



WISCONSIN NORTHWOODS FREIGHT RAIL STUDY

June 2018



ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The purpose of the Northwoods Freight Rail Study update was to reassess the need for rail service in the counties that make up the Northwoods Railroad Transit Commission (NRTC). This was accomplished through outreach with NRTC members, economic development officials, business owners, shipping companies, rail users and other interested stakeholders. This study builds upon the findings of the Wisconsin Northwoods Freight Railroad Market Study, published in September 2013.¹

Since publication of the initial Northwoods Railroad Study, railroad service has continued to be an issue for northern Wisconsin businesses. Additional rail segments have been abandoned or are no longer served. Shipping rates and car availability are not what businesses hope they would be. Many companies that would prefer shipping by rail are currently shipping by truck.

The study area is composed of 13 Wisconsin counties: Barron, Florence, Forest, Iron Langlade, Lincoln, Marathon, Marinette, Oconto, Oneida, Price, Rusk and Vilas. Nine northern Michigan counties were also included in the study: Baraga, Delta, Dickinson, Gogebic, Houghton, Iron, Menominee, Marquette and Ontonagon. As of 2018, these 22 counties and their representatives are the members of the NRTC.

CHALLENGES FACING THE RAIL INDUSTRY IN THE NORTHWOODS

The current rail industry in the Northwoods faces great challenges. Offering rail service at a competitive price is challenging due to a number of factors:

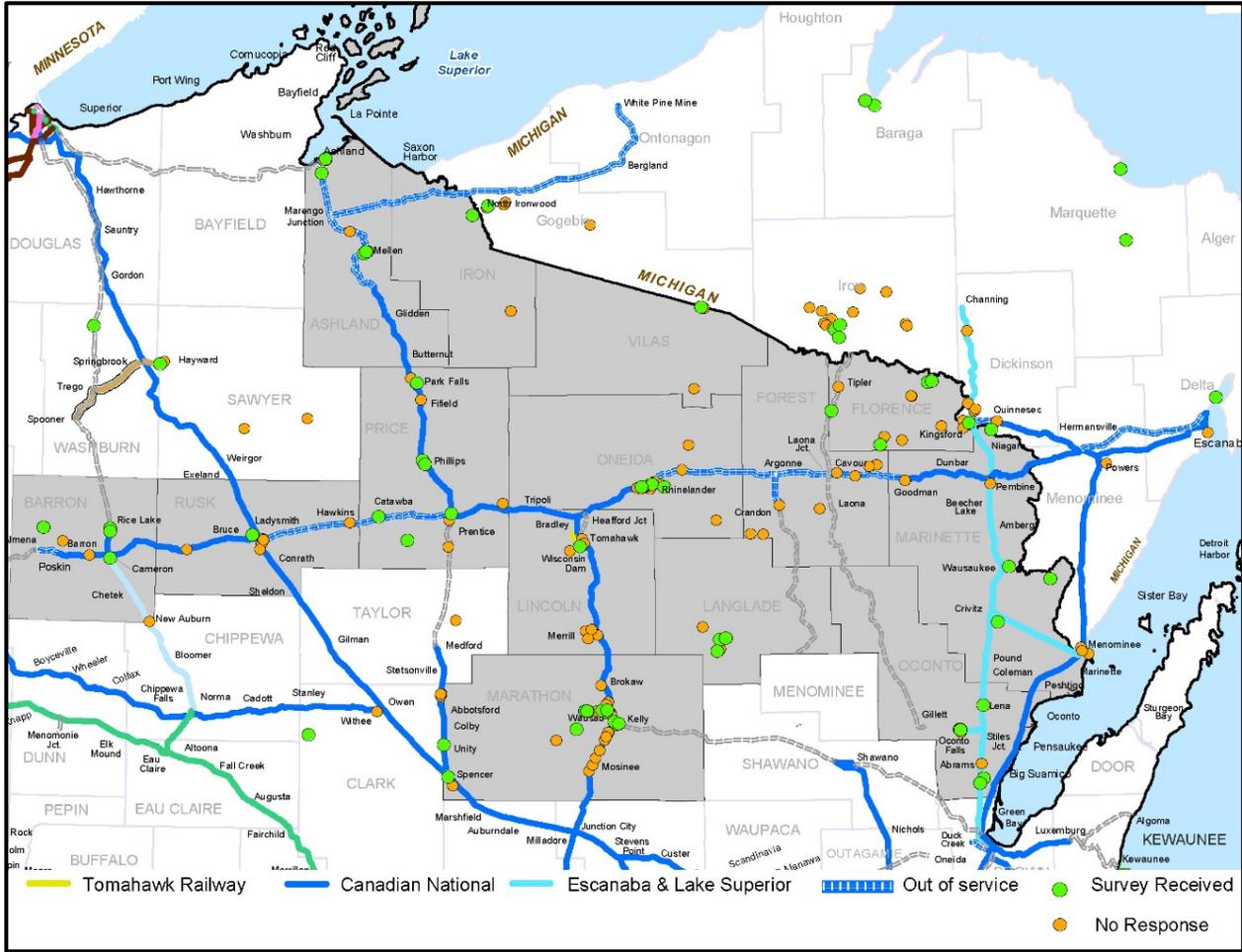
- number and location of customers
- frequency of service
- availability of rail cars
- lack of truck to rail transload facilities
- out-of-service rail lines causing indirect and longer rail routes

Commodities such as logs require several trains and switching points, which causes delay and increases the price to the customer. Although logs and wood products are northern Wisconsin's and northern Michigan's top commodities by volume, shipping logs is not always profitable for a railroad company.

SURVEY RESULTS

A major component of the study was a business survey to learn about the current transportation needs of Northwoods businesses. Questions asked about their physical business location, location(s) of customers, preferred methods of transportation to ship/receive goods, commodities they import/export, their volumes and reasons for using/not using rail service. The survey was mailed to 200 businesses in northern Wisconsin and upper Michigan.

¹ <http://northwoodsrail.org/wp-content/uploads/2013/FINAL%20Northwoods%20report.pdf>



The 2018 Northwoods Freight Rail Study encompasses 13 Wisconsin counties and nine Michigan counties. The Northwoods survey was sent to 200 businesses (shown as the green and orange circles). The orange dots represent businesses that were sent a survey but did not respond, while the green dots represent businesses that did respond.

Seventy-four businesses responded to the survey, for a total response rate of 37 percent. Takeaways from the surveys included the following:

- Logs, lumber, wood and pulp products were the top shipped and received commodity.
- More than 90 percent of businesses use hired truck carriers to ship their products.
- More than 95 percent of outbound freight is staying in the Midwest, United States.
- Lower shipping rates were the number one improvement needed for businesses to consider using rail.
- Unavailable rail service was the number one reason for not using rail service.
- More than 10.5 million tons of logs, lumber, wood and pulp products are shipped or received annually by 41 businesses.
- Trucks carry 85 percent of all logs, lumber, wood, and pulp products total weight for the surveyed businesses. Approximately 73 percent of all shipped and 99 percent of all received logs, lumber, wood, and pulp products are carried by truck.

- If the 41 businesses who currently truck logs, lumber, wood, and pulp products completely transitioned to rail, 105,218 additional rail cars could be added to the rail system annually in this commodity alone. This would remove 343,984 trucks annually from Wisconsin roads.
- If conditions improved, current rail users could ship an additional 950,000 tons of freight each year.

FINDINGS

As in 2013, the survey results indicated that there is potential for additional shipments to be made by rail under improved conditions. These conditions include lower shipping rates, infrastructure investment, more car availability and service.

Despite many challenges, the rail industry in the Northwoods counties continues to show potential. Escanaba and Lake Superior (ELS) saw their volumes increase by 16 percent in 2016, suggesting there is growing potential in the railroad industry in this region. CN reopened the seven-mile Ladysmith to Tony line and will serve a log landing at the Rusk County Industrial Park.

There have been discussions between Genesee & Wyoming (G&W) and CN regarding leasing lines to serve local demands. Lines of note include the following:

- Mosinee to Bradley
- Bradley to Prentice
- Prentice to Ladysmith (currently out of service)
- Prentice to Ashland
- Bradley to Rhinelander
- Rhinelander to Goodman (currently out of service)/Pembine

There is also continued interest by G&W and ELS railroads in leasing some of the CN routes to better serve local businesses, potentially reopening several out-of-service lines. The lack of businesses and products shipped on the rail line enables CN to justify the embargo of lines.

An investment in railroad infrastructure is needed in northern Wisconsin – the future of Northwoods businesses is in question without shortline rail options.

RECOMMENDATIONS AND NEXT STEPS

Below is a list of recommendations and next steps to consider:

- The Wisconsin Department of Transportation (WisDOT), Michigan Department of Transportation (MDOT), NRTC, Tri-County Rail Team, participating counties and Michigan Tech University should continue to share data and findings from their studies and research.
- Survey results from this study should be used to help identify travel lanes of specific origins and destinations that can assist with other efforts in the Great Lakes Forest Region. In January 2018, funds to conduct a \$200,000 planning study for the Alger County-Upper Peninsula Forest Projects Rail Study project were approved. The study will investigate solutions for effective rail transport of the forest products industry in Michigan's Upper Peninsula.
- The Wisconsin Economic Development Commission (WEDC) and NRTC should combine efforts on business proposals for companies that want to ship or receive goods via rail. This would include identifying interested businesses, inventorying existing and potential volumes and

looking at potential sites for collaboration. The proposals could be presented to business development and real estate personnel at the operating railroad companies who can provide advice on availability of rail accessible sites and service potential.

- All stakeholders should promote WisDOT's grant and loan assistance programs² to businesses looking for help with rail-related infrastructure improvements. Programs include the Freight Railroad Infrastructure Improvement Program (FRIP), Freight Railroad Preservation Program (FRPP), Transportation Economic Assistance (TEA) and the State Infrastructure Bank (SIB) Program.
- To maximize effective communication, NRTC, Tri-County Rail Team and all railroad transit commissions statewide should prioritize their issues and deliver a unified message to legislatures, businesses and railroads. These groups should work with local municipalities and businesses to create and carry out action plans to stabilize and grow railroad businesses.
- The NRTC should work with member counties and local businesses to establish a contacts list and facility location inventory for its rail users. The list would include specific contacts for each facility and provide the means for future group communication. The contact list could be used for businesses to discuss issues and concerns as well as a starting point for future studies.
- The NRTC should work with its rail users to inventory current facilities and commodity volumes and provide projections on changing needs over the next decade. Organized data of this type could help attract future rail service.
- Representatives of the operating railroads should continue to investigate possible options for shortline service and leasing/purchasing options.
- An inventory of deficient infrastructure (tracks and bridges that need repair) and cost estimates for repair would help determine the overall investment needed to reopen out-of-service lines.
- Additional discussion and study is needed to determine if transload/intermodal facilities would benefit NRTC member counties. Specifics would include the location, size and business types that could use the facility as well as who would pay for the land and fund the infrastructure.
- There is a need to improve relationships and trust between RTCs, County Economic Development Officials, local businesses and the railroads. Past efforts to work together have been challenging. Developing a platform for effective communication could benefit all stakeholders.
- The potential for mining exploration work in northern Michigan, including the Porcupine Mountains, Copperwood Mine, Back Forty Mine, Eagle Mine and the White Pine Mine should be examined. Potential destinations and routes to be used through Wisconsin should be identified.
- WisDOT will provide on-line mapping of all active and out-of-service rail lines and stations, including aerial imagery in the area. This information could be used by the NRTC and local businesses to identify potential transload facilities.
- Research is needed regarding the log car shortage before no cars are available. WisDOT will identify if there is a role for its loan programs. Log needs for the paper industry need to be confirmed and forecasted.

² <http://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/aid/default.aspx>

CHAPTER 1: Introduction

During the 2011 Governor’s Freight Summit, Wisconsin shippers and manufacturers expressed concerns about the lack of rail service in the northern part of the state. As a result, WisDOT completed a study called the Northwoods Freight Railroad Market Study (2013).

In 2017, due to continuing concerns, WisDOT was again tasked with studying rail service in northern Wisconsin. WisDOT coordinated with the Northwoods Railroad Transit Commission (NRTC) on this update. Identifying businesses with the potential to ship by rail, or to ship more by rail, will make the NRTC counties and their businesses more attractive to railroad companies that could provide service.

Major components of the study include:

- an overview of Wisconsin’s current freight rail network
- a summary of the NRTC and its rail preservation efforts
- county profiles with economic conditions and commodity flow
- a business survey looking at shipping patterns
- meetings with the three operating railroads

The survey of businesses in northern Wisconsin and the Upper Peninsula of Michigan was designed to identify:

- businesses that currently ship by rail and those with the potential to ship by rail
- origins and destinations of commodities
- type and volume of products shipped to and from their facilities
- infrastructure improvements that could allow businesses to better utilize rail

Figure 1 shows the study area and the businesses that were surveyed. More than 200 businesses that were identified as shipping by rail or having an interest in shipping by rail were contacted. 74 businesses replied to the survey, a response rate of 37 percent. The results of the survey along with overall recommendations can be found in Chapters 6 and 7 of this study.

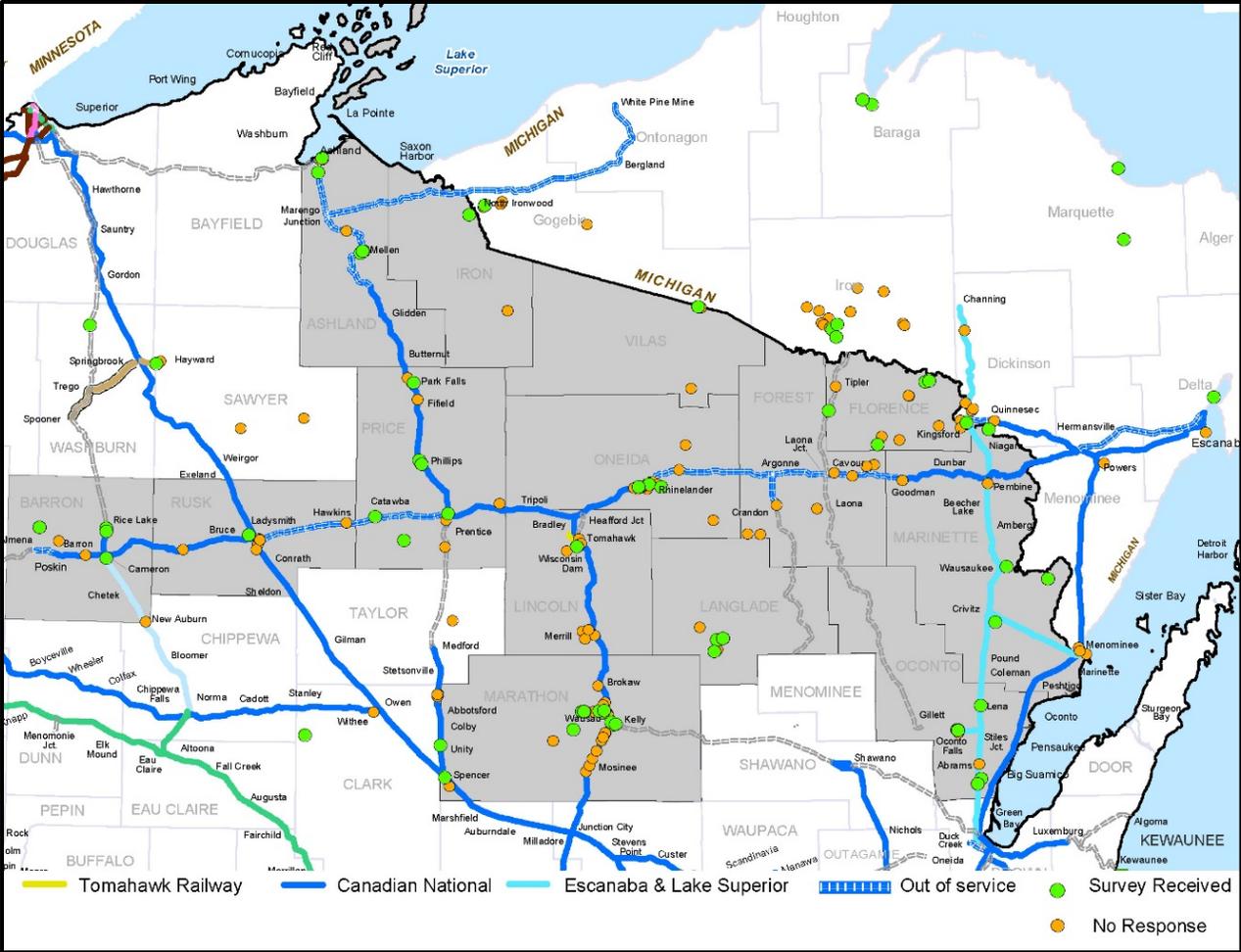


Figure 1: Surveyed Businesses

CHAPTER 2: Wisconsin's Current Freight Rail Network

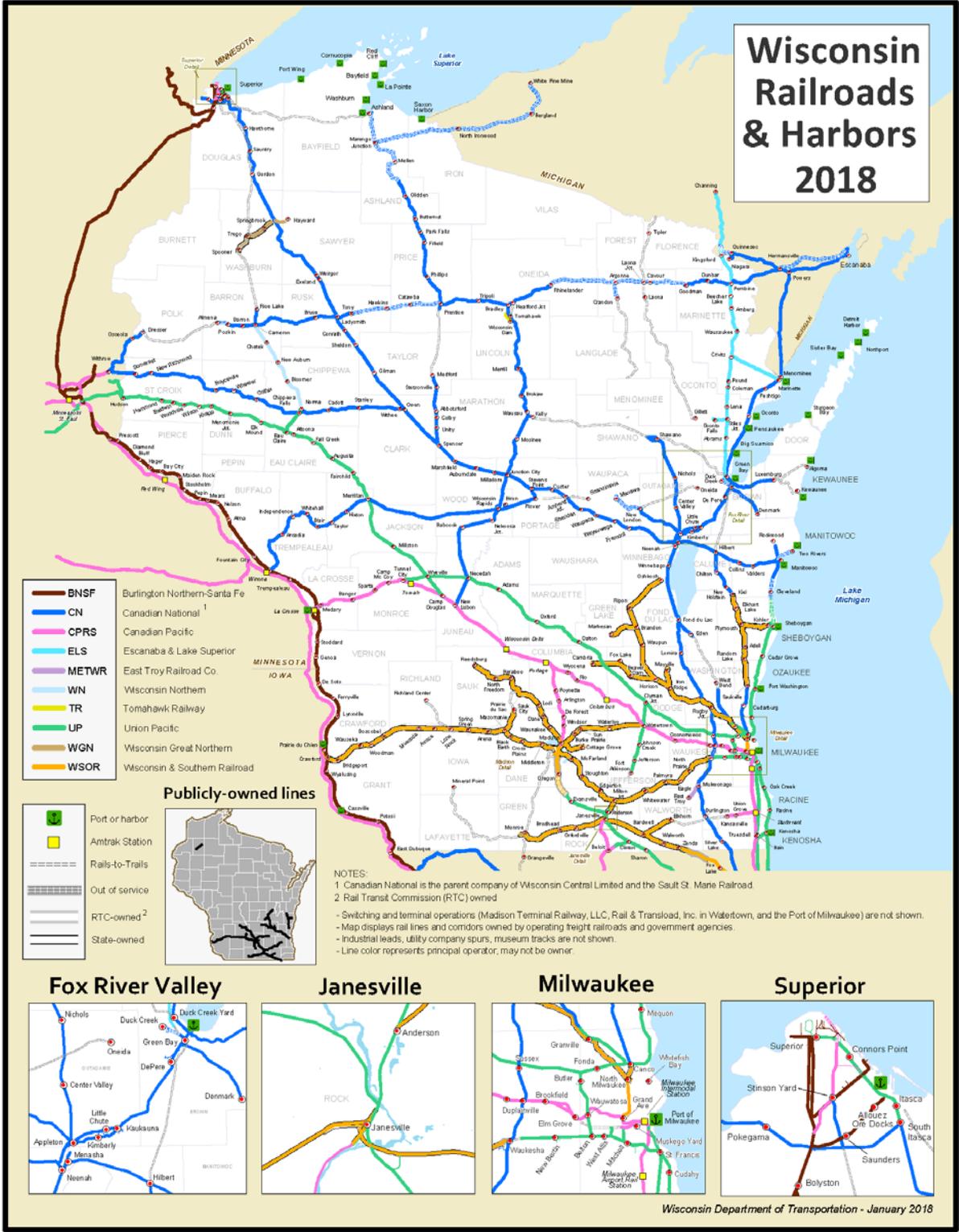


Figure 2: Wisconsin Railroads and Harbors Map - 2018

Currently Wisconsin's rail system (Figure 2) consists of a network of mainlines, branches, industrial leads, spurs, rail yards and terminals. Currently, active rail lines total more than 3,300 track miles and serve 59 of Wisconsin's 72 counties. This represents about two percent of the nation's rail network.

The state's rail network includes inactive lines still in private rail company ownership and former rail corridors that have been preserved for possible future transportation use. These corridors are protected under rail banking agreements or are currently being used as trails under the protections of the National Trails System Act.

STATEWIDE COMMODITY FLOW

Nearly 580 million tons of freight moved to, from, within or through Wisconsin in 2015. Rail transported 35.6 percent (206 million tons) of the total freight tonnage and 28 percent (more than \$158 billion) of the total freight value. Table 1 presents the statewide modal breakdown.

Table 1: Statewide Freight Commodity Flow

Wisconsin Freight Shipments by Tonnage, 2015 (all modes)					
	Outbound	Inbound	Within State	Overhead	Total
Rail	29,423,497	63,337,833	3,710,230	109,825,402	206,296,962
Truck	97,500,185	74,935,325	127,698,328	45,910,778	346,044,616
Water	18,090,116	9,285,361	21,027	-	27,396,503
Air	52,700	55,625	9,795	-	118,120
Other	9,292	111,538	-	9,484	130,315
TOTAL	145,075,790	147,725,682	131,439,380	155,745,664	579,986,517

Source: IHS, Transearch freight database 2015

The major commodities by weight transported by rail in 2015 included coal, oil/gas, nonmetallic minerals (sand/gravel), and farm products. Table 2 and Table 3 provide the tonnage and value of statewide rail commodities. Table 4 through Table 7 display the commodity movements by inbound, outbound, internal, and overhead shipments.

Table 2: Top Wisconsin Commodities by Weight, Transported by Rail

Commodity	Tons	% of Total
Coal	38,566,916	18.7%
Crude Petroleum or Natural Gas	27,578,553	13.4%
Nonmetallic Minerals	24,629,607	11.9%
Chemicals or Allied Products	21,994,078	10.7%
Farm Products	17,638,671	8.6%
Metallic Ores	15,471,328	7.5%
Food or Kindred Products	12,097,501	5.9%
Miscellaneous Mixed Shipments	11,466,465	5.6%
Lumber or Wood Products	9,653,444	4.7%
Pulp, Paper or Allied Products	7,539,520	3.7%
All other	13,157,919	9.5%
Total	206,296,962	100.0 %

Source: IHS/Global Insight, 2015 Transearch database

Table 3: Top Wisconsin Commodities by Value, Transported by Rail

Commodity	Dollars	% of Total
Miscellaneous Mixed Shipments	\$56,101,231,297	35.5%
Chemicals or Allied Products	\$25,282,273,466	16.0%
Transportation Equipment	\$23,247,223,776	14.7%
Pulp, Paper or Allied Products	\$9,388,233,943	5.9%
Crude Petroleum or Natural Gas	\$8,992,894,755	5.7%
Food or Kindred Products	\$7,587,453,935	4.8%
Farm Products	\$5,216,217,790	3.3%
Primary Metal Products	\$3,841,768,591	2.4%
Petroleum or Coal Products	\$3,167,899,145	2.0%
Lumber or Wood Products	\$2,701,303,071	1.7%
All other	\$12,477,366,158	7.9%
Total	\$158,003,865,927	100.0%

Source: IHS/Global Insight, 2015 Transearch database

Table 4: Top Inbound Wisconsin Commodities by Weight, Transported by Rail

Commodity	Tons	% of Total
Coal	38,023,728	60.0%
Metallic Ores	9,847,714	15.5%
Chemicals or Allied Products	3,564,477	5.6%
Farm Products	2,768,725	4.4%
Pulp, Paper or Allied Products	2,700,176	4.3%
Lumber or Wood Products	1,853,960	2.9%
Food or Kindred Products	1,320,240	2.1%
Clay, Concrete, Glass or Stone	1,267,540	2.0%
Petroleum or Coal Products	828,881	1.3%
Waste or Scrap Materials	352,596	0.6%
All other	809,796	1.3%
Total	63,337,833	100.0%

Source: IHS/Global Insight, 2015 Transearch database

Table 5: Top Outbound Wisconsin Commodities by Weight, Transported by Rail

Commodity	Tons	% of Total
Nonmetallic Minerals	20,443,138	69.5%
Farm Products	2,662,378	9.0%
Chemicals or Allied Products	1,642,409	5.6%
Food or Kindred Products	1,024,512	3.5%
Clay, Concrete, Glass or Stone	1,004,824	3.4%
Pulp, Paper or Allied Products	928,260	3.2%
Petroleum or Coal Products	594,832	2.0%
Waste or Scrap Materials	468,996	1.6%
Lumber or Wood Products	341,320	1.2%
Miscellaneous Mixed Shipments	186,000	0.6%
All other	126,828	0.4%
Total	29,423,497	100.0%

Source: IHS/Global Insight, 2015 Transearch database

Table 6: Top Commodities by Weight, Transported by Rail within Wisconsin

Commodity	Tons	% of Total
Nonmetallic Minerals	1,059,985	28.6%
Farm Products	1,040,753	28.1%
Lumber or Wood Products	611,268	16.5%
Pulp, Paper or Allied Products	325,480	8.8%
Chemicals or Allied Products	235,468	6.3%
Waste or Scrap Materials	141,540	3.8%
Clay, Concrete, Glass or Stone	113,520	3.1%
Food or Kindred Products	82,400	2.2%
Transportation Equipment	50,160	1.4%
Petroleum or Coal Products	47,920	1.3%
Fabricated Metal Products	1,736	0.0%
Total	3,710,230	100.0%

Source: IHS/Global Insight, 2015 Transearch database

Table 7: Top Commodities by Weight, Transported by Rail through Wisconsin (Overhead)

Commodity	Tons	% of Total
Crude Petroleum or Natural Gas	27,578,329	25.1%
Chemicals or Allied Products	16,551,724	15.1%
Farm Products	11,166,815	10.2%
Miscellaneous Mixed Shipments	11,095,785	10.1%
Food or Kindred Products	9,670,349	8.8%
Lumber or Wood Products	6,846,896	6.2%
Metallic Ores	5,623,614	5.1%
Petroleum or Coal Products	4,273,122	3.9%
Pulp, Paper or Allied Products	3,585,604	3.3%
Clay, Concrete, Glass or Stone	3,100,116	2.8%
All other	10,333,048	9.4%
Total	109,825,402	100.0%

Source: IHS/Global Insight, 2015 Transearch database

CHANGING ECONOMY IMPACTS TRANSPORTATION INFRASTRUCTURE

County roads, state and federal highways and freight rail systems provide the means to transport raw and processed goods throughout Wisconsin and to other states and countries. Changes in the economy and increased demand for certain commodities translate into changing demands on the state's transportation infrastructure network.

Northern Wisconsin's economy relies on tourism, forestry, paper industry, manufacturing and nonmetallic mining. Over the past decade, frac sand mining has received increased attention in Wisconsin due to the role that the state's high-quality white northern silica sand plays in the extraction of natural gas and oil from the nation's shale reserves.

Hydraulic fracturing ("fracking") extracts natural gas or petroleum from deposits in sedimentary rock known as oil shale. The process pumps a pressurized mixture of sand, water and chemicals deep into the underground shale formations, fracturing them. The resulting fissures are held open by the sand particles, so the oil or gas can flow up the well. The procedure requires sand that has a high quartz (silica) content and well-rounded grains. Wisconsin's mines produce some of the highest quality frac sand in the country.

Even though sand and gravel have been extracted in Wisconsin in the past, the increase in demand for frac sand increased the demand for freight infrastructure in the central and western counties. Rail service and rail car availability have played a critical role in the most recent development of the frac sand sector. For each well to be fracked, approximately 60 carloads of frac sand are required to prop open the fissures. Demand for the covered hoppers used to transport frac sand peaked between 2011 and 2013, with 70,000 of these cars in service in early 2014; more than a third of those cars had been delivered in the previous five years.³ Wisconsin's growth in frac sand production was aided by the presence of freight rail lines in the sand-producing areas of the region. By contrast, Minnesota's lack of sufficient rail capacity was noted as a limitation on their ability to develop the sector.⁴

Two major rail projects in Northwestern Wisconsin attest to the importance of frac sand production. In 2012, Canadian National completed a \$35 million rehabilitation of 40 miles of rail between Ladysmith and Poskin (west of Barron) to serve Superior Silica Sands.⁵ This allowed for cost-effective transportation of frac sand to shale deposits in North Dakota, Texas and Pennsylvania. According to a report by financial consulting firm Raymond James (2012), it was estimated that sand producers saved as much as \$10 per ton shipping by rail.⁶ Subsequently, another processor, Source Energy Services, opened a facility along that corridor in Weyerhaeuser. By the close of 2013, CN had reported a 300 percent market growth in frac sand over a five-year period, with 50,000 carloads moved that year.⁷

In addition to CN's investments to serve the frac sand sector, in 2014, Union Pacific invested \$30 million to improve and expand the rail yard in Altoona, compelled by additional traffic generated by frac sand.⁸

³ <https://www.chase.com/content/dam/chasecom/en/commercial-bank/documents/equipment-insight-vol9-sept2014.pdf>

⁴ https://www.minneapolisfed.org/~media/files/pubs/fedgaz/12-07/sand_surge_fedgazette_july_2012.pdf

⁵ https://www.cn.ca/en/news/2012/08/media_news_invest_wisconsin_frac_20120813

⁶ Marshall J. Adkins and James M. Rollyson. Hi Crush Partners LP, Launching on High Quality, Low Cost Frac Sand and Producer Hi Crush with MO2 (September 14, 2012): 3. Quoted in Environment & Energy Publishing, accessed at <http://www.eenews.net/stories/1059982951>

⁷ <https://www.cn.ca/en/news/2013/12/another-state-of-the-art-frac-sand-producer-locates-on-cns-wisconsin-network>

⁸ <http://www.weau.com/home/headlines/Railroad-improvements-coming-to-Altoona-section-of-track--256640061.html>

As quickly as the market for frac sand seemed to grow, the market contracted beginning in 2014. Many factors were involved, but the primary reason was a sharp decline in oil prices. Oversupply of oil led to an eventual drop in demand for production rigs at the three most productive domestic shale deposits: Bakken (centered in western North Dakota), Eagle Ford (arcing across southern and eastern Texas) and Permian (across west Texas and southeastern New Mexico). These three areas accounted for 89 percent of shale oil production in the United States.

For a period in 2015 and 2016, the rapid drop in active rigs led to a sharp drop in sand production, with layoffs at several Wisconsin sand producers and closing of operations that were not cost-effective. The covered hopper cars that had been in great demand just months earlier were suddenly parked for storage – between 25,000 and 40,000 cars were sitting idle in the fourth quarter of 2016. But then, with the rebound in oil prices to \$57 per barrel, mine operations and the rail car market both perked up by April 2017, following increases in oil production and rig counts.⁹ A potential factor favorable to the recovery of the frac sand proppant sector was the reported increase in the volume of sand used in each well drilled: as much as three times previous standards.¹⁰

Also indicative of a potential rise in demand for frac sand, the Energy Information Administration forecasts that crude oil production in the United States will reach a record high in 2018, led by a large increase in production from the Permian Basin. Further, the production per well for new wells (as charted on a months-of-operation timeline) shows that peak and sustained production have both risen each year from 2014 to 2017, as operators apply changing techniques to maximize output per well.¹¹

In Wisconsin, sand production resumed at two mines in late 2016 after a year-long hiatus; however, the announcement of the reopenings noted the sand products would be sold to other customers besides hydraulic fracturing.¹² Estimates for the market demand for frac sand for 2017 ranged from 45 to 55 million tons, down from the peak demand of 60 million tons in 2014.¹³ As of mid-2017, the Wisconsin DNR estimated that 92 facilities were actively serving the frac sand mining industry, while another 32 were inactive.¹⁴

OTHER CHANGING BUSINESS SECTORS IN NORTHERN WISCONSIN

Recent plant closings and lay-offs in the paper and packaging industry diminished the need for rail service in northern Wisconsin. Once the dominant industry in many parts of the state, paper-making has undergone attrition over the past few decades, as foreign competition and reduced demand for printed goods brought many mills to a standstill. Since 2000, 19 paper mills have closed in Wisconsin. Between 2005 and 2015, one-third of Wisconsin's paper mill jobs were lost.¹⁵ Many of these mills produced coated paper that is used in magazines and other glossy printing applications. However, most of the remaining mills may not be as vulnerable to closings. Of the mills remaining, 90 percent of their products are tissue, packaging and specialty papers; these markets are identified as stable or growing.¹⁶

⁹ Railway Age, May 2017. https://issuu.com/railwayage/docs/may_railway_age

¹⁰ <https://www.wiscontext.org/energy-industry-weighing-how-bullish-be-wisconsin-frac-sand-2017>

¹¹ <https://www.eia.gov/todayinenergy/detail.php?id=34212>

¹² <https://www.wpr.org/two-wisconsin-frac-sand-mines-resume-operation>

¹³ <https://www.wiscontext.org/energy-industry-weighing-how-bullish-be-wisconsin-frac-sand-2017>

¹⁴ <http://dnr.wi.gov/topic/Mines/ISMMMap.html>

¹⁵ <https://www.marketplace.org/2017/09/06/world/paper-mill-jobs-meant-comfortable-lifestyle-Wisconsin-before-globalization>

¹⁶ <https://www.wpr.org/demand-paper-mills-decline-while-market-tissue-sanitary-paper-expected-rise>

TRUCK TO RAIL DIVERSION POTENTIAL – FREIGHT CHOICE MODELING

To estimate the potential amount of freight that could move by rail rather than truck, to or from the study area, WisDOT modeled its 2015 commodity flow data. The distance of freight trips and the weight and value of the commodities provided the means for estimates. Although the study area includes shorter railroad travel distances between its origins and destinations compared with national railroad travel distances, this analysis attempts to look at the potential for additional railroad shipments by applying five classification models to analyze the current freight mode choice patterns between truck and rail. The methodology is applied to a group of commodities that are moved by both truck and rail; however, the methodology can also be applied to a specific commodity.

Based on the models, the truck shipments that the models predicted as rail shipments range from 1,630,000 to 14,500,000 tons (0.6 to 5.4 percent of the Wisconsin truck shipments), or 74,000 to 763,000 truckloads (0.6 to 6.0 percent of the Wisconsin truck shipments), or \$0.61 to \$5.56 billion in value (0.6 to 5.5 percent of the Wisconsin truck shipments). The false positives (shipments moving by truck but predicted to move by rail) range from 96,000 to 1,302,000 tons (0.5 to 6.8 percent of the Northwoods truck shipments), 5,000 to 54,000 truckloads (0.5 to 6.0 percent of the Northwoods truck shipments) and \$12.4 to \$280 million in value (0.2 to 4.2 percent of the Northwoods truck shipments). This indicates that the most optimistic of the models shows the potential for an additional 1.3 million tons to be shipped by rail, rather than truck, on an annual basis.

METHODOLOGY

Freight mode choice is an area transportation planners and policymakers have vigorously researched. Discrete choice models have been popular among planners because of their predictive strength and interpretability for policy analyses. Recent studies have also considered several other models and measured their predictive strength, such as tree-structured models, neural networks, etc. In this study, four classification models were applied: 1) recursive partitioning and regression tree (rpart) model, 2) logit model, 3) linear discriminant analysis (LDA) and 4) random forest model. The statistical software 'R' was used to conduct the study.

Factors affecting the freight mode choice vary widely. Common factors include logistic, modal, commodity and firm characteristics. For this analysis, commodity and firm characteristics were analyzed: ton-mile and value per ton of shipments. In general, rail is considered more efficient than truck for shipping bulky commodities over a long distance. Also, commodities that are fragile and high value are not commonly moved by rail, primarily due to commodity and modal characteristics.¹⁷ Thus, we expect ton-mile and value-per-ton variables to have a correlation with the freight mode choice.

Each model has different statistical assumptions, which puts limitations on a model from capturing complete freight shipment characteristics. In addition, depending on the nature of available data, one model might be more appropriate over the other models. Comparing the results of multiple models may provide a broader picture of freight mode choice patterns.

DATA

The Transearch database was used to analyze the freight mode choice between truck and rail in Wisconsin. The database is updated annually and draws from public as well as private sources and

¹⁷ Federal Highway Administration, The Role of the National Highway System Connectors: Industry Context and Issues

surveys. Transearch provides commodity flows at a four-digit level Standard Transportation Commodity Codes (STCC) at a county level. The database contains more than 340 commodity types, four shipping modes and modal and firm characteristic variables,¹⁸ which allows analysts to conduct a wide range of transportation-related analyses. Table 8 shows a summary of goods moved by truck and rail in Wisconsin.

Table 8: Commodity Flows in Wisconsin

	Truck	Rail
Shipment records	917,337	2,880
Tons	300,133,838	96,471,560
Loads	15,018,416	947,193
Value	\$ 283,854,729,719	\$ 23,237,213,265

The data is further filtered by commodities that are moved by both truck and rail. After filtration, 78 commodities at a four-digit level STCC remained. After removing empty hauling shipments, the final dataset used for the analysis is summarized in Table 9.

Table 9: Commodities Moved by Truck and Rail in Wisconsin and the Northwoods region

	Wisconsin		Northwoods RTC	
	Truck	Rail	Truck	Rail
Shipment records	282,484	2,858	32,392	203
Tons	183,624,984	86,531,142	19,176,147	5,337,581
Loads	8,885,691	848,551	887,944	54,610
Value	\$ 84,358,536,415	\$ 22,431,495,550	\$ 6,723,301,318	\$ 969,025,386

EMPIRICAL RESULTS

Common statistical performance measures of a classification model are accuracy and sensitivity. Accuracy measures the percentage of all correct predictions, and sensitivity measures the proportion of correctly predicted rail observations to all rail observations. Table 10 summarizes the accuracy and sensitivity of the models.

Table 10: Accuracy and Sensitivity of the Models

	RPART	LOGIT	LDA	Random Forest
Accuracy (%)	99.3	99.2	99.0	99.9
Sensitivity (%)	42.0	37.3	4.7	89.4

¹⁸ IHS MarkIt, Transearch. Viewed Oct 9, 2017. <https://www.ihsmarkit.com/products/transearch-freight-transportation-research.html>

The accuracy ranges from 99.0 to 99.9 percent, and the sensitivity ranges from 4.7 to 89.4 percent. The random forest model performs best in classifying modes in terms of accuracy and precision. The prediction made by a model that differs from the actual mode is comprised of false positives and false negatives. A false positive is a truck shipment that a model predicted as rail shipment. A false negative is a rail shipment that a model predicted as truck shipment. Table 11 and Table 12 summarize false positives in Wisconsin and the Northwoods region.

Table 11: Truck Flow and False Positives in Wisconsin (000s)

	Tons	Loads	Value
Wisconsin	268,265	12,730	\$101,410,546
RPART	6,370 (2.4%)	281 (2.2%)	\$828,918 (0.8%)
LOGIT	14,500 (5.4%)	763 (6.0%)	\$5,559,666 (5.5%)
LDA	3,354 (1.3%)	139 (1.1%)	\$785,706 (0.8%)
Random Forest	1,630 (0.6%)	74 (0.6%)	\$611,116 (0.6%)

Table 12: Truck Flow and False Positives in the Northwoods region (000s)

	Ton	Load (Truck)	Value
Northwoods	19,176	888	\$6,723,301
RPART	96 (0.5%)	5 (0.5%)	\$19,568 (0.3%)
LOGIT	603 (3.1%)	31 (3.5%)	\$280,195 (4.2%)
LDA	1,302 (6.8%)	54 (6.0%)	\$12,353 (0.2%)
Random Forest	105 (0.5%)	5 (0.5%)	\$43,350 (0.6%)

CONCLUSION

Transearch statewide freight shipment data was used in conjunction with four classification models to identify freight mode choice patterns. Performance measures were used to estimate the predictive strength of the models based on ton-miles and value per ton. The random forest model had the highest predictive strength in terms of accuracy and precision. Although the models do not account for all the important variables affecting freight mode choice, firm and commodity characteristics variables captured well, in terms of accuracy, the patterns in Wisconsin. In addition, false positives, which are truck shipments that a model predicted as rail shipments, were identified. Based on ton-miles and value per ton variables, false positives range from 1,630,000 to 14,500,000 tons (74,000 to 763,000 truckloads) in Wisconsin, and 96,000 to 1,302,000 tons (5,000 to 54,000 truckloads) in the Northwoods region. Based on the results, not all shipments were moved by the expected mode, and further examination of these shipments can help identify other factors influencing freight mode choice and limitations of the current freight transportation system in Wisconsin.

CHAPTER 3: Rail Transit Commissions and Rail Preservation

Wisconsin's efforts to preserve freight rail service began with the passage of an amendment to the state constitution in 1992 that allowed state dollars to be used to purchase rail infrastructure. Rail Transit Commissions (RTCs) have been created to help preserve rail service or the potential for rail service and to influence policies on the future use of rail corridors if rail service is discontinued.

Grant agreements between WisDOT and the RTCs determine how the lines can be used. Much of the responsibility for operations and management is transferred to the RTCs that, in turn, contract with private railroads for service.

Wisconsin has approximately 718 miles of publically supported rail corridors that are jointly owned by the state and seven RTCs. Currently, 624 of these miles are publically owned and operated primarily by Wisconsin and Southern Railroad (WSOR). Wisconsin also has more than 700 miles of rail corridors preserved in the Rails to Trails Program. See Table 13 for a list of RTCs and their member counties and Figure 3 for a map of their locations.

RTCs are staffed by their member municipalities and, in some cases, by regional planning commission staff. Their respective level of activity and scope of efforts vary significantly. The commissions continue to be important partners with WisDOT in preserving rail service. In this partnership arrangement, WisDOT provides resources, information, staff support, general oversight and funding. The commissions provide project management, matching funds and coordination with shippers, freight rail operators and local governments.

