to work. Personal vehicles are overwhelmingly the preferred choice of transportation, as more than 90 percent of the Region's workforce chooses to drive alone or carpool to work.

TABLE 3 | 2012 Modes of Transportation to Work (Percent)

County	Year	Workforce	Drive Alone	Carpool	Public Transportation	Bike	Walked	Taxi, Motorcycle and Other Means	Worked At Home
ADAMS	2000	7,700	78.10%	12.40%	0.30%	0.40%	2.50%	1.20%	5.20%
	2012	7,752	79.40%	10.50%	0.10%	1.90%	0.40%	1.10%	4.60%
FOREST	2000	3,961	73.60%	13.00%	0.50%	0.10%	6.10%	0.90%	5.80%
	2012	3,702	77.80%	22.50%	0.50%	0.00%	2.60%	0.80%	6.30%
JUNEAU	2000	11,220	77.90%	11.70%	0.20%	0.00%	4.30%	1.00%	5.00%
	2012	12,079	79.90%	18.40%	0.20%	0.30%	4.00%	1.10%	3.90%
LANGLADE	2000	9,517	78.20%	11.70%	0.20%	0.50%	4.20%	0.50%	4.70%
	2012	9,150	81.70%	8.00%	0.00%	0.40%	5.00%	0.80%	4.10%
LINCOLN	2000	14,319	78.40%	12.50%	0.50%	0.30%	3.30%	0.40%	4.40%
	2012	13,776	80.70%	11.20%	0.80%	0.10%	2.90%	0.80%	3.50%
MARATHON	2000	65,680	81.10%	9.50%	0.90%	0.30%	2.60%	0.60%	5.10%
	2012	68,128	81.70%	9.80%	0.60%	0.60%	2.20%	1.10%	4.00%
ONEIDA	2000	16,791	81.40%	9.40%	0.40%	0.20%	4.10%	0.80%	3.70%
	2012	16,579	81.40%	10.20%	0.10%	0.40%	2.90%	0.90%	4.10%
PORTAGE	2000	35,088	78.50%	9.50%	0.40%	1.50%	5.60%	0.60%	4.20%
	2012	35,386	78.50%	9.00%	0.60%	2.10%	5.30%	1.20%	3.40%
VILAS	2000	8,876	80.00%	9.40%	0.10%	0.00%	4.80%	1.00%	4.50%
	2012	9,172	76.20%	8.50%	0.20%	0.30%	5.70%	1.90%	7.10%
WOOD	2000	36,803	82.20%	8.90%	0.20%	0.20%	3.60%	0.70%	4.10%
	2012	35,975	82.20%	8.70%	0.20%	0.70%	3.30%	1.30%	3.70%
NCWRPC	2000	209,955	80.10%	9.98%	0.49%	0.46%	3.76%	0.68%	4.58%
	2012	211,699	80.66%	10.21%	0.42%	0.82%	3.32%	1.13%	4.02%

SOURCE: US Census, ACS 2008-2012, NCWRPC

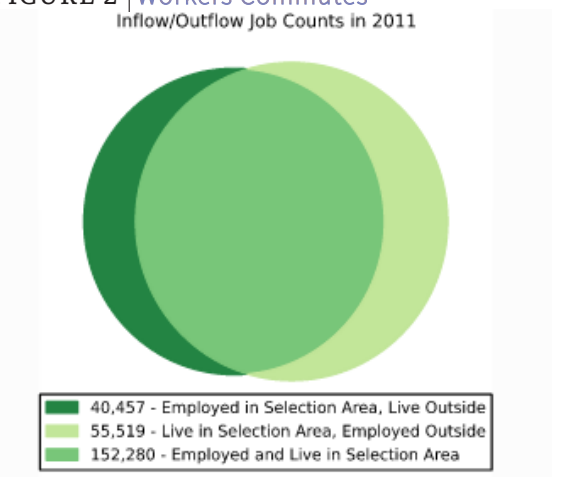


3. Workers Commutes

Overall, the Region has a negative net migration of workers coming to the Region for work. Over 55,500 people who live in the Region leave the Region for work, while 44,457 people come into the Region for work (see Figure 2 and Table 4). Employees who live and work in the Region create more than 61 percent of the workforce. The most populated counties of Marathon, Portage and Wood have the highest number of people who live and work in the same county. Adams, Forest, Juneau and Langlade, the Region's more rural counties, have the highest number of people who travel to a different county for work.

Roughly 64 percent of the workforce from Adams County works outside of the county. Over 68 percent of the workforce in Juneau County and 63 percent in Forest County work in a different county than where they reside. A majority of the workforce leaving Juneau County for work leaves the Region traveling to the surrounding counties of Wood (2.3%), Monroe (8.7%), Sauk (11.5%) Dane (3.4%), and Columbia (6.4%). Workforce leaving Forest County for work travels to Oneida (5.7%), Vilas (3.8%), Brown (3.5%), Dane (3.3%), and Langlade (2.6%) counties. Some of the work migration can be explained by people listing their vacation or seasonal homes as their main home while responding to the Census. This would result in a higher number of people leaving the region for work than actually exists.

FIGURE 2 | Workers Commutes



SOURCE: US Census, On The Map

These commuting patterns are further shown on average travel times to work as the most populated counties have the lowest average commute times. Marathon County has the lowest percentage of workforce working outside of the County with 48 percent of the workers living in Marathon County and has one of the shortest commute times in the region at 18.7 minutes (see Table 4). Only Wood County with an average commute time of 18.3 minutes is shorter. Adams, Forest, Juneau and Lincoln Counties have commute times higher than the state's average of 21.6 minutes.

TABLE 4 | 2011 Workers' Commutes

County	Adams	Forest	Juneau	Langlade	Lincoln	Marathon	Oneida	Portage	Vilas	Wood	NCWRPC
EMPLOYED AND LIVING IN COUNTY	1,827	1,995	4,665	4,767	6,382	42,316	8,241	18,106	4,043	22,334	152,280
LIVE IN COUNTY, EMPLOYED OUTSIDE	5,449	2,125	6,531	5,084	8,409	23,532	9,229	16,435	3,276	12,350	55,519
EMPLOYED IN COUNTY, BUT LIVING OUTSIDE	1,276	1,242	3,275	2,720	3,854	22,011	5,482	13,638	3,491	20,856	40,457
WORKERS PER CAR	1.08	1.08	1.07	1.05	1.07	1.06	1.06	1.06	1.06	1.05	-
MEAN TRAVEL TIME TO WORK	28.0	21.7	22.9	19.1	23.2	18.7	19.2	19.2	19.6	18.3	-
% OF PEOPLE WITHOUT ACCESS TO A VEHICLE	1.40%	1.1%	1.2%	1.4%	1.80%	1.60%	1.70%	1.80%	1.90%	1.40%	-

SOURCE: US Census, ACS 2008-2012, On The Map 2011

The more populated counties also have the most people commuting less than 10 miles to work. Marathon (53.5%) and Wood (54.9%) Counties are the only counties with more than 50 percent of their workforce commuting less than 10 miles (see Table 5). Adams (31.1%), Forest (35.8%), Oneida (34.3%) and Langlade (30.8%) have more than 30 percent of their

TABLE 5 | Distance Report Home to Work (%)

County	Adams	Forest	Juneau	Langlade	Lincoln	Marathon	Oneida	Portage	Vilas	Wood	NCWRPC
TOTAL ALL JOBS	7,978	4,121	11,196	9,851	14,791	65,848	17,470	34,541	7,319	34,684	207,799
LESS THAN 10 MILES	24.50%	30.90%	30.80%	39.30%	34.50%	53.50%	40.50%	43.00%	36.70%	54.90%	45.49%
10 TO 24 MILES	31.10%	21.00%	31.20%	13.90%	27.40%	20.20%	18.20%	20.10%	29.30%	17.60%	21.15%
25 TO 50 MILES	13.00%	12.30%	11.70%	16.00%	12.10%	8.60%	7.00%	9.90%	9.80%	10.40%	10.02%
GREATER THAN 50 MILES	31.30%	35.80%	26.20%	30.80%	26.00%	17.70%	34.30%	27.10%	24.10%	17.10%	23.35%

SOURCE: US Census, On The Map 2011, NCWRPC

workforce commuting greater than 50 miles. Adams County also has the region's longest average commute, at 28 minutes. On average, almost half of the Region's workforce commutes less than 10 miles to work and 67 percent commutes less than 25 miles.