Table 13: Wisconsin Rail Transit Commissions

Name	Created	WI Counties	Purpose
East Wisconsin Counties Rail Consortium	1970s	Winnebago Dodge Green Lake Washington Fond du Lac	Manages 150 miles of track in cooperation with Wisconsin & Southern Railroad (WSOR)
Pecatonica Rail Transit Commission	1978	Rock Iowa Green Lafayette	Manages 34 miles of track between Monroe and Janesville, as well as a recreational trail between Monroe and Mineral Point
South Central Wisconsin Rail Transit Commission	1978	Dane Green	Manages 59 miles of rail corridor that is currently a recreational trail
Wisconsin River Rail Transit Commission	1980	Crawford Dane Grant Iowa Rock Sauk Walworth Waukesha	Largest and most active commission manages 254 miles of track; contracts with WSOR to provide service over its network

Name	Created	WI Counties	Purpose
Pink Lady Rail Transit Commission	1988	Sauk	Created to work with Union Pacific Railroad, communities, and shippers to maintain area rail service
Washburn County Rail Transit Commission	1998	Washburn	Manages 18 miles of rail line and currently has an operating agreement with the Wisconsin Great Northern Railroad
Northwoods Rail Transit Commission	2012	Ashland Florence Forest Iron Langlade Lincoln Marathon Marinette Oconto Oneida Price Rusk Vilas	Organized to negotiate on behalf of its counties and take actions designed to improve local rail service for the communities of northern Wisconsin and the Upper Peninsula of Michigan

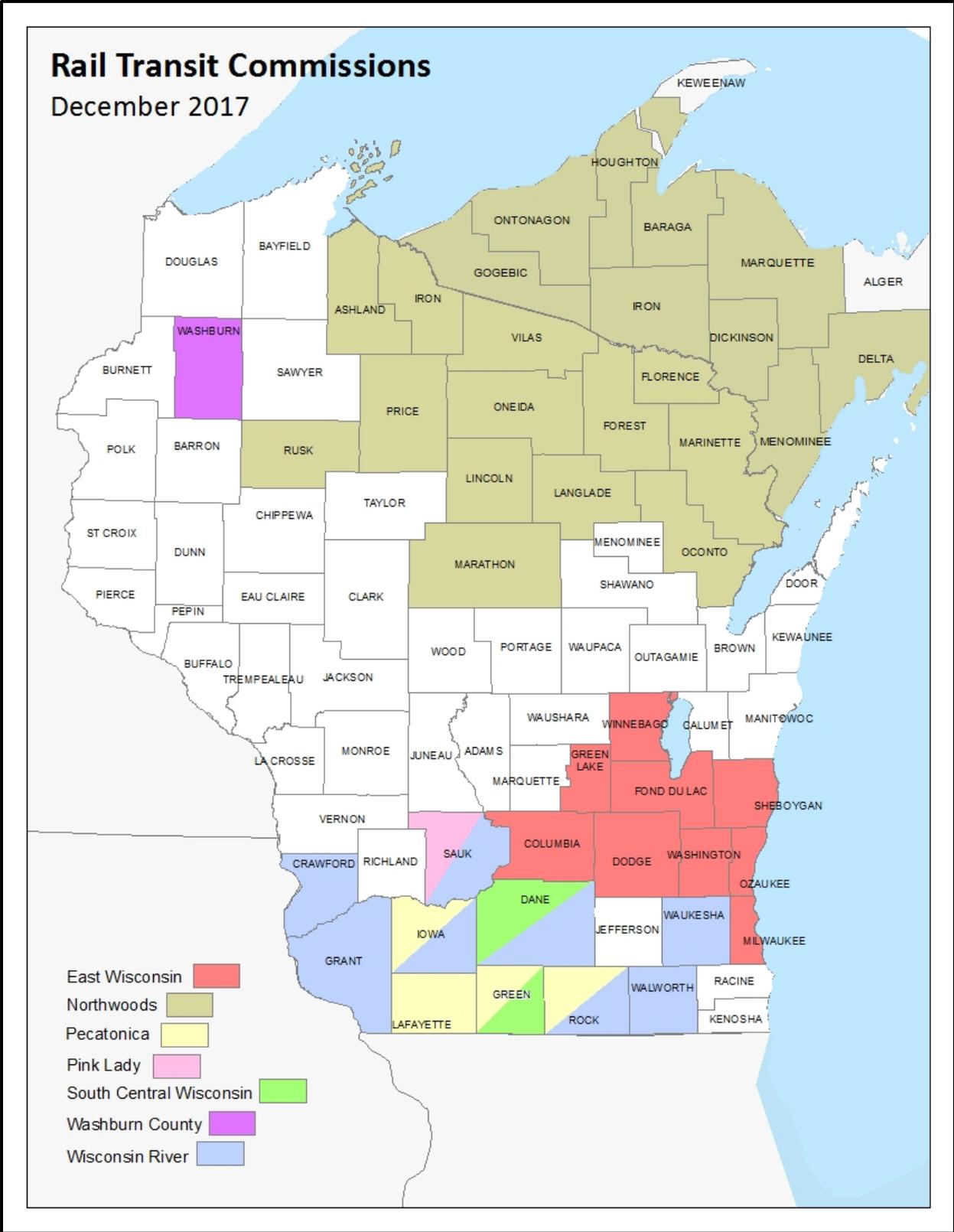


Figure 3: Wisconsin Rail Transit Commissions-2017

NORTHWOODS RAIL TRANSIT COMMISSION

The Northwoods Rail Transit Commission (NRTC) was officially recognized by the State of Wisconsin in May of 2012. The purpose of the NRTC is to work with the operating railroads and area businesses to build and maintain quality rail service. In the spring of 2013, the NRTC consisted of 10 northern Wisconsin counties that had banded together “to sustain and enhance safe, reliable and efficient rail service critical to the businesses, communities and economies in northern Wisconsin and the Upper Peninsula of Michigan.” Recognizing the importance of formally allowing input from counties in Michigan’s Upper Peninsula, the NRTC members approved revising the articles of incorporation in 2013. This revision recognized the statutory authority from each state that permitted the NRTC. It thereby allowed for development of a formal interstate cooperation agreement, which permits counties in Michigan to formally join the group and participate¹⁹. State approval of this agreement was received in late 2013²⁰.

The negotiations that led to the interstate cooperation agreement not only brought in the new counties from Michigan, but also encouraged other Wisconsin counties to join. The counties added to the NRTC in 2013 included the Wisconsin counties of Oconto and Marathon and the Michigan counties of Ontonagon, Iron and Dickinson. The counties added to the NRTC in 2014 included the Wisconsin county of Iron and the Michigan counties of Gogebic, Houghton and Menominee. Three counties in Michigan were added to the NRTC in 2015: Baraga, Delta and Marquette²¹.

The NRTC is composed of two representatives from each member county; they serve staggered two-year terms. The commission has an elected Chair, Vice-Chair and Secretary/Treasurer that serve one-year terms. The current representatives are:

Wisconsin Representative(s)

- Ashland County: Gary Kabasa and Dale Kupczyk (Vice Chair)
- Florence County: Wendy Gehlhoff and Fran Modschiedler
- Forest County: Don Dehart and Ron Karl
- Iron County: Joe Pinardi and Kelly Klein
- Langlade County: Dave Solin and Angie Close
- Lincoln County: Kevin Koth and Derek Woellner
- Marathon County: Alan Christensen (Secretary/Treasurer) and David Nutting
- Marinette County: Mike Cassidy and Tricia Grebin
- Oconto County: Paul Ehrfurth and Gary Frank
- Oneida County: Stacey Johnson and Bill Liebert
- Price County: TBD
- Rusk County: Andy Albarado (Chair)
- Vilas County: Jay Verhulst

¹⁹ http://northwoodsrail.org/wp-content/uploads/2013/Minutes/NRTC_Notes_Apr_2013_revised.pdf

²⁰ http://northwoodsrail.org/wp-content/uploads/2014/02/NRTC_Notes_Nov_2013.pdf

²¹ <http://northwoodsrail.org/minutes/>

Michigan Representative(s)

- Baraga County: Gale Eilola and Bill Menge
- Delta County: David Rivard and Peter VanSteen
- Dickinson County: Barb Kramer and Joe Stevens
- Gogebic County: Joe Bonovetz and Tom Laabs
- Houghton County: Al Koskela and Tom Tikkanen
- Iron County: TBD
- Marquette County: Scott Erbisch and Steve Schenden
- Menominee County: Steve Gromala
- Ontonagon County: Carl Nykanen

WISCONSIN RAIL ASSISTANCE PROGRAMS

WisDOT currently has three local government rail assistance programs: Freight Railroad Infrastructure Improvement Program (FRIIP), Freight Railroad Preservation Program (FRPP) and Transportation Economic Assistance (TEA) Program. The FRIIP offers loans to enable the state to encourage a broader array of improvements to the rail system, particularly on privately owned lines. It also provides funding for other rail-related projects, such as loading and transload facilities. The FRPP provides grants to local units of government, industries and railroads for preserving essential rail lines and rehabilitating them following purchase. A third WisDOT funding source, the Transportation Economic Assistance (TEA) program, also assists with rail-related projects. The TEA program provides grants to governing bodies, private businesses and consortiums for up to 50 percent of the costs of road, rail, harbor and airport projects that help attract employers to Wisconsin or encourage business and industry to remain and expand in the state.

Additional information regarding WisDOT rail assistance programs can be found on the WisDOT website or in the Wisconsin Rail Plan 2030.

CHAPTER 4: Northern Wisconsin Study Area

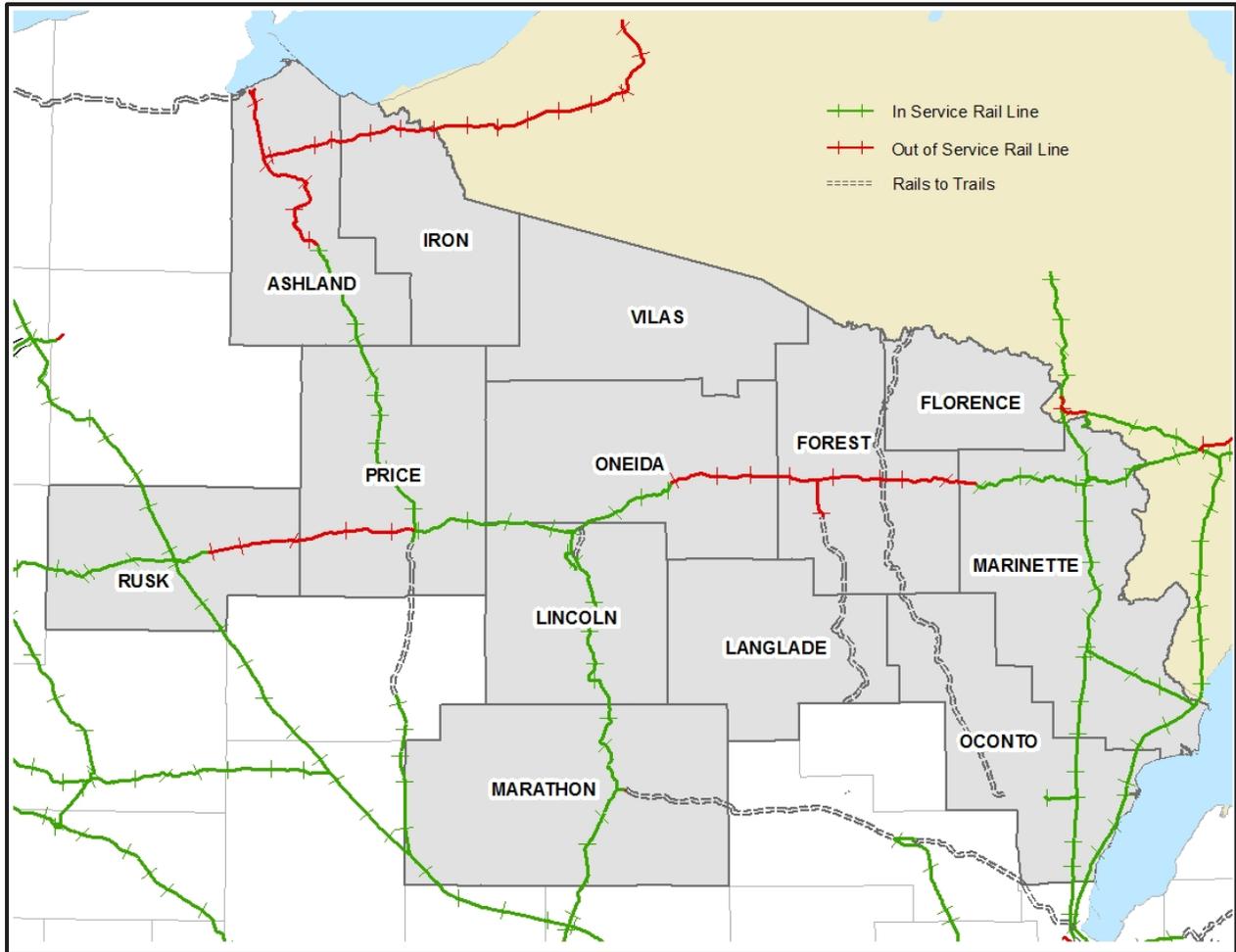


Figure 4: Northwoods Wisconsin Study Area

Nearly 350,000 people live in the 13 counties that make up the NRTC study area. This is a 9.4 percent increase in population since 1970, but a 0.8 percent decrease since 1990. The median household income for these counties was \$43,876 in 2011-2015, below Wisconsin’s median household income of \$52,701 for the same time period.²² There are more than 10,000 establishments in the study area and more than 650 manufacturing facilities.²³

These 13 counties represent diverse populations and industries. While northern Wisconsin may be known for tourism, forestry and mining, the region’s economy is also made up of a variety of manufacturing-related industries that rely on an efficient freight infrastructure system to transport their commodities.

²² U.S Census Bureau; “State & County Quickfacts”; generated by Liat Bonneville; <<http://quickfacts.census.gov>> (16 August 2013).

²³ Wisconsin Department of Workforce Development, 2012.

RAILROAD HISTORY

Railroads have been an integral part of Wisconsin's transportation system and economy since 1847. Wisconsin's railroad network peaked around 1920 at about 7,600 miles. From 1920 to 1929, abandonments exceeded new construction, and this pattern continued and accelerated for the remainder of the Twentieth Century.

The history of rail service throughout northern Wisconsin has included operations that serve customers within the state as well as overhead transportation (serving customers with both origins and destinations outside of the state). Virtually all the development and construction of the rail corridors currently in existence occurred in the 45-year period from the end of the Civil War (1865) through 1910.

Most of the corridors across the region were north-south, including the current dominant corridor for overhead traffic – the CN route between Duluth/Superior and Chicago. While timber and ore shipments were critical for the north-south lines, the region's development was catalyzed and sustained by a west-east overhead corridor – the initial Soo Line corridor between Minneapolis/Saint Paul, Minnesota and Sault Ste. Marie, Michigan/Ontario.

In 1987, the Soo Line divested itself of some of its low-density lines, selling them to Wisconsin Central Limited (WCL). Pulp and paper products, lumber and wood products, and clay/glass/stone composed more than half of its commodity volume at its inception²⁴. A 1991 study noted that 60 percent of WCL car loadings were related to the paper industry²⁵.

In the early 1990s, WCL went through a phase of expansion. The company purchased Soo Line's Ladysmith – Superior and C&NW's Cameron – Superior lines, giving WCL a corridor from Superior to Chicago. WCL also acquired the former C&NW line from Green Bay to Ishpeming, Michigan via Marinette and Escanaba.

Through the 1990s, CN became increasingly reliant on WCL as a bridge line between Superior and Chicago, under a 1996 partnership between CN, WCL and CSX for a transcontinental intermodal shipping corridor²⁶. The link became even more crucial in 1998, when CN acquired Illinois Central, providing CN with direct access to ports along the Gulf of Mexico²⁷. In 2001, WCL was acquired by CN for \$800 million, plus assumption of \$400 million in WCL debt²⁸.

Subsequently, WCL/CN began paring back the system. The largest piece to go through formal Surface Transportation Board (STB) abandonment was from Shawano to Crandon; however, WCL/CN also withdrew service from Prentice west to Ladysmith (prior to 2008)²⁹ and from Rhinelander east to Goodman (between 2008 and 2012). A segment that had its service discontinued between Ladysmith

²⁴ Statistics of Regional and Local Railroads, Economic and Finance Dept., Association of American Railroads, 1988.

²⁵ Ralph O. Gunderson and J. Scott McDonald, Wisconsin Railroads: Success in the Heartland; UW-Oshkosh, Sept. 1991.

²⁶ "CSX Joins the 'Superior Connection,'" Railway Age, May 1, 1996, summary accessed at <http://www.highbeam.com/doc/1G1-18313829.html>

²⁷ Stephen Franklin, "Illinois Central Goes To Canadian National Railway," Chicago Tribune, February 11, 1998 http://articles.chicagotribune.com/1998-02-11/business/9802110374_1_railroad-mergers-canadian-national-railway-canadian-firm

²⁸ "Canadian Railway to Buy Wisconsin Central," New York Times, January 31, 2001, <http://www.nytimes.com/2001/01/31/business/company-news-canadian-railway-to-buy-wisconsin-central.html>

²⁹ Wisconsin Dept. of Transportation, Draft State Rail Plan 2030, Chapter 3: <http://www.dot.wisconsin.gov/projects/state/docs/railplan-chapter3.pdf>

and Poskin was rebuilt in 2012 as the opening of a new frac sand processing facility generated sufficient revenue to restore service³⁰.

Since publication of the initial Northwoods Market Study in 2013, CN petitioned to abandon the segment from Argonne to Crandon in 2014 and announced discontinuation of service between Rhinelander and Goodman in 2017. Following flooding in 2016 that caused substantial bridge damage, CN embargoed the line from Morse to Ashland in mid-2016, and officially discontinued service on that segment in 2017.

For additional detail on the history of railroads in Wisconsin, see the 2013 Wisconsin Northwoods Freight Rail Market Study or the Wisconsin Rail Plan 2030.

RAIL SHIPMENTS TODAY

Inbound Freight

In 2015, more than 77 percent of the freight that was shipped to the study area was transported by truck. More than 10 million tons were shipped by truck (valued at nearly \$9 billion), while about three million tons (valued at \$480 million) moved to the area by rail. The top commodities shipped to the study area by truck were nonmetallic minerals, farm products, gas/oil, lumber or wood products and food or kindred products. Most of these shipments came from the Wisconsin counties of Chippewa and Brown as well as from the neighboring states of Michigan, Minnesota, Iowa and Illinois.

The top commodities shipped to the study area by rail were coal, pulp or paper products, lumber or wood products, chemicals or allied products and food or kindred products. Most products were delivered from Brown County, Wisconsin and Wyoming, Alberta, and Indiana.

Table 14 shows the inbound carload history for each NRTC county from 2011-2015, along with a comparison to 2007. The source of this data is IHS Transearch databases.

³⁰“CN to invest \$35 million in Wisconsin to serve Superior Silica Sands frac sand plant and other producers in future,” Canadian National web site, August 13, 2012, accessed at http://www.cn.ca/en/news/2012/08/media_news_invest_wisconsin_frac_20120813

Table 14: Inbound Carload History (2011-2015)

	2007	2011	2012	2013	2014	2015
Ashland	80	-	40	120	-	-
Florence	-	-	-	-	-	-
Forest	160	-	-	-	-	-
Iron	-	-	-	-	-	-
Langlade	-	-	-	-	-	-
Lincoln	280	2,044	1,776	2,040	2,196	1,044
Marathon	22,834	31,484	28,644	29,584	28,164	22,484
Marinette	4,296	1,956	1,320	1,360	1,640	1,440
Oconto	160	80	40	40	120	-
Oneida	1,000	796	520	720	560	1,680
Price	560	840	800	1,448	880	1,000
Rusk	572	40	-	120	188	80
Vilas	-	-	-	-	-	-
Total	29,942	37,240	33,140	35,432	33,748	27,728

Outbound Freight

In 2015, 87 percent of the commodities that were shipped out of the study area were shipped by truck. The remainder was sent by rail or water. Nearly 19 million tons of freight (valued at \$11 billion) originated in counties within the study area.

More than 16 million tons of goods were shipped from the study area by truck (worth around \$10.5 billion). Some of the top commodities were nonmetallic minerals, farm products, lumber or wood products and concrete. Common destinations include Brown and Outagamie Counties in Wisconsin as well as locations in Illinois, Minnesota and Michigan.

More than 2.3 million tons of commodities were shipped from the study area by rail (valued at more than \$493 million). Top commodities shipped by rail are the same as those moved by truck. Major destinations for these rail shipments were Wood and Outagamie Counties in Wisconsin as well as Ontario and Ohio.

Table 15 shows the outbound carload history for each NRTC county from 2011-2015, along with a comparison to 2007. The source of this data are IHS Transearch databases.

Table 15: Outbound Carload History (2011-2015)

	2007	2011	2012	2013	2014	2015
Ashland	1,040	1,240	1,028	1,088	960	840
Florence	-	-	-	-	-	-
Forest	80	-	-	-	-	-
Iron	40	-	-	-	-	-
Langlade	-	-	-	-	-	-
Lincoln	6,760	6,000	5,900	5,208	5,320	6,040
Marathon	9,520	7,640	7,200	6,920	5,840	5,680
Marinette	7,240	4,920	5,560	5,320	4,440	3,480
Oconto	648	540	860	836	-	40
Oneida	120	320	-	240	120	-
Price	2,720	2,400	2,800	4,120	2,080	1,600
Rusk	80	680	360	760	8,172	9,482
Vilas	-	-	-	-	-	-
Total	28,248	23,740	25,720	26,505	28,946	27,162

COUNTY FREIGHT PROFILES

Appendix 2 of this report provides economic and freight activity analyses for each Wisconsin county in the NRTC study area. Each county profile contains information about major industry and employment activity, freight flow and lists of major shippers and receivers of freight. The data describes the county's freight activity in relation to other counties or regions in and out of the study area and includes information about major commodities, major state trading partners and the type of transportation that was used.

FEDERAL RAILROAD ADMINISTRATION FREIGHT STATIONS

"Freight station" is a term used by the Federal Railroad Administration (FRA) to describe a location where commodities are transferred from one mode of transportation to another (usually from rail to truck or truck to rail). Freight stations can be found as a layer on the FRA's web-based railroad map, which is available to the public.³¹

Freight stations may include various types of freight handling configurations such as rail spurs, yards, sidings, terminals and intermodal (container) facilities. These freight stations were established on or near the rail corridor to provide rail service for area businesses.

³¹ <http://fragis.fra.dot.gov/GISFRASafety/>

Identifying the locations and freight handling capabilities of the freight stations in the study area could assist in improving or restoring rail service along segments of the railroad line. Details about each freight station can be found in the 2013 Wisconsin Freight Railroad Market Study. The locations of the facilities can be found online in the FRA web map.

CHAPTER 5: Surveying Northwoods Businesses

SURVEY METHODOLOGY

The Wisconsin Northwoods Freight Rail Market Study published in September of 2013 surveyed 1,094 businesses that appeared to have the potential to use rail, based on the types of commodities they handled. The recipients were located primarily in the 10 counties that made up the NRTC at the time: Ashland, Florence, Forest, Langlade, Lincoln, Marinette, Oneida, Price, Rusk and Vilas. Of the 1,094 businesses surveyed, a total of 190 surveys were returned to WisDOT, a response rate of 17.3 percent. The results of the survey indicated that 39 of the businesses that returned the survey currently use rail service and 43 businesses did not use rail, but would be interested if service and infrastructure needs were met. These 82 businesses were carried over from the 2013 study as the starting point for the 2017 update.

The 2017 study was expanded to include Iron, Oconto, and Marathon Counties – NRTC members added after the 2013 study was completed. NRTC counties in Michigan were also given the opportunity to identify businesses to receive the survey. The goal was to generate an additional 68 businesses to achieve a mailing list of a minimum of 150 total businesses. Through the research provided by the study team, NRTC and economic officials, the 2017 survey generated an additional 128 businesses to be surveyed, and the survey was mailed to 210 businesses. From this list, 10 businesses were either closed or addresses were returned to sender, leaving 200 businesses that received the survey by mail.

In November 2017, business surveys were distributed via email and postal mail, and businesses had 60 days to respond to the survey. Two weeks before the survey closed, economic development officials were sent a survey reminder and a list of received responses per county to date. Each EDC was asked to forward the reminder to their businesses contacts encouraging survey participation.

In addition to the 200 businesses that received a mailed survey, another eight businesses participated by filling out the online survey. In total, 74 businesses responded to the survey (26 by mail and 48 online), which is a response rate of 36 percent. This response rate was more than double the 17.3 percent response in 2013. The 2013 study collected data from 39 rail shippers, and the 2017 study collected data from 27 additional rail users, expanding the list of known rail shippers to 66.

THE SURVEY

The Northwoods Freight Rail survey was mailed and emailed to 200 businesses in northern Wisconsin and the upper peninsula of Michigan. Respondents could take the survey online through a Survey Monkey weblink or complete the hardcopy survey and return it by mail in prepaid envelopes. Seventy-four surveys were completed. Responses by county are summarized in Tables 16 and 17.

Table 16: Surveys Sent and Received in Wisconsin By County

WI Counties	Surveys Sent	Survey Responses Received	Survey Response
Ashland	10	6	60%
Barron	8	4	50%
Clark	5	1	20%
Florence	12	4	33%
Forest	9	1	11%
Iron	2	2	100%
Langlade	5	3	60%
Lincoln	8	2	25%
Manitowoc	1	1	100%
Marathon	37	13	35%
Marinette	6	4	67%
Oconto	13	4	31%
Oneida	16	4	25%
Polk	1	0	0%
Price	12	6	50%
Rusk	7	1	17%
Sawyer	6	1	17%
Taylor	1	0	0%
Vilas	3	1	33%
Washburn	1	1	100%
Winnebago	1	1	100%
Wood	1	1	100%
Total	61	165	37%

Table 17: Survey Responses Sent and Received in Michigan by County

Michigan Counties	Surveys Sent	Survey Responses Received	Survey Response
Alger	1	0	0%
Baraga	2	2	100%
Delta	2	1	50%
Dickinson	7	2	29%
Gogebic	4	1	25%
Iron	16	5	31%
Marquette	1	2	50%
Menominee	3	0	0%
Total	13	35	37%

The survey asked respondents to answer either 15 or 19 questions depending on the answer to question 11: do you currently ship or receive freight by rail?

- If businesses shipped or received freight by rail, the survey continued to questions 12 to 19.
- If businesses did not ship or receive freight by rail, the survey jumped to questions 20 to 24.

Therefore, the maximum number of responses for questions 1 to 11 was 74. Thirty-five respondents answered “yes” to question 11, so 35 was the maximum number of responses for questions 12 to 19. Thirty-seven respondents answered “no” to question 11, so 37 was the maximum number of responses for questions 20 to 24. Two respondents did not answer question 11 so their survey ended at that point, and no further data was included for questions 12 to 24.

SUMMARY OF SURVEY QUESTIONS

Below is a detailed summary of the survey question responses.

Question 1: Tell us about yourself.

In this question, company name, address, respondent name and email address were requested. Of the 74 responding businesses, 61 were from Wisconsin and 13 were from northern Michigan. Additionally, 47 respondents provided a contact name and 45 provided business contact email addresses.

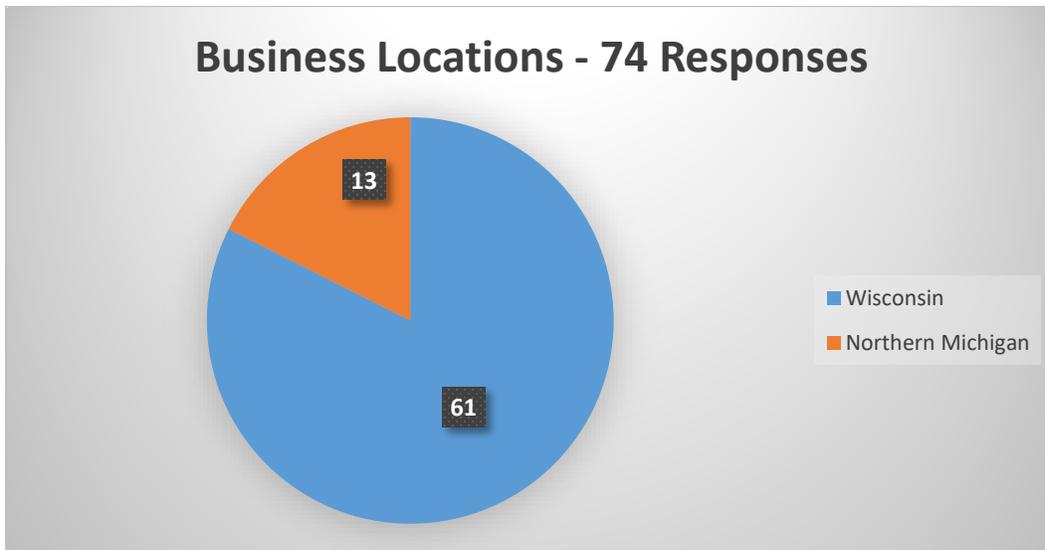


Figure 5: Location of Businesses Surveyed by State

Question 2: Do you ship and/or receive freight?

Of the 70 businesses that responded to this question, 61 indicated their business currently ships freight in some capacity. Sixty businesses responded to the question about receiving freight, and a total of 46 businesses received freight by either car, truck, rail, air or water.



Figure 6: Businesses that Ship and/or Receive Freight

Outbound Freight Questions

Questions 3 to 6 deal with outbound freight activities.

Question 3: If you ship freight, what products or raw materials do you ship out? What was the approximate volume of products or raw materials shipped out in calendar year 2016?

Of the 60 businesses that responded to this question, the top four products or raw materials that businesses shipped out were logs, lumber, wood products and pulp (35); metal/steel/aluminum (9); food products (5); and plastics products (3). Other materials shipped with less than three responses included aftermarket and miscellaneous parts, animal bedding, concrete, crushed rock, fertilizer, gasoline/fuel oil/propane, lubricants, pellets, stone products, veneer and weighing equipment.

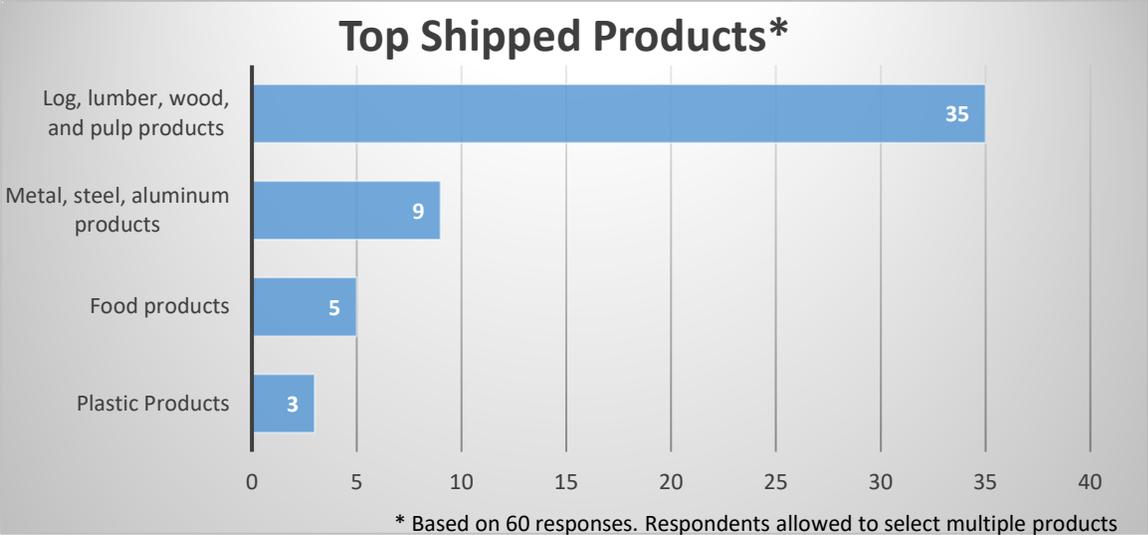


Figure 7: Top Products Shipped from Surveyed Businesses

Logs, Lumber, Wood Products and Pulp: Because respondents' answers varied in units (i.e., cords, rail cars, board feet, tons, cords and pounds) conversions were made to standardize the data.³² For this report, units are presented in tons, which represent 2,000 pounds. Of the 35 responding businesses that ship logs, lumber, wood products or pulp, volumes ranged between three and 1,253,000 tons annually, with an average of 158,814 tons shipped per respondent business. Five of these businesses were located in Northern Michigan, and the ranges of volume shipped by these businesses were between 111,813 and 665,109 tons, with an average of 262,385 tons per year.



Graphic depicts one full cord of wood, which is equivalent to 2.1 tons of weight

Cumulatively, these 35 businesses ship over 5.5 million tons of logs, lumber, wood products and pulp, which equates to approximately 213,788 semi-trucks annually (586 semi-trucks daily) or 65,394 rail cars per year (180 rail cars daily). Using these figures as representative samples, the average of the respondents would load 6,109 semi-trucks annually or 1,869 rail cars per year with these commodities.

Metal, Steel and Aluminum Products: The type of freight businesses shipped included mining parts, trailers, electrical panels, heavy equipment machinery and machinery parts, metal ends, fabricated steel, scrap aluminum, metal shavings and bolts. Because of the wide variety of equipment and size shipped in this category, it was not feasible to convert all data to tons. Of the nine respondents, four provided answers in a measurement of weight. These businesses provided ranges between 1,000 and 12,800 tons per year with an average of 6,459 tons. Using these figures as representative samples, the average of the respondents would load 248 semi-trucks annually or 76 rail cars per year with these commodities.

Food Products: The type of freight businesses shipped included cheese, potatoes, beans, oats, wheat, peanut products and dry milk powder. Of the five responding businesses that ship food products, volumes varied greatly between 1,200 and 135,000 tons, with an average of 48,524 tons. These businesses were all located in Wisconsin. Using these figures as representative samples, the average of the respondents would load 1,867 semi-trucks annually or 571 rail cars per year with these commodities³³.

Plastic Products: The type of plastic products shipped included plastic bags and film. Of the seven responding businesses that ship plastic products, volumes varied between 5,000 and 24,299 tons, with an average of 11,433 tons. These businesses were all located in Wisconsin. Using these figures as

³² <https://www.reference.com/science/convert-board-feet-tons-4d6b36f0b4f03598> Converting board feet into tons – 0.0023172750963701 * x board-feet equals weight in tons;

<https://www.revenue.nh.gov/mun-prop/property/documents/timber-conversion-formulas.pdf> Converting cords to tons – 1 cord = 2.1 tons;

<https://www.revenue.nh.gov/mun-prop/property/documents/timber-conversion-formulas.pdf> Converting cords of chips to tons – 1 cord = 2.6 tons;

A full cord of wood assumes that the wood is arranged in a way that all the individual pieces are stacked (aligned, parallel, touching, and compact) and fit within the following dimensions: 4 feet high x 4 feet wide x 8 feet long.;

<https://www.csx.com/index.cfm/customers/resources/equipment/railroad-equipment/> A 50' standard boxcar can carry between 70-100 tons, depending on pulp or wood. For sake of this conversion, 85 tons per car is assumed.

³³ <http://business.tenntom.org/why-use-the-waterway/shipping-comparisons/> It is assumed that one semi-truck can transport 26 tons of products per load

representative samples the average of the respondents would load 440 semi-trucks annually or 135 rail cars per year with these commodities.

Question 4: Of your outbound freight's total volume, what percentage is shipped by each mode?

Fifty-seven businesses (90.5 percent) indicated that they currently use a hired truck carrier to haul their products. Twenty-eight (44.4 percent) use their own trucks, while 14 businesses (22.2 percent) use direct railroad loadings. Six respondents use some combination of water and/or air to ship their products/freight.

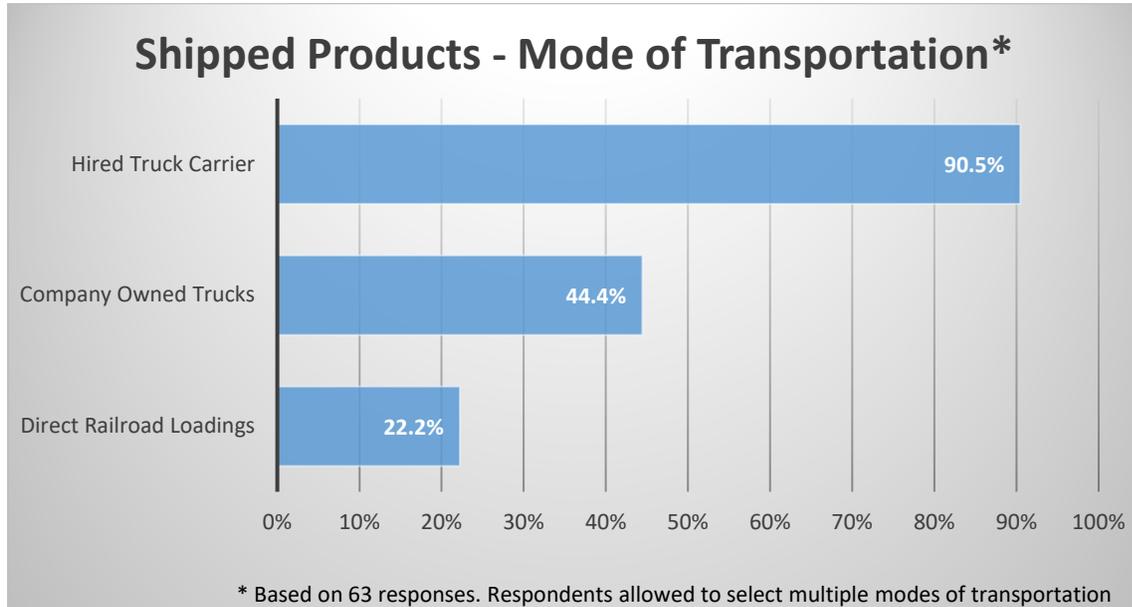


Figure 8: Mode of Transportation used to Export Products

Twenty-three businesses³⁴ use a combination of truck and rail exchange facilities. The following locations were identified:

Table 18: Truck and Rail Exchange Locations

Truck and Rail Exchange Location	Number of Businesses
Chicago, Illinois	6
Minneapolis, Minnesota	2
Chippewa Falls, Wisconsin	2
Crivitz, Wisconsin	2
Oshkosh, Wisconsin	2
Pembine, Wisconsin	1
Mellen, Wisconsin	1
Sobieski, Wisconsin	1
Spring Brook, Wisconsin	1
Beecher, Wisconsin	1
Mass City, Michigan	1

³⁴ Businesses can identify more than one facility

Truck and Rail Exchange Location	Number of Businesses
Sidnaw, Michigan	1
Iron River, Michigan	1
Marinette, Wisconsin	1
Ladysmith, Wisconsin	1
Prentice, Wisconsin	1
Wausau, Wisconsin	1
Waukesha, Wisconsin	1
Chetek, Wisconsin	1

Question 5: Where does your outbound freight go to in Wisconsin?

All 72 Wisconsin counties received freight from the study area. Of the 50 businesses that responded to this question, Marathon County was the top destination (38 percent of businesses). Milwaukee (34 percent), Wood (32 percent), Outagamie and Price Counties (30 percent) were the next top destinations. Waushara and Ozaukee Counties were the lowest destinations in Wisconsin (10 percent of businesses).

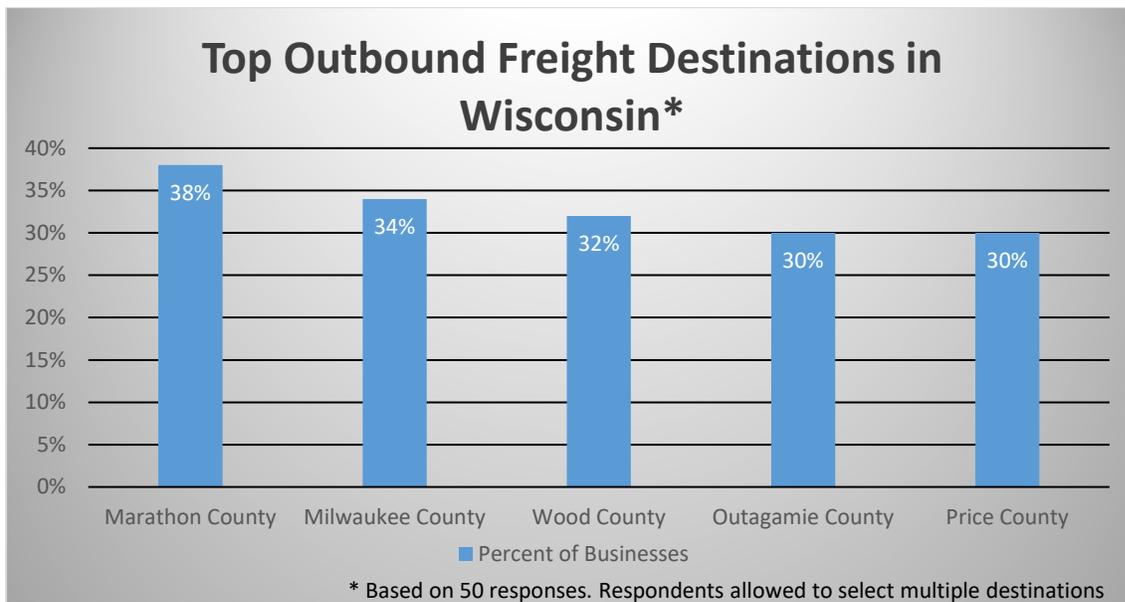


Figure 9: Top Outbound Freight Destination in Wisconsin

Question 6: Where does your outbound freight go in North America?

Of the 65 respondents, 62 (95.4 percent) indicated the United States - Midwest was a destination of their goods/products. This includes the states of Wisconsin, Minnesota, Iowa, Kansas, Missouri, Illinois, Indiana, Kentucky, Ohio, Michigan. The United States – Northeast received 30 responses (46.9 percent) and included Maine, New Hampshire, Vermont, New York, Massachusetts, Connecticut, Rhode Island, Pennsylvania, New Jersey, Maryland, West Virginia and Virginia. The United States - South received 24 responses (37.5 percent) and included Arkansas, Mississippi, and Louisiana. All United States regions had at least 19 responses with the Mountain Central region as the lowest; Montana, North Dakota, South Dakota, Wyoming, Colorado, and Nebraska.

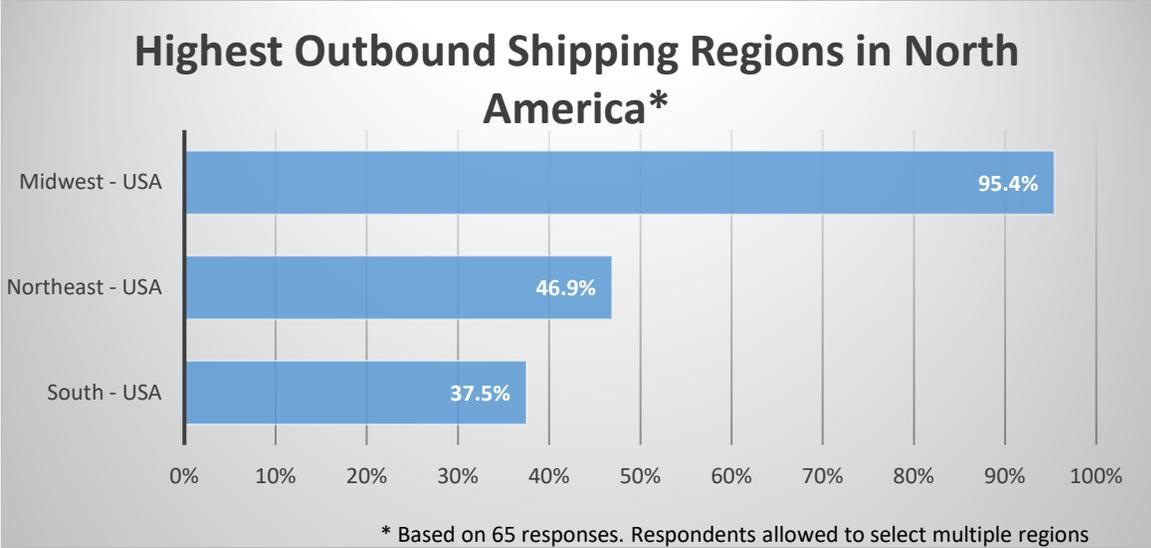


Figure 10: Highest Outbound Shipping Regions in North America

Outbound freight is being sent internationally, within North America. Almost 25 percent of the businesses ship to Eastern Canada, Western Canada and/or Mexico.

Inbound Freight Questions

Questions 7 to 10 covered inbound freight activities.