Over 55,500 workers migrate outside the Region daily for work. Workforce leaving the region predominately works in the counties surrounding the region and the major urban centers of Dane County (Madison), Brown County (Green Bay), Winnebago and Outagamie Counties (Fox Cities) and Milwaukee County (Milwaukee) (see Table 6). Over 15 percent (8,375 workers) of workers who live in the Region and are employed outside of it leave the region for work in Milwaukee County and Dane County. Brown County (Green Bay) attracts the second most workers with 4,616 workers commuting for work per day. Other major counties of employment are Outagamie County (3,918 workers), Sauk County (2,948 workers) and Winnebago County (2,921 workers).

Over 40,000 workers migrate to the Region daily for work. The workforce commuting into the Region for employment is distributed evenly throughout the counties and major urban centers. Milwaukee, Brown, Dane and Winnebago Counties combine to provide just fewer than 6,000 workers, or 15 percent, of the in-migrant workforce to the Region. Shawano County accounts for the highest number of workers commuting to the region for work with 1,918 workers, or 4.75 percent of all in-migrant workers (see Table 7). Waupaca, Dane, and Eau Claire Counties all provide over 4 percent of the regions in-migrant workforce. Overall, in-migrant workers come from a number of counties with no one county being a major provider of workforce to the Region.

As described in the means of transportation section, a majority of the workforce chooses to drive alone to work on a daily basis. The average in the Region is just over one person per car. The rural make-up of the region explains the low percent of workforce without access to a vehicle, as access to a personal vehicle is necessary due to a lack of public transportation options and long commute distances in the Region.

TABLE 6 | Top 10 Workforce Out-Migration Destinations (2011)

County	Count
Dane County, WI	4,688
Brown County, WI	4,616
Outagamie County, WI	3,918
Milwaukee County, WI	3,687
Sauk County, WI	2,948
Winnebago County, WI	2,921
Columbia County, WI	2,328
Eau Claire County, WI	2,328
Waukesha County, WI	2,072
Clark County, WI	1,989

SOURCE: US Census On The Map

TABLE 7 | Top 10 Workforce In-Migration Destinations (2011)

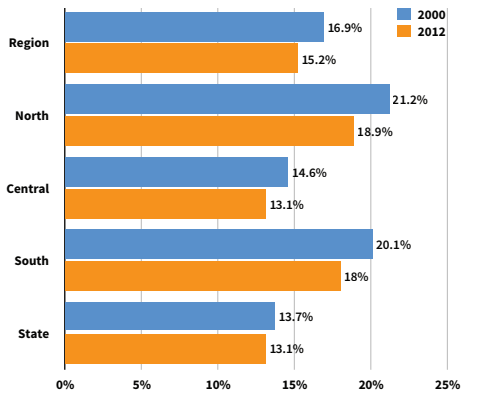
County	Count
Shawano County, WI	1,918
Waupaca County, WI	1,634
Eau Claire County, WI	1,625
Dane County, WI	1,604
Brown County, WI	1,587
Milwaukee County, WI	1,514
Clark County, WI	1,439
St. Croix County, WI	1,421
Winnebago County, WI	1,294
Monroe County, WI	1,262

SOURCE: US Census On The Map

Workers' traveling into a county for work puts additional wear on the county's transportation system. The use of state and county highways adds to the maintenance needs and rehabilitation necessary to maintain business. Non-county residents who use these highways do not pay taxes to help repair the roads, they pay taxes in their respective counties, resulting in an additional burden to the county residents. In addition, workers who work in one county and live in a different county typically stimulate their local economy. They use the money they earn in one county to spend in the county where they live. This results in less money being introduced to the local economy, and less tax generated for the county through sales. A county experiencing a positive net migration of workers may lack the necessary affordable housing to attract these workers to their county full time. These counties may also lack the community and environment that attracts people to an area. Counties that experience a negative net migration may lack the necessary number of quality employment opportunities to meet their population's needs. Regardless, the migration of workers to and from a county puts additional stress on the transportation infrastructure.

4. Driver's Age

FIGURE 3 | Population Over 65



SOURCE: US Census 2000, 2010

North Central Wisconsin's population age 65 and older increased 1.9 percent from 2000 to 2010, coming to 16.9 percent of the Region's population in 2010. The aging of the baby boom generation will mean an increasing number of elderly drivers. Projections indicate that more than 33 percent of the Region's population will be aged 65 and older by 2035. This is the first generation to have been highly mobile throughout adulthood, and its members may continue to travel as long as they are physically able to do so. Any special needs of this population group will have to be addressed in future plans. In the early 1970's, just over half of Americans aged 65 and older held a driver's license; by 2010, nearly 84 percent. Today, one in six drivers on U.S roads are 65 years of age or older. There has been about a 20 percent increase in trips and a 33 percent increase in miles travelled between 1990 and 2009. Studies show that work-related commutes for drivers aged 65 and older have doubled compared to 20 years ago; and 68 percent of drivers age 85 and older report driving five or more days a week.

Recent studies have shown that a higher percentage of young adults are not obtaining drivers licenses. The number of 19 year olds with a driver's license declined from 87 percent to 70 percent between 1983 and 2010. Young adults aged 17 years old were even more dramatic, decreasing from 69 percent in 1983 to 46 percent in 2010. The Insurance Institute for Highway Safety's Highway Loss Data Institute (HLDI) confirms this trend, showing a 12 percent drop in covered teen drivers since 2006. A recent study by the University of Michigan's Transportation Research Institute found that a mere 28% of 16-year-olds had driver's licenses in 2010, compared with 44% in 1980. This reduction in new drivers will result in young adults looking for environments that offer a variety of amenities and employment opportunities within walking and biking distance or communities that have a convenient and reliable public transportation system. Millennials look to live in walkable, urban locations and prefer car-sharing services like ZipCar or ride sharing services like Uber. Many of the younger generation feel that a car is just an expensive hassle, as technology equals freedom in 2014.

TABLE 8 | County by Age of Licensed Drivers 16 Years of Age

County	2004	2010	2013	Net Change 2004 - 2013	% Change 2004 - 2013
ADAMS	128	95	88	-40	-31.3%
FOREST	71	69	41	-30	-42.3%
JUNEAU	209	129	152	-57	-27.3%
LANGLADE	206	133	129	-77	-37.4%
LINCOLN	289	224	225	-64	-22.1%
MARATHON	1,031	1,040	1,070	39	3.8%
ONEIDA	298	220	214	-84	-28.2%
PORTAGE	544	462	494	-50	-9.2%
VILAS	157	113	108	-49	-31.2%
WOOD	615	487	481	-134	-21.8%
REGION	3,548	2,972	3,002	-546	-15.4%
NORTH	1,021	759	717	-304	-29.8%
CENTRAL	2,190	1,989	2,045	-145	-6.6%
SOUTH	337	224	240	-97	-28.8%

SOURCE: WisDOT

Between 2004 and 2013, the Region followed the national trend of fewer young drivers but more drivers over the age of 65. The Region has experienced a 15.4 percent decrease in licensed drivers aged 16 years old and a 19.2 percent decrease in licensed drivers aged 18 years old between 2004 and 2013. Only Marathon County increased in the number of licensed drivers aged 16 and older over the 10 year period, adding 39 licensed drivers (see Table 8). All counties experienced a decrease in licensed drivers 18 years of age. The north sub-region had the largest decrease in 16 year old licensed drivers (304) and the largest negative percent change (29.8%) in 16 year old licensed drivers between 2004 and 2013. The central sub-region experienced the largest net decrease in licensed driver's aged 18, decreasing 602 people (see Table 9). The south sub-region experienced the largest percent change reducing licensed drivers aged 18 years of age 27.9 percent over the ten

year period. Wood County experienced the largest decrease in both 16 year old and 18 year old licensed drivers, decreasing 134 drivers aged 16 years old and 233 drivers aged 18 years old. Adams County experienced the largest percent reduction in licensed drivers aged 16 (-31.3%) and 18 (-37.3%) during the time period. The Region is also experiencing a decrease in the total number of residents aged 17 and under. This trend could help explain some of the reductions in licensed drivers. The Region lost 4,688 people, 3.3 percent, aged 17 and under between 2000 and 2010.