Question 7: If you receive freight, what products or raw materials are shipped in? What was the approximate volume of products or raw materials shipped to you in calendar year 2016?

Of the 50 responding businesses, the top three products or raw materials that businesses received were logs, lumber, wood products, pulp (24), metal/steel/aluminum (12) and plastics products (4). Other materials shipped with less than three responses included bulk liquids, fertilizer, food products, gasoline/fuel oil/propane, glass and lubricants.

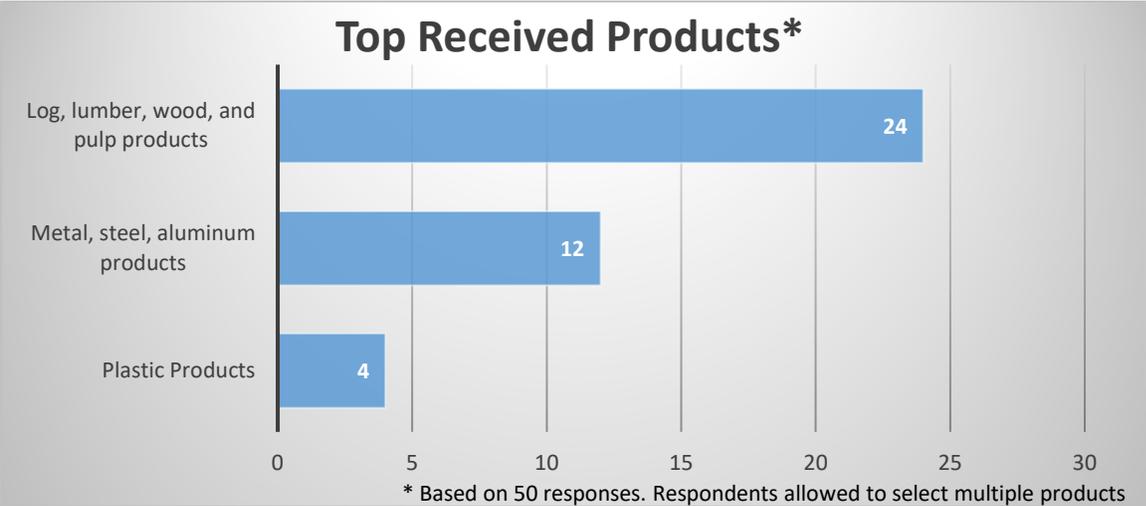


Figure 11: Top Received Products from Businesses Surveyed

Logs, Lumber, Wood Products and Pulp: Of the 24 businesses that receive logs, lumber, wood products and/or pulp, volumes ranged between 60 and 1,853,820 tons, with an average of 183,815. Cumulatively, these 24 businesses receive 4,962,368 million tons of logs, lumber, wood products and pulp, which equates to approximately 58,381 rail cars per year or 160 rail cars per day. Using these figures as representative samples, the average respondent would load 7,953 semi-trucks annually or 2,433 rail cars per year with these commodities.



Logs, lumber, wood products, and pulp are the number one shipped and received rail commodity in Wisconsin and Northern Michigan

Metal, Steel and Aluminum Products: The type of freight that businesses received included aluminum, electrical parts, engine and machine parts, metal and steel. Because of the wide variety of equipment and size shipped in this category, it was not feasible to convert all data to tons. Of the twelve respondents, eight provided answers in a measurement of weight. These businesses provided ranges between five and 52,000 tons per year with an average of 14,416 tons. Using these figures as representative samples, the average respondent would load 555 semi-trucks annually or 170 rail cars per year with these commodities.

Plastic Products: The type of plastic products shipped in included plastic resin pellets and membranes, packaging material, bags and film. Of the four responding businesses that ship plastic products, volumes varied between 30 and 27,478 tons, with an average of 8,152 tons. Using these figures as representative samples, the average respondent would load 314 semi-trucks annually or 96 rail cars per year with these commodities.

Question 8: Of your inbound freight's total volume, what percentage is shipped by each mode?

Of the 50 businesses that responded to the survey, 46 (92 percent) indicated that they currently use a hired truck carrier to haul their inbound products. Seventeen (34 percent) use their own trucks, while 12 businesses (24 percent) use direct railroad loadings. Five respondents use some combination of water and/or air to ship their products/freight. Eight businesses³⁵ use a combination of truck and rail exchange facilities. The following facilities were identified:

³⁵ Businesses can identify more than once facility, and some businesses did not identify a rail exchange facility

Table 19: Truck and Rail Exchange Locations

Truck and Rail Exchange Location	Number of Businesses
Chicago, Illinois	2
Auburndale, Wisconsin	1
Merrill, Wisconsin	1
Mukwonago, Wisconsin	1
Wausau, Wisconsin	1
Kalamazoo, Michigan	1
Iron River, Michigan	1
Minneapolis, Minnesota	1
Various	1

Question 9: Where does your inbound freight come from in Wisconsin?

Businesses in all 72 Wisconsin counties shipped freight to the study area. Of the 40 responding businesses, 47.5 percent of businesses indicated they had incoming freight from Marathon County. Other counties rating the highest for incoming freight included Milwaukee and Brown (32.5 percent) and Ashland, Florence, Lincoln, Price and Vilas (30 percent). Northwoods businesses had the lowest levels of inbound freight from Walworth County (5 percent) and Dane, Dodge, Grant, Iowa, Lafayette, Ozaukee, Rock, Vernon, Washington (7.5 percent of businesses) also ranked near the bottom.

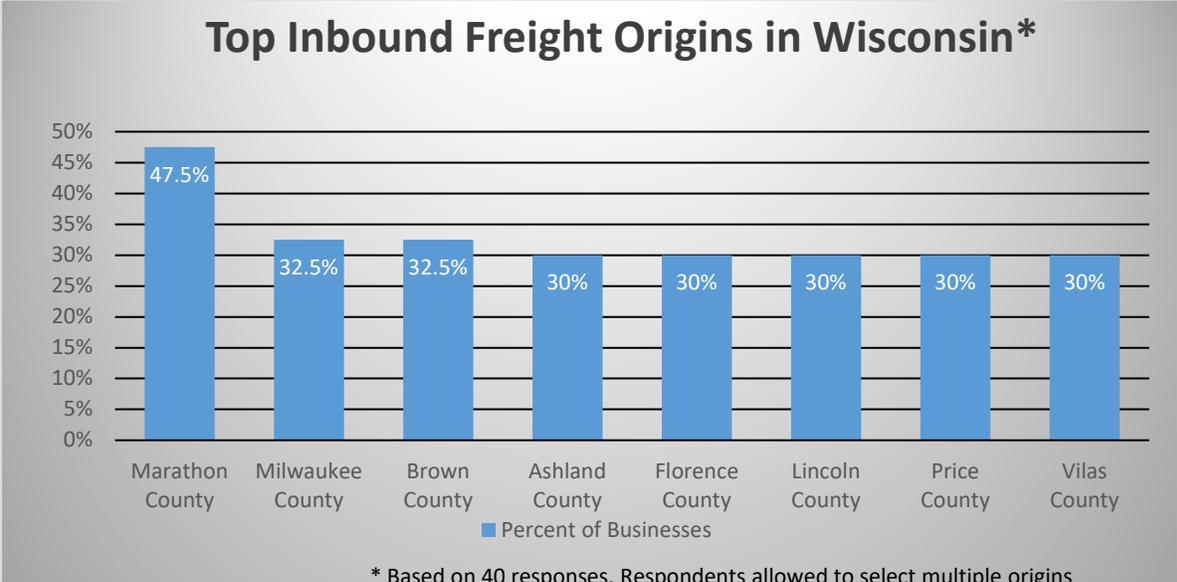


Figure 12: Top Inbound Freight Origins in Wisconsin

Question 10: Where does your inbound freight come from in North America?

For this question, respondents could choose between eight geographic regions in the United States as well as Mexico, eastern Canada or western Canada. Respondents could select all areas that apply. The United States - Midwest Region, consisting of Wisconsin, Minnesota, Iowa, Kansas, Missouri, Illinois, Indiana, Kentucky, Ohio, and Michigan, rated the highest with nearly 81 percent. United States - Southeast (38.3 percent), Eastern Canada (36.2 percent), United States - Northeast (31.9 percent), and United States - Northwest (29.8 percent) regions rounded out the top five. Mexico scored the lowest with only one response (2.1 percent). Other North American areas of low inbound freight were from the United States - Southwest (12.8 percent) and Western Canada (17 percent) regions.

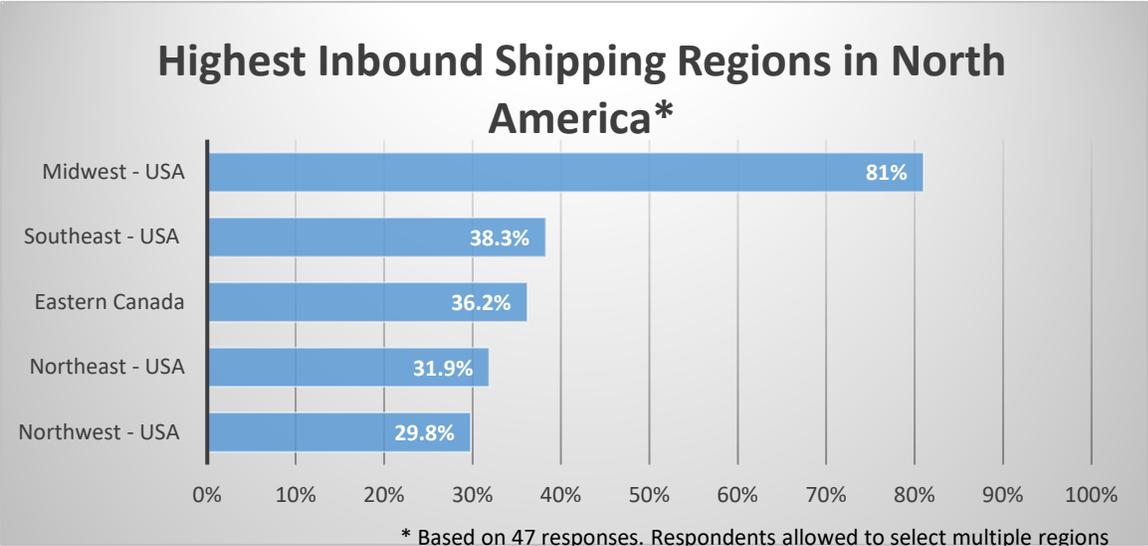


Figure 13: Highest Inbound Shipping Regions in North America

Question 11: Do you currently ship or receive freight by rail?

Of the 72 businesses that answered this question, 35 (48.6 percent) currently ship or receive freight by rail, whereas 37 (51.4 percent) of businesses do not currently use rail.

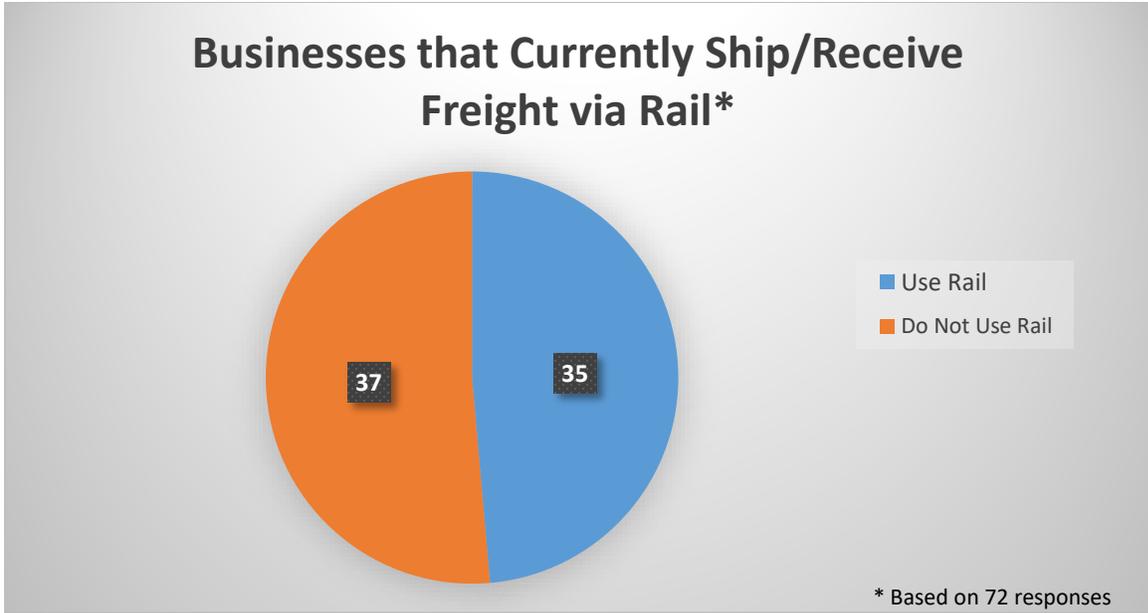


Figure 14: Businesses that Currently Ship/Receive Freight via Rail

Question 12: Are transportation infrastructure improvements (new roads, rail spurs, etc.) needed to utilize, or take greater advantage of, any of the active rail lines in northern Wisconsin?

Twenty-nine comments were provided. Multiple comments were made to reactivate railroad lines, specifically Ashland to Prentice, Ladysmith to Prentice, and Goodman to Rhinelander. Several comments regarded updating, improving or adding additional rail spurs and new intermodal facilities to be located somewhere in the Fox Valley. Three comments centered around increasing track weight and bridge capacity from 263 to 286 tons from Bradley to Stevens Point. Three comments were regarding more frequent and better service, while two comments centered around affordability and rates for railroad shippers.

Question 13: What (if any) changes to your current rail service would need to occur for you to ship or receive more volume by rail?

This question had four choices including lower shipping rates, additional rail cars, more frequent service and an “other” option. Respondents could list more than one answer if desired. Of the 35 businesses who currently ship or receive freight by rail as indicated in question 11, 28 of those businesses answered this question. Twenty-seven respondents indicated lower shipping rates are needed if their business would consider shipping or receiving more volume by rail. Fifteen businesses indicated more frequent service is needed, and 13 cited additional rail cars are needed. Ten “other” responses included additional rail spurs, hiring of a logistics coordinator, dependency of customer needs, opportunities and incentives for businesses to coordinate two-way hauls, reinstating out-of-service lines, access to more public sidings, access to a centrally located intermodal yard and additional short line railroads.

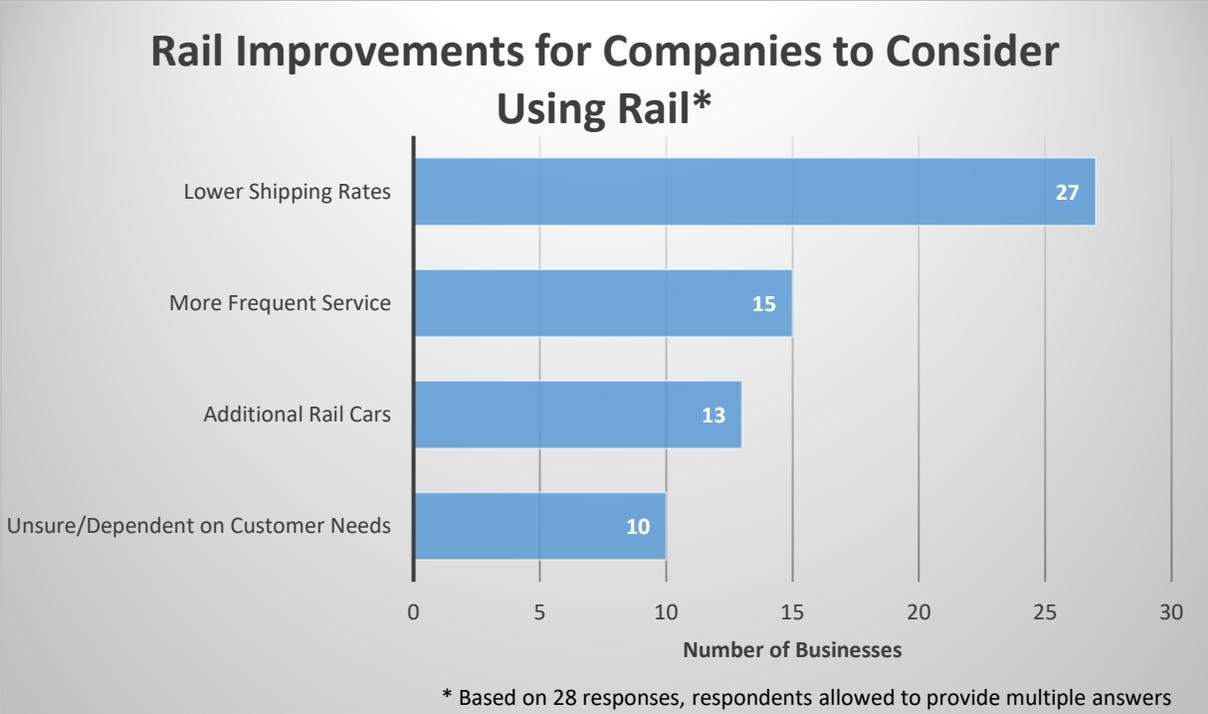


Figure 15: Rail Service Improvements for Companies to Ship or Receive more by Rail

Question 14: If those changes were made, how much additional volume would you consider shipping and/or receiving by rail on an annual basis?

Twenty-five businesses provided feedback to this question. Since this question was asked in an open-answer format, individual responses were compared back to the product and volume that were provided in questions three and seven and an additional volume percentage was calculated. As can be expected, volumes varied greatly.

Ten businesses were unsure of the amount of additional volume they would ship or receive. Some companies either did not provide a number or listed volumes were dependent on customer needs. Eight respondees would increase their shipping and/or receiving volumes from zero to 20 percent, three would increase by 21 to 80 percent and four businesses would increase their shipping and/or receiving volumes by 81 to 300 percent.

A breakdown of the 25 businesses that provided responses regarding additional volume is presented in the following figure.

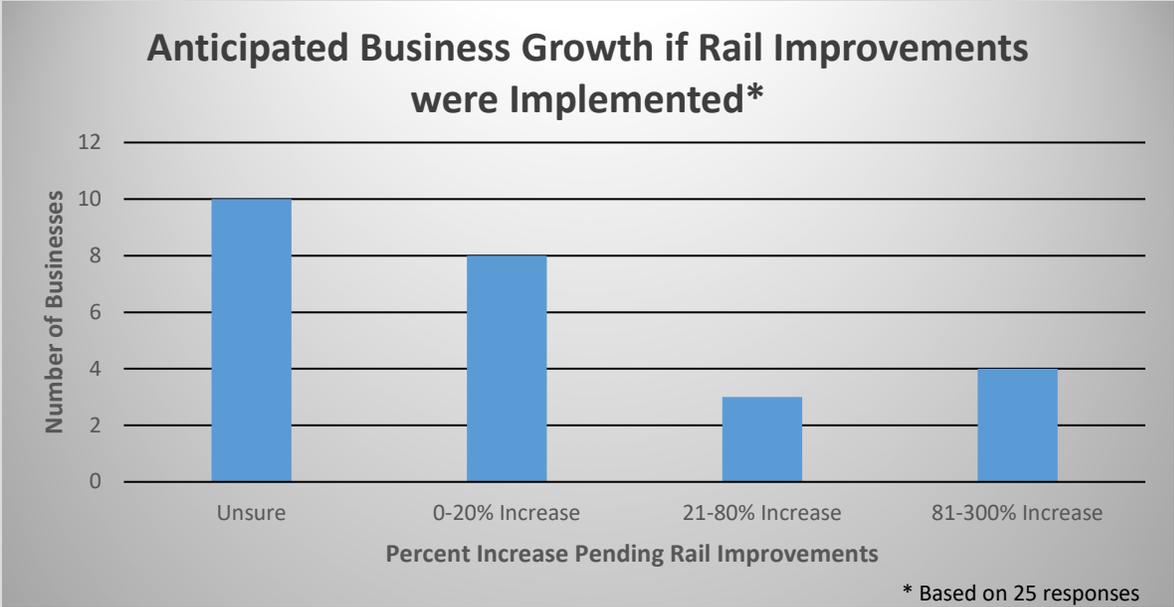


Figure 16: Anticipated Business Growth if Rail Improvements were Implemented

Of these 15 businesses, a total of 949,531 tons of additional product would be shipped or received if changes were made to/in the rail system. From the survey data collected, on average, approximately 63,303 tons of product would be moved by each business. This equates to an extra 11,171 cars per year or approximately 31 rail cars per day in these 15 businesses alone.

Question 15: If a rail line that is not currently being served in Wisconsin was put back into service, would you be able to take advantage of it?

This question received 32 responses. Twelve businesses (37.5 percent) indicated that they would be able to use an out-of-service rail line if it were put back in to service, while seven (21.9 percent) said they would not. Thirteen businesses (40.6 percent) were not sure. The Goodman to Rhinelander, Ashland to Prentice and Prentice to Ladysmith routes were cited most often.



Vacant tracks along the Ashland Subdivision

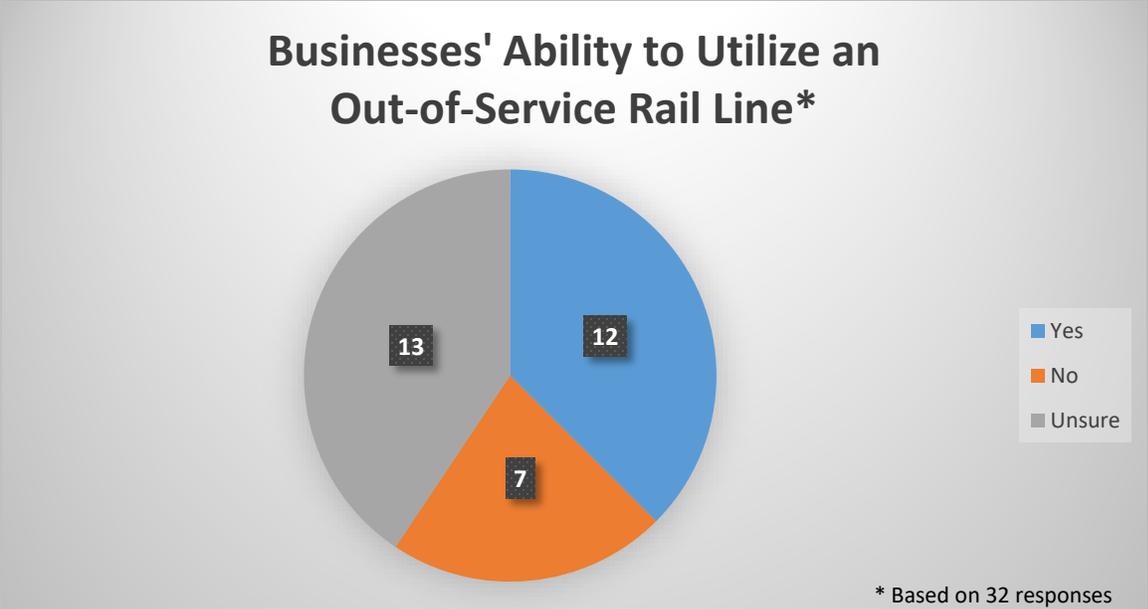


Figure 17: Businesses' Ability to Utilize an Out-of-Service Rail Line

Question 16: Do you utilize an intermodal container facility?

This question received 30 responses. Twenty-five businesses that responded to this question (83.4 percent) do not use an intermodal container facility while five businesses (16.6 percent) do.

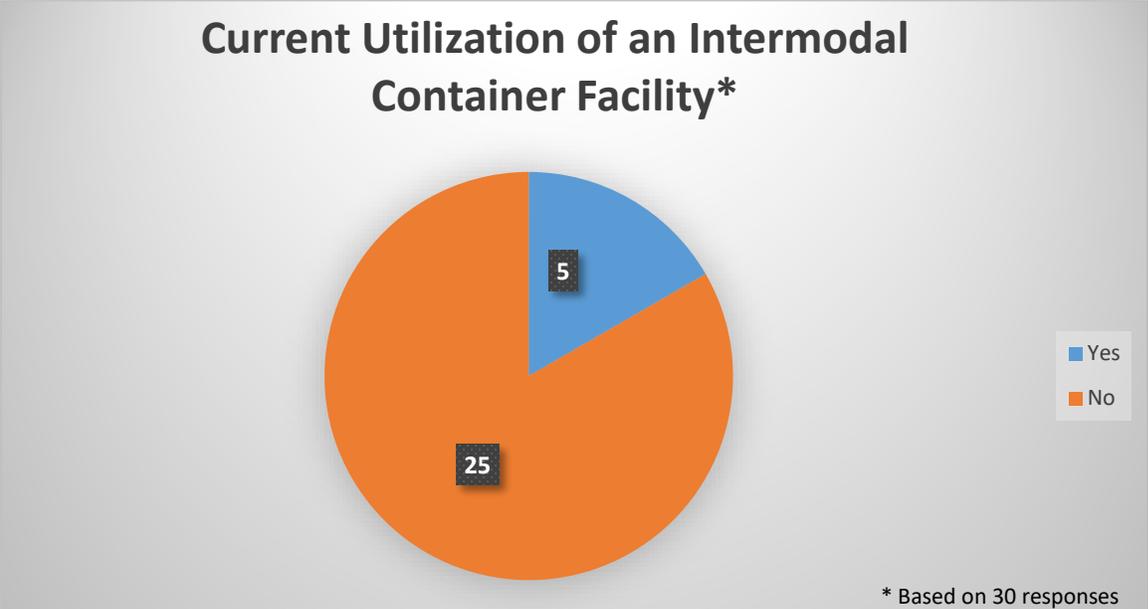


Figure 18: Current Utilization of Intermodal Container Facility

Question 17: Do you currently use a transload facility or log landing for loading and unloading rail cars?

This question received 30 responses. Sixteen businesses that responded to this question (53.4 percent) do not use a transload facility while 14 businesses (46.6 percent) do.

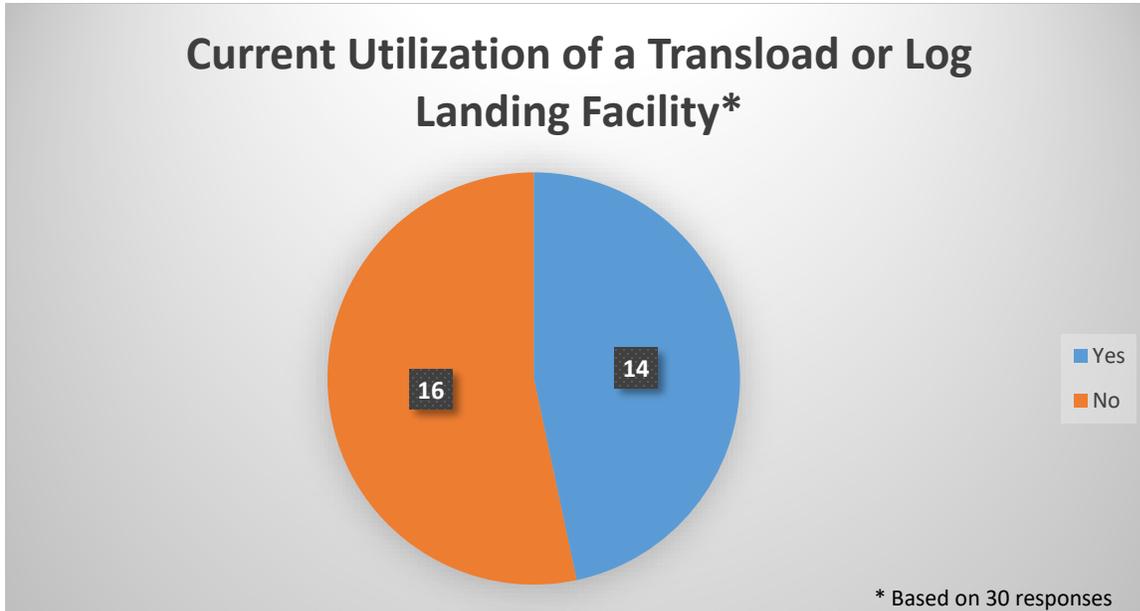


Figure 19: Current Utilization of a Transload or Log Landing Facility

Question 18: If you are interested in a new location for the exchange between truck and rail, where would it be located?

Locations identified included Wausau, Wisconsin Rapids, Green Bay, Oshkosh, Ashland, Antigo, Mellen, Superior, Somerset, Park Falls, Hayward, Stanley, Wausaukee, Crivitz, Dunbar, Goodman, Cavour and Merrill.

Question 19: Do you have any comments or concerns regarding rail service that you would like this study to address?

Below is a summary of the 23 comments that were received.

- Prices are still too high to ship via rail, or increased prices at certain loading points (7)
- Need to upgrade/rebuild rail infrastructure or reinstate out of service lines (3)
- Not enough cars/service (3)
- Some providers not focused on the customer needs and provide poor service (3)
- Rail cars are in poor conditions (2)
- Need for additional intermodal yards
- Sharing of the study data, recommendations between Michigan and Wisconsin DOTs
- Improvements needed for log shippers
- Need to maintain rail service for attracting/retaining Northwoods businesses
- Need to negotiate track leases to a short line so a customer focused rail carrier can provide service to businesses

Question 20: Has your business ever shipped by rail from its current location?

Thirty-six respondents answered this question. Twenty-three (63.9 percent) indicated their businesses have never shipped by rail while 12 (33.3 percent) said they have shipped by rail from their current location. One respondent (2.8 percent) was unsure.

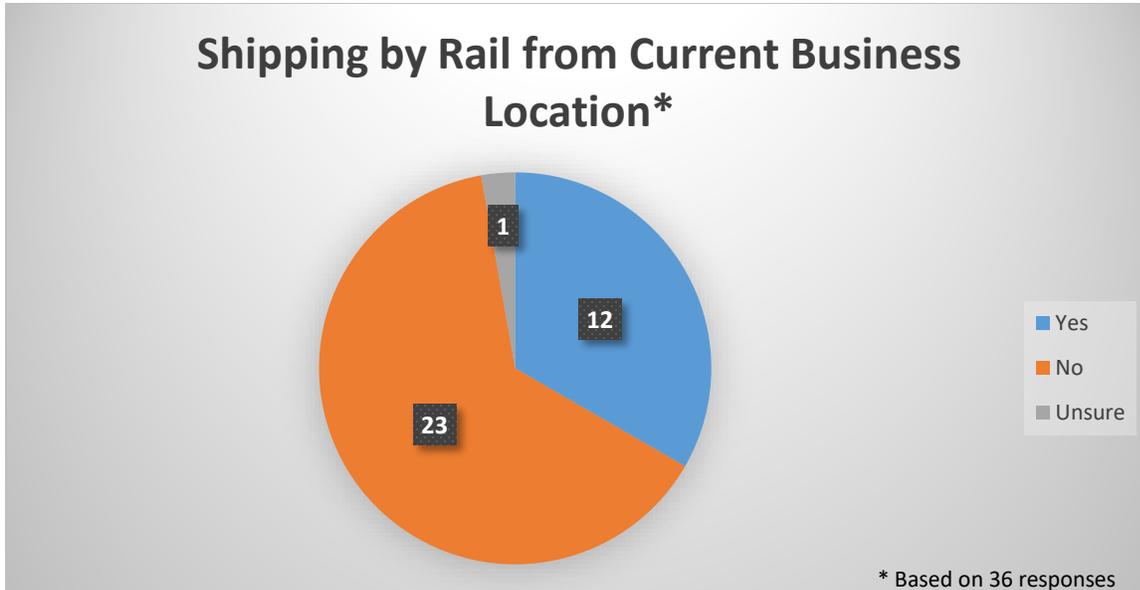


Figure 20: Shipping by Rail from Current Business Location

Question 21: What are the reasons that you don't use rail service? Check all that apply.

For this question, respondents could select more than one answer. Thirty-four businesses responded. Eighteen listed that service is not available (52.9 percent), and 13 cited that it is inconvenient and takes too long (38.2 percent). Other responses stated:

- Service is poor (23.5 percent).
- Less efficient than trucking (20.6 percent).
- Unfamiliarity with rail (17.7 percent).
- Freight not suitable for rail transport (14.7 percent).
- Not enough volume (14.7 percent).
- More expensive than trucking (14.7 percent).
- Lack of interest in exploring rail service (11.8 percent).

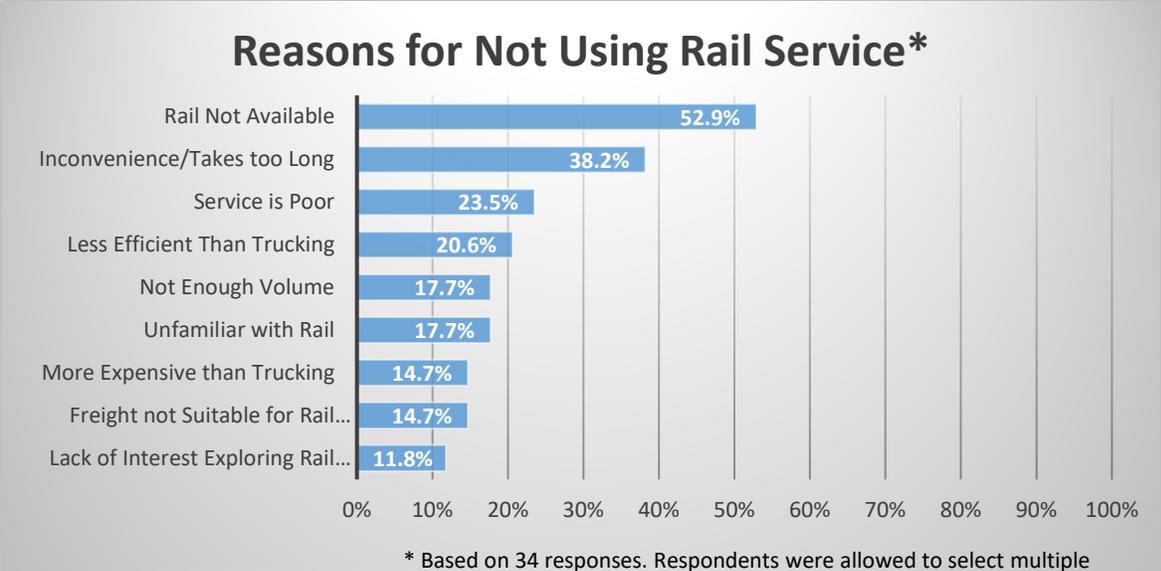


Figure 21: Reasons for Not Using Rail Services

Question 22: If a rail line that is not currently being served in Wisconsin was put back into service, would you consider using it?

Thirty-two businesses responded. Respondents were given three choices: yes, no or not sure. If not sure, the respondent could list which current out-of-service lines would help receive or ship freight more efficiently. Seven respondents (21.9 percent) answered “yes” to the question while five (15.6 percent) answered “no.” The rest of the responses answered “not sure.” Out-of-service lines that would help receive or ship freight more efficiently were identified from Ashland to Park Falls, Mellen to White Pine and Ladysmith to Prentice.

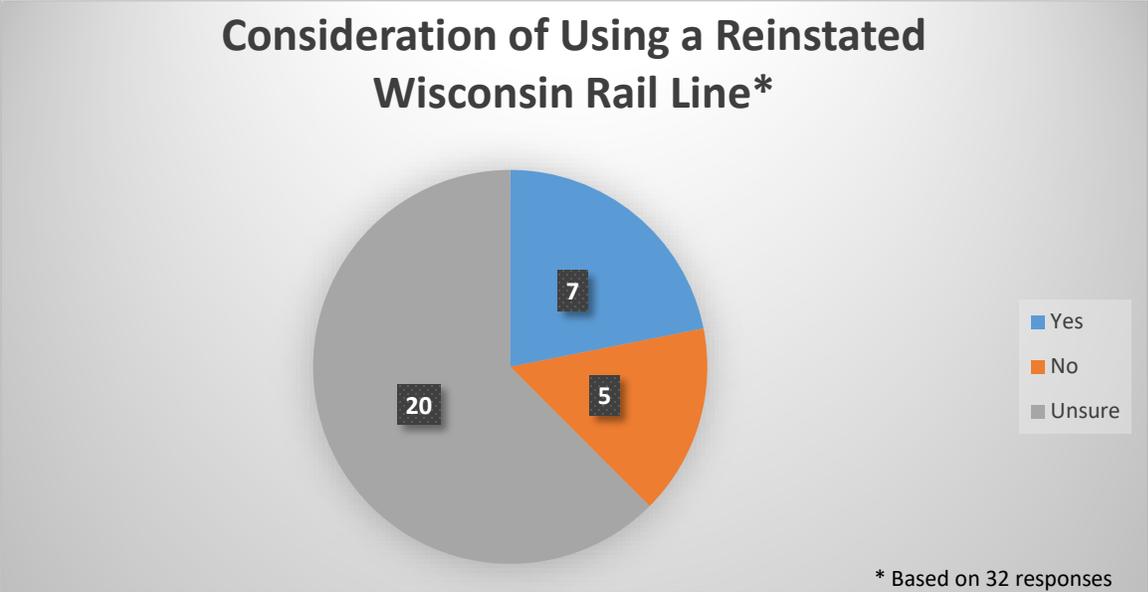


Figure 22: Consideration of Using a Reinstated Wisconsin Rail Line

Question 23: What (if any) transportation infrastructure improvements (new roads, rail spur, loading location, etc.) would you need to ship by rail? Please describe where improvements would be needed.

Ten comments discussed the need for additional spurs, rail sidings, rail trestles or loading and unloading locations between Pembine and Armstrong Creek, Ashland, Antigo, Kennan, Rice Lake, Price County, and Iron River, Michigan. Four comments focused around infrastructure improvements and repairing railways that were damaged in July of 2016 floods. Two comments were not related to infrastructure, stating that better communication, service, and fewer delays are needed. Two commenters felt that infrastructure is in place now for their needs.

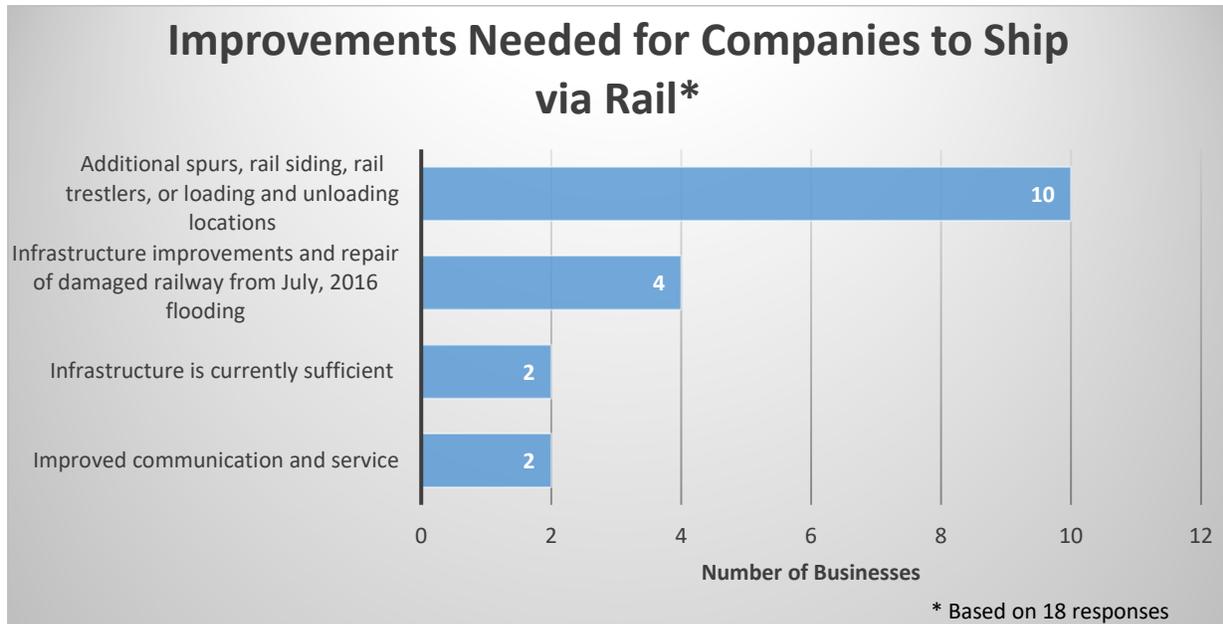


Figure 23: Improvements Needed for Companies to Ship via Rail

Question 24: Do you have any comments or concerns regarding rail service that you would like this study to address?

Below is a summary of the 16 comments that were received:

- Rail carriers are not user friendly.
- Rails carriers not willing to ship logs because it is not a profitable for them.
- Too costly to ship due to lack of service compared to trucks.
- Interest in shipping, but one business alone does not justify the costs.
- Dependability improvement on rail cars on site when needed.
- Interest in shipping more wood, but getting too much wood received from Canada.
- Interested in rail service in Kennan.
- Repairs are needed to reinstate line between Mellen and Ashland.
- Intermodal ramp needed in Northern Wisconsin north of Wausau to help improve costs for businesses.

SURVEY RESULTS

Comparisons Between 2013 and 2017

- The 2017 survey response rate of 37 percent was more than double the 17 percent response in 2013.
- The 2013 study collected data from 39 rail shippers, and the 2017 study collected data from 27 additional rail shippers/receivers, expanding the list of businesses that have shipped by rail to 66.
- The number of respondents answering “yes” to the survey question, “Do you ship or receive freight by rail?” grew from 20.6 percent in 2013 to 48.6 percent in 2017.
- Logs, lumber, wood and pulp products were the top commodity while metal products were the second ranked commodity shipped/received for the surveyed businesses in both the 2013 and 2017 surveys.
- Trucking is, by far, the dominant shipping mode to/from northern Wisconsin businesses. In 2013, more than 92 percent of businesses surveyed shipped or received products by truck while the 2017 survey showed 90.5 percent.
- The 2013 and 2017 surveys both showed that more than 95 percent of the outbound freight is staying in the Midwestern United States.
- Both 2013 and 2017 surveys listed “no service offered” and “less convenient than trucking” as the top two reasons why businesses do not use rail.
- From the 2013 survey, businesses that did not currently ship via rail, but had an interest – only six of 31 businesses responded to the 2017 survey. Of the six respondents, one of them now ships by rail.
- Both 2013 and 2017 surveys showed similar trends to the question, “If inactive rail lines were put back into service, would you use it?”
 - In 2013, 30 percent of surveyed businesses would take advantage of a reactivated line, while 16 percent were unsure depending on location.
 - In 2017, 37.5 percent of surveyed businesses would take advantage of a reactivated line, while 40.6 percent were unsure depending on location.

Additional Survey Takeaways

- The surveyed businesses ship over 5.5 million tons of logs, lumber, wood products and pulp annually. This equates to 65,394 rail cars per year for business respondents in this commodity alone.
- The surveyed businesses ship 72.5 percent (over 4 million tons) of logs, lumber, wood products and pulp via truck. This equates to almost 155,000 truckloads annually.
- The surveyed businesses receive nearly 5 million tons of logs, lumber, wood products and pulp annually. This equates to 58,381 rail cars per year for these businesses in this commodity alone.
- The surveyed businesses receive 99 percent of logs, lumber, wood products and pulp via truck. This equates to almost 189,000 truckloads annually.
- While logs/lumber/wood and pulp products were the highest ranked in the Northwoods counties, they only ranked ninth and tenth respectively for top Wisconsin commodities by weight that were transported by rail (see Table 2 in Chapter 2).

CHAPTER 6: MEETINGS AND COORDINATION

MEETINGS WITH NRTC STAFF AND INTERESTED STAKEHOLDERS

Throughout the Wisconsin Northwoods Freight Rail Study, meetings with NRTC staff and other project stakeholders occurred. The table below summarizes meeting dates and participants.