TABLE 9 | County by Age of Licensed Drivers 18 Years of Age

County	2004	2010	2013	Net Change 2004 - 2013	% Change 2004 - 2013
ADAMS	220	186	138	-82	-37.3%
FOREST	130	107	106	-24	-18.5%
JUNEAU	315	274	248	-67	-21.3%
LANGLADE	294	232	223	-71	-24.1%
LINCOLN	362	328	309	-53	-14.6%
MARATHON	1,680	1,559	1,527	-153	-9.1%
ONEIDA	465	384	335	-130	-28.0%
PORTAGE	877	723	661	-216	-24.6%
VILAS	258	215	206	-52	-20.2%
WOOD	1,030	887	797	-233	-22.6%
REGION	5,631	4,895	4,550	-1,081	-19.2%
NORTH	1,509	1,266	1,179	-330	-21.9%
CENTRAL	3,587	3,169	2,985	-602	-16.8%
SOUTH	535	460	386	-149	-27.9%

SOURCE: WisDOT

The Region has experienced an increase in licensed drivers aged 65 and over and 85 and over. Between 2004 and 2013, the Region increased licensed drivers aged 65 and over 20 percent increasing the total number of licensed drivers to 72,771 (see Table 10). Licensed drivers aged 85 and over increased at a higher rate; increasing 46.8 percent over the 10 year period (see Table 11). Every county experienced an increase in licensed drivers aged 65 and over and 85 and over during the 10 year period. The central sub-region experienced the highest increase in 65 and over drivers, increasing 7,381 people, an increase of 23.5 percent. The central sub-region also experienced the highest increase in 85 and over licensed drivers, increasing 1,676 people, a 49.3 percent increase. The north sub-region had the smallest percent change in licensed drivers aged 65 and over, increasing at a rate of 15 percent. Marathon County has the highest total increase of drivers aged 65 and over (3,756) and Portage County had the highest percent change (30.2%) over the 10 year period. Marathon County also experienced the highest total increase of drivers aged 85 and over (801) and Oneida County had the highest percent change (66.2%) over the 10 year period.

TABLE 10 | County by Age of Licensed Drivers 65+ Years of Age

County	2004	2010	2013	Net Change 2004 - 2013	% Change 2004 - 2013
ADAMS	3,879	4,343	4,723	844	21.8%
FOREST	1,711	1,770	1,854	143	8.4%
JUNEAU	3,744	4,014	4,371	627	16.7%
LANGLADE	3,383	3,500	3,798	415	12.3%
LINCOLN	4,383	4,629	5,072	689	15.7%
MARATHON	14,294	15,795	18,050	3,756	26.3%
ONEIDA	6,855	7,421	8,024	1,169	17.1%
PORTAGE	6,825	7,179	8,889	2,064	30.2%
VILAS	5,302	5,231	6,138	836	15.8%
WOOD	10,291	10,155	11,852	1,561	15.2%
REGION	60,667	64,037	72,771	12,104	20.0%
NORTH	21,634	22,551	24,886	3,252	15.0%
CENTRAL	31,410	33,129	38,791	7,381	23.5%
SOUTH	7,623	8,357	9,094	1,471	19.3%

SOURCE: WisDOT

TABLE 11 | County by Age of Licensed Drivers 85+ Years of Age

County	2004	2010	2013	Net Change 2004 - 2013	% Change 2004 - 2013
ADAMS	259	276	416	160	61.8%
FOREST	144	143	193	49	34.0%
JUNEAU	377	351	451	74	19.6%
LANGLADE	361	358	490	129	35.7%
LINCOLN	433	443	585	152	35.1%
MARATHON	1,530	1,729	2,331	801	52.4%
ONEIDA	574	660	954	380	66.2%
PORTAGE	681	616	1,057	376	55.2%
VILAS	487	392	692	205	42.1%
WOOD	1,192	1,031	1,691	499	41.9%
REGION	6,038	5,999	8,863	2,825	46.8%
NORTH	1,999	1,996	2,914	915	45.8%
CENTRAL	3,403	3,376	5,079	1,676	49.3%
SOUTH	636	627	870	234	36.8%

SOURCE: WisDOT

C Transit

Public transit within the Region is comprised of a fixed-route urban bus system and shared-ride taxi services. The cities of Merrill, Stevens Point and Wausau operate fixed-route bus systems, including a paratransit component. The Village of Plover and the cities of Marshfield, Mauston, Rhinelander and Wisconsin Rapids all have subsidized shared-ride taxi services. These taxi services also make accommodations for disabled riders.

Two private bus companies operate service in the Region. Jefferson Lines currently provides service from Wausau to Milwaukee through Green Bay and from Wausau to Minneapolis/ St. Paul through Eau Claire. Lamers Bus Lines provides service from Wausau to Madison and from Wausau to Milwaukee with connections in Stevens Point, Green Bay and Appleton. Connections can be made to Chicago and points nationwide. Lamers Bus Service also provides access to rail service from Wausau to the Wisconsin Dells and Portage Amtrak stations.
In addition to regular public transit, specialized transit services for the elderly and disabled are provided by each county in the Region. Other specialized transportation operations provide service throughout the area, based at medical and private care facilities, as well as social service agencies that provide various services for targeted populations.

In 2012, only 0.42 percent of the regional workforce used public transportation to get to and from work on a daily basis, down from 0.49 percent in 2000 (see Table 12). The use of public transportation decreased 148 people from 2000 to 2012 while the region increased its workforce 1,744 persons. Lincoln, Portage and Vilas Counties saw minor increases in workforce using public transportation to get to and from work. However, none of the 10 counties experienced significant public transit use. Lincoln County had the highest percent of workforce using public transportation at .80 percent in 2012.

Public transit ridership in North Central Wisconsin has increased over 11 percent from 1990 to 2012 (see Table 12). Stevens Point experienced the largest increase in riders increasing from 138,916 riders in 1990 to 283,096 in 2012, a 104 percent increase. The Region's most populous city, Wausau, had a 13.4 percent decrease in ridership over the same time period. The elimination of service on Saturdays, a small increase in rider fees, and the elimination of several routes explain some of the reduction in ridership over the 20 year time period. However, all other cities experienced an increase over the 22 year period resulting in a sizable increase for the Region. Overall, the Region is increasing its transit riders while the state is experiencing a decrease, specifically in the past 12 years when the Region experienced an increase of 144,202 riders and the state a decrease of 546,859 riders.

TABLE 12 | Public Transit Ridership in North Central WI

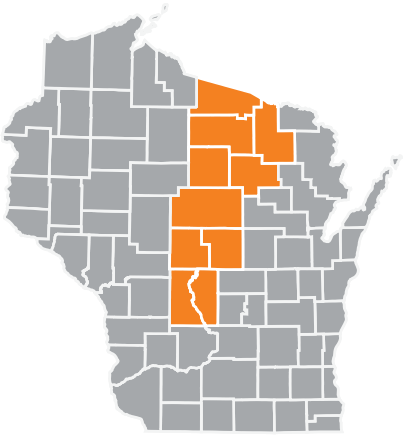
System	1980	1990	2000	2012	% Change 1990 - 2012
MERRILL	80,692	67,923	69,818	73,209	7.78%
STEVENS POINT	152,706	138,916	97,224	283,096	103.79%
WAUSAU	1,093,053	731,955	749,025	633,638	-13.43%
MARSHFIELD	30,747	98,807	89,126	84,870	-14.11%
MAUSTON	-	14,081	26,708	19,385	37.67%
PLOVER	-	1,946	10,569	21,688	1014.49%
RHINELANDER	38,907	47,012	29,768	71,338	51.74%
WISCONSIN RAPIDS	30,323	59,494	74,856	104,072	74.93%
REGION	1,426,428	1,160,134	1,147,094	1,291,296	11.31%
STATE	93,298,823	77,611,528	76,382,984	75,836,125	-2.29%