Table 20: Meeting Dates with NRTC Staff and Interested Stakeholders

Meeting Date	Meeting Type	Attendees
March 28, 2017	NRTC Meeting	WisDOT, NRTC staff
June 29, 2017	Kickoff Meeting	WisDOT, SRF
July 19, 2017	Conference Call – Discuss Study Schedule and Methodology	WisDOT, SRF, Wendy Gelhoff, Andy Albarado, Dale Kupczyk, Betsey Harries
August 29, 2017	Clark County EC – Call	Paul Chellevoid, Sheila Nyberg
August 30, 2017	NRTC Meeting	WisDOT, SRF, NRTC staff
October 16, 2017	NRTC Conference Call	WisDOT, SRF, NRTC staff
April 18, 2018	NRTC Presentation	Dan Thyges – WisDOT, Paul Chellevoid – SRF, NRTC staff

General Concerns

Members of the NRTC and the newly formed Tri-County Rail Team, which consists of approximately 30 members in Marathon, Clark, and Taylor Counties, noted several concerns, which included:

- Quality of service and lack of short line service is an issue.
- Feeling of railroads dictating where new businesses should locate to receive rail service.
- Lack of open communication between railroad operators and businesses/users.
- Inefficiencies in movement of goods and services, unnecessary need to truck goods to Duluth for cheaper and affordable rates, leading to the feeling of “whatever freight makes the most money is the only items the operators want to haul.”
- Importance of more business opportunities in the Northwoods and those businesses to have options for rail service.
- Desire to improve relationships and work more closely with railroads and operators.
- Disinclined to share business names with railroad operators.
- Improved railroad infrastructure (bridges and tracks) is needed in several areas.
- There are discussions regarding an east-west connection to Escanaba and up to the Upper Peninsula. If this happens, some stakeholders are concerned that if/when mines do open, the timber industry would likely be negatively impacted because operators would only agree to ship the most expensive cargo. There would then be a need for businesses to come together to combine loads to get service. Would the operators even be willing to haul them?
- Michigan DOT would coordinate a 50/50 Category A Program in Michigan.

- Michigan Tech is trying to secure funds for a railroad study in the Upper Peninsula, but would share data from their previous study.
- The Michigan Tech representative stated that Wisconsin should consider transload facility locations. He said the number of “big player” companies are not as many as you would think, but all movements from northern Wisconsin into the Upper Peninsula and to some of the Minnesota log mills should be analyzed.
- Wendy Gehlhoff of the NRTC indicated that it will be critical to include pulp mills in this study.
- There is mine exploration work occurring north of Wakefield. Patrick Tucker, representing Northwoods Environmental Industry, indicated the White Pine Mine has enormous potential via a \$300 million operation.
- Some feel that meeting with CN is not useful:
 - CN is only interested in long haul routes (Duluth to Chicago).
 - CN doesn’t want to serve intermittent customers.
 - CN is reluctant to serve non-service or low volume lines.

MEETINGS WITH RAILROADS

Three rail companies currently operate within the Northwoods study area; Canadian National (CN), Tomahawk Railway (TR), and Escanaba & Lake Superior Railroad (ELS). The study team met with representatives from each of the rail companies to discuss freight transportation challenges.

Table 21: Meetings with Railroads

Meeting Date	Meeting Type	Attendees
August 30, 2017	Tomahawk Railway	WisDOT, SRF, Susie Klinger
November 21, 2017	Escanaba & Lake Superior RR	WisDOT, SRF, Tom Klimek
December 6, 2017	Canadian National RR	WisDOT, SRF, Brian Buchanan

Tomahawk Railway Meeting

Susie Klinger met with Dan Thyges and Paul Chellevoid at the TR office in Tomahawk on August 30, 2017. Ms. Klinger is the General Manager of TR and the General Manager of the Ottertail Valley Railroad in Fergus Falls, Minnesota. She described TR as a safety and customer first organization. She leads Operation Lifesaver, a nonprofit public safety education and awareness organization dedicated to reducing collisions, fatalities, and injuries at highway-rail crossings and trespassing on or near railroad tracks.

TR has 23 employees and operates approximately six miles of railroad in the Tomahawk area. TR provides daily service to the pulpboard mill at Wisconsin Dam, owned by Packaging Corporation of America (PCA) as well as its own 150,000-square-foot warehouse located in Tomahawk. TR has 8 to 10 different customers, including Louisiana Pacific. TR handles more than eight thousand carloads annually, consisting of coal, chemicals, scrap paper and pulpwood inbound as well as pulpboard outbound from Wisconsin Dam to its connection with CN at Tomahawk. (Since this meeting, TR no longer handles coal, reducing annual carloads by 2,000.)

TR operates an eight-person truck shuttle at the mill, and this allows TR to know exactly where every shipment is going and what is on each load. TR takes great pride in their employees' cross-training opportunities, and several employees are cross trained in Expera products.

Ms. Klinger discussed the ongoing negotiations between CN and Genesee & Wyoming (G&W) regarding leasing low density lines to better serve local demands. (Since this meeting, CN has stopped negotiations.) Lines of note include:

- Mosinee to Bradley
- Bradley to Prentice
- Prentice to Ladysmith (currently out of service)
- Prentice to Ashland
- Bradley to Rhinelander
- Rhinelander to Goodman (currently out of service)/Pembine

Ms. Klinger understands CN's business model and knows the out-of-service lines (especially into Ashland) are not worth the cost to operate to CN, but TR is willing to work out a deal to serve customers. She said, "let us take care of the local businesses, and it's a win-win for everybody."

Her goal is to serve customer needs and expressed the importance in evaluating out-of-service lines and working out leasing opportunities with the larger carriers such as CN. TR is interested in learning more about all customers who are interested or consider using rail service. TR is willing to operate leased shortlines in the area.

Ms. Klinger indicated another challenge to serve these businesses in the Northwoods is the shipping track rates. The lack of business and shipping weight allows CN to justify the embargo of lines, but this puts northern businesses in a very difficult place to succeed. Without putting infrastructure in place or being able to serve northern Wisconsin customers with a variety of shipping and storage options, the future of the Northwoods businesses without shortline options is not positive.

Escanaba and Lake Superior Railroad Meeting:

Tom Klimek met with Dan Thyes and Paul Chellevoid via conference call on November 21, 2017. Mr. Klimek has been in transportation since 1973 and has held planning positions in various RPCs and DOTs in Wisconsin and Illinois. He is currently the Vice President of Marketing for ELS and is located in Green Bay. His ELS employment began in 1984. ELS currently has 30 customers, approximately 10 to 15 Wisconsin customers at any one time. ELS also works extensively with approximately 20 additional wood producers.

The group discussed several topics, and highlights of the discussion are below.

- Mr. Klimek has been involved with the NRTC for seven years. He believes NRTC needs to engage other freight business stakeholders like the mining industry because it will be a "rough go with just forest products."
- His number one goal is to do what he can to preserve these rail lines and assure that no more lines go out-of-service. ELS saw their volumes increase by 16 percent in 2016, suggesting that there is growing potential in the railroad industry in this region. ELS trains are usually moving a

combination of freight loads, storage cars and rail cars destined for repair at the ELS contract car repair shop.

- ELS operates with a “customers first” approach. Mr. Klimek is the first line of contact for ELS customers. He feels the customers are satisfied with the service ELS brings.
- ELS is interested in potentially purchasing or leasing CN’s lines. The question continues to be whether CN has interest in selling any lines, possibly because of the potential of mining opportunities. If CN was willing to lease their out-of-service lines, ELS would be a willing operator.
- ELS serves all the rail customers in Marinette and Menominee as a result of a 2014 switching agreement with CN. The arrangement benefits both carriers in terms of operating savings and increased revenue while providing seamless service to CN and ELS customer.
- The largest commodity shipped is pulpwood logs to paper mills including Verso Paper and Sappi Paper and also to Louisiana Pacific in Sagola, Michigan for the production of oriented strandboard and lumber. Over half of the shipments are local on the ELS. They also move agricultural products including fertilizers, corn, wheat and soybeans out of Oconto Falls. Other commodities transported by ELS are oxidized ore and cement through its bulk transload in Floodwood, Michigan; and LPG, scrap metals, plastic pellets, lumber, and woodpulp to Kimberly-Clark at Marinette, Wisconsin.
- They have a log rail car kit and want to build additional log cars as well as expand the contract car repair and paint shop in Escanaba, Michigan, which currently is home to 75 employees (down from a high of 90 including full time subcontractors). The ELS car shop does contract car repairs for the 10 largest private car owners in North America.
- ELS operating profile is as follows:
 - The CN rail yard in Green Bay near the I-43 bridge is where ELS interchanges traffic to CN. It then goes back to Crivitz with other loads and empties on a schedule of approximately three times per week. Locomotives are housed in Crivitz.
 - Service to Oconto Falls is based upon customer needs.
 - The storage of rail cars along with the car shop and rail freight comprise the ELS business model. Nearly 115 miles of track/sidings can accommodate up to 7,000 rail cars.
 - ELS operates on trackage rights over CN between Pembine, Wisconsin and its headquarters in Wells, Michigan. This also allows for the movement of many rail cars for contract car repairs.
 - Besides its Floodwood bulk site and Kingsford, Michigan transload building, ELS owns 26 acres in Crivitz that could be available as a transload location.
 - The company-wide carloads today are about 50 percent of what they were circa 2000 to 2007 due to the 2010 closing of the Smurfit-Stone Container medium corrugated paper plant in Ontonagon, Michigan.
 - ELS will mark its 40th anniversary under current ownership in 2018.

Canadian National Railroad Meeting:

Brian Buchanan met with WisDOT/SRF staff at Hill Farms Central Office building on December 6, 2017. The meeting was attended by Dean Prestegaard, Dave Leucinger, Rich Kedzior, Matt Umhoefer and Dan Thyges from WisDOT; Paul Chellevoid from SRF; and Brian Buchanan from CN.

(NOTE: CN operates in Wisconsin as Wisconsin Central Ltd. (WCL), a wholly owned subsidiary operating company. CN is the ultimate parent company. The U.S. subsidiaries of CN such as WCL operate collectively under the CN brand name.)

Mr. Buchanan has been in the rail business since 1981. He is currently the Manager for Corporate Development for CN in Homewood, Illinois. He worked for Wisconsin Central from 1987 to 2001 and under CN since they purchased Wisconsin Central. Mr. Buchanan coordinates with NRTC and often speaks with Tom Klimek and Susie Klinger, representatives of TR and ELS.

WisDOT and CN discussed several topics and are highlighted below.

- Discussions were held in the past with a possible operator for some of the light density lines in northern Wisconsin but at present these talks are dormant.
- The seven-mile Ladysmith to Tony line has been put back into service to serve a log landing at the Rusk County Industrial Park. Verso Corporation subleased this property from the County. This will replace a log landing along the CN mainline in Ladysmith and allow for more efficient log loading and mainline operations. It also reduces the blocking of crossings in Ladysmith.
- Logging is a “tough business” for railroads. There is a high handling cost due to the many trains and switches needed. The short moves equate to low revenue. Thus, the log operations are not always compensatory (not profitable or break-even in many cases), making it hard for CN to justify service. To be profitable, a large price boost would be required on some moves that would push traffic from rail to other modes of transportation.
- The current log car fleet owned by CN only has several years of life remaining. Any future rail cars would have to be owned and or leased by customers, rather than by the railroad, unless the economics can be improved.
- If the Copperwood mine opens, it would generate traffic to eastern destinations. The volume would not justify re-opening the line from Rhinelander to Goodman. CN would encourage most of the ore movement onto existing rail lines in the Upper Peninsula. Routing this ore through Wisconsin via rail would be circuitous, resulting in additional cost, transit time, and require more cars.
- Mr. Buchanan is aware that some customers and stakeholders are upset with CN due to the lack of service in some areas. He reiterated that for CN to consider serving customers, it must be a profitable business venture. He indicated that to his knowledge, NRTC has not approached CN with any business opportunities or proposals other than running logs to paper mills. He is willing to listen and recommends that, if there are additional businesses, or an increase in business volume, the NRTC should bring that to him.
- There are dedicated business development and real estate people at CN who can assist potential customers. Jim Fountain is the best person to contact at CN for availability of rail-accessible sites.
- There is potential to provide a rail/truck transload location at the site of the former Niagara Paper mill. The mill is demolished, but warehouse and transload buildings are still in place. To move this site forward, infrastructure upgrades such as track and bridge rehabilitation is needed.
- The general idea of transload/intermodal is great, but who is going to pay for the land, construction and operation of the facility?

- There has been a recent uptick in frac sand shipping. CN has built a support yard at Blair in Trempealeau County. The transloading to rail had been done with linear tracks in some cases. Construction is underway at several customers to build loop tracks to allow unit train loading.
- CN's Intermodal growth has been boosted by capacity expansion at Prince Rupert. One basic rule for a ramp site is that you need enough inbound volume of containers to generate capacity for your intended outbound exports. But beyond that, the match back requires that you have the right box (size and container/shipping company) going to the right port. One challenge is coordinating the supply of heavy capacity well cars to handle any heavy loaded containers.
- Duluth's new Intermodal service is doing well. Traffic arrives and departs in the manifest train network.

Chapter 7: Recommendations and Next Steps

After listening to the concerns of stakeholders, meeting with the railroads, and analyzing the results of the survey, the following are the recommendations of this study:

- WisDOT, MDOT, NRTC, Tri-County Rail Team, participating counties, and Michigan Tech University should continue to share data and findings from their various studies and research.
- Survey results from this study should be used to help identify travel lanes of specific origins and destinations that can assist with other efforts in the Great Lakes Forest Region. As of January 2018, funds to conduct a \$200,000 planning study for the Alger County-Upper Peninsula Forest Projects Rail Study project were approved. The study, in collaboration with Alger County, NRTC, and Michigan Tech University, will investigate solutions for effective rail transport of the forest products industry in Michigan's Upper Peninsula.
- The Wisconsin Economic Development Commission (WEDC) and NRTC should combine efforts on business proposals for companies that want to ship or receive goods via rail. This would include identifying interested businesses, inventorying existing and potential volumes, and looking at potential sites for collaboration. The proposals could be presented to business development and real estate personnel at the operating railroad companies who can provide advice on availability of rail accessible sites and service potential.
- All stakeholders should promote WisDOT's grant and loan assistance programs³⁶ to businesses looking for help with rail-related infrastructure improvements. Programs include the Freight Railroad Infrastructure Improvement Program (FRIIP), Freight Railroad Preservation Program (FRPP), Transportation Economic Assistance (TEA), and the State Infrastructure Bank (SIB) Program.
- To maximize effective communication, NRTC, Tri-County Rail Team, and all railroad transit commissions statewide should prioritize their issues and deliver a unified message to legislatures, businesses and railroads. These groups should work with local municipalities and businesses to discuss, create and carry out action plans to stabilize and grow railroad businesses.
- The NRTC should work with member counties and local businesses to establish a contacts list and facility location inventory for its rail users. The list would include specific contacts for each facility and provide the means for future group communication. The contact list could be used for businesses to discuss issues and concerns, as well as a starting point for future studies.
- The NRTC should work with its rail users to inventory current facilities, commodity volumes, and provide projections on changing needs over the next decade. Organized data of this type could help attract future rail service.
- Representatives of the operating railroads should continue to investigate possible options for shortline service and leasing/purchasing options.
- An inventory of deficient infrastructure (tracks and bridges that need repair) and cost estimates for repair would be helpful in determining the overall investment in reopening out-of-service lines.

³⁶ <http://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/aid/default.aspx>

- Additional discussion and study is needed to determine if transload/intermodal facilities would benefit NRTC member counties. Specifics would include the location, size, business types that could use the facility, and who would pay for the land and fund the infrastructure.
- There is a need to improve relationships between RTCs, county economic development officials, local businesses and the railroads. Past efforts to work together have been challenging. Developing a platform for effective communication could benefit all stakeholders.
- The potential for mining exploration work in northern Michigan, including the Porcupine Mountains, Copperwood Mine, Back Forty Mine, Eagle Mine and the White Pine Mine should be examined. The potential destinations and routes to be used through Wisconsin should be identified.
- WisDOT will provide on-line mapping of all active and out-of-service rail lines and stations, including aerial imagery in the area. This information could be used by the NRTC and local businesses to identify potential transload facilities.
- Research is needed regarding the log car shortage. Log needs for the paper industry should be confirmed and forecast. WisDOT will identify if there is a role for its loan programs.

APPENDIX 1: County Freight Profiles

Appendix 1 contains economic and freight activity analyses for each county in the Northwoods Rail Transit Commission study area. Each county profile contains information about major industry and employment activity, freight flow, and lists of major shippers and receivers of freight. The data describes the county's freight activity in relation to other counties or regions in and out of the study area and includes information about major commodities, major state trading partners and the type of transportation that was used.

DATA SOURCES AND DEFINITIONS

Data was collected from many sources, all of which are described below. The data provided in the county freight profiles is derived from

- IHS Transearch 2015 database
- IHS FreightFinder 2015 database
- United States Census Bureau
- Bureau of Labor Statistics
- ReferenceUSA.gov (2017 Infogroup data)

The **Transearch database** is a comprehensive, proprietary database of commodity movement from one county or region to another. The database provides information about the type, tonnage, value, direction and transportation mode of commodities. Data is used to analyze commodity movement at the county, region and state level.

- **Standard Transportation Commodity Code (STCC)** – Commodity data is identified in Transearch as both 2 and 4-digit STCC.

The **Freight Finder database** is a spreadsheet and Geographic Information Systems (GIS) file that displays businesses in Wisconsin, their location, and the type and tonnage amount of a commodity being shipped to and from these businesses, but it does not indicate which mode is being used.

- **North American Industry Classification System (NAICS)** – Standard used by Federal statistical agencies in classifying business establishments

Population, Population Growth Rate, Median Household Income, Businesses, Workers: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-Year Estimates

The ACS is a nationwide survey that collects and produces information on social, economic, housing, and demographic characteristics about our nation's population every year.

Compound Annual Growth Rate (CAGR) is a geometric average that represents the one, consistent rate at which the population would have grown if the population had compounded at the same rate each period.

The formula for CAGR is:

$$\text{CAGR} = (\text{EV}/\text{BV})^{1/n} - 1$$

EV = Ending value

BV = Beginning value

n = Number of periods (months, years, etc.)

An **establishment** is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments.

Establishments/Employees by Industry: U.S. Census Bureau, 2015 County Business Patterns

County Business Patterns covers most of the country's economic activity. The series excludes data on self-employed individuals, employees of private households, railroad employees, agricultural production employees, and most government employees. Businesses operating without an Employer Identification Number (EIN), and businesses with an EIN but without employees, are excluded from the County Business Patterns universe.

The definition for Mid-March Employment (Number): **Paid employment** consists of full- and part-time employees, including salaried officers and executives of corporations, who are on the payroll in the pay period including March 12. Included are employees on paid sick leave, holidays, and vacations; not included are sole proprietors and partners of unincorporated businesses. This figure would represent the number of employees working at an **in-scope** establishment with an address in the county.

Census Business Patterns suppresses a data row to avoid disclosing information about a specific company, or if it does not meet publication standards. In these cases, an employment range flag is given for the data row. Rows with a small number of establishments are the most likely to be able to have an individual company's information deduced, hence rows with a small number of establishments make up the majority of Census Business Patterns data suppressions.

Average Annual Unemployment Rates (Not seasonally adjusted): Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS)

The Local Area Unemployment Statistics (LAUS) program produces monthly and annual employment, unemployment, and labor force data for Census regions and divisions, states, counties, metropolitan areas, and many cities, by place of residence.

Major employers: ReferenceUSAgov (2017 data from Infogroup)

ReferenceUSAgov is an internet-based database containing an inventory of most Wisconsin businesses and their characteristics.

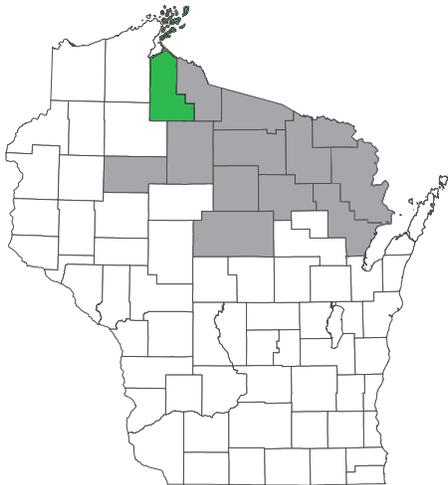
FREIGHT DEFINITIONS

- **National Highway System (NHS)** – The NHS includes the Interstate System as well as other roads important to the nation’s economy, defense, and mobility.
- **Oversized – Overweight (OSOW) Routes** – Roads that can accommodate both Oversized (too wide) and Overweight (too heavy) trucks
- **High Clearance Routes** – Roads that can provide the vertical clearance required for tall truck shipments
- **Freight-intensive** establishments are establishments in which transportation of raw materials, intermediate products and finished goods accounts for a major share of their costs. The following sectors are considered freight-intensive:
 - Agriculture, forestry, fishing and hunting
 - Mining, quarrying, and oil and gas extraction
 - Construction
 - Manufacturing
 - Wholesale trade

Ashland County Freight Profile

At a Glance	
15,993	Population
515	Total Establishments
6,322	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2015	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
6.3%	-0.3%	\$39,381
4.6%	0.4%	\$53,357



Ashland County serves as a gateway to major outdoor visitor attractions, including Lake Superior, the Apostle Islands, Big Bay State Park and the Chequamegon-Nicolet National Forest. Major employers include health care services, a casino, manufacturers and general merchandise stores.

Approximately 28% of the active labor force is employed in freight-intensive industries such as manufacturing, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
19.1	Miles of In Service Railroad
52.3	Miles of Out of Service Railroad
2.3	Miles of Rails-to-Trails
109.3	Miles of Oversize-Overweight Highways
18.7	Miles of High Clearance Highways
75.0	Miles of NHS Designated Roads
123.1	Miles of Long Truck Routes

Employment and Major Employers



Memorial Medical Center
General Medical & Surgical Hospitals



CG Bretting Mfg. Co.
Sawmill, Woodworking & Machinery Mfg.



Northland College
Colleges & Universities



Walmart Supercenter
Major Warehouse Store



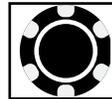
Golden Living Center
Continuing Care Retirement Communities



Ashland Health & Rehab Center
Vocational Rehab Services



Bad River Band- Lake Superior
General Government Support



Bad River Lodge & Casino
Casinos



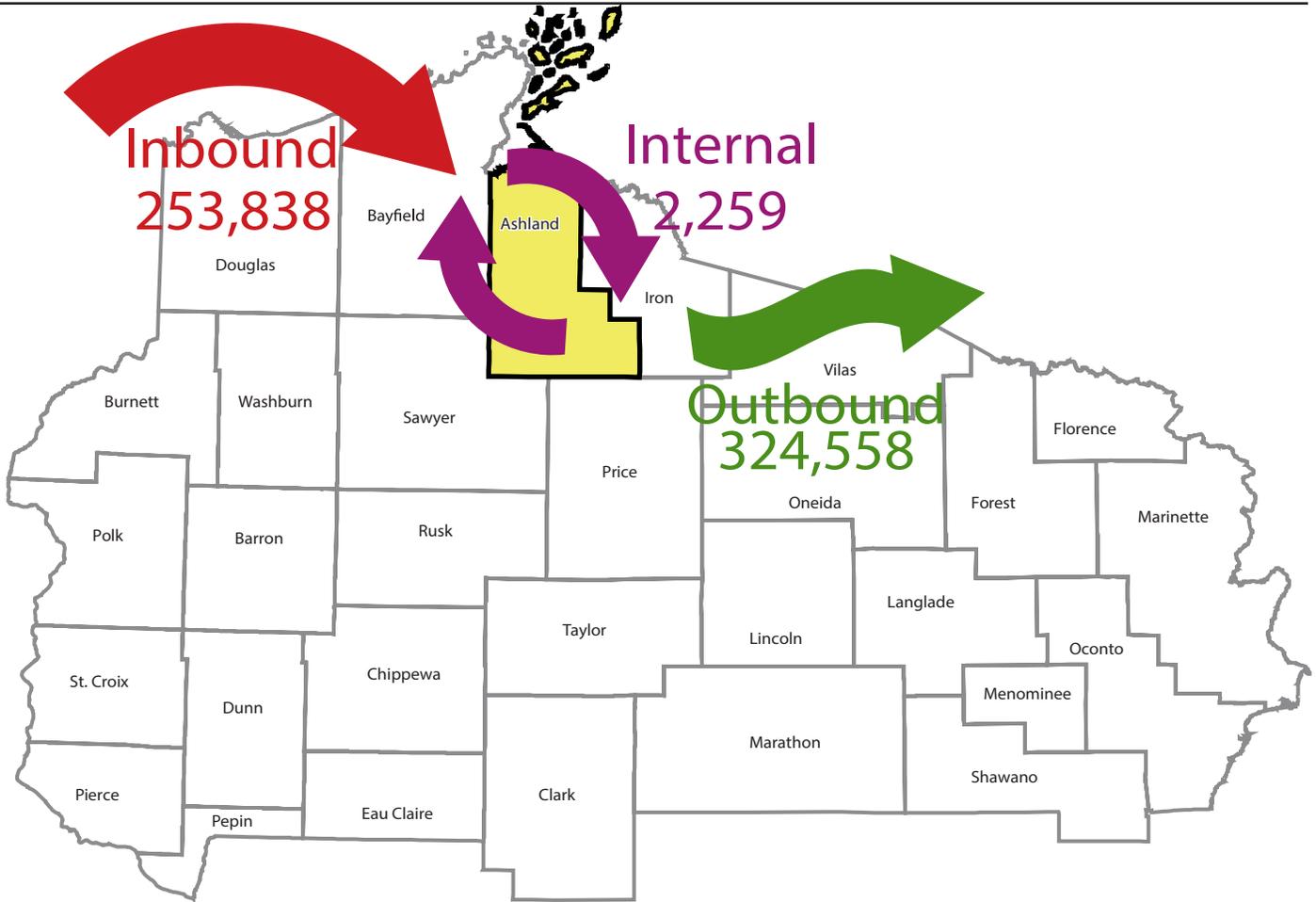
Columbia Forest Products
Hardwood & Plywood Manufacturing

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	16	42
Mining, Quarrying & Extraction*	0	0
Construction*	51	468
Manufacturing*	24	1,122
Wholesale Trade*	13	111
Transportation & Warehousing	20	143
Utilities	4	20-99
Health Care & Social Assistance	63	1,371
Retail Trade	86	951
Accommodation & Food Services	66	668
Educational Services	5	500-999
All Other Sectors	262	2,426

*Freight Intensive Industry

Freight Movement and Modes



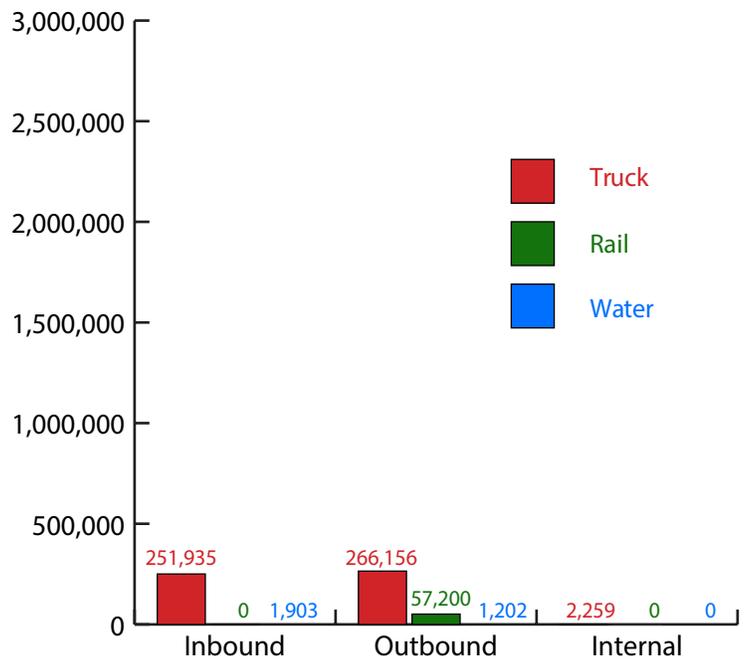
Definitions:

Inbound Tonnage: Goods shipped into the county from other Wisconsin counties and other states.

Outbound Tonnage: Commodities shipped out of the county to other Wisconsin counties and states.

Internal Tonnage: Goods that are shipped from one destination in the county to another destination within the county.

*Tonnage amounts do not include “overhead tonnage”, products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Larson-Juhl Inc.	Ashland	All Other Miscellaneous Manufacturing	Primary Forest Materials
Terry Paleck Inc. Trucking	Butternut	Landscaping Services	Gravel or Sand
Midland Services	Ashland	Petroleum and Petroleum Products Merchant Wholesalers	Petroleum Refining Products
Carlson Building Supplies Inc.	Ashland	Other Building Material Dealers	Lumber or Dimension Stock
South Shore Brewery	Ashland	Breweries	Grain

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Ronald Radlinger Logging	Butternut	Logging	Primary Forest Materials
CWO Auto & Scrap Removal LLC	Ashland	Recyclable Material Merchant Wholesalers	Metal Scrap or Tailings
Robert Mika Farms	Marengo	All Other Miscellaneous Crop Farming	Miscellaneous Field Crops
C.G. Bretting Mfg. Co.	Ashland	Sawmill, Woodworking and Paper Machinery Manufacturing	Paper Industries Machinery
Northland Dairy	Ashland	Dairy Cattle and Milk Production	Dairy Farm Products

Major Commodities Ashland County - Rail and Water

Commodity	Originating Rail Tons
Lumber or Wood Products	57,200

All major commodities shipped from Ashland County by rail in 2015 were Lumber or Wood Products. These shipments fell under the subcategory of Primary Forest Materials.

Wood County, WI was the only geographic area that received these shipments from Ashland County.

Commodity	Terminating Water Tons
Miscellaneous Mixed Shipments	1,062
Petroleum or Coal Products	744
Nonmetallic Minerals	98

Fak Shipments*, under the STCC 2 commodity of Miscellaneous Mixed Shipments, were the highest tonnage inbound shipments by water to Ashland County, originating in Bayfield County, WI.

Other shipments include Petroleum Refining Products from Door, Brown and Bayfield Counties, and Gravel or Sand from Baton Rouge, LA.

Commodity	Originating Water Tons
Miscellaneous Mixed Shipments	1,029
Lumber or Wood Products	173

Fak Shipments*, under the STCC 2 commodity code of Miscellaneous Mixed Shipments, were the highest tonnage outbound shipments by water from Ashland County, going to Bayfield County, WI.

The other major shipment from Ashland County is Primary Forest Materials, under Lumber or Wood Products, to Huntsville, AL.

* Fak Shipments is an abbreviation for Freight of All Kinds, in which various kinds of goods are pooled and shipped together at one freight rate.

Major Commodities Ashland County - Truck

Commodity	Inbound Truck Tons
Petroleum or Coal Products	66,320
Nonmetallic Minerals	38,685
Lumber or Wood Products	31,433
Secondary Traffic	29,818
Clay, Concrete, Glass or Stone	24,895
Chemicals or Allied Products	14,324
All Others	46,459

Shipments of Petroleum Refining Products to Ashland County by truck were some of the highest tonnage inbound shipments. Some of the locations that shipped this commodity to Ashland County include Duluth (MN) and Douglas County (WI).

Broken Stone or Riprap was another commodity that saw high tonnage shipments to the county. Major shippers include Marinette County (WI) and the Michigan Upper Peninsula.

Commodity	Outbound Truck Tons
Lumber or Wood Products	115,614
Farm Products	73,371
Waste or Scrap Materials	46,925
Chemicals or Allied Products	10,258
Machinery	10,172
Rubber or Miscellaneous Plastics	5,505
All Others	4,312

A wide variety of different types of Lumber or Wood Products were shipped from Ashland County by truck. Some of the recipients of these shipments include Plywood or Veneer to Minneapolis (MN), Cork Products to Minneapolis (MN) and Plywood or Veneer to Detroit (MI).

Metal Scrap or Tailings were shipped by truck from Ashland County to Northwestern Indiana, Duluth (MN) and San Francisco (CA).

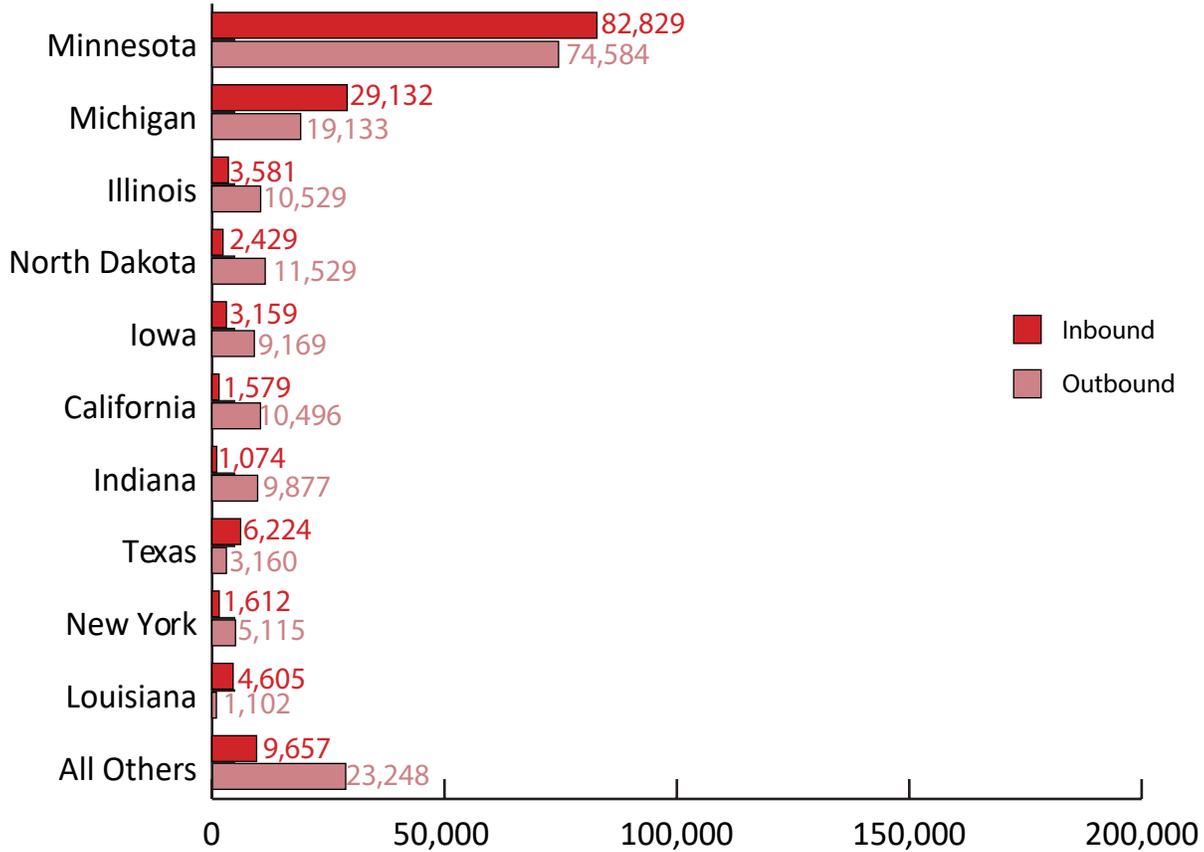
Commodity	Internal Truck Tons
Lumber or Wood Products	1,082
Farm Products	443
Machinery	411
Rubber or Miscellaneous Plastics	105
Food or Kindred Products	94
Fabricated Metal Products	45
All Others	79

A variety of different types of Lumber or Wood Products were shipped internally within Ashland County. Commodities with the highest tonnages include Plywood or Veneer, Cork Products and Wooden Ware or Flatware.

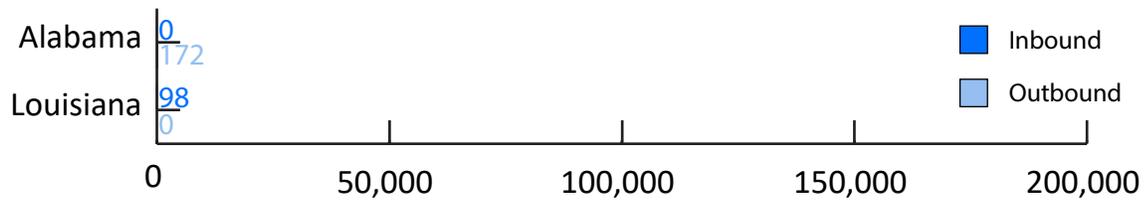
Many different types of Farm Products were also shipped by truck internally in Ashland County. Some of these include Miscellaneous Field Crops and Grain.

Major Trading Partners by Mode- States/Provinces

Truck - Inbound and Outbound Tons, 2015

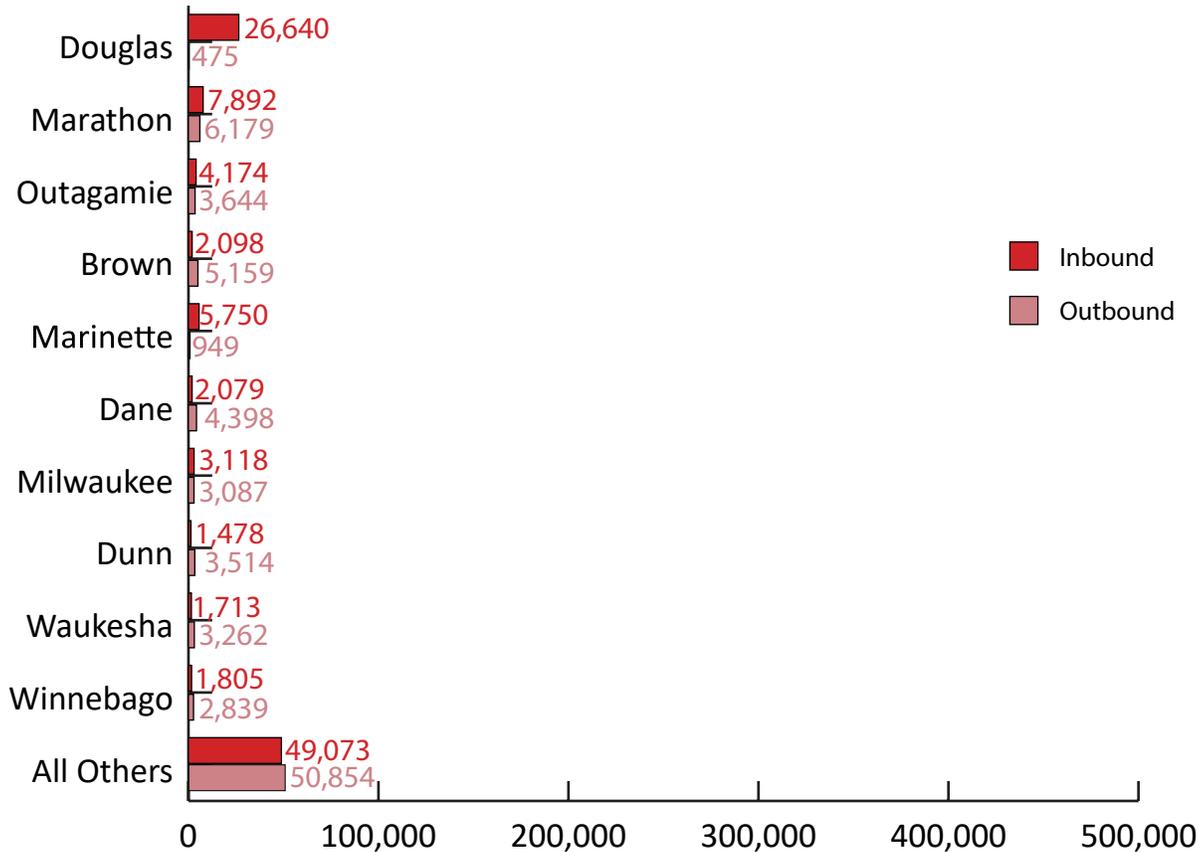


Water - Inbound and Outbound Tons, 2015

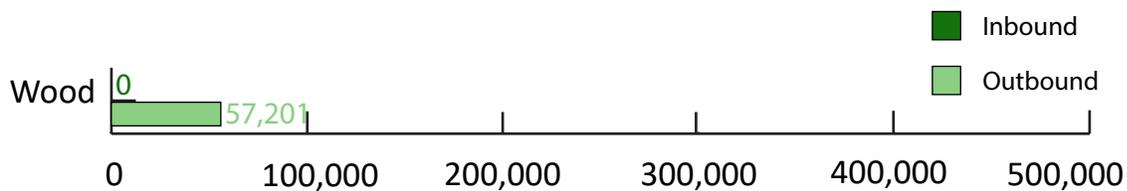


Major Trading Partners by Mode - Wisconsin Counties

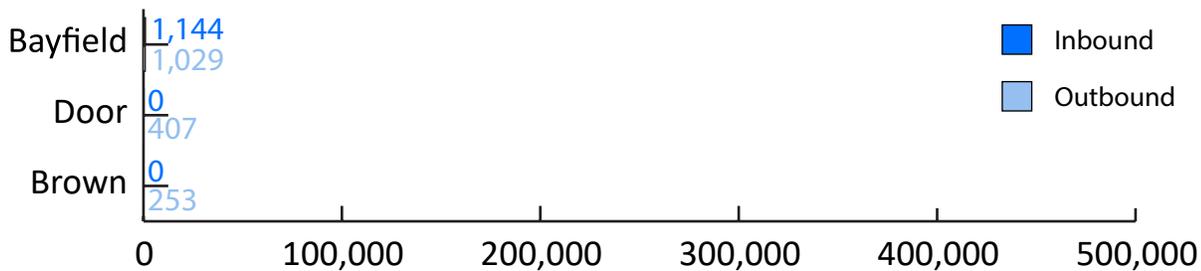
Truck- Inbound and Outbound Tons, 2015



Rail - Inbound and Outbound Tons, 2015



Water - Inbound and Outbound Tons, 2015

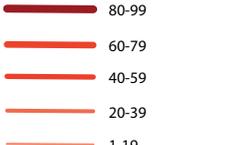


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.