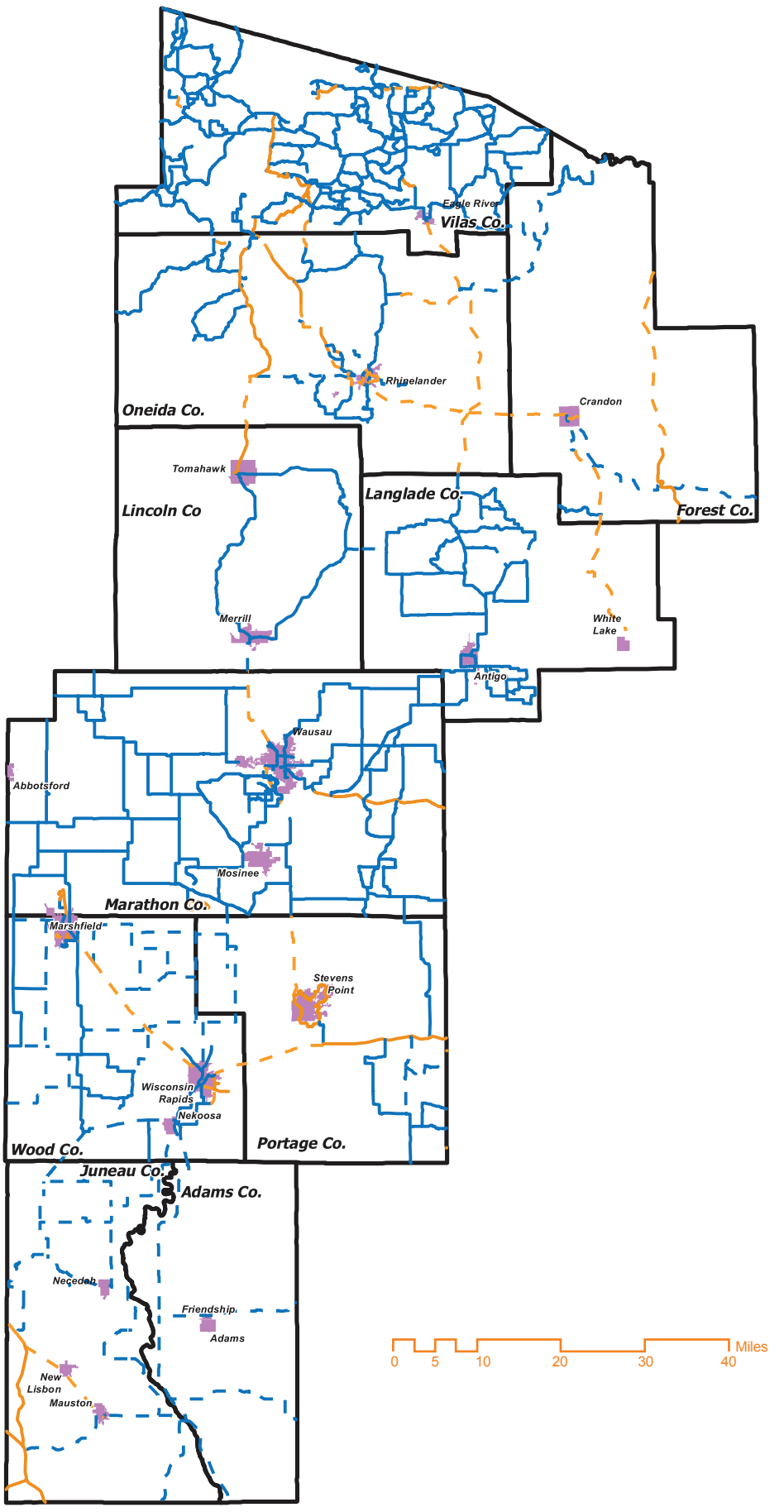
SOURCE: WisDOT

D Bicycle Facilities

Biking and walking will continue to be vital components of Wisconsin's multimodal transportation system. Bicycle and pedestrian modes currently account for 8.2 percent of all trips in Wisconsin for all 12 months of the year. The bicycle and pedestrian commuting modal share in Table 3 shows that a relatively low percentage of people use these modes to travel to work. In 2012, .82 percent of the workforce in the Region biked to work and 3.32 percent walked. Portage County has the highest percentage of workforce biking to work with 2.1 percent choosing this mode of transportation. Vilas County has the highest percent of workforce walking to work with 5.7 percent of their workforce choosing this mode of transportation. It is important to note that the Census data represents the last week of March, which is typically a period not conducive to making non-motorized journeys.

WisDOT addresses both of these modes in independent state bicycle and pedestrian plans. Both plans call for significant increases in the number of trips by bicycle and foot while reducing the number of crashes that involve pedestrians and cyclists. Some counties and municipalities in the Region have also created bicycle and pedestrian plans in an effort to increase trips by bicycle and foot while improving safety. In 2004, the NCWRPC created a regional bicycle and pedestrian trail facilities plan.
This plan identifies existing bikeways and routes and recommends a regional system of new interconnected trail facilities, see Map 2. To date seven of the ten counties have developed and adopted bicycle and pedestrian plans. Forest, Juneau and Lincoln Counties currently do not have a county bike and pedestrian plan.





This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.

E Air Service

The Region has 19 public use airports, two commercial airports and 17 medium and small general aviation airports. The locations of the 19 airports in the Region are shown in Map 3. Small and medium aviation airports serve corporate jets, small passenger and small cargo jet aircraft. Commercial airports are designed to accommodate virtually all aircraft up to and, in some cases, including wide body jets and large military transports. The only two commercial airports in the Region are located in Mosinee and Rhinelander and are critical for the continued growth for the Region.

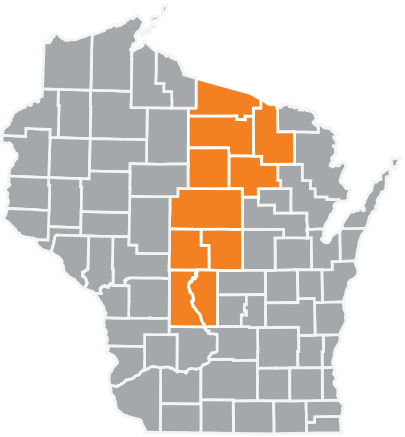
Central Wisconsin Airport (CWA) in Mosinee has three major airlines (United, Delta and American Airlines) that provide daily departures and direct service to three cities (Detroit, Minneapolis and Chicago), and connections to any destination in the world. In 2012, the airport served 120,637 passengers and recorded 15,236 aircraft operations, a 21.8 percent and 29.25 percent decrease from 2008 respectively (see Table 13). During the same five year time period (2008-2012), CWA experienced a 60 percent decrease in air cargo. CWA's enplaned air cargo decreased from 1.3 million pounds of cargo in 2008 to 521,788 pounds of air cargo enplaned in 2012.

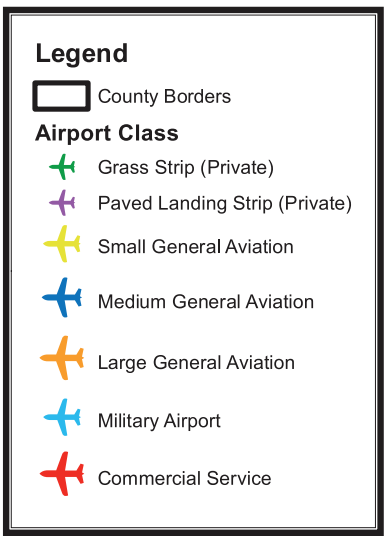
Rhinelander-Oneida County airport has one major airline (Delta) that provides daily departures and direct service to Minneapolis/ St. Paul and Iron Mountain, MI. In 2012, the airport served 11,353 passengers, a 64 percent decrease from 2008. Rhinelander Airport has decreased the number of flights from 2,339 in 2008 to 736 in 2012, a 68.5 percent decrease in service. The Rhinelander-Oneida Airport also decreased the amount of cargo shipped, enplaning 871,615 pounds of air cargo in 2012, a 22 percent decrease from 1,117,049 pounds.