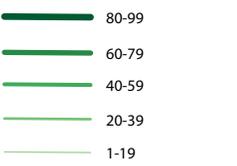


Ashland County Freight Profile

STN Highway Freight Score



Local Road Freight Score



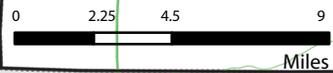
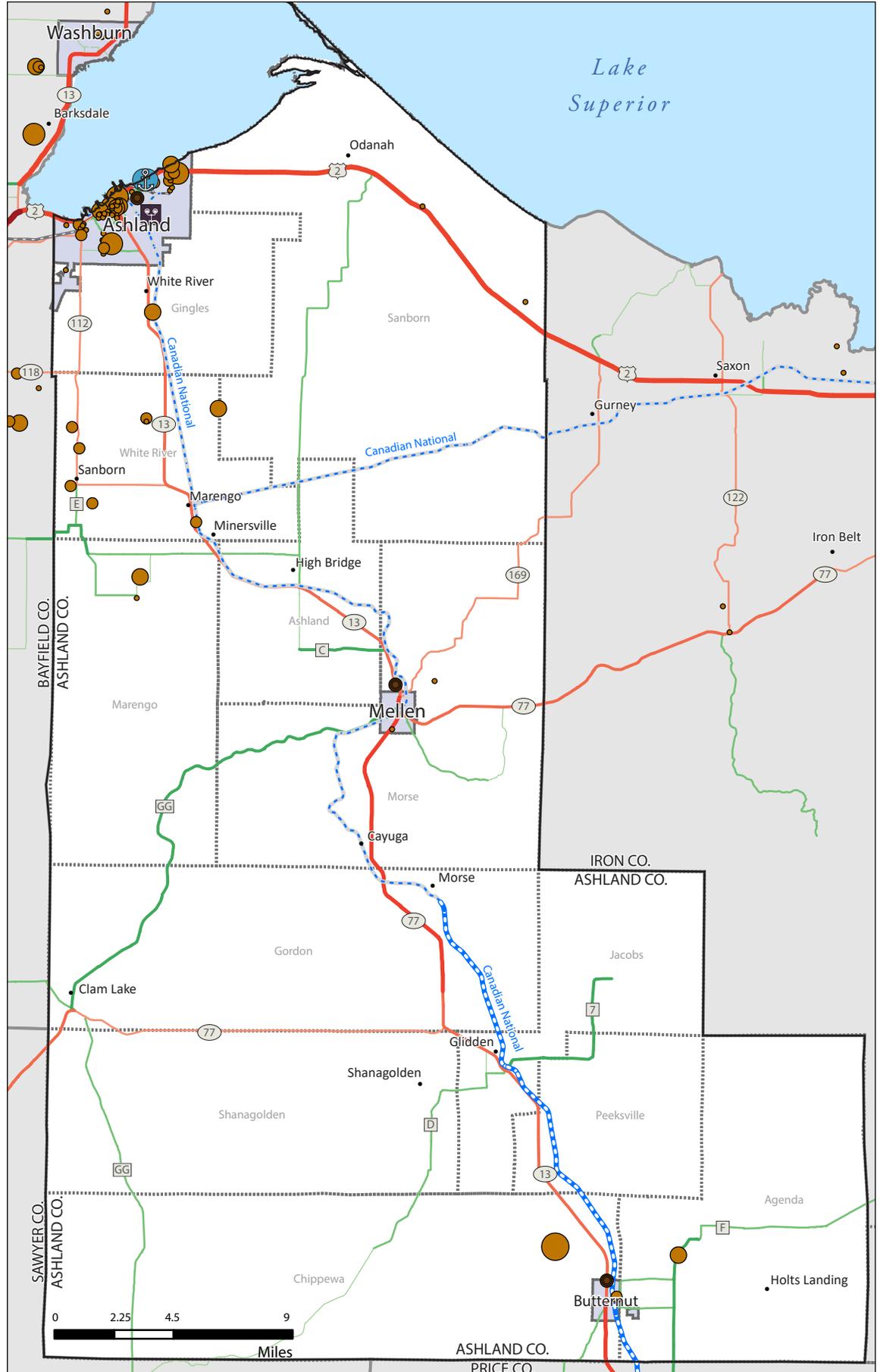
Freight Railroad Lines



Shippers/Receivers



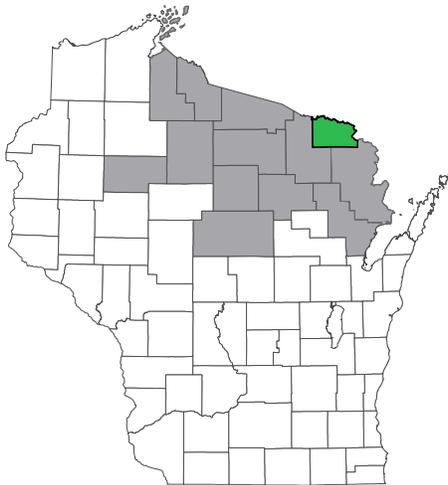
Other Freight Facilities



Florence County Freight Profile

At a Glance	
4,476	Population
110	Total Establishments
610	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
6.8%	-0.5%	\$48,643
4.6%	0.4%	\$53,357



Florence County is a sparsely populated county that rests at Michigan's border. The leisure and hospitality industry sector accounts for a large share of the county's workforce but dairies, logging companies, and sawmills play a significant role in the economy.

Approximately 28% of the active labor force is employed in freight-intensive industries such as manufacturing, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
0.0	Miles of In Service Railroad
0.0	Miles of Out of Service Railroad
14.7	Miles of Rails-to-Trails
39.0	Miles of Oversize-Overweight Highways
15.8	Miles of High Clearance Highways
14.5	Miles of NHS Designated Roads
67.5	Miles of Long Truck Routes

Employment and Major Employers



Golden Living Center
Continuing Care Retirement Communities



L & H Utility Contractors
Power & Communications Construction



St Vincent De Paul
Used Merchandise Stores



Riverside Liquor Spa/Pool
Beer Wine & Liquor Stores



El Capitan Supper Club
Full Service Restaurants



Annites T & T Steakhouse
Full Service Restaurants



Dina Mia of Florence
Full Service Restaurants



Florence County Sheriff
Legislative Bodies



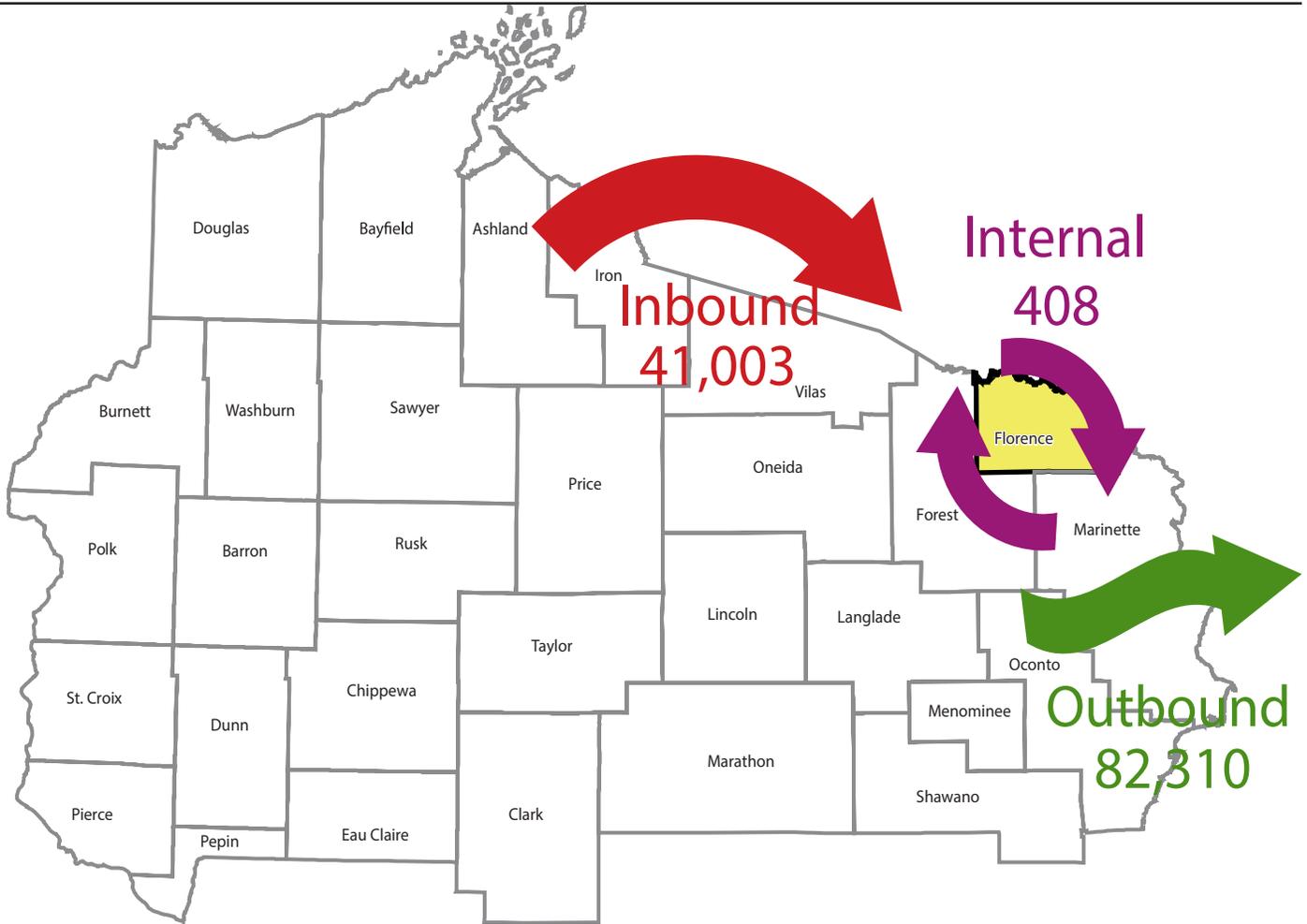
Svecia Country Club
Civil & Social Organizations

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	6	9
Mining, Quarrying & Extraction*	0	0
Construction*	14	38
Manufacturing*	9	122
Wholesale Trade*	3	20-99
Transportation & Warehousing	6	38
Utilities	0	0
Accomodation and Food Service	26	147
Retail Trade	3	20-99
Health Care	10	59
All Other Sectors	27	56

*Freight Intensive Industry

Freight Movement and Modes



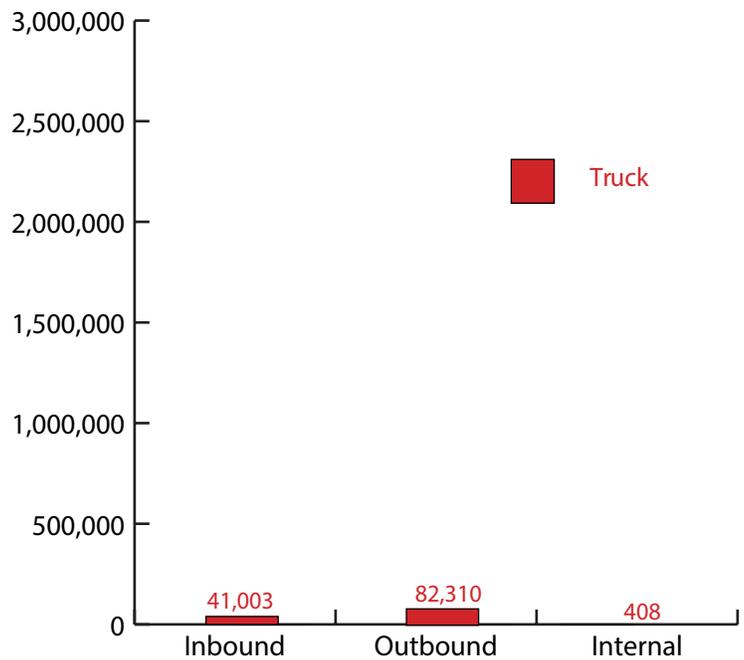
Definitions:

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Outbound Tonnage: Commodities shipped out of the county to other Wisconsin counties and states.

Internal Tonnage: Goods that are shipped from one destination in the county to another destination within the county.

*Tonnage amounts do not include “overhead tonnage”, products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
G & G Lumber	Florence	Cut Stock, Resawing Lumber, and Planing	Primary Forest Materials
Schomer Forest Products	Niagara	Logging	Primary Forest Materials
Gilligan Logging	Long Lake	Logging	Primary Forest Materials
American Dock Mfg. Inc.	Florence	Other Heavy and Civil Engineering Construction	Ready-mix Concrete, Wet
Tall Timber Logging Inc.	Fence	Logging	Primary Forest Materials

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
G & G Lumber	Florence	Cut Stock, Resawing Lumber, and Planing	Miscellaneous Sawmill or Planing Mill
Schomer Forest Products	Niagara	Logging	Primary Forest Materials
Gilligan Logging	Long Lake	Logging	Primary Forest Materials
Tall Timber Logging Inc.	Fence	Logging	Primary Forest Materials

Major Commodities Florence County - Truck

Commodity	Inbound Truck Tons
Lumber or Wood Products	26,200
Secondary Traffic	5,492
Petroleum or Coal Products	3,946
Clay, Concrete, Glass or Stone	1,999
Nonmetallic Minerals	1,586
Furniture or Fixtures	1,179
All Others	603

The major Lumber and Wood products shipped to Florence County include Primary Forest Materials from Forest County (WI), Duluth (MN) and Oneida County (WI), as well as Miscellaneous Sawmill or Planing Mill products from Milwaukee County (WI).

Warehouse & Distribution shipments were the main commodity by tonnage under the Secondary Traffic commodity. Areas that shipped these products to the county include Outagamie (WI), and Milwaukee (WI).

Commodity	Outbound Truck Tons
Lumber or Wood Products	66,502
Farm Products	14,204
Fabricated Metal Products	742
Misc. Manufacturing Products	383
Waste or Scrap Materials	376
Furniture or Fixtures	31
All Others	72

A wide variety of Lumber or Wood Products were shipped by truck from Florence County. These include Miscellaneous Sawmill and Planing Mill Products shipped to Minneapolis (MN), and Brown and Marathon Counties (WI). Also included are Cork Products to Chicago (IL) and Primary Forest Materials to Brown County (WI).

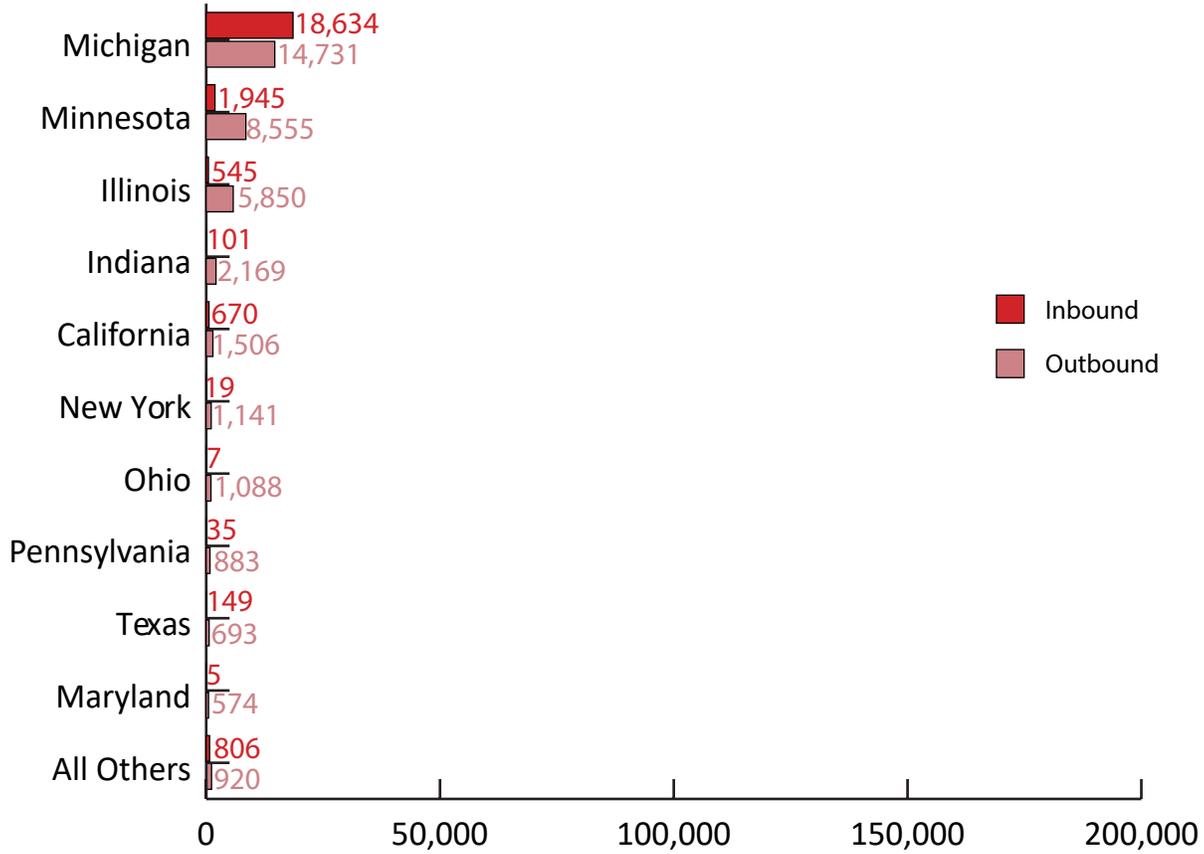
Farm and Grain Products were shipped to Chicago (IL), Outagamie County (WI) and Marquette County (MI).

Commodity	Internal Truck Tons
Lumber or Wood Products	408

Internal shipments fell under the category of Lumber or Wood Products. These were shipments of Miscellaneous Sawmill or Planing Mill Products and of Primary Forest Materials.

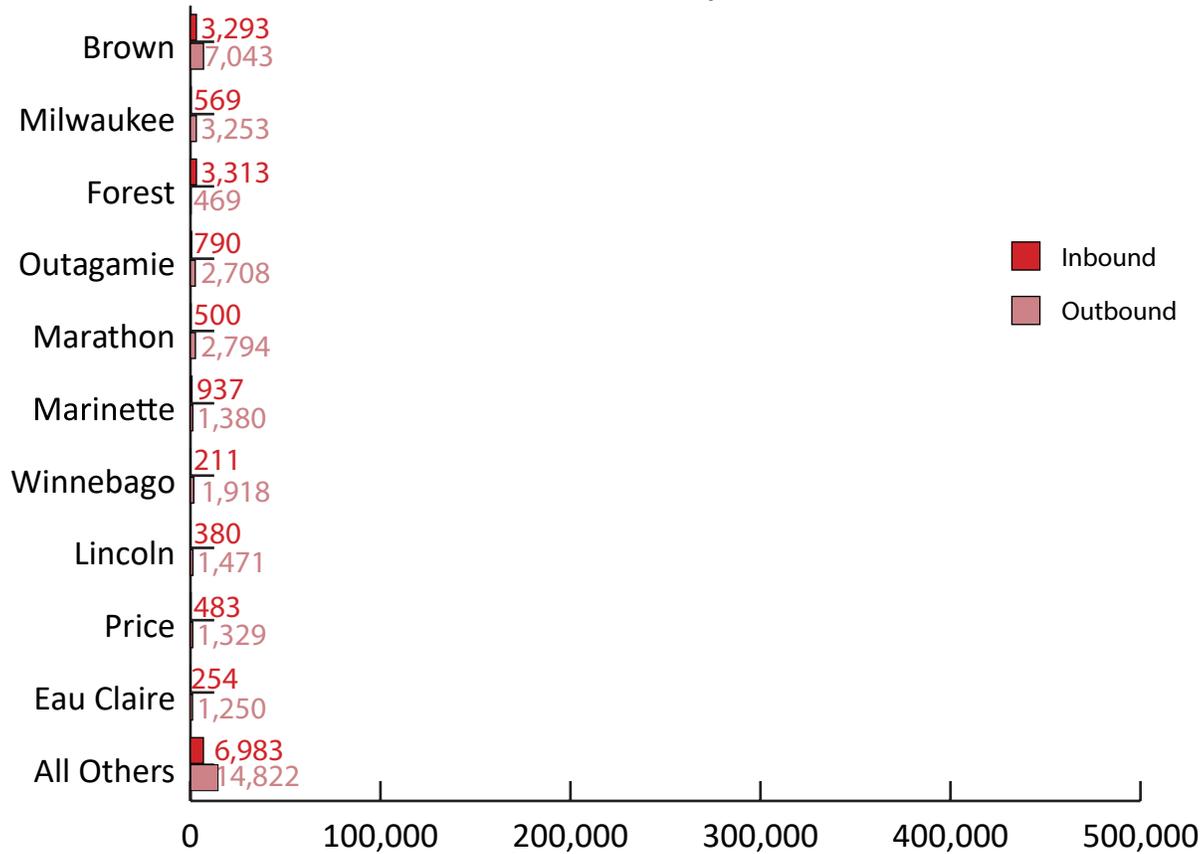
Major Trading Partners by Mode - States/Provinces

Truck - Inbound and Outbound, 2015



Major Trading Partners by Mode - Wisconsin Counties

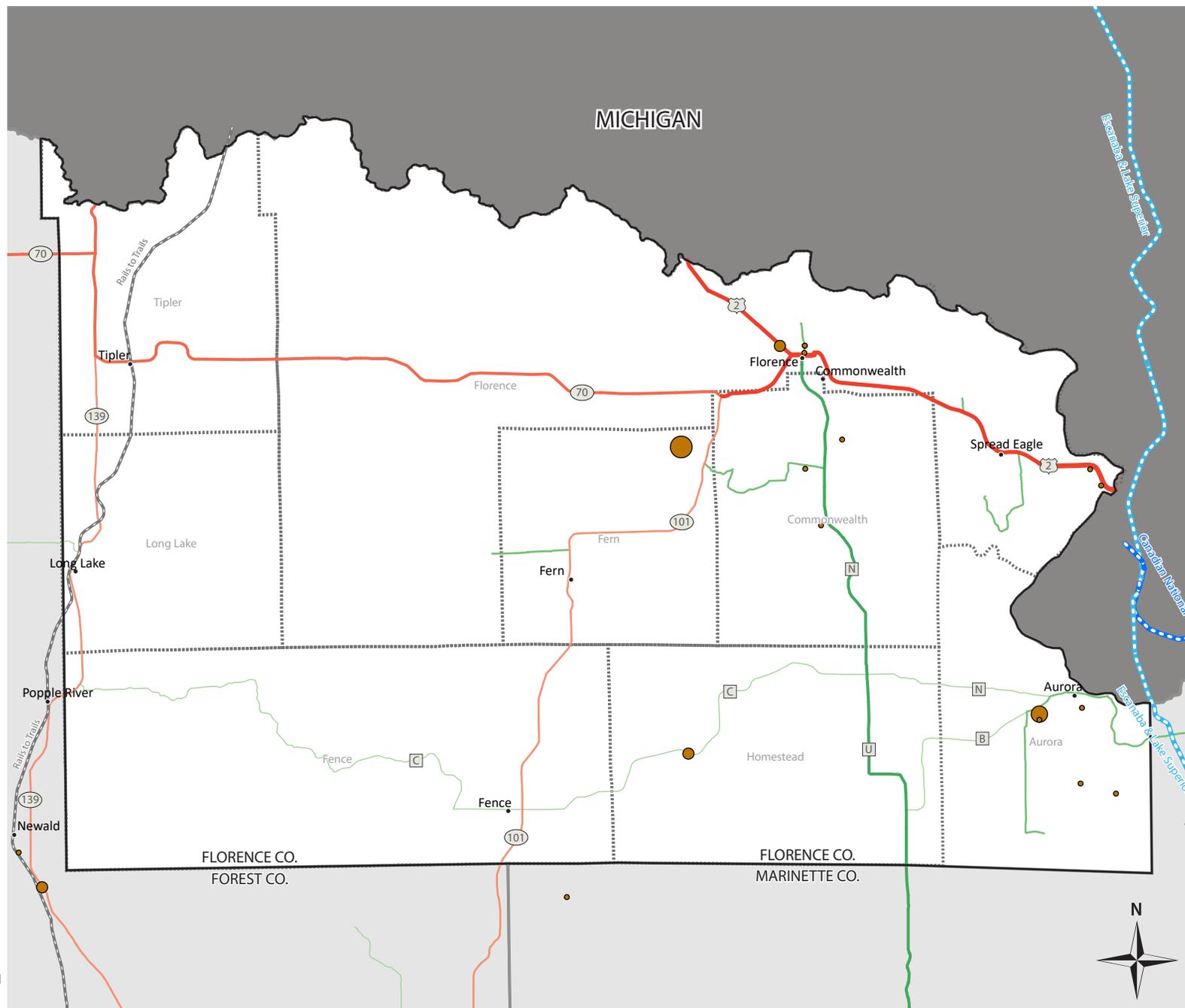
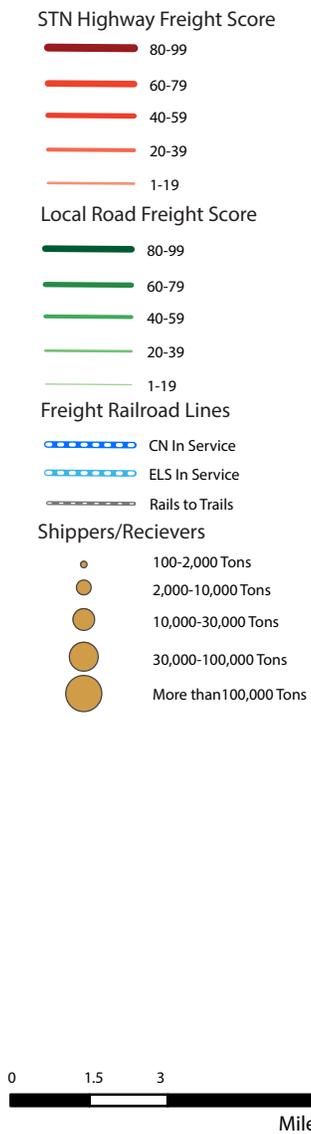
Truck - Inbound and Outbound, 2015



Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.



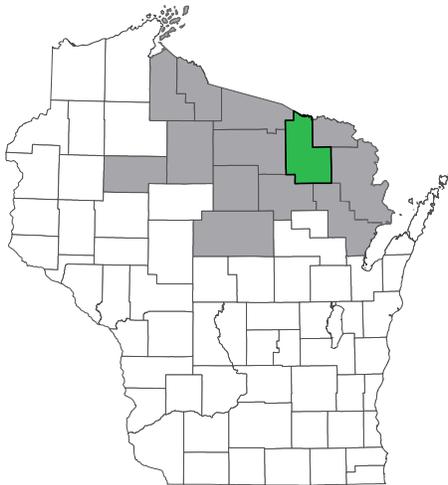
Florence County Freight Profile



Forest County Freight Profile

At a Glance	
9,304	Population
221	Total Establishments
2,928	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
6.4%	-7.2%	\$40,636
4.1%	6.0%	\$53,357

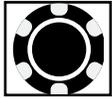


Forest County is a predominately rural county, with an economy driven by forestry, tourism and recreation, fluctuating with seasonal weather.

Approximately 23% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
0.0	Miles of In Service Railroad
38.0	Miles of Out of Service Railroad
48.8	Miles of Rails-to-Trails
57.9	Miles of Oversize-Overweight Highways
19.7	Miles of High Clearance Highways
38.2	Miles of NHS Designated Roads
159.1	Miles of Long Truck Routes

Employment and Major Employers



Potawatomi Bingo Northern
Other Gambling Ind.



Schaefer's IGA
Supermarkets



Wisconsin Timber Assoc.
Lumber Wholesalers



School District of Crandon
Elementary & Secondary Schools



Nu-Roc Community Health
Nursing Care Facilities



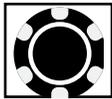
AGI Healthcare of Crandon
Nursing Care Facilities



WD Flooring LLC
Other Millwork



Novak Transportation Services
All Other Transit & Ground Transportation



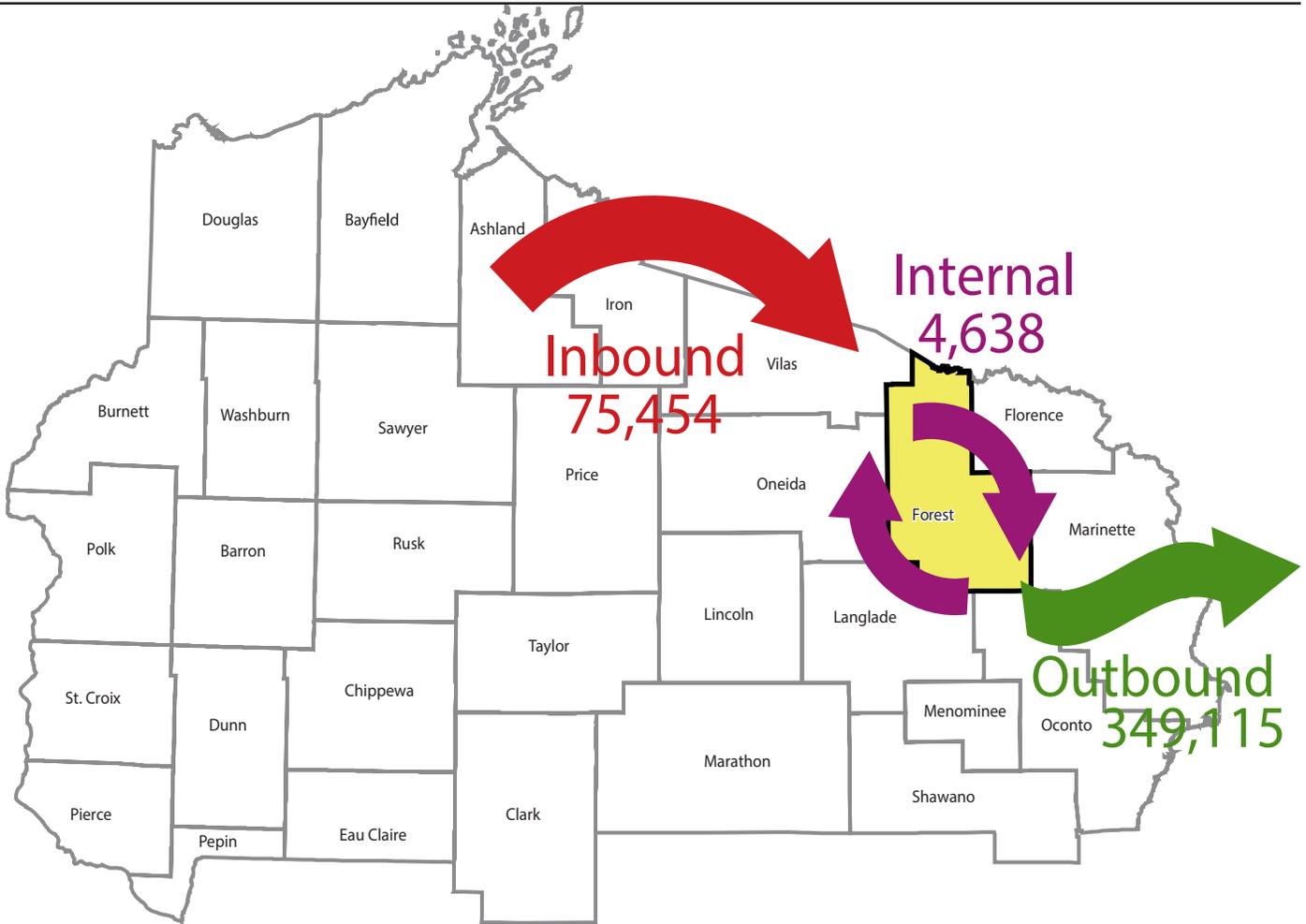
Mole Lake Casino & Lodge
Casinos except Casino Hotels

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	20	65
Mining, Quarrying and Extraction*	1	0-19
Construction*	19	36
Manufacturing*	16	293
Wholesale Trade*	3	0-19
Transportation & Warehousing	37	101
Utilities	1	0-19
Accommodation & Food Service	38	374
Health Care	18	330
Retail Trade	33	256
All Other Sectors	29	248

*Freight Intensive Industry

Freight Movement and Modes



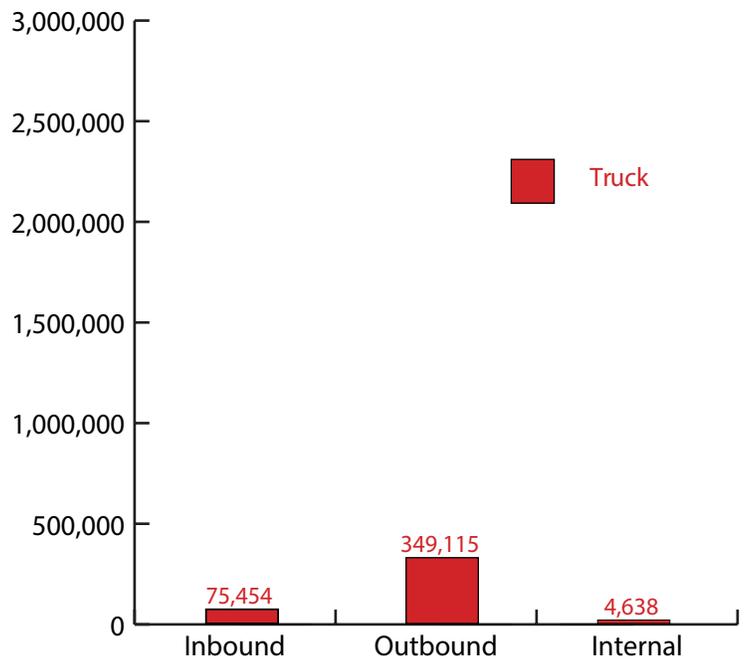
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Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Snow River Products	Crandon	Home Furnishing Merchant Wholesalers	Petroleum Refining Products
Hogan Enterprises Inc.	Wabeno	Brick, Stone, and Related Construction Material Materials	Broken Stone or Riprap
Charles Mihalko & Sons	Crandon	Logging	Primary Forest Materials
Bedrock Sand & Gravel	Crandon	Brick, Stone, and Related Construction Material Materials	Gravel or Sand
Timber Creek Resources	Argonne	Cut Stock, Resawing Lumber, and Planing	Primary Forest Materials

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Charles Mihalko & Sons	Crandon	Logging	Primary Forest Materials
Ken Mihalko & Sons Inc.	Crandon	Logging	Primary Forest Materials
Snow River Products	Crandon	Home Furnishing Merchant Wholesalers	Miscellaneous Sawmill or Planing Mill
C & H Walentowski Inc.	Crandon	Logging	Primary Forest Materials
P Jensen Logging Inc.	Wabeno	Logging	Primary Forest Materials

Major Commodities Forest County - Truck

Commodity	Inbound Truck Tons
Lumber or Wood Products	29,974
Petroleum or Coal Products	14,967
Nonmetallic Minerals	14,048
Clay, Concrete, Glass or Stone	6,224
Transportation Equipment	4,389
Secondary Traffic	3,984
All Others	1,868

The types of Lumber or Wood Products shipped to Forest County by truck include Primary Forest Materials from the Michigan Upper Peninsula, Duluth (MN) and Langlade County (WI). Lumber or Dimension Stock was also shipped to the county from the Michigan Upper Peninsula.

Petroleum Refining Products was another major commodity by tonnage, shipped into the county from Brown and Oneida Counties (WI).

Commodity	Outbound Truck Tons
Lumber or Wood Products	263,578
Nonmetallic Minerals	51,694
Farm Products	17,926
Clay, Concrete, Glass or Stone	7,641
Waste or Scrap Materials	4,545
Transportation Equipment	2,817
All Others	914

Lumber or Wood Products made up the largest tonnage of all commodities shipped from Forest County. Primary Forest Materials made up most of these high tonnage shipments, with destinations including Brown, Winnebago and Shawano Counties (WI).

Broken Stone or Riprap was the highest tonnage commodity of Nonmetallic Minerals, with shipments going to Minneapolis (MN).

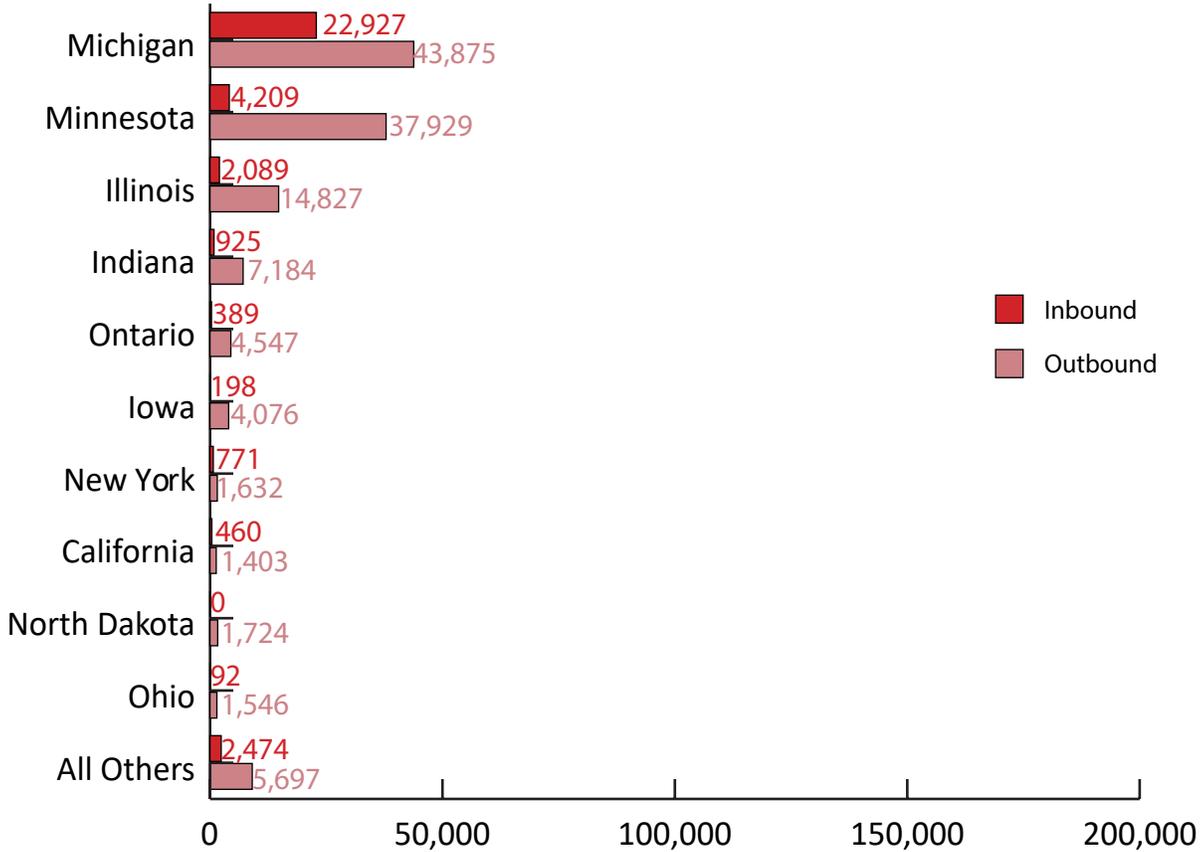
Commodity	Internal Truck Tons
Lumber or Wood Products	3,783
Nonmetallic Minerals	355
Transportation Equipment	289
Clay, Concrete, Glass or Stone	211

Lumber or Wood Products had the highest tonnage shipments by truck within Forest County. Some of these commodities include Primary Forest Materials and Lumber or Dimension Stock and Miscellaneous Sawmill or Planing Mill Products.

Other high tonnage shipments within the county include Broken Stone or Riprap.

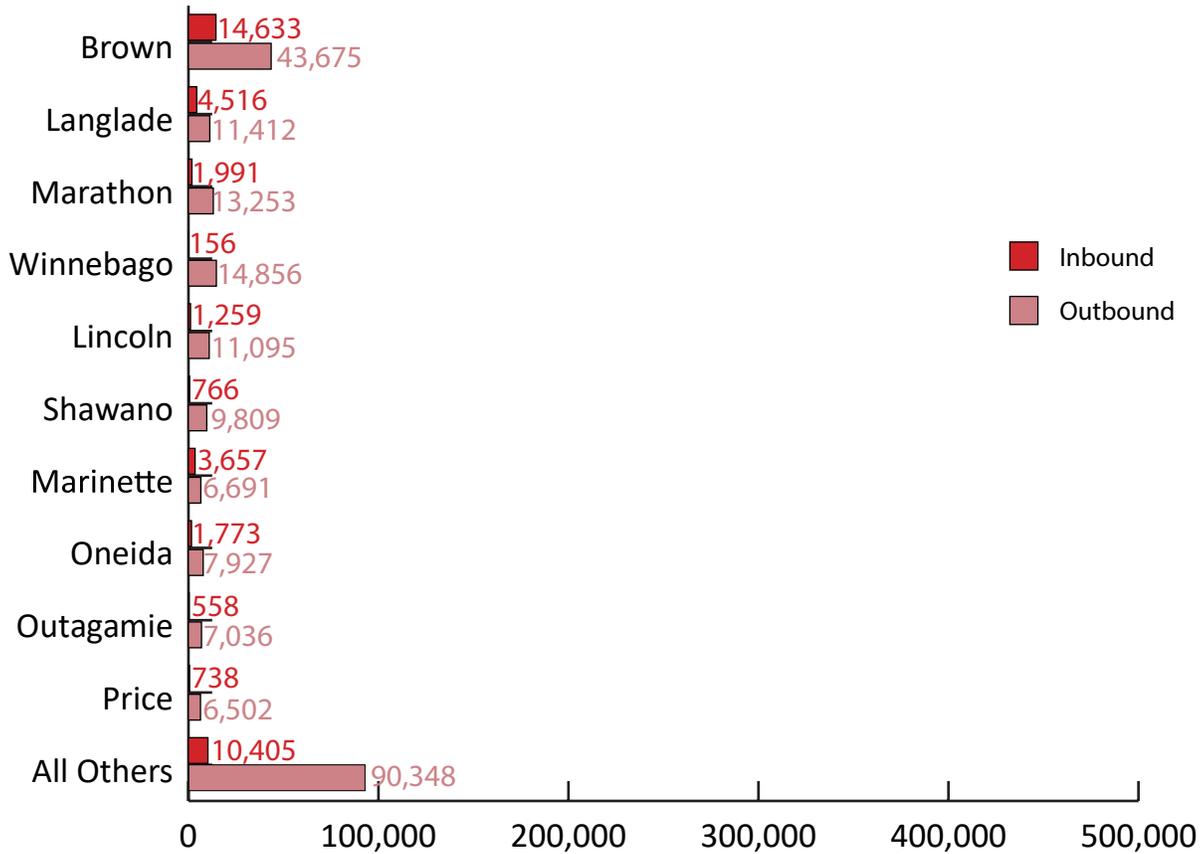
Major Trading Partners by Mode - States/Provinces

Truck - Inbound and Outbound Tons, 2015



Major Trading Partners by Mode - Wisconsin Counties

Truck- Inbound and Outbound Tons, 2015

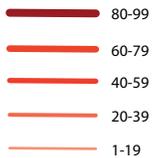


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.

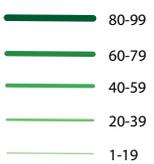


Forest County Freight Profile

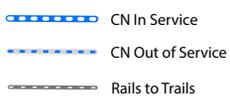
STN Highway Freight Score



Local Road Freight Score



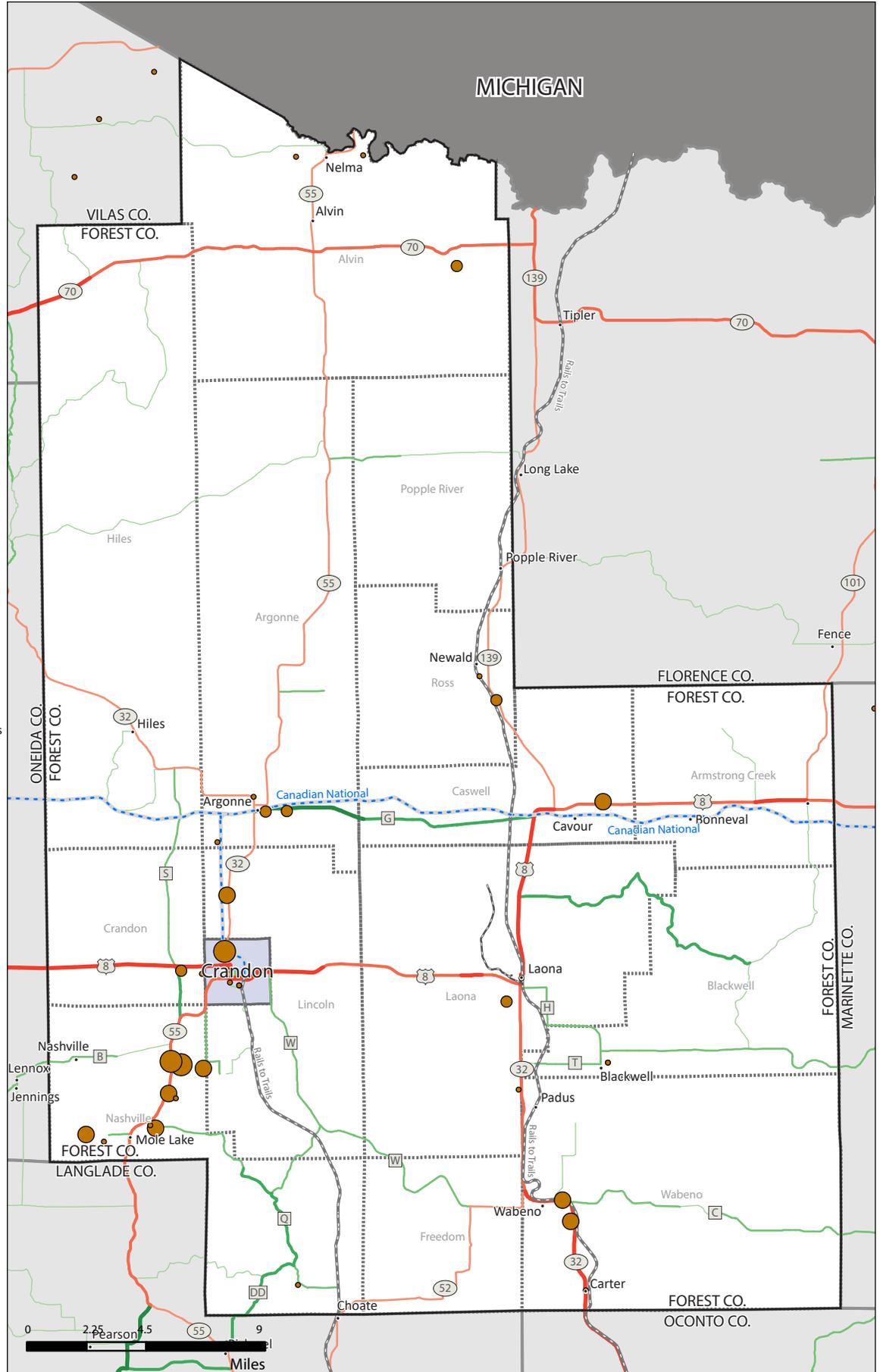
Freight Railroad Lines



Shippers/Recievers



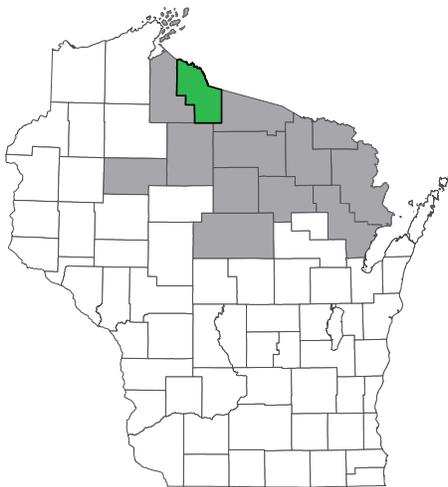
Other Freight Facilities



Iron County Freight Profile

At a Glance	
5,907	Population
205	Total Establishments
1,339	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
8.8%	-0.6%	\$42,543
4.6%	0.4%	\$53,357



In the 1960's, Iron County's mining and logging dwindled and the economy gradually turned to tourism. The County's location on the shore of Lake Superior and 300 smaller lakes offer tourists and residents a multitude of outdoor recreation opportunities.

Approximately 27% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
0.0	Miles of In Service Railroad
16.6	Miles of Out of Service Railroad
0.0	Miles of Rails-to-Trails
72.5	Miles of Oversize-Overweight Highways
51.0	Miles of High Clearance Highways
51.0	Miles of NHS Designated Roads
118.9	Miles of Long Truck Routes

Employment and Major Employers



Angelo Luppino Inc.

New Single Family Housing Construc.



Whitecap Mountain Resort

All other Traveler Accommodation



Villa Maria Health & Rehab

Nursing Care Facilities



Liberty Bell Chalet

Full-service restaurants



Giovanoni Hardware

Hardware Stores



Snow Country Hardwoods

Cut Stock Resawing Lumber & Planing



Mercer School District

Elementary & Secondary Schools



Iron County Government

Legislative Bodies



Avanti Home Health

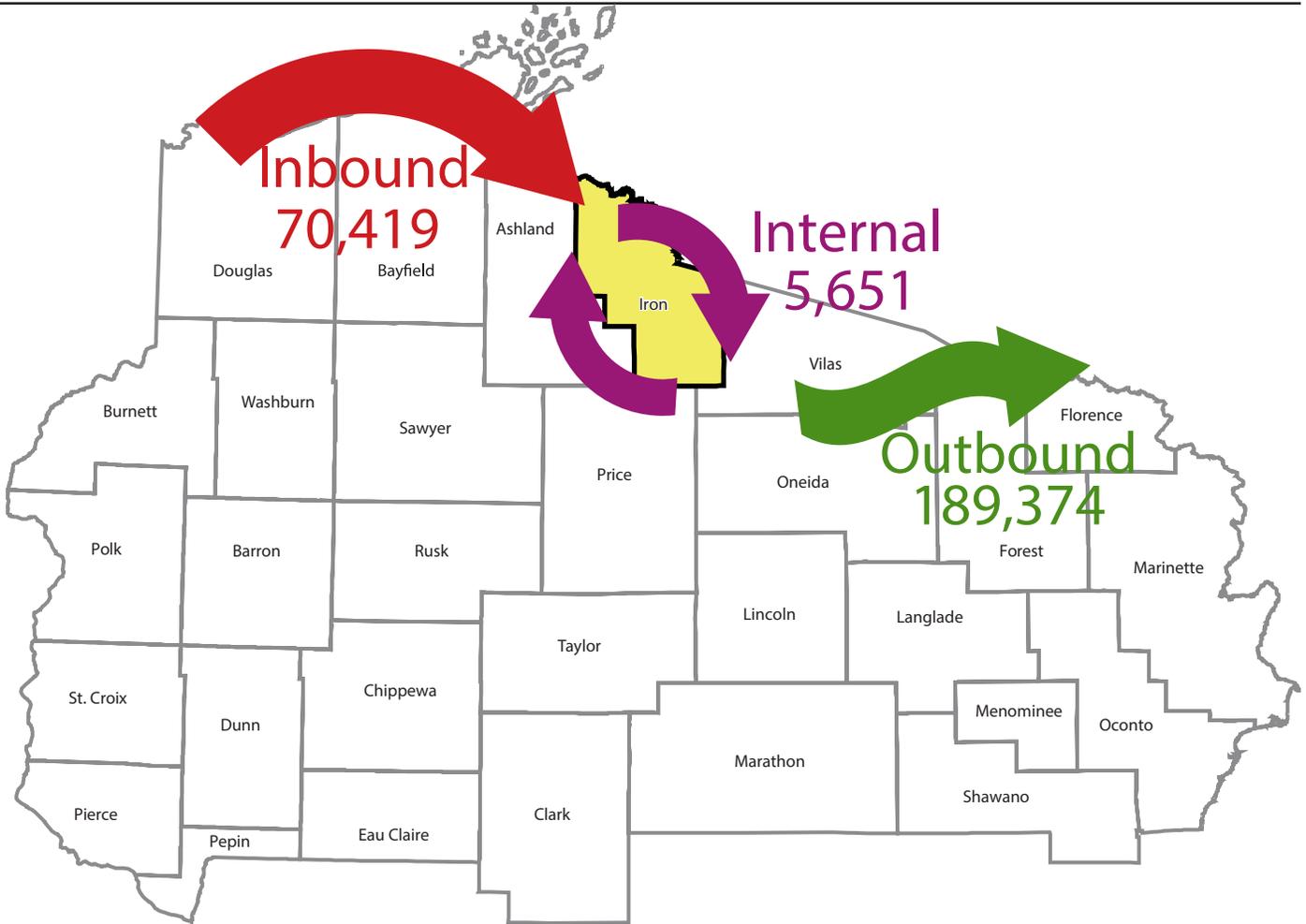
Home Health Care Services

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	7	21
Mining, Quarrying and Extraction	2	0-19
Construction*	30	103
Manufacturing*	11	160
Wholesale Trade*	10	81
Transportation & Warehousing	9	38
Utilities	2	0-19
Health Care	40	311
Accommodation & Food Service	29	241
Retail Trade	18	237
All Other Sectors	49	128

*Freight Intensive Industry

Freight Movement and Modes



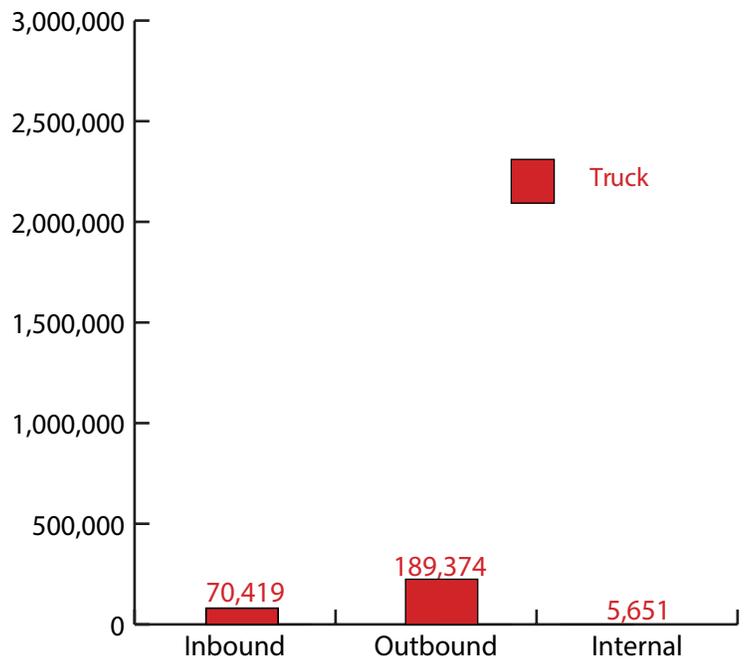
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Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Ho Bo Drive	Hurley	All Other Specialty Trade Contractors	Gravel or Sand
Snow Country Hardwoods	Hurley	Cut Stock, Resawing Lumber, and Planing	Primary Forest Materials
Americas	Mercer	Petroleum and Petroleum Products Merchant Wholesalers	Petroleum Refining Products
Action Floor Systems LLC	Mercer	Other Millwork (including Flooring)	Mineral Wool
Wes Nasi Construction LLC	Hurley	Commercial and Institutional Building Construction	Ready-mix Concrete, Wet

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Lux Transport Inc. and Construction	Mercer	Site Preparation Contractors	Petroleum Refining Products
Northern Lakes Concrete Inc.	Hurley	Other Building Material Dealers	Ready-mix Concrete, Wet
Action Floor Systems LLC	Mercer	Other Millwork (including Flooring)	Millwork or Cabinetwork
K & M Concrete	Mercer	Poured Concrete Contractor	Ready-mix Concrete, Wet
Snowbelt Hardwoods	Hurley	Cut Stock, Resawing Lumber, and Planing	Millwork or Cabinetwork

Major Commodities Iron County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	22,639
Petroleum or Coal Products	13,476
Lumber or Wood Products	10,924
Clay, Concrete, Glass or Stone	10,261
Secondary Traffic	8,369
Food or Kindred Products	2,248
All Others	2,502

Nonmetallic Minerals were the highest tonnage commodities shipped into Iron County by truck. Gravel or Sand had the highest tonnage shipments, originating from Minneapolis (MN) and Chippewa and Sawyer Counties (WI). Broken Sand or Riprap also had high tonnage shipments originating from the Michigan Upper Peninsula.

Petroleum Refining Products also had several high tonnage shipments to the county, originating from Douglas County (WI) and Duluth (MN).

Commodity	Outbound Truck Tons
Nonmetallic Minerals	66,810
Lumber or Wood Products	40,957
Food or Kindred Products	40,116
Clay, Concrete, Glass or Stone	19,619
Farm Products	14,329
Waste or Scrap Materials	7,273
All Others	271

Nonmetallic Minerals were the highest tonnage commodities shipped from Iron County by truck. Gravel and Sand made up the highest tonnage shipments from the county, shipping to Vilas, Marathon and Price Counties (WI).

Food and Kindred Products also had high tonnage shipments, with Soft Drinks or Mineral Water the highest tonnage commodity shipped from Iron County. Destinations include Minneapolis (MN) and Chicago (IL).

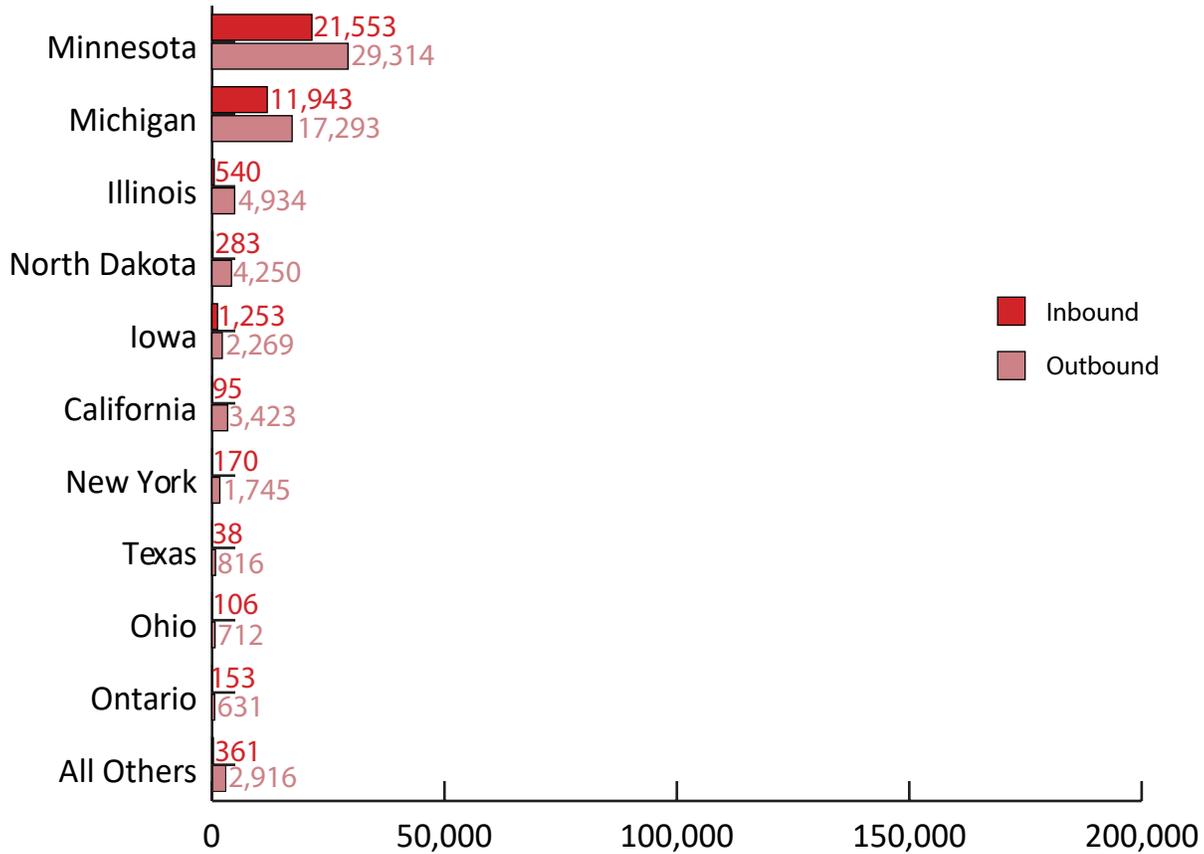
Commodity	Internal Truck Tons
Nonmetallic Minerals	4,339
Clay, Concrete, Glass or Stone	684
Food or Kindred Products	592
Lumber or Wood Products	35

Nonmetallic Minerals also have the highest tonnage of all commodities shipped within Iron County by truck. All of this tonnage came from shipments of Gravel or Sand.

Food or Kindred Products also has high tonnage shipments within Iron County. Some of these commodities include Soft Drinks or Mineral Water and Ice.

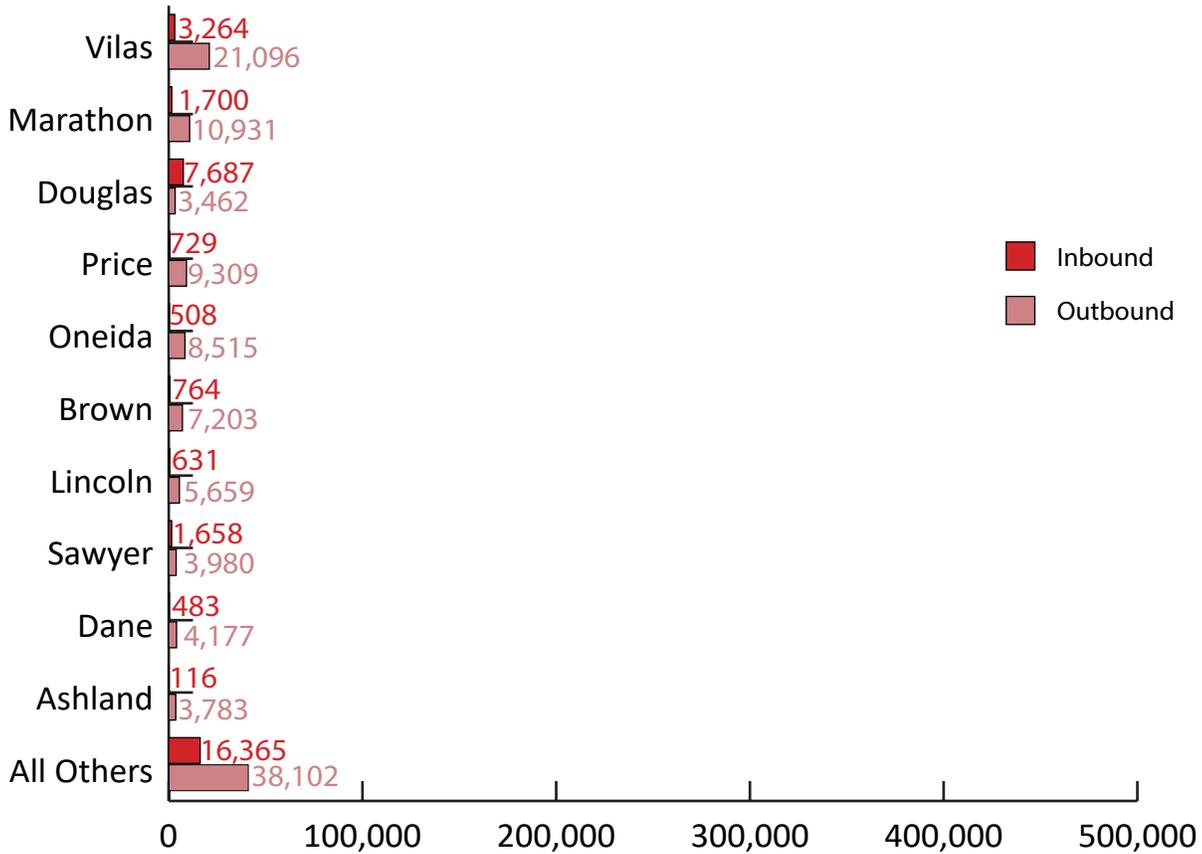
Major Trading Partners by Mode - States/Provinces

Truck - Inbound and Outbound Tons, 2015



Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015

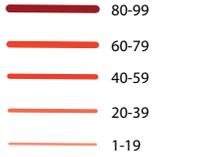


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.

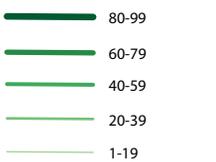


Iron County Freight Profile

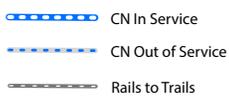
STN Highway Freight Score



Local Road Freight Score



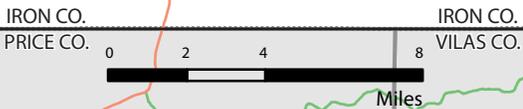
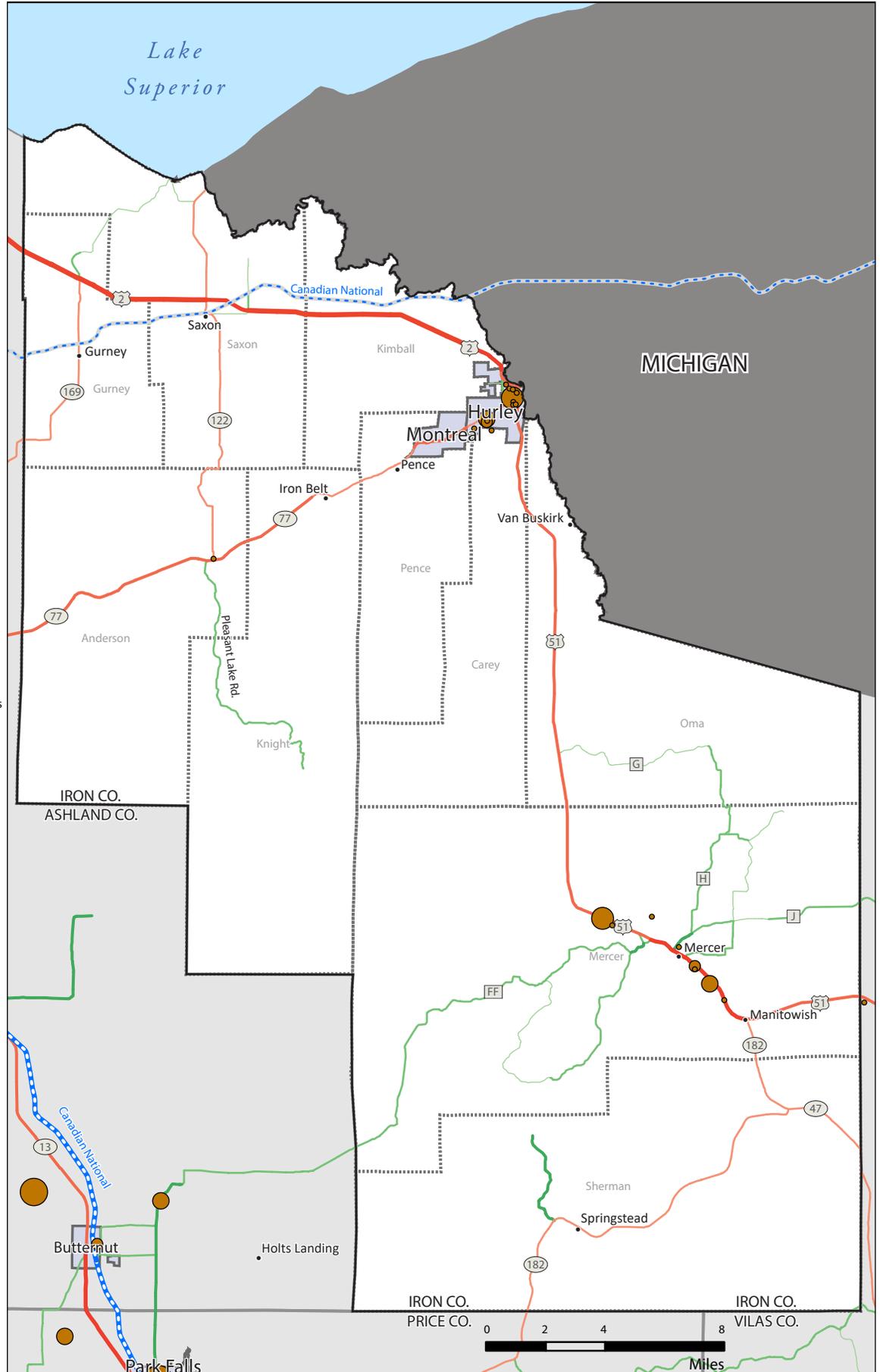
Freight Railroad Lines



Shippers/Receivers



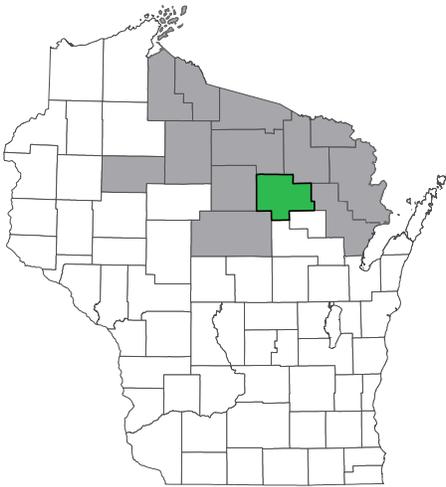
Other Freight Facilities



Langlade County Freight Profile

At a Glance	
19,551	Population
546	Total Establishments
6,344	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
6.1%	-0.7%	\$41,775
4.6%	0.4%	\$53,357



Langlade County is predominantly rural, offering abundant recreational opportunities with over 800 lakes, 225 streams, 200 spring ponds, and the Wolf River.

About a third of the county's active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing and hunting.

Freight Facilities	
0.0	Miles of In Service Railroad
0.0	Miles of Out of Service Railroad
23.3	Miles of Rails-to-Trails
79.3	Miles of Oversize-Overweight Highways
32.3	Miles of High Clearance Highways
32.3	Miles of NHS Designated Roads
145.3	Miles of Long Truck Routes

Employment and Major Employers



Aspirus Langlade Hospital
General Medical & Surgical Hospitals



Amron
Switchgear & Switchboard Mfg.



Merit Gear Corp.
Speed Changer Driver & Gear Mfg.



Waukesha Bearings
Ball & Roller Bearing Mfg.



Kretz Lumber Company
Sawmills



Antigo Neon
Sign Manufacturing



Menards
Home Remodeling Store



Plaspack USA
Misc. Textile Product Mills



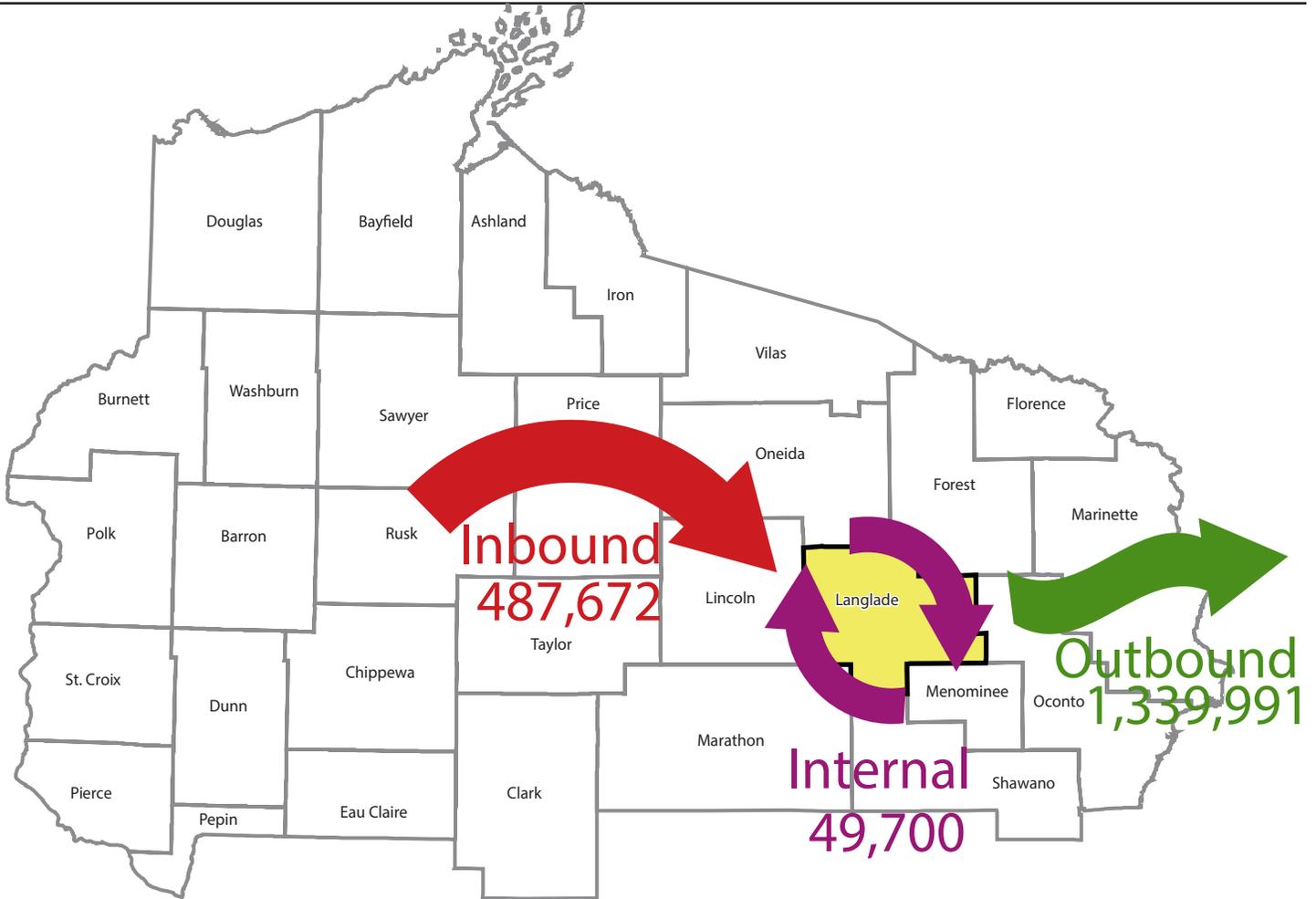
Eastview Medical & Rehab
Ambulatory Health Care Services

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	5	20
Mining, Quarrying and Extraction	1	0-19
Construction*	55	179
Manufacturing*	42	1,487
Wholesale Trade*	26	405
Transportation & Warehousing	45	465
Utilities	3	20-99
Retail Trade	87	1,289
Health Care	48	981
Accomodation & Food Services	63	536
All Other Sectors	171	982

*Freight Intensive Industry

Freight Movement and Modes



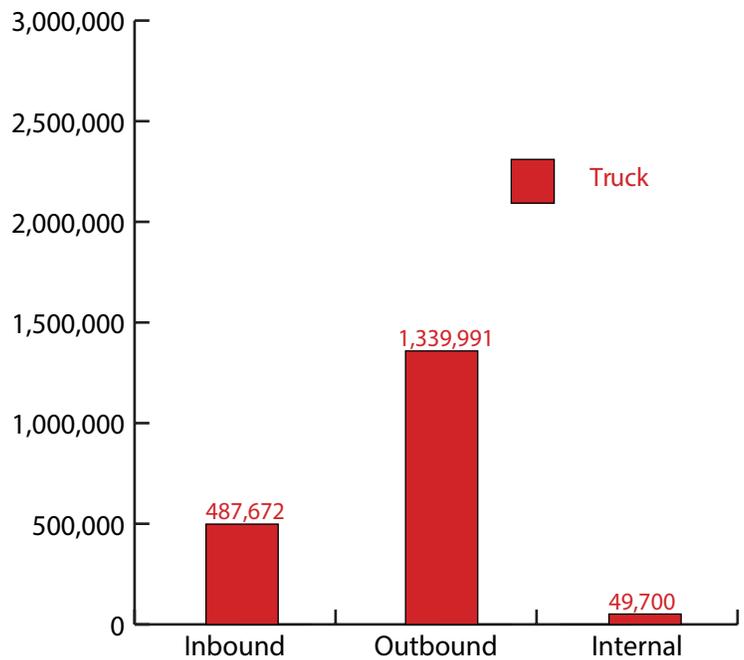
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*Tonnage amounts do not include “overhead tonnage”, products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Meverden Trucking	Antigo	Brick, Stone, and Related Construction Material Materials	Gravel or Sand
County Materials Corp.	Antigo	Ready-mix Concrete Manufacturing	Broken Stone or Riprap
Flannery & Flannery Logging	Antigo	Logging	Primary Forest Materials
Schroeder Brothers Farm Inc.	Antigo	Fresh Fruit and Vegetable Merchant Wholesalers	Grain
Great Lakes Hardwood Lumber Co.	Antigo	Other Building Material Dealers	Lumber or Dimension Stock

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
James Gallenberg Farm	Antigo	All Other Miscellaneous Crop Farming	Miscellaneous Field Crops
Arndt Lumber & Custom Sawing	Antigo	Sawmills	Misc Sawmill or Planing Mill
Sartori Co.	Antigo	Cheese Manufacturing	Dairy Farm Products
Seidl Farms Inc.	Bryant	All Other Miscellaneous Crop Farming	Miscellaneous Field Crops
Flannery & Flannery Logging	Antigo	Logging	Primary Forest Materials

Major Commodities Langlade County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	102,472
Petroleum or Coal Products	90,854
Farm Products	90,286
Chemicals or Allied Products	55,762
Lumber or Wood Products	40,072
Clay, Concrete, Glass or Stone	39,031
All Others	69,196

Petroleum or Coal Products had the highest tonnage shipments to Langlade County by truck. These commodities include Petroleum Refining Products from Brown and Oneida Counties (WI) and Liquefied Gases, Coal or Petroleum from Brown County (WI).

Chemicals or Allied Products also had high tonnage shipments to the county. These included Plastic Materials or Synthetics. Fibers from Houston (TX) and Fertilizers from Toledo (OH).

Commodity	Outbound Truck Tons
Nonmetallic Minerals	584,545
Farm Products	475,901
Lumber or Wood Products	153,094
Waste or Scrap Materials	47,262
Rubber or Misc Plastics	22,700
Machinery	21,921
All Others	34,567

Nonmetallic Minerals were the highest tonnage outbound shipments from Langlade County. Broken Stone or Riprap was the highest tonnage commodity, with major shipments going to Minneapolis (MN), and Oneida and Marathon Counties (WI).

Farm Products also had high tonnage outbound shipments. Some of these commodities included Miscellaneous Field Crops to Portage and Outagamie Counties (WI).

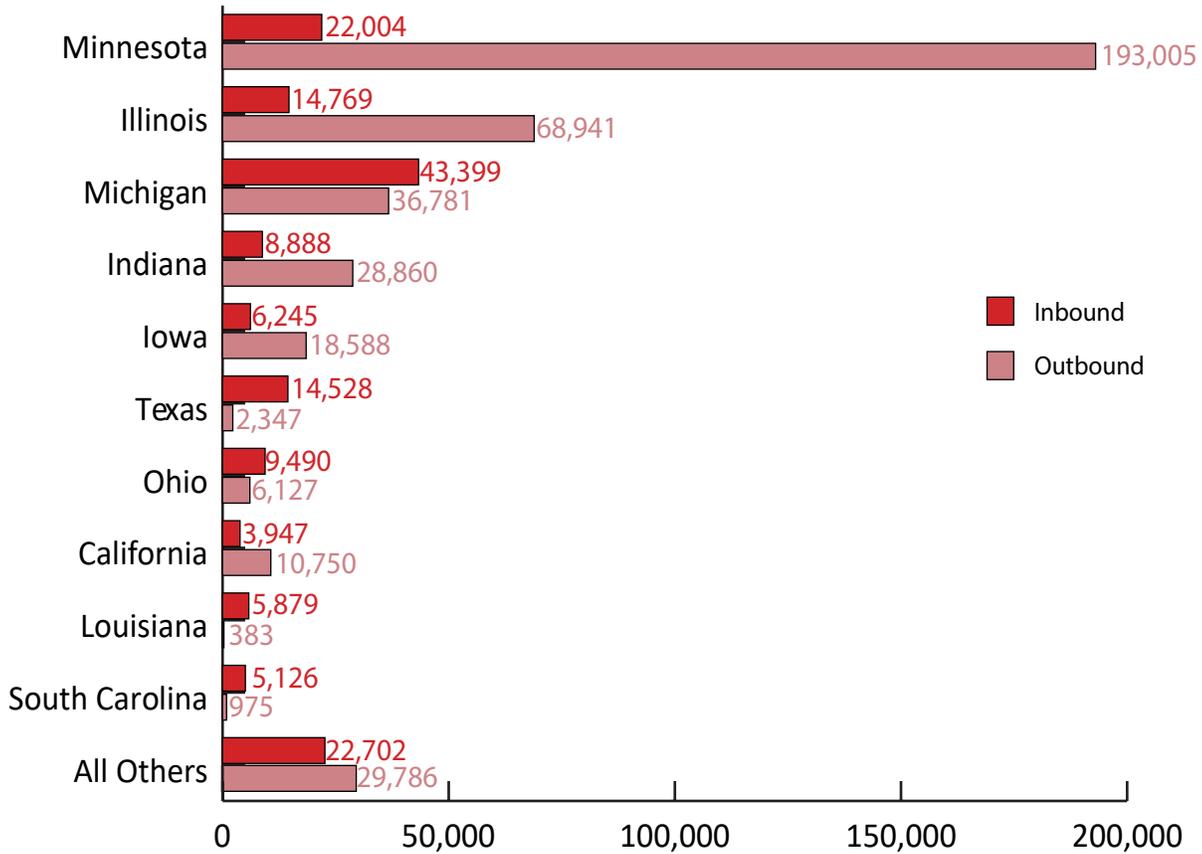
Commodity	Internal Truck Tons
Nonmetallic Minerals	41,351
Farm Products	2,725
Lumber or Wood Products	2,483
Machinery	2,216
Clay, Concrete, Glass or Stone	316
Food or Kindred Products	243
All Others	367

Nonmetallic Minerals made up the highest tonnage of all commodities shipped by truck within Langlade County, with all tonnage coming from Broken Stone or Riprap.

Farm Products and Machinery also had high tonnage shipments within the county. Some of the highest tonnage commodities in Farm Products are Miscellaneous Field Crops and Dairy Farm Products. For Machinery, the highest tonnage commodity is Mechanical Power Transmission Equipment.

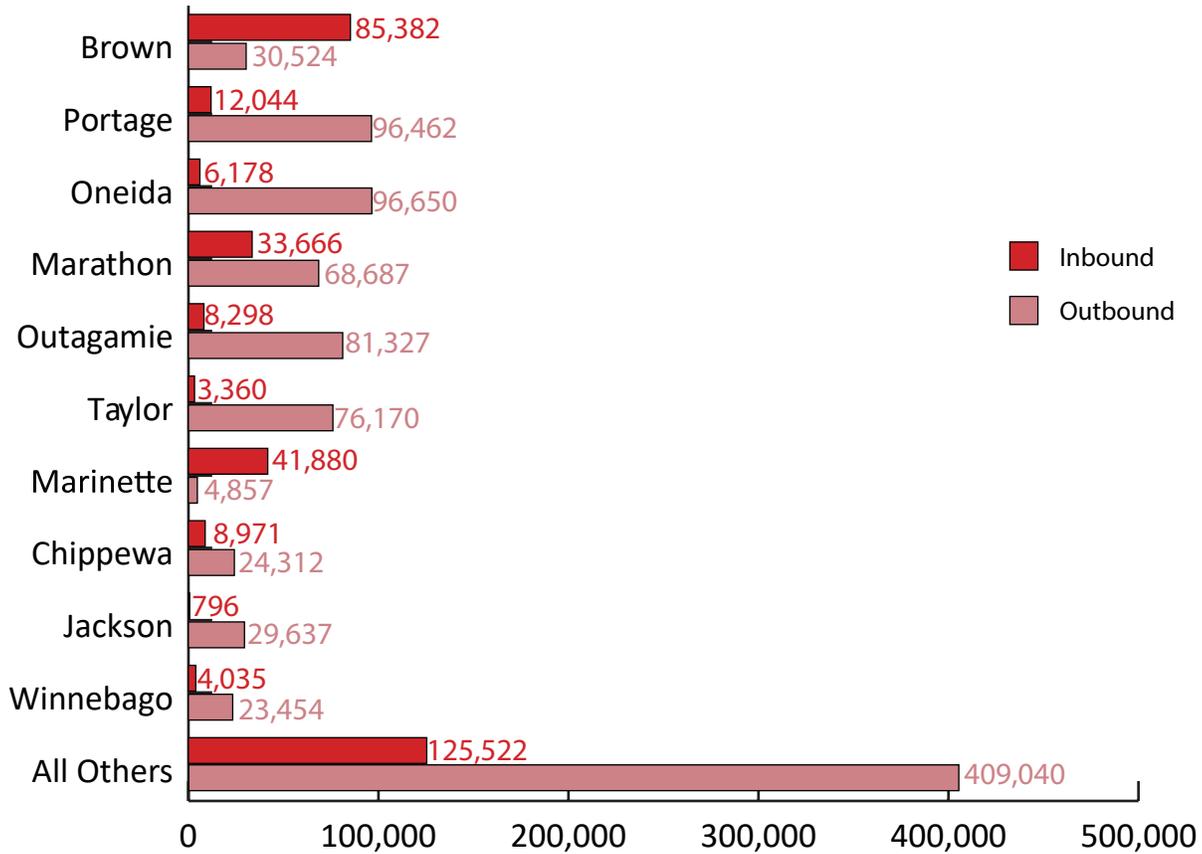
Major Trading Partners by Mode - States

Truck - Inbound and Outbound Tons, 2015



Major Trading Partners by Mode - Wisconsin Counties

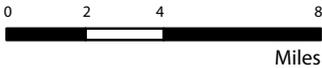
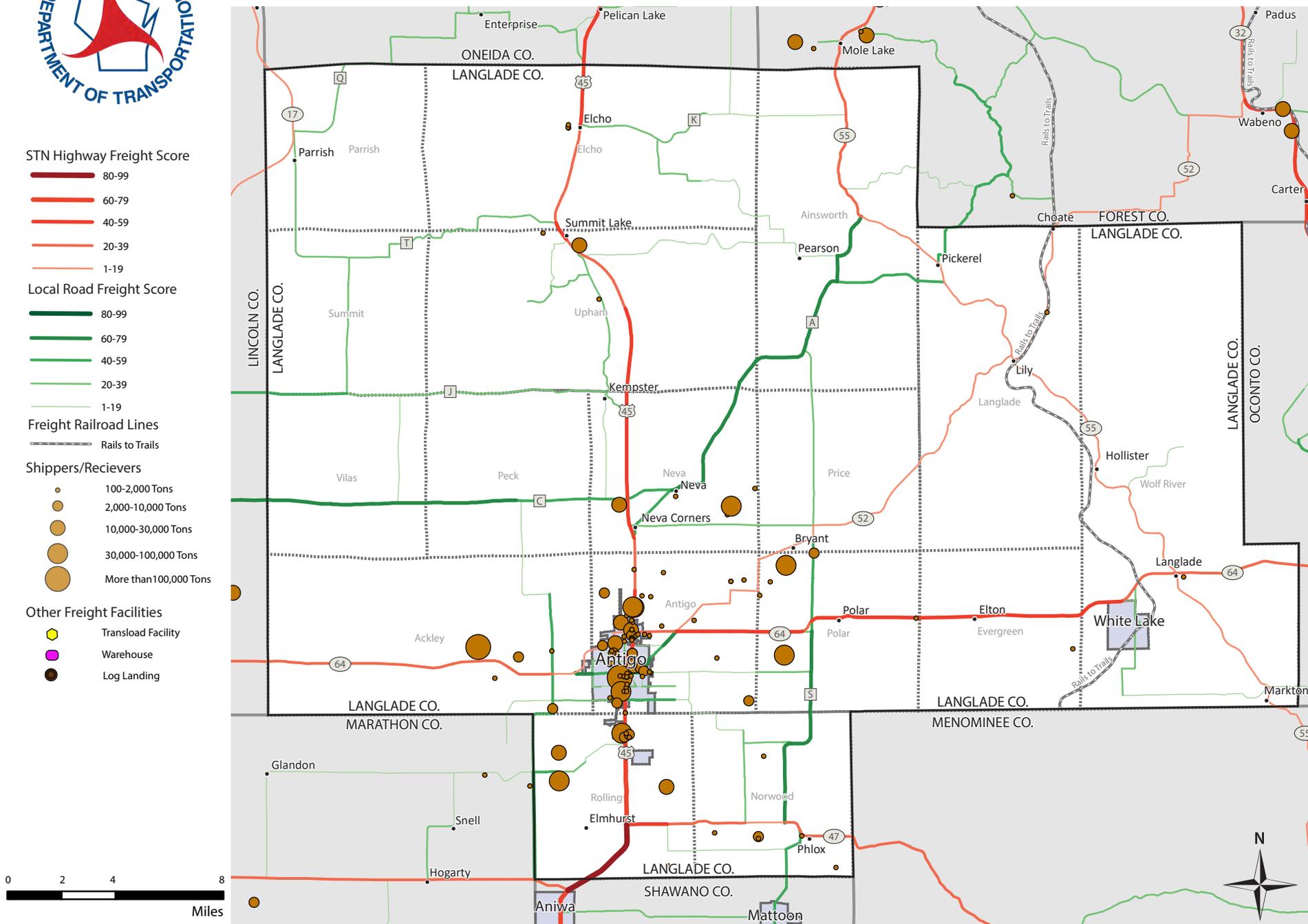
Truck - Inbound and Outbound Tons, 2015



Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.