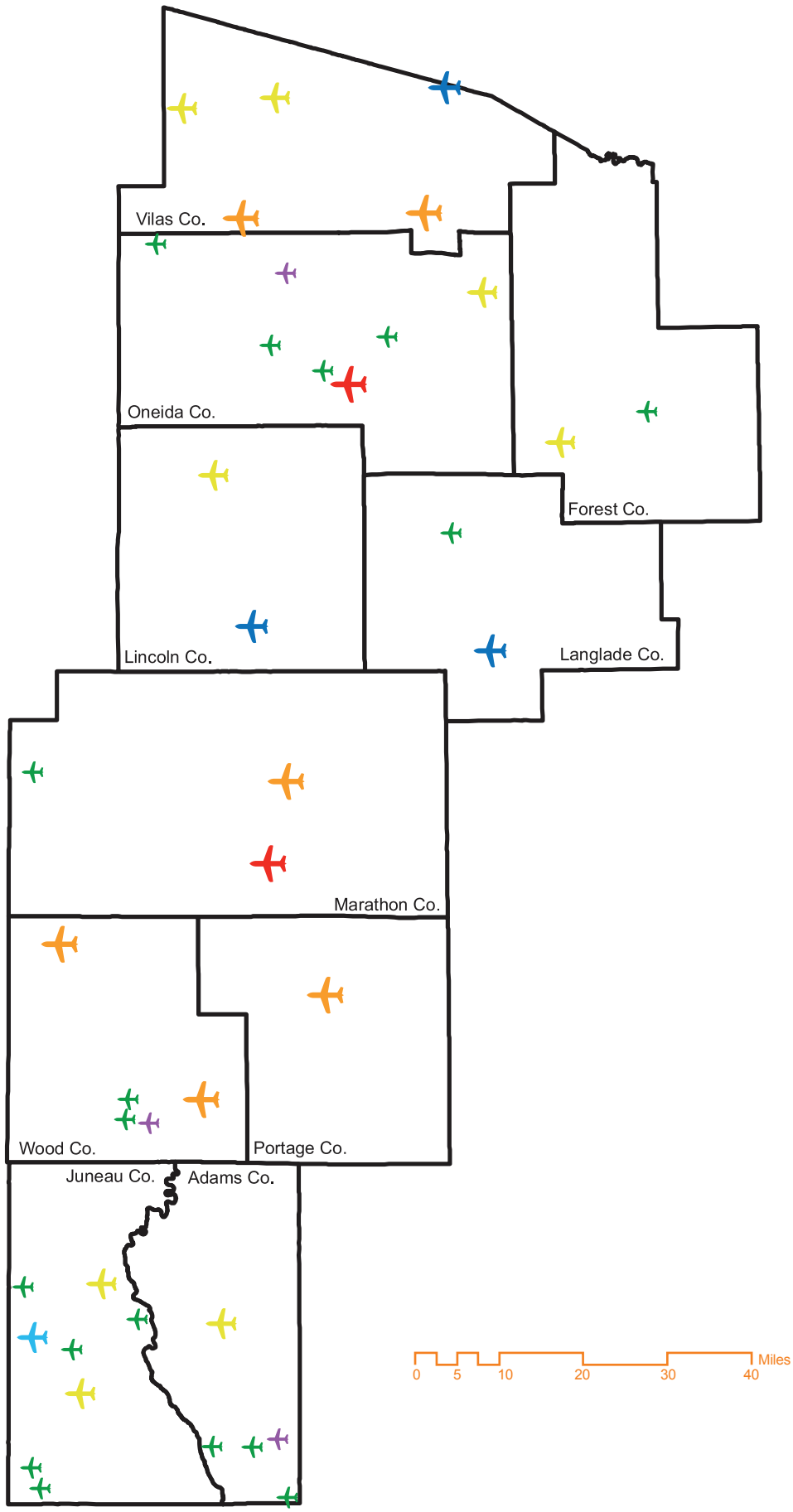
The State is currently creating the Wisconsin State Airport System Plan 2030 (SASP 2030), an update to the Wisconsin State Airport System Plan 2020. The SASP 2030 provides a framework for the preservation and enhancement of a system of public-use airports adequate to meet the current and future aviation needs of Wisconsin.

TABLE 13 | Aviation Passengers and Shipping

Airport	Air Carrier Enplanements		Aircraft Operations		Enplaned Freight (lbs.)	
YEAR	2008	2012	2008	2012	2008	2012
MOSINEE - CENTRAL WISCONSIN (CWA)	154,312	120,637	21,352	15,236	1,308,437	521,788
RHINELANDER - ONEIDA AIRPORT	26,193	11,353	2,339	736	1,117,049	871,615







This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.

F Rail

Rail is a major component of any transportation system. Rail moves commodities and people across the country. Freight and passenger rail are constantly evolving to meet changing needs. With an increasing population and a steady growth in highway traffic congestion, rail will become even more important to the state's transportation system.

Passenger Rail

There is no passenger rail service within the Region at this time. AMTRAK utilizes track through Juneau County, however no passenger stops are located within the Region. The nearest AMTRAK stations are located in Portage, Tomah, and Wisconsin Dells, which provide daily service to Chicago and Minneapolis.

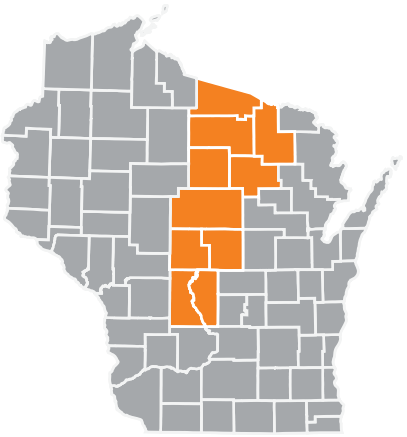
Freight Rail

Rail is a critical component of the transportation, especially as it relates to the movement of goods. Within the Region the rail system is made up of four rail providers, these are: Canadian National, Canadian Pacific, Tomahawk Railway, and Union Pacific. Canadian National (CN) is the primary railroad serving the region, with tracks in 8 of the 10 counties. CN operates track mileage by county as follows: Forest 39 miles, Juneau 29 miles, Lincoln 40 miles, Marathon 70 miles, Oneida 47 miles, Portage 71 miles and Wood 97 miles (see Map 4).

Canadian Pacific Railway (CPR) parallels Interstate 90/94 across the southwest corner of the region with about 36 miles of track in Juneau County. This railroad connects with Canadian National at New Lisbon. The track in Juneau County was obtained by Canadian Pacific when it acquired the Soo Line Railroad in 1992.

The Tomahawk Railway is perhaps one of the shortest railroads in the country. Formerly part of the Marinette, Tomahawk, and Western (MT&W) Railroad, the remaining 14 mile rail line services a paper mill and hauls products to a distribution center in the City of Tomahawk, where it is off-loaded for warehousing and transfer to trucks. The Louisiana-Pacific plant is also served by this line.

The Union Pacific Railroad (UP) crosses Adams and Juneau Counties with a connection to the Canadian National at Necedah. Union Pacific has approximately 29 miles of track in Adams County and 19 miles in Juneau County. Union Pacific tracks cross the State of Wisconsin from Superior and the Twin Cities to Milwaukee and south to Chicago.



This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.

Freight Usage

A recent study on the Wisconsin Northwoods Freight market (Wisconsin Northwoods Freight Rail Market Study) identified that six percent of all inbound freight, or 495,000 tons, was shipped via rail, equaling $150 million. The majority of the products shipped by rail include coal, pulp or paper products, lumber or wood products, chemicals and allied products, and food or kindred products. Most of these products were delivered from the Kentucky portion of the Evansville (Indiana) BEA, Non-Census Metropolitan Area (Non-CMA), British Columbia (Canada), Non-CMA Alberta (Canada), and St. Louis County (Minnesota).

Just over 1 million tons of commodities were shipped from the Northwoods areas by rail, valued at just over $412 million. Top commodities include pulp or paper products, lumber or wood products, and clay/glass/stone. Major destinations for these shipments were other Wisconsin counties, Indiana, and Minnesota.

Freight terminating in the Region increased 3,674,893 tons between 2007 and 2011 (see Table 14). Only six of the ten counties in the Region currently have rail service. Wood County experiences the largest amount of freight terminating in the Region, with 5,335,029 tons of freight in 2011. Over 50 percent of all freight which terminated in the Region went to Wood County. The other major destination for freight in the region is Marathon County, with 3,575,120 tons of freight in 2011. Wood County also experienced the largest gain in freight terminating in their county, increasing 2,594,353 tons between 2007 and 2011. Lincoln County experienced a significant increase in freight terminating in their county, while Portage County had a large decrease in the tonnage of freight terminating in their county.

Freight originating in the Region decreased 126,728 tons between 2007 and 2011. Wood County exports the most tons of freight, with over 1 million tons of freight originating in Wood County. The next highest tonnage of freight originating in the Region is in Marathon County with 738,000 tons of freight. The Region's termination to origination ratio increased to 4 to 1 in 2011, compared to 2 to 1 in 2007. Juneau County and Oneida County are the only counties to experience an increase in the amount freight originated in their counties between 2007 and 2011. Juneau County experienced the largest increase, increasing from 3,840 tons in 2007 to 129,732 in 2011.

Only three counties in the Region use rail service for internal freight. Wood County decreased the amount of freight moved internally by almost 50,000 tons between 2007 and 2011. Overall, the Region moved just over 200,000 tons internally in 2011, a slight decrease from 2007.

Northwoods Rail Commission:
The need for access to reliable rail service has been identified by local leaders and businesses in parts of our region. The decline of rail service in northern Wisconsin has had a negative impact on manufacturers and loggers in the Region. North Central Wisconsin Regional Planning Commission assisted local leaders throughout northern Wisconsin and they formed the Northwoods Rail Commission in 2012. The recently formed commission consists of Ashland, Forest, Florence, Iron, Langlade, Lincoln, Marathon, Marinette, Oconto, Oneida, Price, Rusk, and Vilas counties. In addition to those counties several other counties have expressed interest, including some located in Michigan. The mission of the Northwoods Rail Commission is to sustain and enhance safe, reliable and efficient rail service critical to the businesses, communities and economies in northern Wisconsin.

G Truck Freight

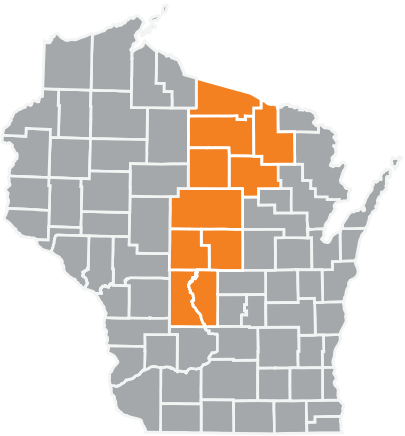
The Wisconsin State Connections 2030 Long-Range Multimodal Transportation Plan predicts that trucking will remain the dominate mode of freight transportation. Trucking is expected to account for 68 percent of all 2035 freight shipments measured by weight and 76 percent of all 2035 freight shipments measured by value. With truck traffic predicted to double by 2030, highways corridors will experience heavy increases in commercial truck traffic. In Wisconsin, it is expected that commercial vehicle miles traveled will outpace the growth of total vehicle miles traveled through the year 2030. See Map 5 for the Primary Truck Routes in the Region.

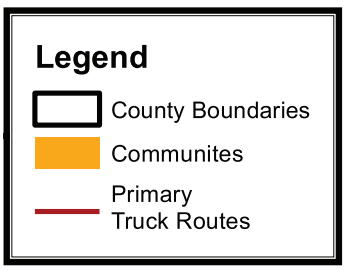
Regionally, the 2014 Comprehensive Economic Development Strategy (CEDS) identified the transportation and warehousing sector (NAICS 48) as an emerging industrial cluster. The transportation and warehouse cluster is the strongest cluster in the Region with all areas showing job growth over the next 10 years. This cluster currently employs 4.3 percent of the region's workforce. Between 2013 and 2023, the cluster is expected to gain 2,220 jobs, or 20 percent of its employment. The largest projected increase is in truck transportation with projected increases of 1,580 jobs, a 21 percent increase in employment. Truck transportation also ranks in the top ten (number eight) of the Region's economic driver industries with a location quotient of 3.23.

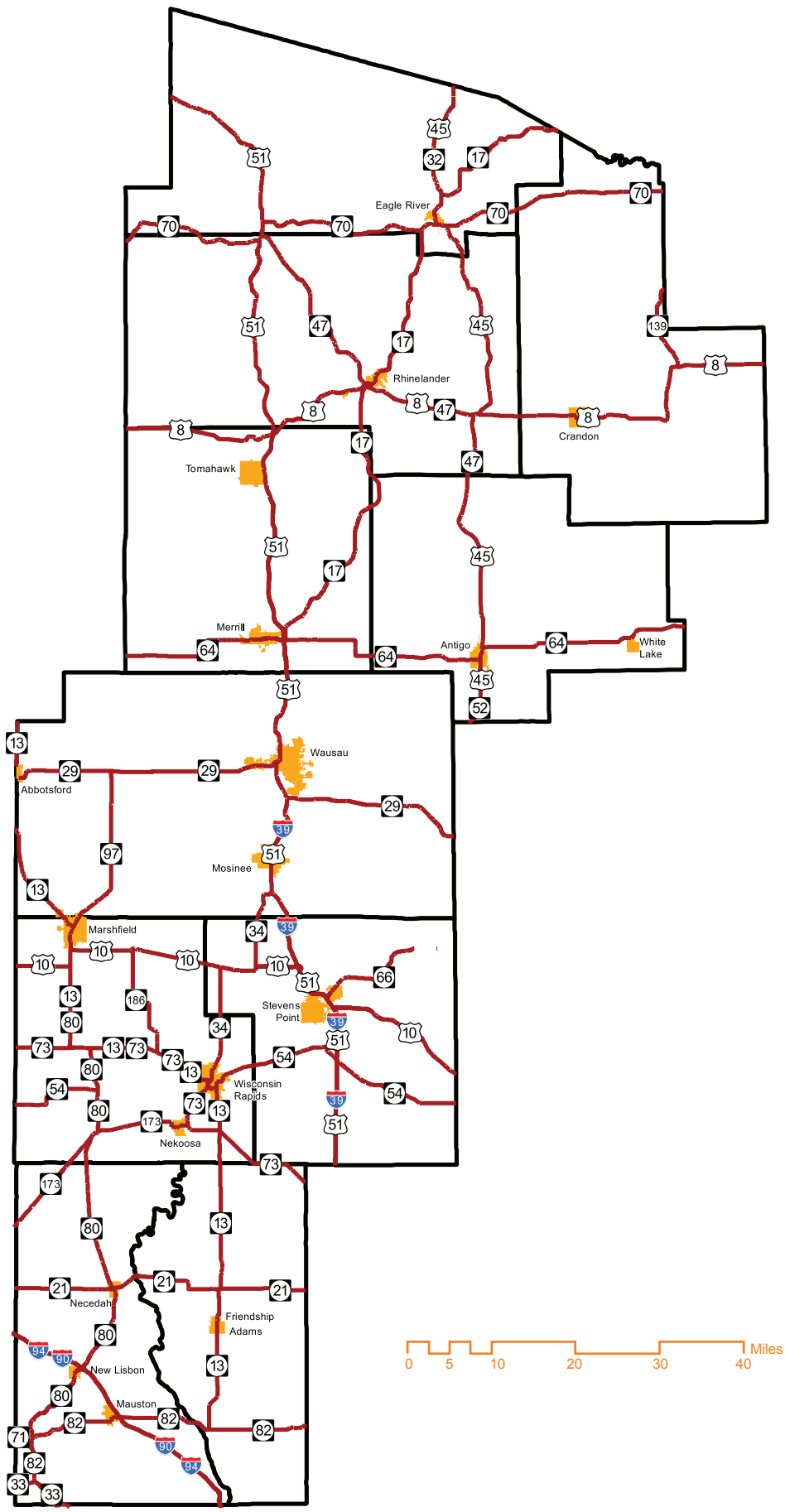
Over 17 million tons of freight terminated in the region in 2011, a two million ton increase from 2007. All ten counties use truck transportation to import freight into the Region. Marathon County reports the largest tonnage of freight terminating in their county with more than 6 million tons. Marathon, Wood, Portage, Oneida and Juneau Counties all terminated more than 1 million tons of freight in their county in 2011 (see Table 14). Overall, seven of the ten counties experienced an increase in the amount of freight terminated. With an increase of almost 1.4 million tons, Marathon County experienced the largest increase in terminated freight. Wood County experienced the largest decrease in freight tonnage terminated by truck, decreasing more than 1.2 million tons of freight between 2007 and 2011. However, Wood County had the largest increase in freight tonnage terminated by rail in the county, increasing over 2.5 million tons of freight by rail. The central sub-region of Marathon, Portage and Wood Counties experienced significant growth in freight terminated, increasing by 2,642,375 tons over the four year period.

Freight originating in the Region exceeded 20 million tons in 2011, a 1,466,106 ton decrease from 2007. Marathon County experienced the largest decrease in freight originated, decreasing more than 3 million tons between 2007 and 2011. Half of the counties experienced a decrease of freight originated over the 4 year period. Langlade County experienced the largest increase in freight originated, increasing nearly 2 million tons to 3.6 million tons total. Five Counties (Juneau, Langlade, Marathon, Portage, and Wood) originated more than 1 million tons of freight each comprising the majority of the freight originated in the region. Overall, the Region's 2011 origination to termination ratio is 1.16 to 1, compared to 1.41 to 1 in 2007. The region is exporting less freight and importing more freight by truck than it did in 2007.

The region decreased the amount of freight shipped internally by truck between 2007 and 2011 by more than 1.4 million tons. Langlade and Marathon Counties experienced the largest decreases in freight trucked internally. Langlade experienced a decrease from 1,327,819 tons in 2007 to 159,230 in 2011. Marathon experienced a similar reduction decreasing more than 1.4 million tons. Oneida and Wood Counties also experienced significant increases over the four year period. Oneida increased freight moved internally by more than 600,000 tons and Wood increased internal freight by more than 900,000 tons. Overall, 6 of the 10 counties experienced a decrease in the amount of freight shipped internally by truck.







This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.

TABLE 14 | 2007 - 2011 Freight Movement and Modes

County	Terminating				Originating				Internal			
MODE	TRUCK		RAIL		TRUCK		RAILS		TRUCK		RAIL	
YEAR	2007	2011	2007	2011	2007	2011	2007	2011	2007	2011	2007	2011
ADAMS	175,668	252,977	65,840	55,360	249,607	582,572	31,728	-	78,169	16,407	-	-
FOREST	479,298	189,155	11,720	-	667,099	545,137	4,000	-	328,288	53,816	-	-
JUNEAU	1,150,145	1,005,474	-	-	719,700	1,047,071	3,840	129,732	129,733	39,872	-	-
LANGLADE	432,144	692,233	-	-	1,863,229	3,684,632	-	-	1,327,819	159,230	-	-
LINCOLN	952,412	965,758	19,880	183,384	1,070,149	710,049	377,200	350,520	77,009	347,452	-	-
MARATHON	4,641,388	6,030,505	2,311,924	3,575,120	10,885,310	7,488,676	884,520	738,000	2,710,464	1,286,307	-	30,000
ONEIDA	850,883	1,541,954	96,260	75,588	450,797	351,668	8,080	27,640	45,112	659,296	-	-
PORTAGE	1,607,252	2,560,457	602,760	299,472	2,353,335	2,960,197	191,168	171,072	749,393	406,942	-	14,800
VILAS	274,245	574,298	-	-	112,044	172,697	-	-	4,330	100,853	-	-
WOOD	4,802,513	3,583,767	2,740,676	5,335,029	3,349,763	2,712,227	1,068,580	1,005,424	432,738	1,350,429	204,660	156,680
REGION	15,365,948	17,396,578	5,849,060	9,523,953	21,721,033	20,254,927	2,569,116	2,422,388	5,883,055	4,420,605	204,660	201,480

SOURCE: WisDOT

H Waterways

There are no harbors or ports within the Region. There are several small private marinas throughout the region; however, these are primarily recreational in nature. Although the waterways are not used for transportation, the Wisconsin River does have multiple hydroelectric facilities.

I Transportation Safety

Transportation safety has been and will continue to be an integral part of WisDOT's mission and will continue to be a priority for the North Central Region. From 2006 to 2010, the Region experienced a 10 percent decrease in vehicle accidents (See Table 15). Marathon County, which has the highest vehicle miles traveled in the area on a yearly basis, saw a reduction of 274 accidents over the 5 year period while increasing total vehicle miles traveled from 2003 to 2010. However, in 2010, the three counties with the highest vehicle miles traveled also had the most vehicle accidents. Marathon, Portage and Wood Counties all had more than 1000 vehicle crashes, with Marathon having the most vehicle crashes (2,788). Forest County averaged the lowest number of vehicle crashes over the 5 year period with 202 vehicle crashes and consistently has the lowest amount of vehicle miles traveled.

There is a correlation between the number of vehicle miles traveled and the number of vehicle collisions. The fewer vehicle miles traveled, the fewer vehicle collisions a County will experience. Every county except Juneau, who experienced 7 more accidents, reduced the number of accidents from 2006 to 2010 regardless of an increase or decrease in vehicle miles traveled. Overall, the Region averaged 9,457 accidents a year over the 5 year period. Vehicle fatalities in the Region have seen a 100 percent increase from 2009 to 2012. In 2012, the Region had 63 fatalities compared to 31 fatalities in 2009 (see Table 16). The largest increase in fatalities was between 2009 and 2010, when the Region experienced 26 more fatalities. That number has remained consistent over the past 3 years with 57 fatalities in 2010, 58 in 2011, and 63 in 2012. Marathon County experiences the most fatalities with 17 in 2012; they also experience the most vehicle miles traveled on a yearly basis. Vilas County had the lowest number of fatalities with 3 in 2012 and had the fourth lowest vehicle miles traveled.

TABLE 15 | Annual Vehicle Crashes

County	2006	2007	2008	2009	2010	2006 - 2010 Average
ADAMS	460	421	431	386	384	416
FOREST	201	197	235	183	195	202
JUNEAU	767	926	840	719	774	805
LANGLADE	316	261	279	280	230	273
LINCOLN	832	748	762	622	628	718
MARATHON	3,062	2,787	3,188	2,701	2,788	2,905
ONEIDA	979	912	926	900	818	907
PORTAGE	1,614	1,615	1,569	1,443	1,500	1,548
VILAS	553	502	522	469	475	504
WOOD	1,104	1,189	1,318	1,203	1,070	1,177
REGION	9,888	9,558	10,070	8,906	8,862	9,457

SOURCE: WisDOT

TABLE 16 | 2009 - 2012 County Fatalities

County	2009	2010	2011	2012
ADAMS	1	4	4	5
FOREST	0	1	4	4
JUNEAU	7	8	8	6
LANGLADE	1	2	4	6
LINCOLN	4	2	3	5
MARATHON	2	13	16	17
ONEIDA	4	8	4	5
PORTAGE	3	10	5	8
VILAS	5	2	3	3
WOOD	4	7	7	4
REGION	31	57	58	63

SOURCE: WisDOT

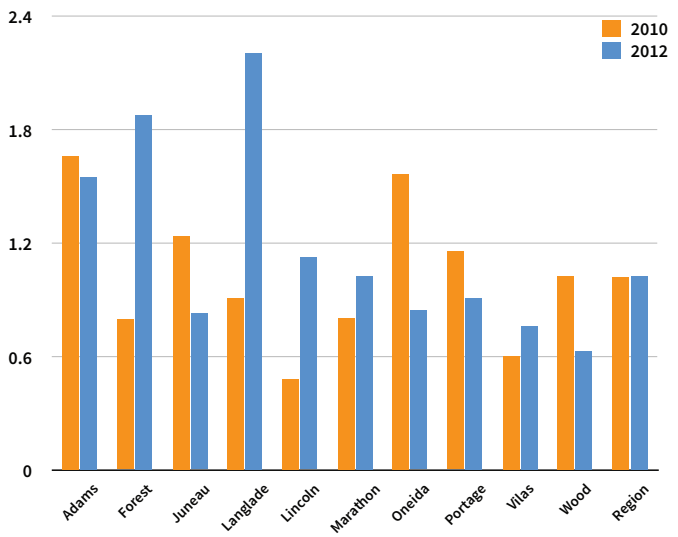
TABLE 17 | Fatality Rate per 100 Million VMT

County	2010	2012
ADAMS	1.66	1.55
FOREST	0.80	1.88
JUNEAU	1.24	0.83
LANGLADE	0.91	2.21
LINCOLN	0.49	1.13
MARATHON	0.81	1.03
ONEIDA	1.57	0.85
PORTAGE	1.16	0.91
VILAS	0.61	0.77
WOOD	1.03	0.63
REGION	1.02	1.03

SOURCE: WisDOT

Langlade has the highest rate of fatalities per 100 million vehicle miles traveled with a rate of 2.21 (see Table 17). Langlade County has experienced a rate increase of 1.3 from 2010 to 2012. Half of the counties had a fatality rate over 1 in 2012 and half of the counties experienced an increase in fatality rate. Oneida County had the highest decrease in fatality rate reducing their rate by 46 percent, from 1.57 in 2010 to .85 deaths per 100 million vehicle miles traveled in 2012. Overall, with an increase of over 500 million vehicle miles traveled in the Region, fatalities only increased .01 percent from 2010 to 2012.

FIGURE 5 | Fatality Rate Per 100 Million VMT



SOURCE: WisDOT, NCWRPC

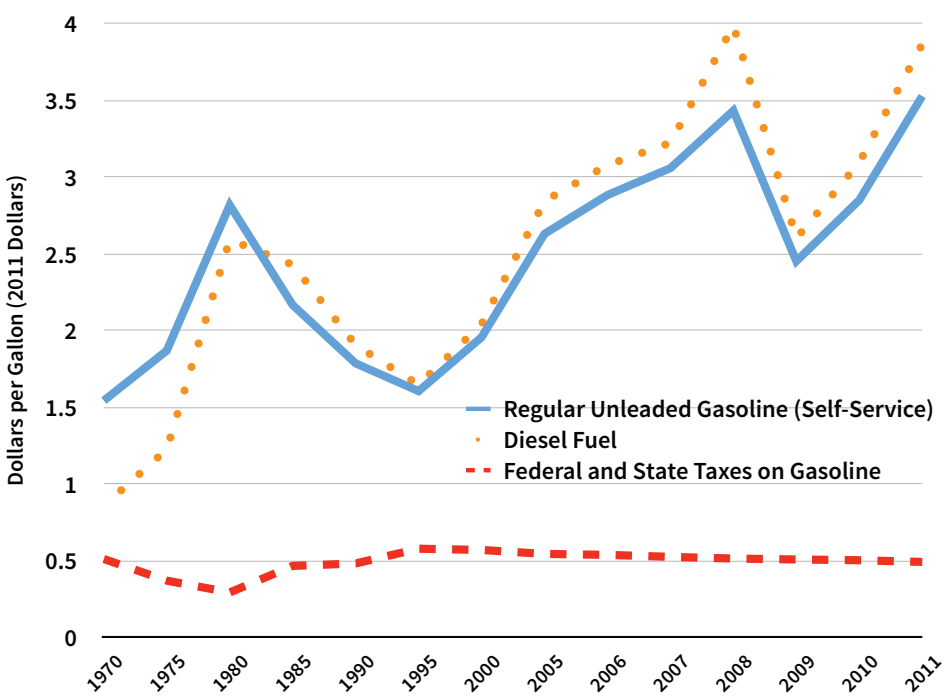
J Fuel Prices

The North Central Region's transportation system depends on petroleum and related products. In 2011, the real price of gasoline was 23.8 percent higher than in 2010. Real gasoline prices in 2011 were the highest on record since data has been compiled. The retail price for diesel fuel which is used by most farm equipment and freight transportation increased 24.9 percent from 2010 to 2011 (see Table 18). Diesel fuel peaked in 2008 when the retail price reached $4.00 per gallon.

In recent years, the cost of fuel has increased considerably. Figure 6 shows the changes in fuel prices from 1970 to 2011. Should the 40 year trend continue, the Region and state can expect to experience a continued increase in retail prices for unleaded and diesel fuels. Historically, gasoline prices increase for 10 to 15 years following a decrease in prices. From 2008 to 2009, the state experienced a reduction in gasoline prices of .80 cents per gallon only to increase prices $1.00 per gallon from 2010 to present day, exceeding 2008 prices. This trend mirrors past increases from 1995 to 2008 which followed a 15 year reduction in prices (1980-1995). Based on this historical trend, the region can expect gasoline prices to continue to rise for the next 10 years.

Rising fuel costs may encourage consumers and businesses to use fuel more efficiently, either driving less or by switching to more fuel-efficient modes of transportation, such as compressed natural gas (CNG), electric and hybrid vehicles, E85 vehicles, and neighborhood electric vehicle (NEV). These fuel efficient options benefit consumers and businesses, as well as the environment. But from a transportation funding perspective, this reduction in fuel consumption, and the resulting decrease in fuel taxes collected, means less revenue for the state's transportation fund. The ability of the state, counties and municipalities to pay for roadway maintenance, new highway construction, and other transportation projects will be reduced. Federal and State taxes on gasoline have remained steady at around .50 cents since 1980. In addition, the increase in fuel prices has a direct effect on the Region's freight transportation. Higher fuel prices are often passed on to the customer, resulting in an increased price for supplies and an increased price to consumers. Higher fuel costs also reduce businesses profits as more money is spent on fuel and less available to invest in workforce development, research and development (R&D), and other business expansion efforts. As fuel prices continue to increase, the region will need to identify cheaper transportation options and supply chains in an effort to stay competitive.

FIGURE 6 | Wisconsin Fuel Retail Prices



SOURCE: WisDOT

Fuel prices also have an effect on the local population. People will choose to drive less as gas prices continue to rise. Fewer vehicle miles traveled will mean a higher demand on public transportation, walking, bicycling. and rail transportation. The inability to drive to work at an affordable price may also result in people looking for employment opportunities closer to their homes to offset the price of commuting. Families will choose vacation destinations closer to their homes to reduce the transportation costs. This would result in less money being introduced to our regional economy. As the price of fuel continues to increase, people will find more affordable transportation options.

TABLE 18 | Wisconsin Gasoline and Diesel Fuel Retail Prices

Year	Regular Unleaded (self-service)	Diesel Fuel	Federal and State Taxes on Gasoline
1970	1.544	0.859	0.512
1975	1.87	1.226	0.371
1980	2.818	2.593	0.294
1985	2.167	2.43	0.467
1990	1.787	1.906	0.483
1995	1.606	1.647	0.579
2000	1.957	2.042	0.571
2005	2.631	2.845	0.545
2006	2.884	3.079	0.539
2007	3.059	3.224	0.526
2008	3.434	3.989	0.515
2009	2.453	2.602	0.509
2010	2.851	3.096	0.504
2011	3.529	3.867	0.493

SOURCE: Wisconsin Division of the American Automobile Association, Fuel Gauge Reports (1993 - 2011)

Summary

The Region's transportation network consists of many thousands of miles of roads, 19 public use airports, and several rail lines, as well as bike and pedestrian facilities. Total vehicles miles traveled within the Region continue to increase, but several counties are seeing a decrease in vehicle miles traveled in the past few years.

The connection between home and work is important to a livable community. Almost 90 percent of workers in the Region drive alone to work, while ten percent carpool. Only fractions of a percent of workers walk, bike, or take public transportation to work. Over 60 percent of workers who live in the Region are also employed in the Region. Those who live and work in the Region typically have shorter commute times than those who live or work outside. More people leave the Region to work than enter the Region to work.

Average driver age has increased along with the age of the Region's population, as the Region now has more drivers over 65 years of age and fewer under age 18. Due to the rural nature of most of the Region, few alternative transportation options are available to people who do not drive or have access to a vehicle.

Commercial traffic is another important segment of transportation. Several rail lines carry freight through the Region, but the majority of freight is transported via truck. Commercial vehicle miles traveled are expected to increase faster than total vehicle miles traveled over the next 15 years. A robust transportation network is essential for future growth and development in the region.

2 Goals and Objectives

As part of the previous Comprehensive Transportation Development Strategy planning efforts the following seven goals, along with objectives and performance measurements, were adopted. These goals that provide the starting point for the development of goals, objectives, and policies for the Regional Livability Plan effort.

GOAL 1:
Emphasize the preservation of the existing transportation system including highway, trucking, transit, disabled, pedestrian, bicycle, rail, air, and water facilities.

Objectives:

1. Maintain and enhance the efficient, safety and functionality of the existing transportation system, which links the Region's urban areas with outlying towns, adjacent counties, and the state.

GOAL 2:
Provide for an integrated, efficient and economical transportation system that affords mobility, convenience, and safety and that meets the needs of all citizens, including transit-dependent and disabled citizens.

Objectives

1. Promote efficient transportation system management and operation.
2. Enhance the integration and connectivity of the transportation system, across all modes throughout the Region, for people and freight.
3. Increase the safety and security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility options available to people and for freight.
5. Optimize financial resources.

GOAL 3:
Foster economic development and productivity of the Region, and its counties and municipalities, through an efficient transportation system.

Objectives

1. Target transportation investments, in all modes, to support business and job growth Region-wide.

GOAL 4:
Transportation planning and project development should protect and enhance the environment, promote energy conservation, and improve quality of life.

Objectives

1. Support passenger transportation alternatives to the private automobile, where feasible.
2. Expand and improve a statewide network of safe and convenient routes for bicycle transportation and touring, including safe and convenient access to and through the state's urban areas.
3. Control storm water runoff to minimize impacts on surface and ground waters during and after construction of transportation projects.

GOAL 5:
Program transportation planning and project development to achieve multiple public objectives including, but not limited to: transportation, recreation and economic development.

Objectives

1. Plan and design new and improved transportation facilities to accommodate and encourage use by bicyclists and pedestrians including those with disabilities.
2. Develop and maintain the navigability of public waterways for transportation purposes.

GOAL 6:
Consider the effects of transportation decisions on land use and development and be consistent with the provisions of all applicable short- and long-term land use and development plans.

Objectives

1. Achieve close coordination between the development of transportation facilities and land use planning, land development, and rural character preservation.

GOAL 7:
Encourage neighborhood designs that support a range of transportation choices.

Objectives

1. Promote land use policies that are bicyclist and pedestrian friendly.

GOAL 8:
Decisions regarding transportation should be consistent with other elements of the Comprehensive Plan.

Regional Performance Measures

In an effort to identify critical information related to transportation and track changes over time the following performance measures were identified.

- Vehicle Miles Traveled (by Mode)
- Commute Times and Distances
- Commute Patterns to and from Region
- Mode of Transportation to Work
- System Level of Service “C” or better
- Accident Rates
- Percent of Roads with Bike Accommodations
- Transit Ridership
- Percent of Population Served by Transit
- Miles of Sidewalk
- CWA/Rhinelander Airport Usage (Passenger and Freight)
- Freight Rail Usage
- Freight Truck Usage
- Housing/Transportation Cost Index (US DOT Affordability)

NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

TRANSPORTATION ASSESSMENT REPORT

EDITION 2015

HO LU
REGIONAL LIVABILITY PLAN
TR ED