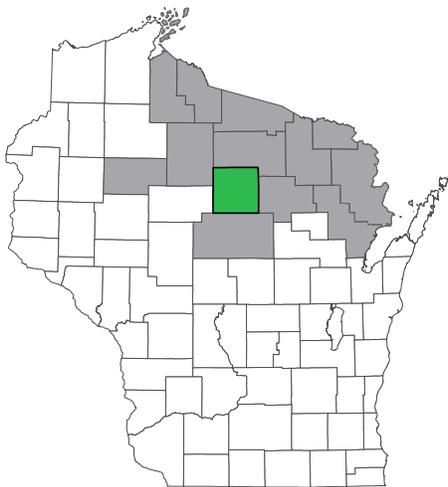
Langlade County Freight Profile



Lincoln County Freight Profile

At a Glance	
28,286	Population
671	Total Establishments
8,791	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
5.0%	-0.6%	\$49,721
4.6%	0.4%	\$53,357



Lincoln County is predominated by manufacturing, retail trade, and government services.

Approximately 38% of the active labor force is employed in freight-intensive industries such as manufacturing, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
50.5	Miles of In Service Railroad
2.3	Miles of Out of Service Railroad
5.2	Miles of Rails-to-Trails
113.9	Miles of Oversize-Overweight Highways
1.6	Miles of High Clearance Highways
55.8	Miles of NHS Designated Roads
167.8	Miles of Long Truck Routes

Employment and Major Employers



Packaging Corp. of America
Corrugated & Solid Box Fiber Mfg.



Nelson's County Market
Supermarkets



Harley-Davidson Motor Co.
Motorcycle & ATV Dealer



Walmart Supercenter
Department Stores



Hurd Doors & Windows
Metal Window & Door Mfg.



Semling-Menke Co.
Other Millwork



Lincoln Wood Products
Other Millwork



Church Mutual Insurance Co.
Insurance Agencies & Brokerages



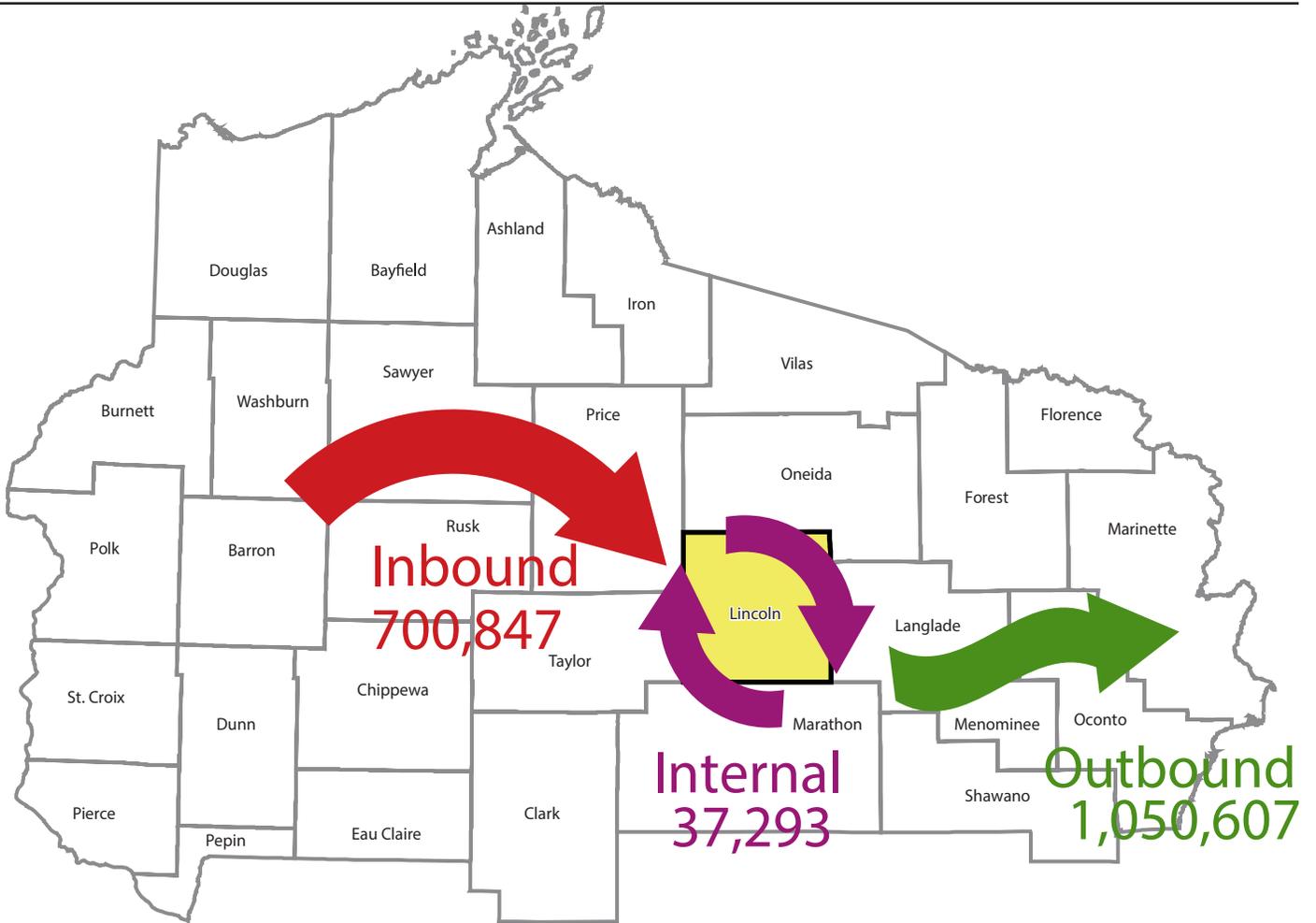
Pine Crest Nursing Home
Nursing Care Facilities

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	15	38
Construction*	79	438
Manufacturing*	46	2,554
Wholesale Trade*	20	320
Transportation & Warehousing	30	401
Utilities	2	20-99
Retail Trade	112	1,375
Finance & Insurance	35	936
Health Care	65	884
Accomodation and Food Service	90	734
All Other Sectors	177	1,111

*Freight Intensive Industry

Freight Movement and Modes



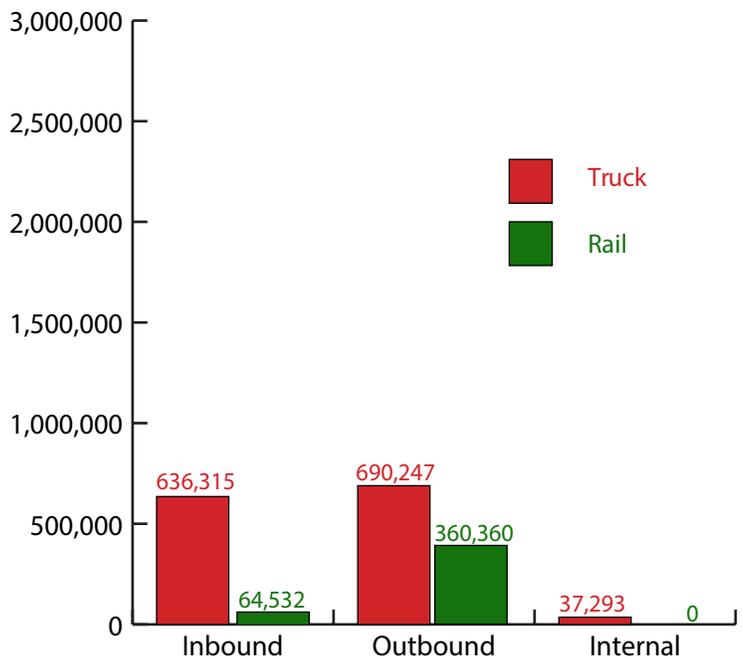
Definitions:

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Outbound Tonnage: Commodities shipped out of the county to other Wisconsin counties and states.

Internal Tonnage: Goods that are shipped from one destination in the county to another destination within the county.

*Tonnage amounts do not include “overhead tonnage”, products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Peterson Sand & Gravel	Merrill	Brick, Stone, and Related Construction Materials	Gravel or Sand
Merrill Gravel & Construction	Merrill	Ready-mix Concrete Manufacturing	Broken Stone or Riprap
Agra Industries Inc.	Merrill	Iron and Steel Mills and Ferroalloy Manufacturing	Bituminous Coal
Hometown Feed Mill	Tomahawk	Farm Supplies Merchant Wholesalers	Grain
Merrill Millwork Inc.	Merrill	Other Millwork (including Flooring)	Primary Forest Materials

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
JMIUSA Limited	Merrill	Petroleum Products	Petroleum Refining Products
Merrill Gravel & Construction	Merrill	Ready-Mix Concrete Manufacturing	Ready-mix Concrete, Wet
Darrell Oestreich	Merrill	Logging	Primary Forest Materials
Agra Industries	Merrill	All Other Miscellaneous Manufacturing	Wood Products, Not Elsewhere Classified
Watland & Watland	Tomahawk	Logging	Primary Forest Materials

Major Commodities Lincoln County - Rail

Commodity	Terminating Rail Tons
Chemicals or Allied Products	31,524
Petroleum or Coal Products	20,680
Coal	17,952
Farm Products	8,216
Pulp, Paper or Allied Products	7,440
Waste or Scrap Materials	1,720

Potassium or Sodium Compound, a type of Chemical or Allied Product, was the highest inbound commodity, with shipments by rail from Saskatch-ewan and Minneapolis (MN).

Bituminous Coal was another tonnage commodity shipped to Lincoln County by rail, originating from Kentucky.

Commodity	Originating Rail Tons
Pulp, Paper or Allied Products	303,400
Lumber or Wood Products	56,960

Pulp, Paper or Allied Products made up a large amount of the total tonnage shipped by rail from Lincoln County. Most of this tonnage came from the Fiber, Paper or Pulpboard commodity, with shipments to Chicago (IL), Dallas (TX) and Salt Lake City (UT).

Major Commodities Lincoln County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	257,312
Lumber or Wood Products	138,040
Petroleum or Coal Products	51,051
Clay, Concrete, Glass or Stone	40,407
Secondary Traffic	30,580
Primary Metal Products	27,433
All Others	91,493

Nonmetallic Minerals had the highest tonnage shipments by truck to Lincoln County. Some commodities include Broken Stone or Riprap from Marathon and Langlade Counties (WI), and Gravel or Sand from Chippewa County (WI).

Petroleum or Coal Products also had high tonnage shipments to Lincoln County by truck. Some of the highest tonnage commodities include Petroleum Refining Products from Portage and Brown Counties (WI).

Commodity	Outbound Truck Tons
Pulp, Paper or Allied Products	248,461
Lumber or Wood Products	126,101
Farm Products	117,273
Clay, Concrete, Glass or Stone	75,178
Waste or Scrap Materials	65,269
Fabricated Metal Products	24,614
All Others	33,350

Pulp, Paper or Allied Products made up some of the highest tonnage shipments from Lincoln County by truck. Fiber, Paper or Pulpboard was the highest tonnage commodity, with shipments to Chicago (IL), Marathon County (WI), and Minneapolis (MN).

Ready-mix Concrete was another high tonnage commodity shipped from Lincoln County by truck. Destinations of this commodity include Clark and Lincoln Counties (WI).

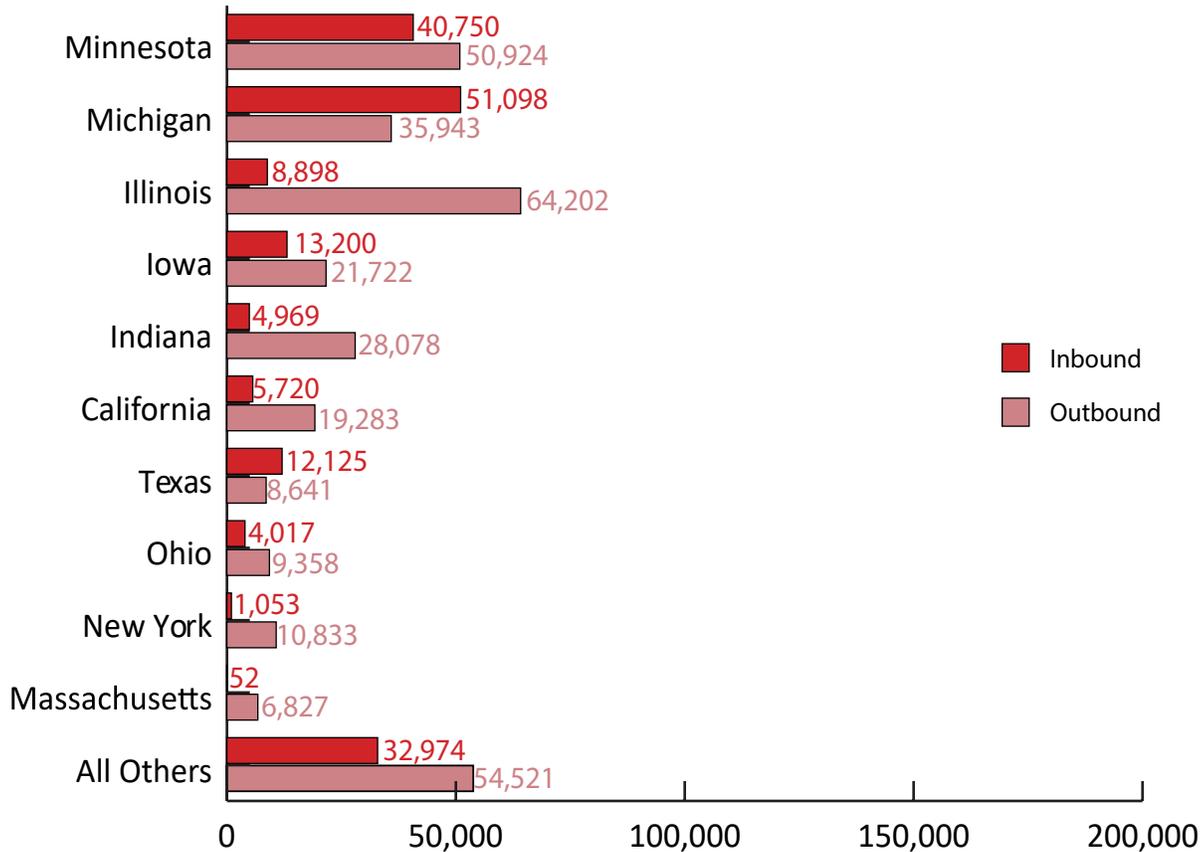
Commodity	Internal Truck Tons
Transportation Equipment	17,669
Clay, Concrete, Glass or Stone	8,155
Pulp, Paper or Allied Products	6,451
Lumber or Wood Products	3,067
Fabricated Metal Products	1,269
Farm Products	325
All Others	358

Transportation Equipment had the highest tonnage shipments within Lincoln County by truck. This tonnage was shaped by the commodity of Motorcycles, Bicycles or Parts.

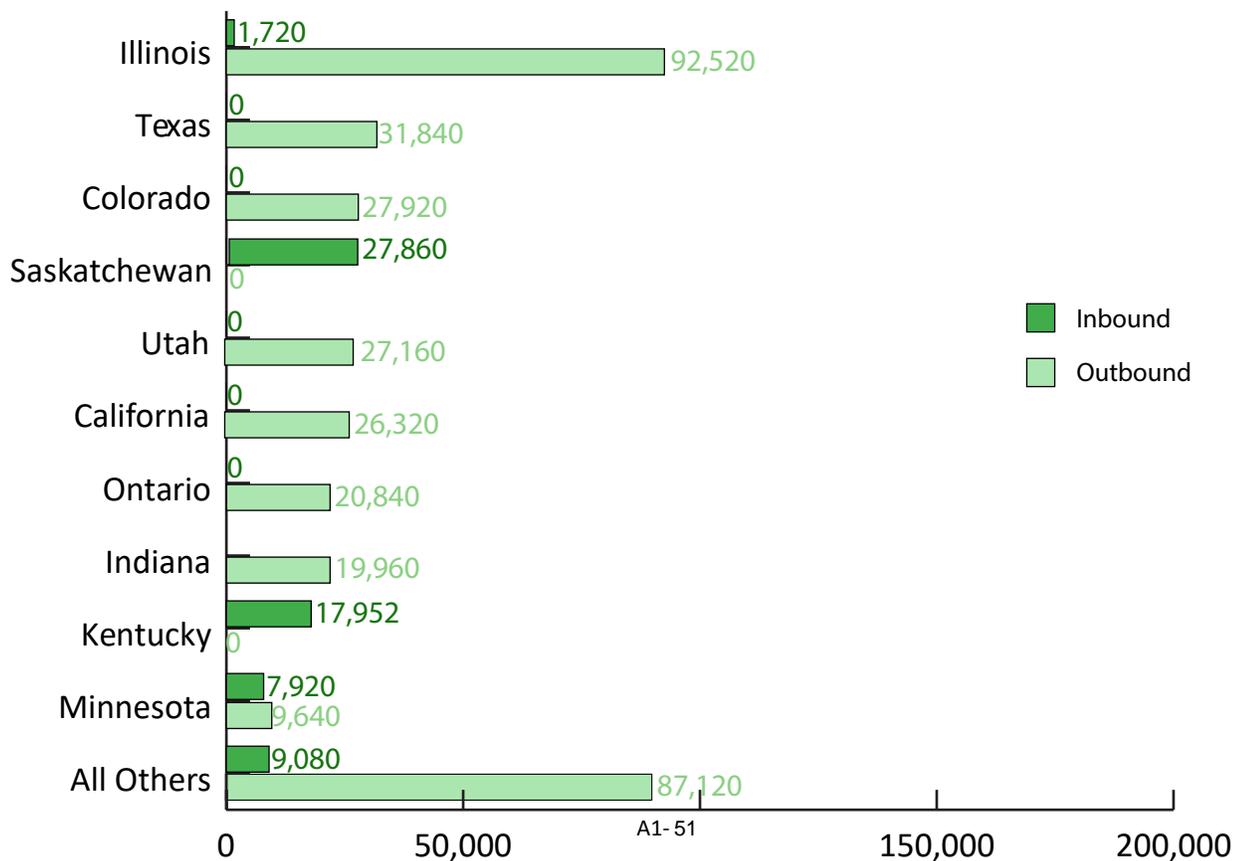
Other high tonnage shipments within the county include Ready-mix Concrete, as well as several categories of Lumber or Wood Products, including Primary Forest Materials and Miscellaneous Sawmill or Planing Mill Products.

Major Trading Partners by Mode - States

Truck - Inbound and Outbound Tons, 2015

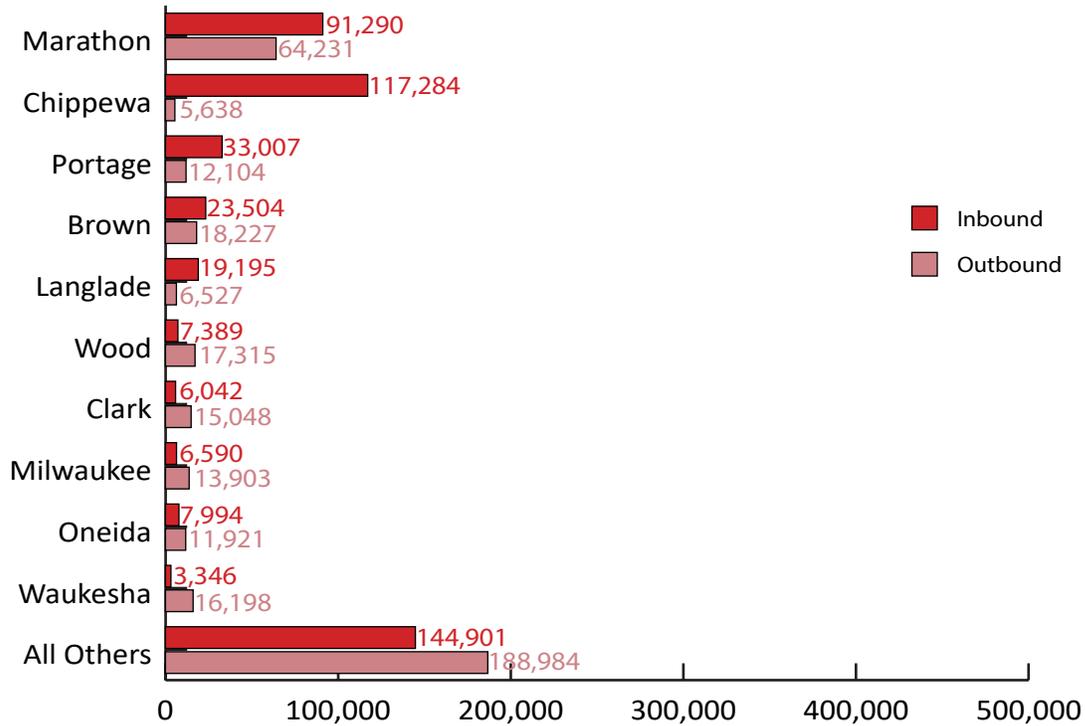


Rail - Inbound and Outbound, 2015

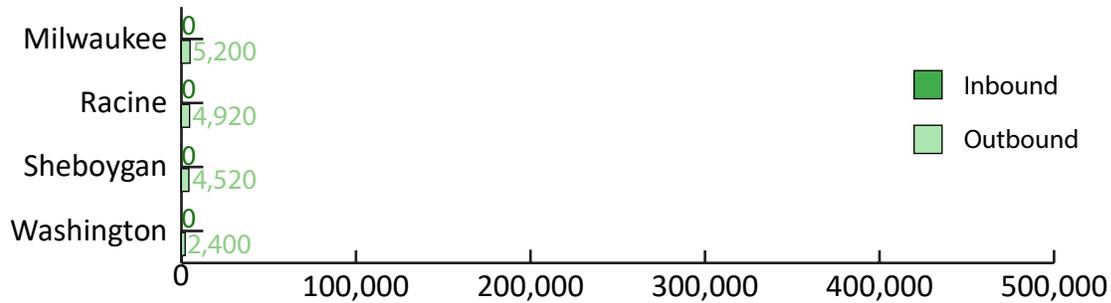


Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015



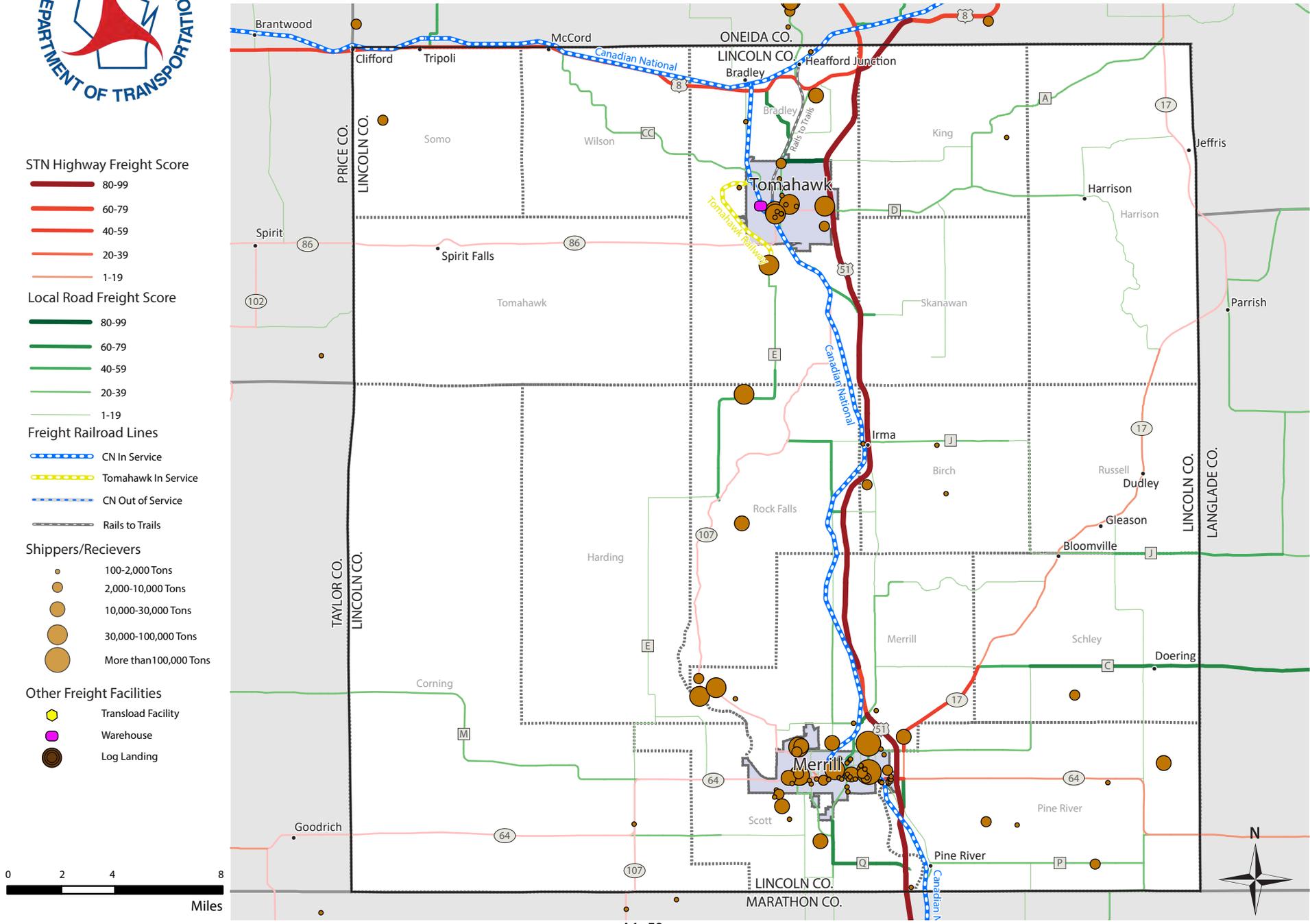
Rail - Inbound and Outbound Tons, 2015



Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.



Lincoln County Freight Profile



Marathon County Freight Profile

At a Glance	
135,177	Population
3,273	Total Establishments
64,477	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
4.0%	0.4%	\$54,083
4.6%	0.4%	\$53,357



Marathon County is located in the center of the state and offers residents and visitors many opportunities for outdoor sports and recreation and cultural attractions. The county's economy is comprised of a strong health care industry, professional services, manufacturing, and agriculture.

Approximately 35% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction

Freight Facilities	
49.3	Miles of In Service Railroad
0.3	Miles of Out of Service Railroad
18.1	Miles of Rails-to-Trails
152.4	Miles of Oversize-Overweight Highways
0.0	Miles of High Clearance Highways
150.4	Miles of NHS Designated Roads
295.8	Miles of Long Truck Routes

Employment and Major Employers



Wisconsin Physicians Svc.
Insurance Agencies & Brokerages



Aspirus Wausau Hospital
General Medical & Surgical Hospital



UMR
All Other Insurance Related Activities



Marathon Electric Motors
Motor & Generator Mfg.



Eastbay Inc.
Electronic & Mail Order Shopping



Marshfield Clinic.
Emergency Centers



Kolbe & Kolbe
Millwork



Northcentral Tech. College
Colleges



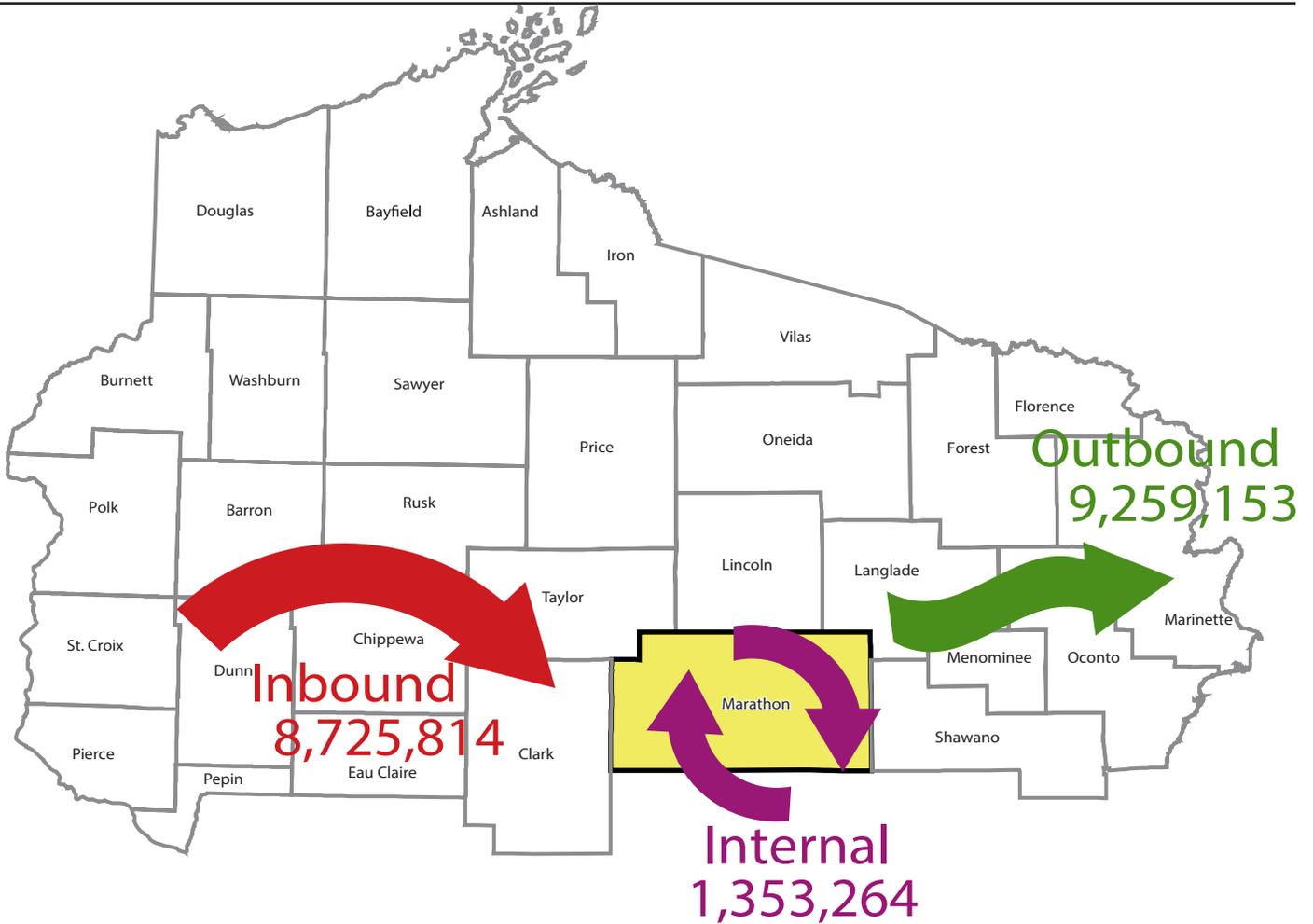
Land O'Lakes Inc.
Cheese Manufacturing

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	14	56
Mining, Quarrying and Extraction	7	210
Construction*	314	2,113
Manufacturing*	234	17,087
Wholesale Trade*	200	3,406
Transportation & Warehousing	162	2,391
Utilities	6	250-499
Retail Trade	77	9,960
Health Care & Social Assistance	62	9,922
Accommodation & Food Services	300	4,581
All Other Sectors	1,223	50,100

*Freight Intensive Industry

Freight Movement and Modes



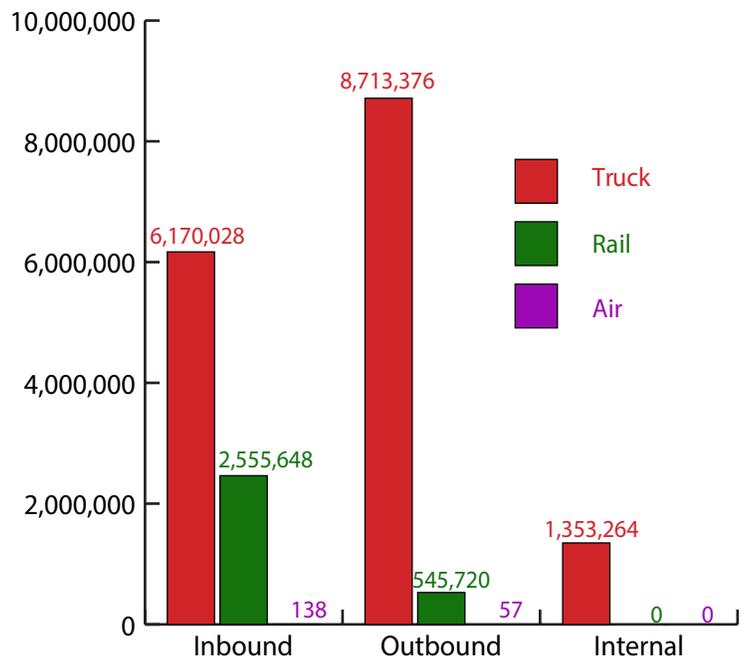
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Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Expera Specialty Solutions	Mosinee	Other Electric Power Generation	Bituminous Coal
Kraft Foods	Wausau	Packaged Frozen Food Merchant Wholesalers	Dairy Farm Products
Graphic Packaging Intl.	Wausau	Paperboard Mills	Bituminous Coal
Wausau Paper Corp.	Kronenwetter	Paper (except Newsprint) Mills	Primary Forest Materials
Domtar Paper Co.	Rothschild	Paper (except Newsprint) Mills	Primary Forest Materials

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Morgan Sand & Gravel Inc.	Marathon	Other Building Material Dealers	Broken Stone or Riprap
County Materials Corp.	Wausau	Ready-Mix Concrete Manufacturing	Concrete Products
Mitch King & Sons Gravel	Hatley	Landscaping Services	Broken Stone or Riprap
Van Boomen Vault Works	Wausau	Service Establishment Equipment and Supplies	Concrete Products
Foremost Farms USA	Schofield	Dry and Condensed Dairy Products Manufacturing	Dairy Farm Products

Major Commodities Marathon County - Rail and Air

Commodity	Terminating Rail Tons
Coal	2,277,448
Food or Kindred Products	65,840
Pulp, Paper or Allied Products	58,640
Lumber or Wood Products	56,880
All Others	96,840

Bituminous Coal was the largest commodity shipped to Marathon County by rail, with major shipments originating from Casper (WY) and Indianapolis (IN).

Primary Forest Materials were also shipped to Marathon County by rail from Sawyer and Douglas Counties (WI).

Commodity	Originating Rail Tons
Clay, Concrete, Glass or Stone	463,160
Pulp, Paper or Allied Products	71,640
Waste or Scrap Materials	3,920
Food or Kindred Products	3,800
Shipping Containers	3,200

Clay, Concrete, Glass or Stone had the highest tonnage of all rail shipments from Marathon County. Nonmetallic Minerals was the highest tonnage commodity, with shipments to Cleveland (OH) and Denver (CO).

There were also high tonnage shipments of Pulp or Paper Mill products to Houston (TX) and Seattle (WA).

Commodity	Terminating Air Tons
Small Packaged Freight Shipments	69
Rubber or Miscellaneous Plastics	46
Machinery	23

Small Packaged Freight Shipments were the highest tonnage commodity shipped to Marathon County, with shipments originating from Dane and Milwaukee Counties (WI).

Rubber or Miscellaneous Plastics also originated from Dane County (WI).

Commodity	Originating Air Tons
Small Packaged Freight Shipments	29
Rubber or Miscellaneous Plastics	27
Photo and Optical Equipment	1
Textile Mill Products	Less than 1
All Others	Less than 1

Small Packaged Freight Shipments were the highest tonnage commodity shipped from Marathon County, with shipments going to Dane and Milwaukee Counties (WI).

Rubber or Miscellaneous Plastics were also shipped to Dane County (WI) and Milwaukee County (WI).

Major Commodities Marathon County - Truck

Commodity	Inbound Truck Tons
Farm Products	1,760,830
Nonmetallic Minerals	1,591,226
Petroleum or Coal Products	484,131
Food or Kindred Products	473,792
Lumber or Wood Products	379,392
Clay, Concrete, Glass or Stone	297,328
All Others	1,183,329

Farm Products had the highest tonnage of all commodities shipped into Marathon County by truck. Some of the highest tonnage commodities include Dairy Farm Products from Clark County (WI), Minneapolis (MN) and Shawano County (WI).

Nonmetallic Minerals also had high tonnage shipments to Marathon County. Gravel or Sand was the highest tonnage commodity, with shipments from Chippewa and Monroe Counties (WI) and Minneapolis (MN).

Commodity	Outbound Truck Tons
Nonmetallic Minerals	3,226,713
Farm Products	1,751,827
Clay, Concrete, Glass or Stone	1,165,596
Lumber or Wood Products	520,969
Waste or Scrap Materials	425,555
Pulp, Paper or Allied Products	378,322
All Others	1,244,393

Nonmetallic Minerals had the highest tonnage shipped out of Marathon County by truck. Broken Stone or Riprap was the highest tonnage commodity, with shipments to Minneapolis (MN), and Clark and Wood Counties (WI).

Farm Products also had high tonnage shipments from Marathon County. Grain was the highest tonnage shipment from the county, going to Columbia County (WI), Chicago (IL), and Dunn County (WI).

Commodity	Internal Truck Tons
Nonmetallic Minerals	696,588
Farm Products	209,495
Clay, Concrete, Glass or Stone	159,322
Primary Metal Products	110,781
Lumber or Wood Products	47,299
Fabricated Metal Products	38,408
All Others	91,371

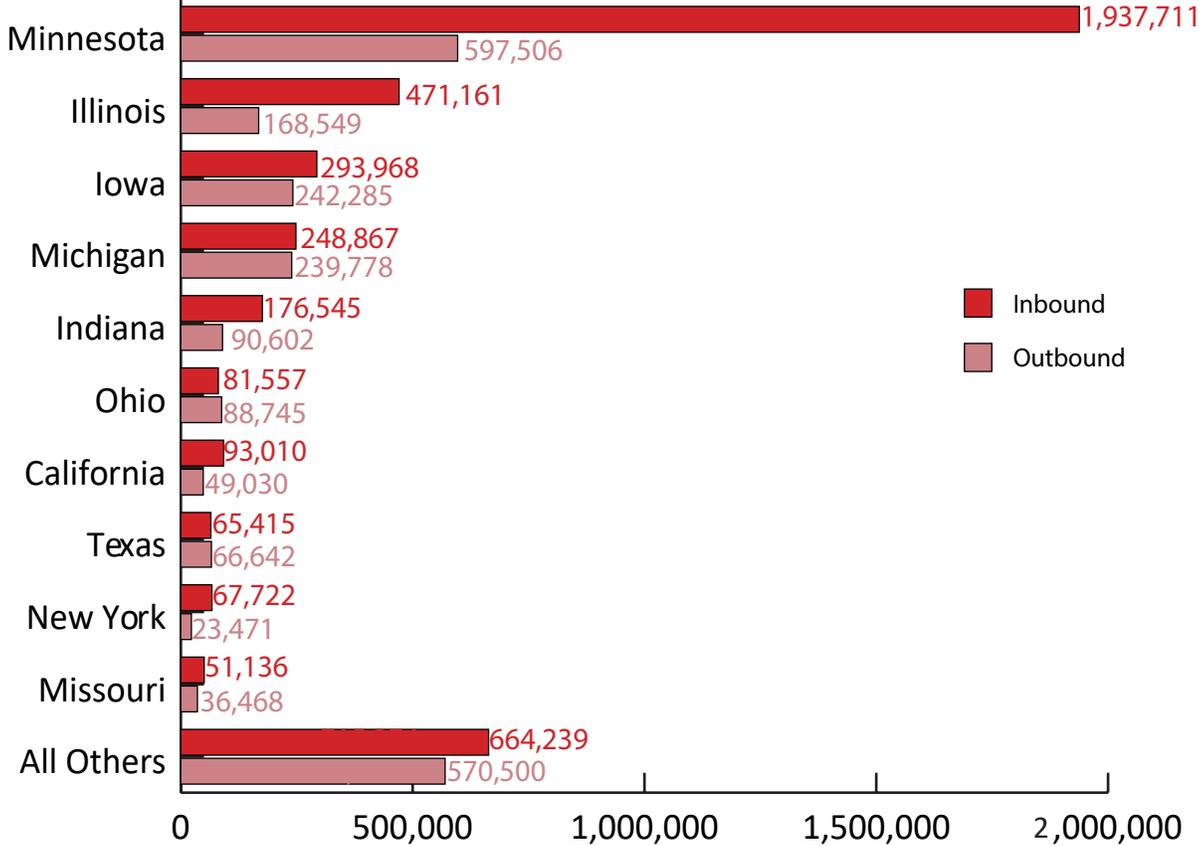
The highest tonnage commodity shipped within Marathon County by truck is Nonmetallic Minerals.

Farm products were also a high tonnage shipment within the county, including Dairy Farm Products and Grain.

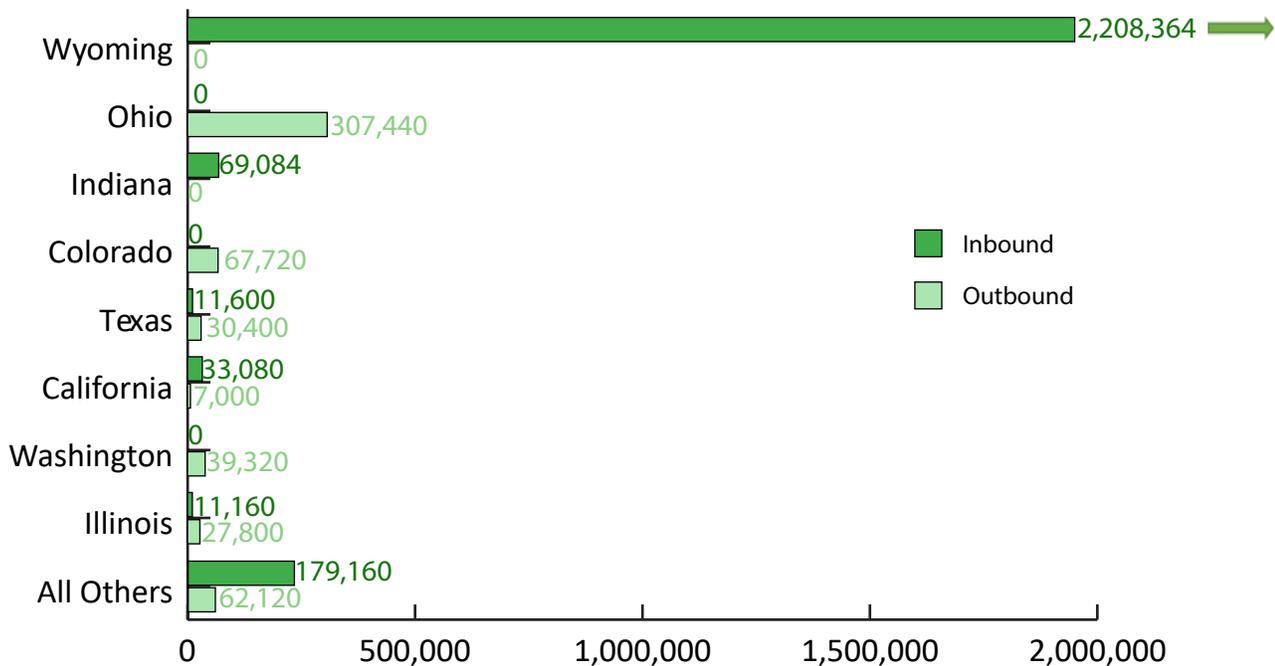
Additionally, Concrete Products and Ready-mix Concrete accounted for a large amount of internal shipments.

Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015

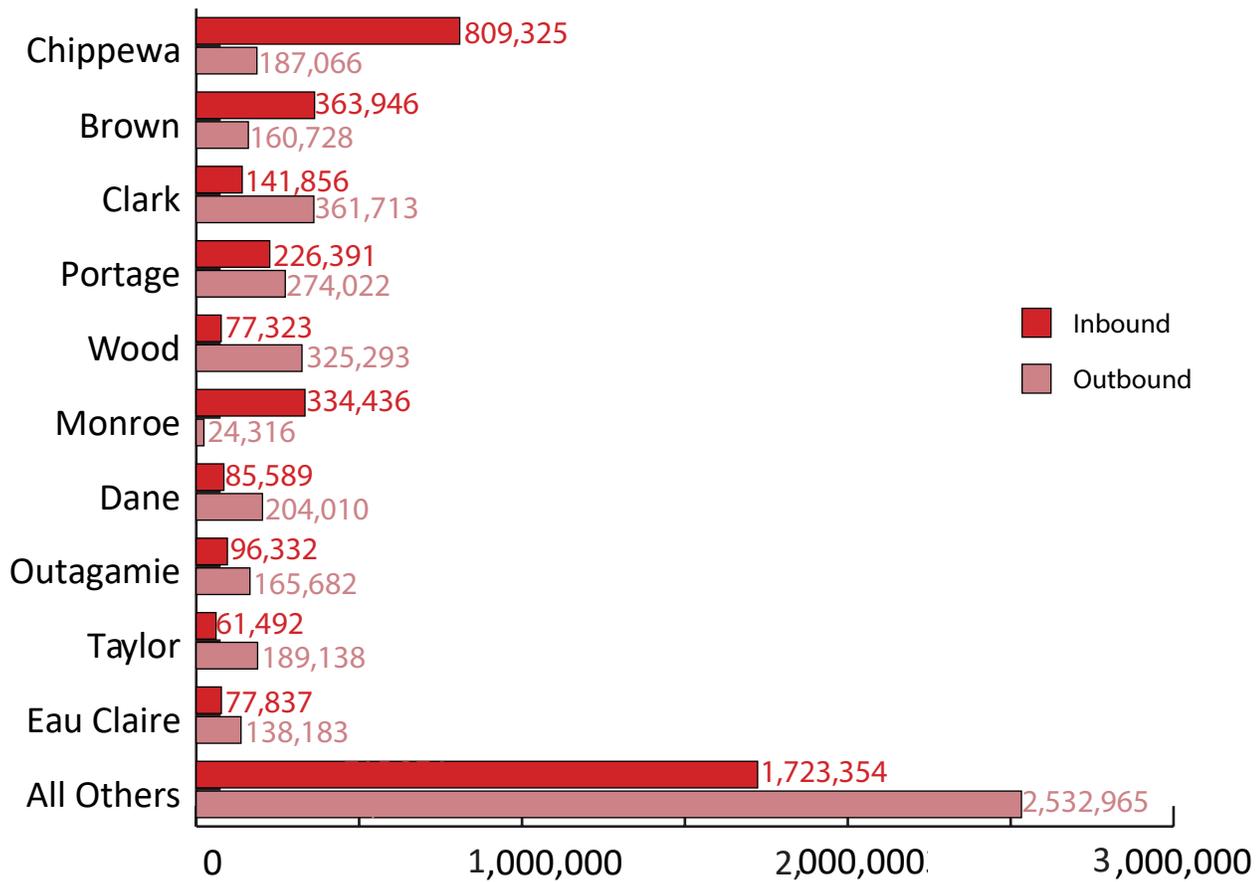


Rail - Inbound and Outbound Tons, 2015

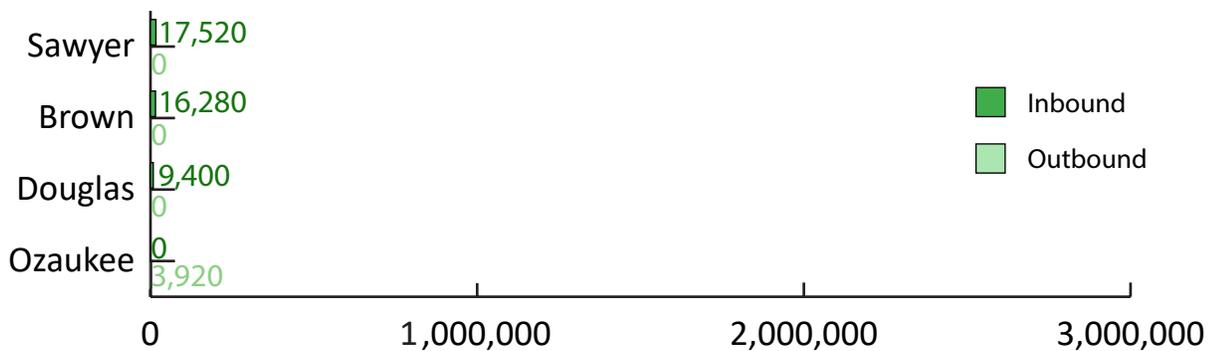


Major Trading Partners by Mode - States

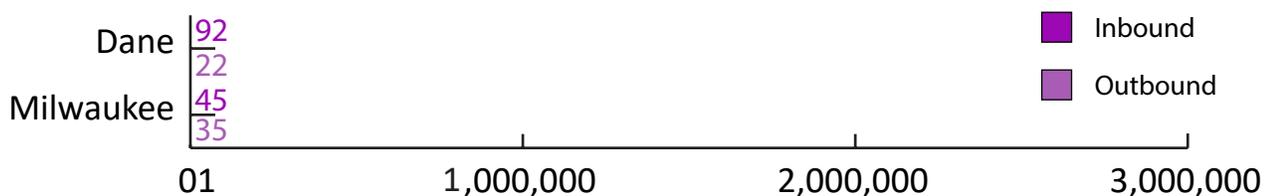
Truck - Inbound and Outbound Tons, 2015



Rail - Inbound and Outbound Tons, 2015



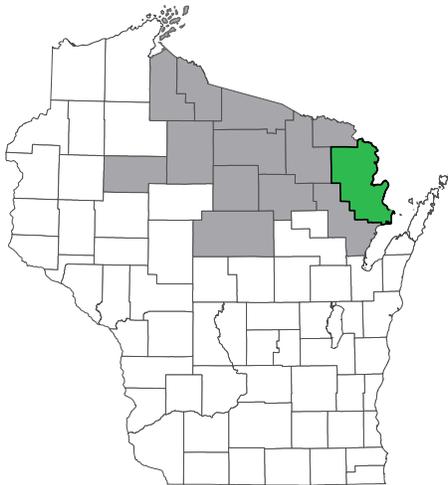
Air - Inbound and Outbound Tons, 2015



Marinette County Freight Profile

At a Glance	
41,287	Population
1,053	Total Establishments
15,988	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
5.8%	-0.4%	\$43,425
4.6%	0.4%	\$53,357



Marinette County is located on the border of Michigan and the shorelines of Green Bay, providing visitors with outstanding outdoor recreation, cultural attractions and shopping opportunities. Northern Marinette shares a border with Michigan's Menominee regional economy.

Approximately 43% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
122.0	Miles of In Service Railroad
3.2	Miles of Out of Service Railroad
0.0	Miles of Rails-to-Trails
126.9	Miles of Oversize-Overweight Highways
0.0	Miles of High Clearance Highways
100.5	Miles of NHS Designated Roads
157.6	Miles of Long Truck Routes

Employment and Major Employers



KS Kolbenschmidt US
Other Motor Vehicle Parts Mfg.



Niagara Development
Paper Mills



Waupaca Foundry
Iron Foundries



Walmart Supercenter
Department Stores



Bay Area Medical Center
General Medical & Surgical Hospitals



Kimberly-Clark
Sanitary Paper Product Mfg.



Aerial Co Inc.
Cosmetic & Beauty Supply



Samuel Pressue Vessel Group
Fabricated Structural Metal Mfg.



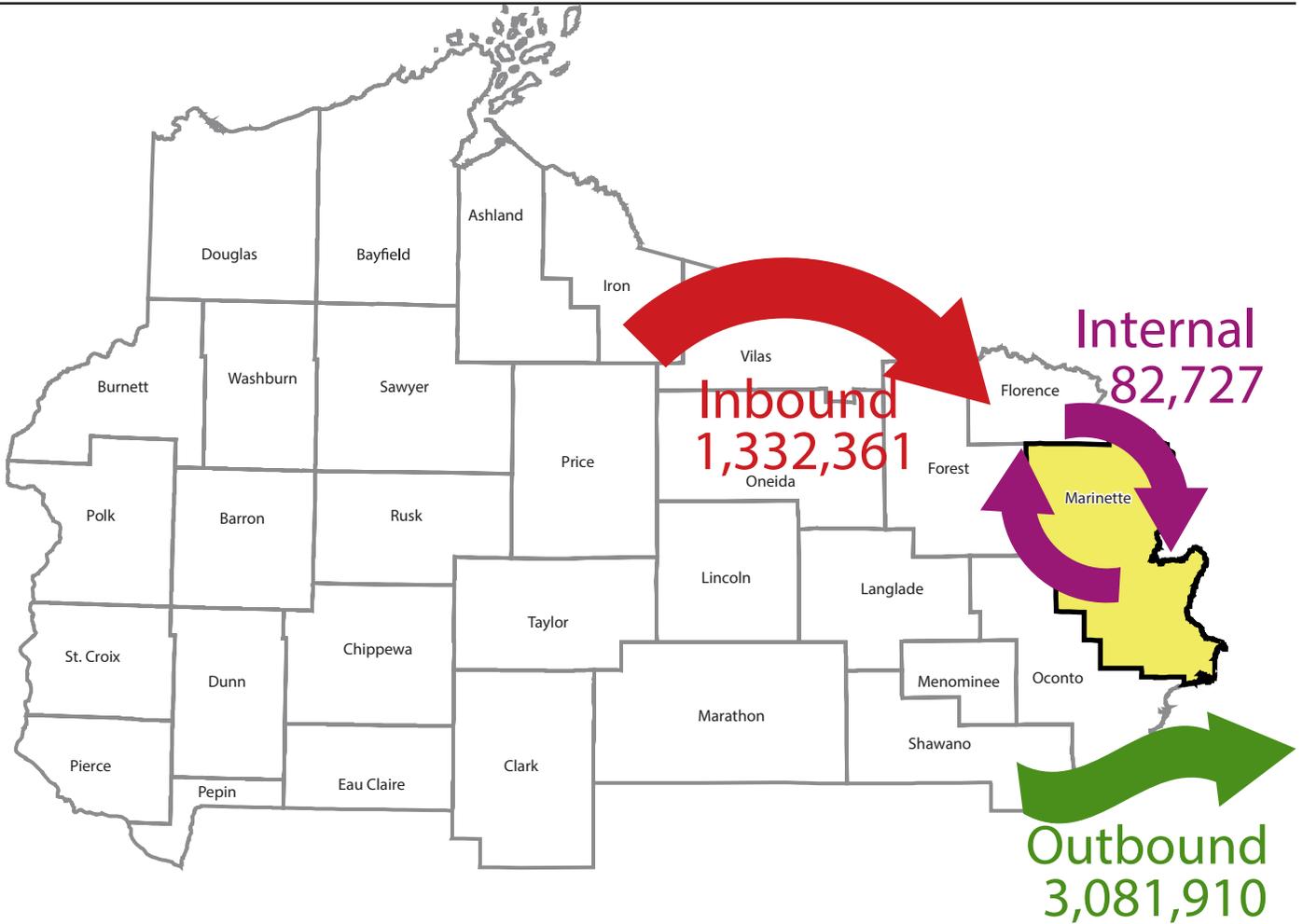
Fincantieri Marinette Marine
Ship Building & Repairing

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	16	44
Mining, Quarrying and Extraction	3	100-249
Construction*	95	432
Manufacturing*	90	6,164
Wholesale Trade*	27	245
Transportation & Warehousing	52	691
Utilities	3	20-49
Health Care & Social Assistance	120	2,698
Retail Trade	173	2,170
Accommodation & Food Services	154	1,310
All Other Sectors	320	2,234

*Freight Intensive Industry

Freight Movement and Modes



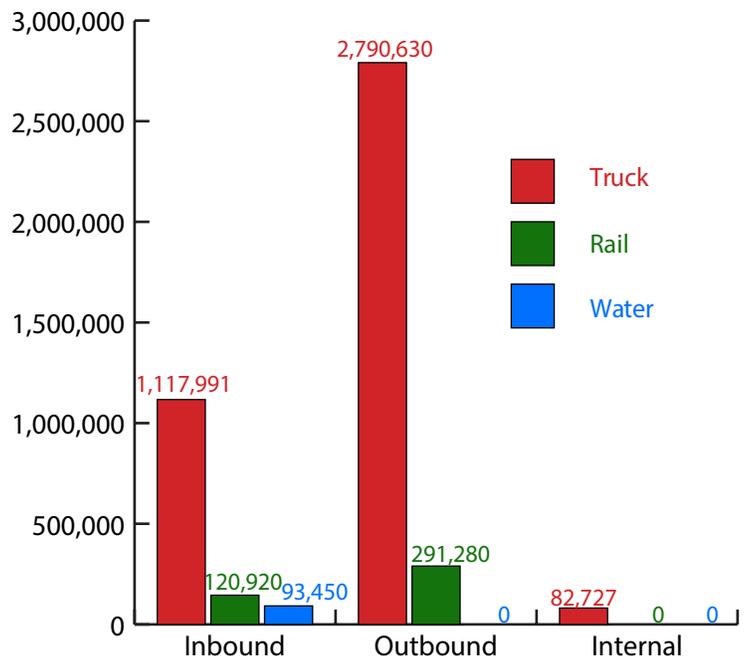
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Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Chem Design Products Inc.	Marinette	All Other Basic Organic Chemical Manufacturing	Grain
Niagara Development LLC	Niagara	Paper (except Newsprint) Mills	Primary Forest Materials
KS Kolbenschmidt US Inc.	Marinette	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	Aluminum or Alloy Castings
Kimberly-Clark	Marinette	Sanitary Paper Product Manufacturing	Pulp or Pulp Mill Products
Aacer Flooring LLC	Peshtigo	Other Millwork (including Flooring)	Lumber or Dimension Stock

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Delaet Enterprises Ltd.	Wausaukee	Logging	Primary Forest Materials
Waupaca Foundry	Marinette	Iron Foundries	Iron or Steel Castings
Aacer Flooring LLC	Peshtigo	Other Millwork (including Flooring)	Millwork or Cabinetwork
NRG Duncaine Logging Inc.	Crivitz	Logging	Primary Forest Materials
Wild Rivers Forestry Inc.	Wausaukee	Logging	Primary Forest Materials

Major Commodities Marinette County - Rail and Water

Commodity	Terminating Rail Tons
Pulp, Paper or Allied Products	52,960
Petroleum or Coal Products	32,200
Chemicals or Allied Products	22,360
Lumber or Wood Products	9,000
Clay, Concrete, Glass or Stone	4,400

The highest tonnage commodity shipped to Marinette County by rail was Paper and Pulp Mill Products, originating from Alberta and Ontario.

Another high tonnage commodity shipped to Marinette County by rail was Liquefied Gases, Coal or Petroleum, originating from Brown County (WI).

Commodity	Originating Rail Tons
Clay, Concrete, Glass or Stone	226,320
Lumber or Wood Products	62,520
Transportation Equipment	2,440

Clay, Concrete, Glass or Stone had a large amount of the tonnage shipped from Marinette County by rail. The highest tonnage commodity was Processed Nonmetal Minerals, shipped to Chicago (IL) and Wichita (KS).

Primary Forest Materials were also a high tonnage commodity, shipped to the Michigan Upper Pensinsula and Wood County (WI).

Commodity	Terminating Water Tons
Nonmetallic Minerals	74,113
Primary Metal Products	19,338

Nonmetallic Minerals made up a majority of the tonnage shipped to Marinette County by water. The highest tonnage commodity was Chemical or Fertilizer, shipped from Ontario and Quebec.

Major Commodities Marinette County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	233,423
Lumber or Wood Products	131,151
Petroleum or Coal Products	113,195
Farm Products	104,003
Primary Metal Products	99,318
Secondary Traffic	80,154
All Others	356,747

Nonmetallic Minerals had the highest tonnage of all truck shipments to Marinette County. The highest tonnage commodity was Gravel or Sand, with shipments originating from Oconto and Waupaca Counties (WI).

Lumber or Wood Products also had high tonnage shipped into the county. The highest tonnage commodity was Primary Forest Products, which had the most tonnage shipped in from the Michigan Upper Peninsula.

Commodity	Outbound Truck Tons
Nonmetallic Minerals	1,813,335
Farm Products	376,537
Lumber or Wood Products	186,695
Clay, Concrete, Glass or Stone	107,117
Secondary Traffic	57,315
Waste or Scrap Materials	51,974
All Others	197,658

Nonmetallic Minerals had the highest tonnage of all truck shipments from Marinette County. The commodity accounting for the highest amount of this tonnage was Broken Stone or Riprap, going to Outagamie, Jackson and Manitowoc Counties (WI).

Grain and Dairy Farm Products were also high tonnage commodities, shipped to Chicago (IL) and Brown County (WI) respectively.

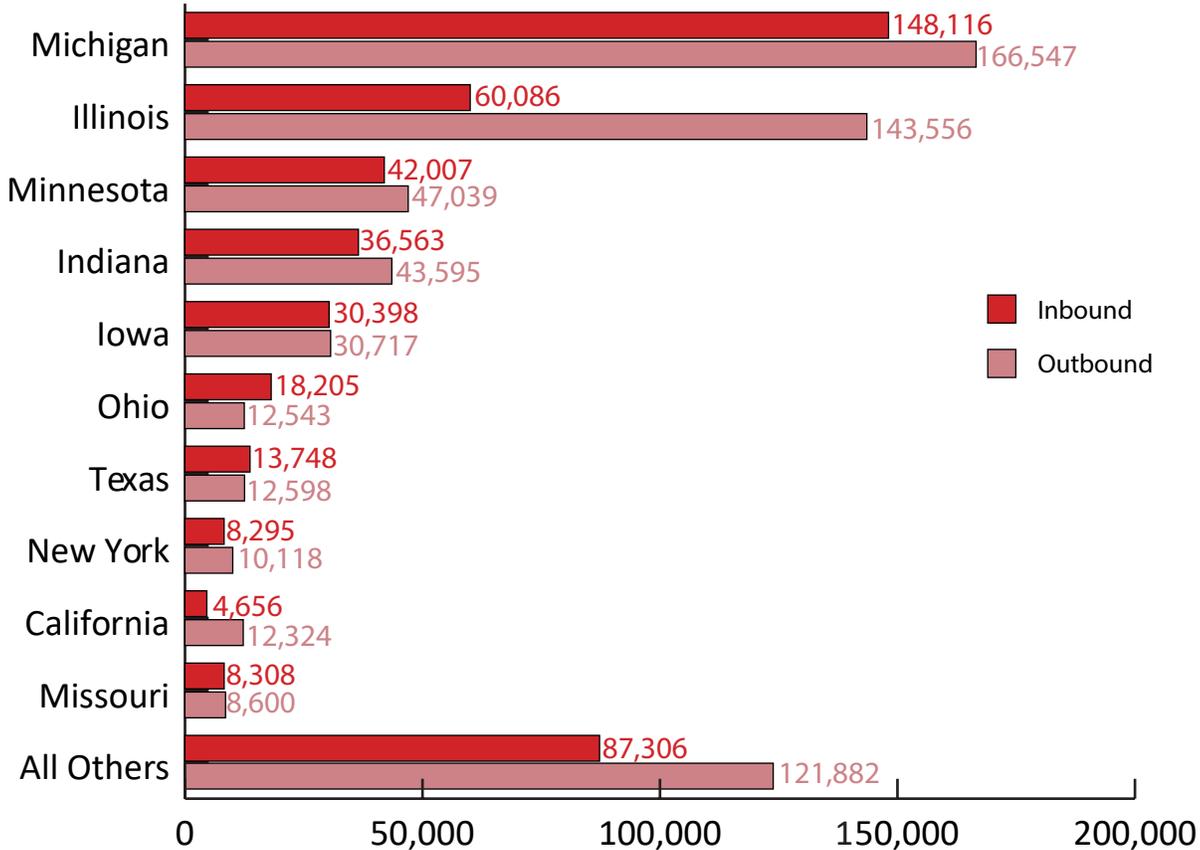
Commodity	Internal Truck Tons
Nonmetallic Minerals	45,748
Clay, Concrete, Glass or Stone	14,506
Lumber or Wood Products	6,036
Fabricated Metal Products	3,598
Farm Products	3,355
Machinery	2,648
All Others	6,836

Nonmetallic Minerals had the highest tonnage of all truck shipments within Marinette County. Some of the major commodities accounting for this tonnage include Gravel or Sand, Broken Stone or Riprap, and Chemicals or Fertilizer.

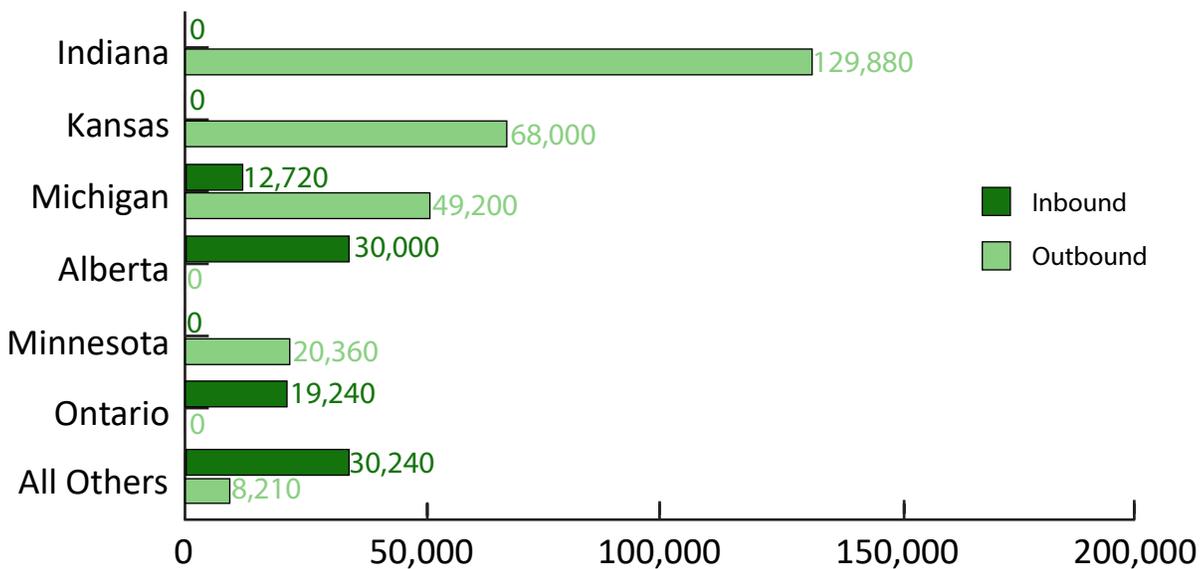
Other high tonnage commodities shipped internally within Marinette County by truck include Ready-mix Concrete and Grain.

Major Trading Partners by Mode - States

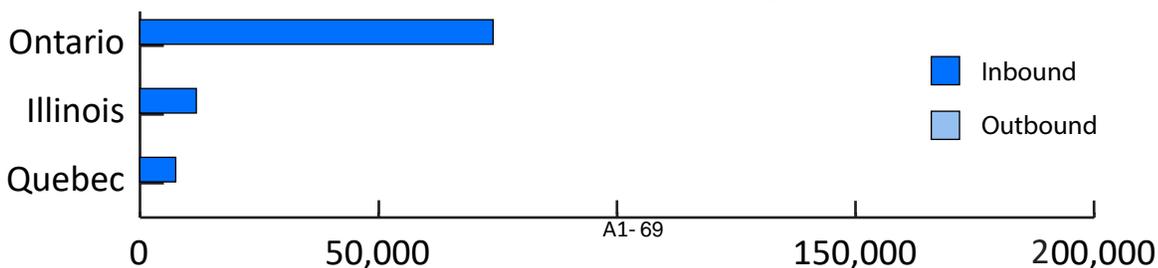
Truck - Inbound and Outbound Tons, 2015



Rail - Inbound and Outbound Tons, 2015

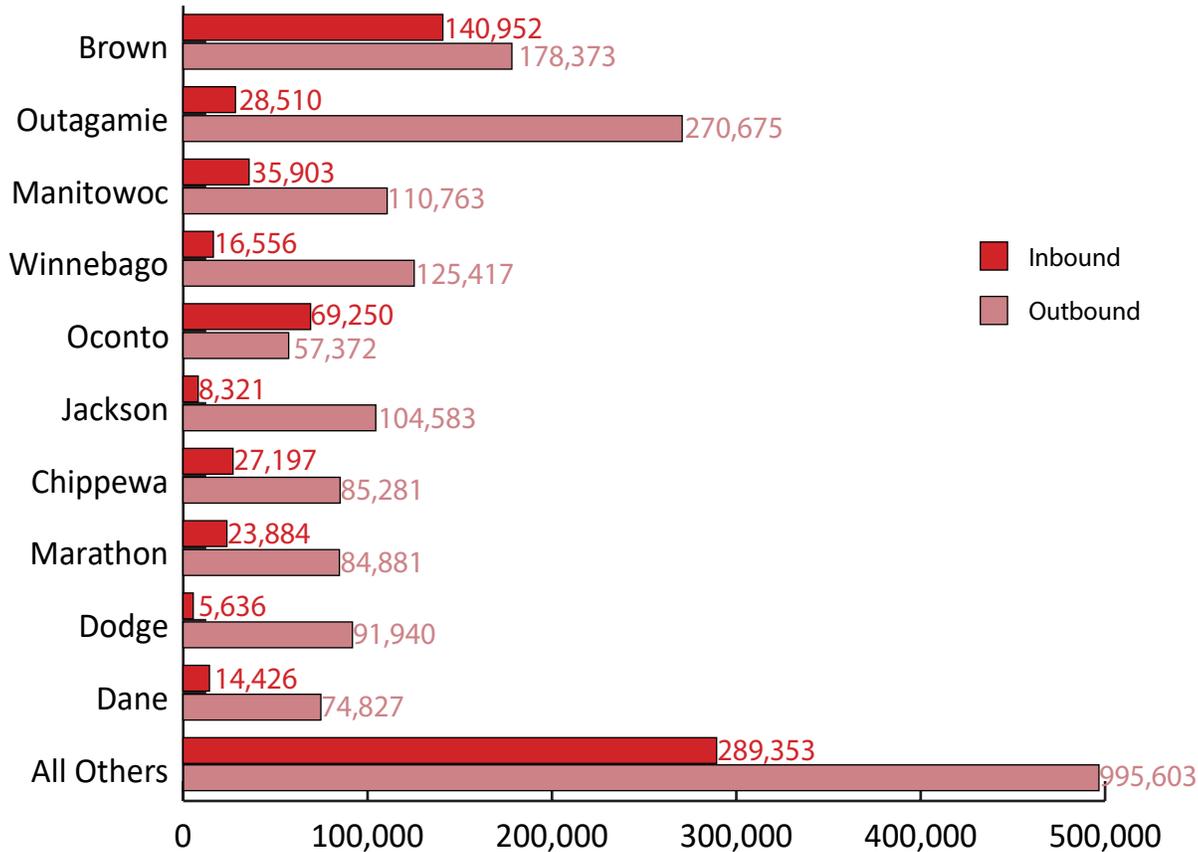


Water - Inbound and Outbound Tons, 2015

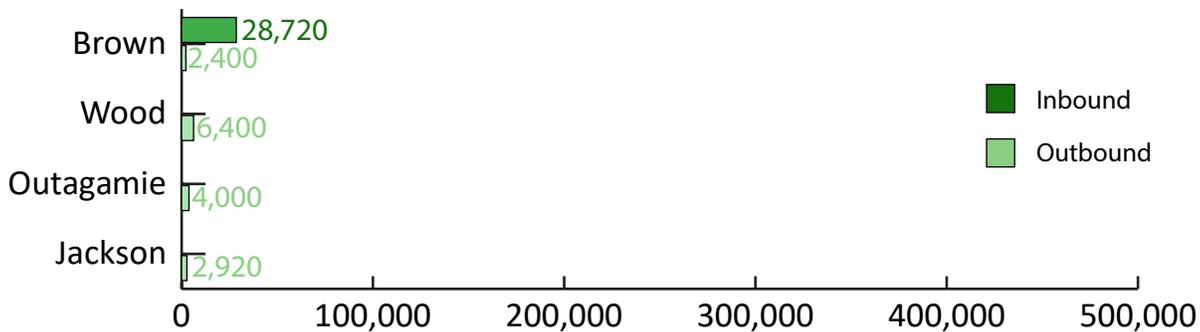


Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015



Rail - Inbound and Outbound Tons, 2015

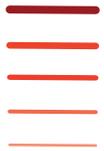


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.



Marinette County Freight Profile

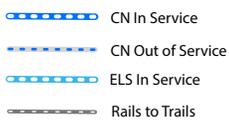
STN Highway Freight Score



Local Road Freight Score



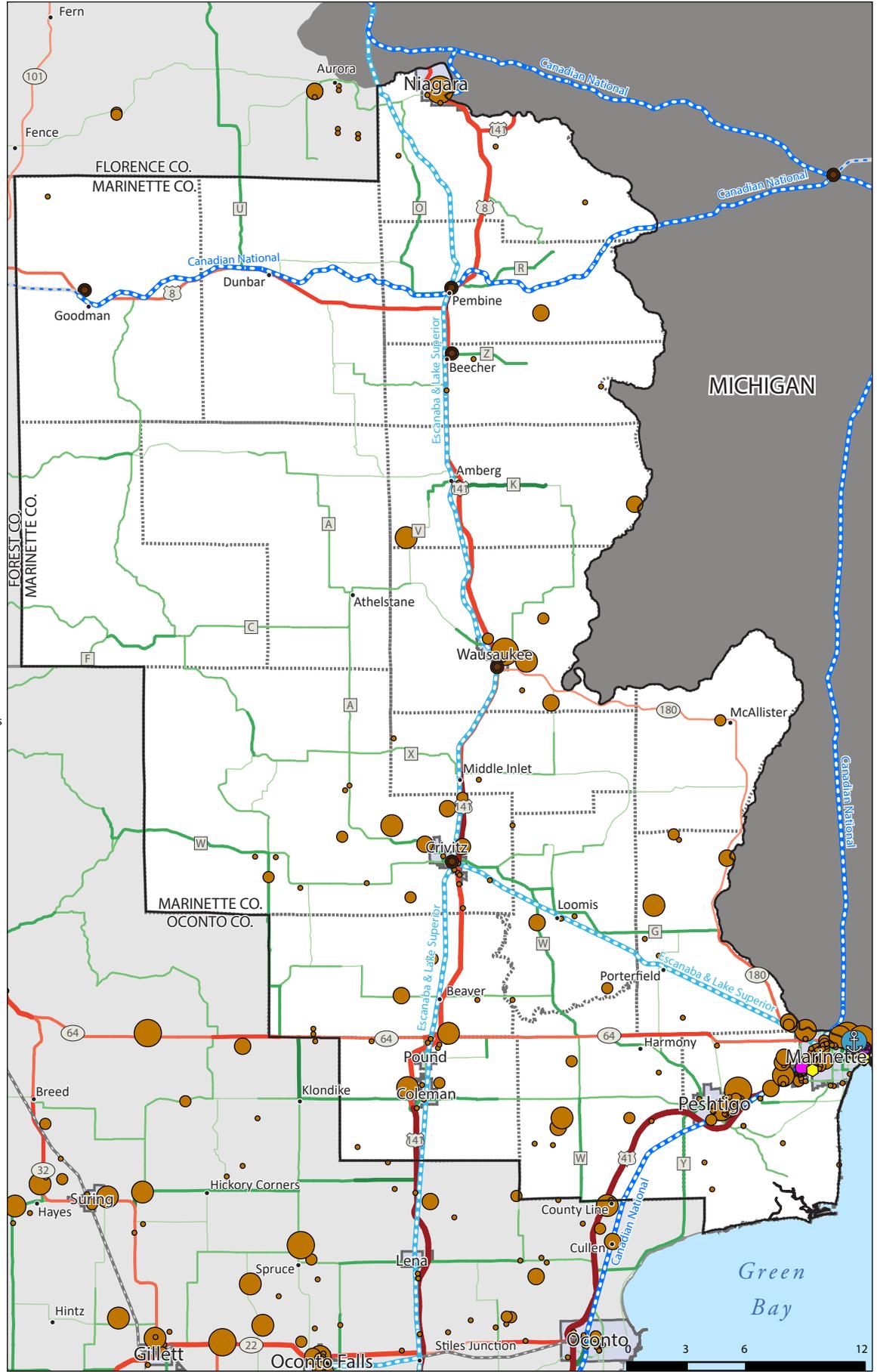
Freight Railroad Lines



Shippers/Receivers



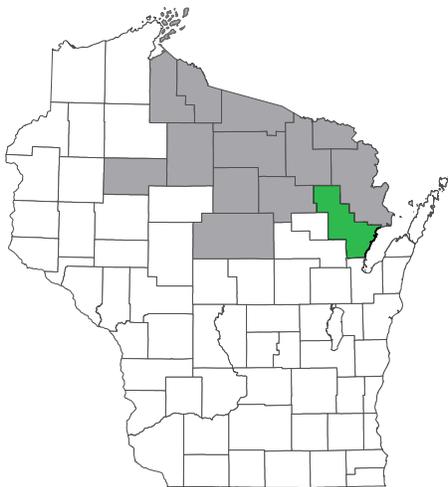
Other Freight Facilities



Oconto County Freight Profile

At a Glance	
37,476	Population
788	Total Establishments
6,953	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
5.2%	-0.1%	\$52,765
4.6%	0.4%	\$53,357



Oconto County once yielded millions of board feet of lumber and this industry is still the backbone of the county's manufacturing-based economy. Much of the cleared land has been converted to farming. The remainder has undergone reforestation programs and is now the basis for a multi-million dollar forestry and recreation industry.

Approximately 38% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
53.1	Miles of In Service Railroad
0.0	Miles of Out of Service Railroad
49.1	Miles of Rails-to-Trails
72.6	Miles of Oversize-Overweight Highways
0.0	Miles of High Clearance Highways
43.5	Miles of NHS Designated Roads
150.2	Miles of Long Truck Routes

Employment and Major Employers



St Clare Memorial Hospital
General Medical & Surgical Hospitals



Diversified Woodcraft Inc.
Analytical Laboratory Instrument Mfg.



Atrium Post Acute Care
Nursing Care Facilities



KCS International
Boat Dealers



New View Industries
Human Rights Organizations



Saputo Cheese USA Inc.
Cheese Mfg.



Seneca Foods Corp.
All Other Misc. Food Mfg.



Unlimited Services-WI
Other Electronic Component Mfg.



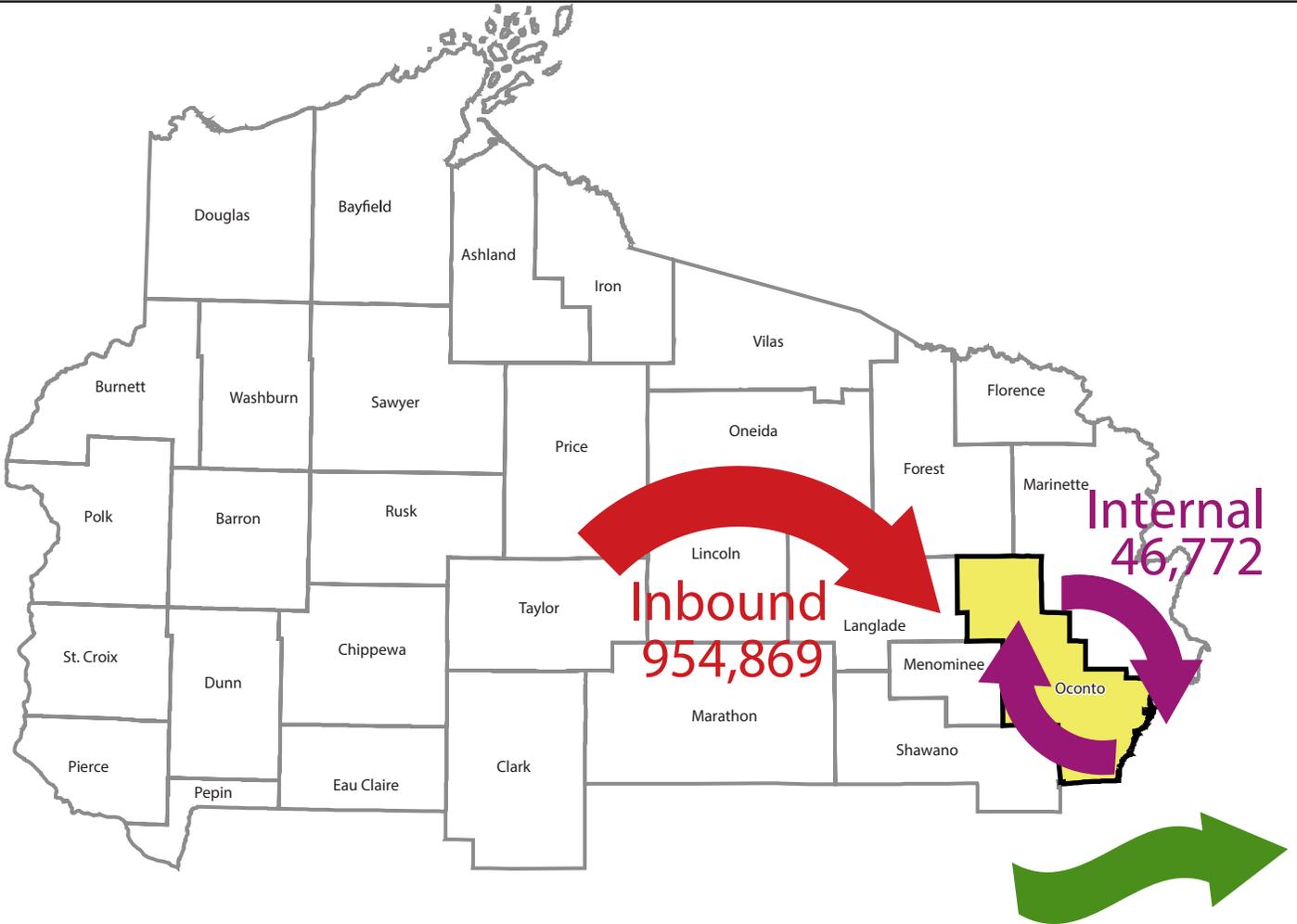
Oconto School District
Elementary & Secondary Schools

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	2	0-19
Mining, Quarrying and Extraction	2	0-19
Construction*	101	387
Manufacturing*	51	2,117
Wholesale Trade*	24	141
Transportation & Warehousing	61	301
Utilities	1	20-99
Health Care & Social Assistance	117	1,461
Retail Trade	98	947
Accommodation & Food Services	97	638
All Other Sectors	234	883

*Freight Intensive Industry

Freight Movement and Modes



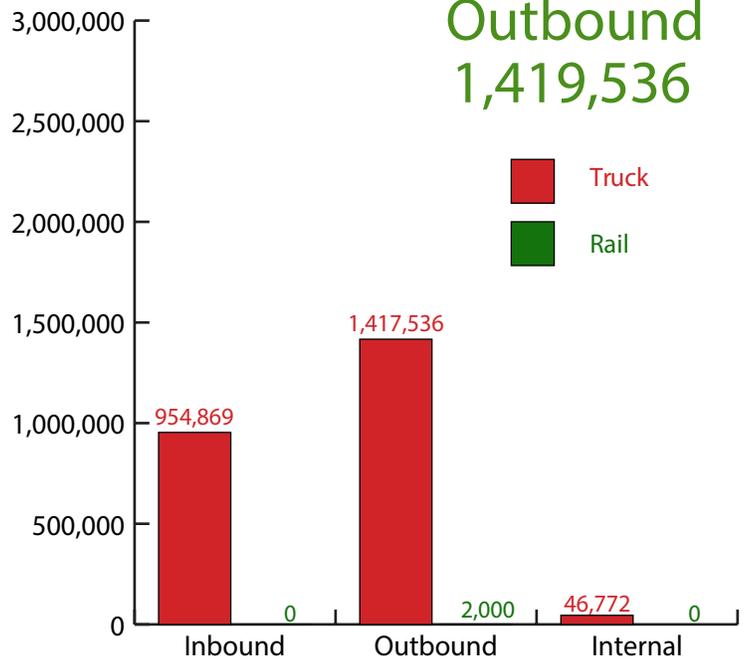
Definitions:

Inbound Tonnage: Goods shipped into the county from other Wisconsin counties and other states.

Outbound Tonnage: Commodities shipped out of the county to other Wisconsin counties and states.

Internal Tonnage: Goods that are shipped from one destination in the county to another destination within the county.

*Tonnage amounts do not include “overhead tonnage”, products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Springside Cheese Corp.	Oconto Falls	Cheese Manufacturing	Dairy Farm Products
Nicolet Farms Inc.	Suring	All Other Miscellaneous Crop Farming	Grain
Zippel Construction Inc.	Gillett	Brick, Stone, and Related Construction Material Materials	Gravel or Sand
O'Harrows Inc.	Oconto Falls	Dairy Product (except Dried or Canned) Merchant Wholesalers	Processed Milk
Sampson Sand & Gravel Inc.	Krakov	Brick, Stone, and Related Construction Material Materials	Gravel or Sand

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Zippel Construction Inc.	Gillett	Brick, Stone, and Related Construction Material Materials	Gravel or Sand
Springside Cheese Corp.	Oconto Falls	Cheese Manufacturing	Cheese or Special Dairy Products
Sampson Sand & Gravel Inc.	Krakov	Brick, Stone, and Related Construction Material Materials	Gravel or Sand
Gillett Cement Products Inc.	Gillett	Other Building Material Dealers	Ready-mix Concrete, Wet
Century Farms Dairy	Oconto	Dairy Cattle and Milk Production	Dairy Farm Products

Major Commodities Oconto County-Rail

Commodity	Originating Rail Tons
Lumber or Wood Products	2,000

The only commodity shipped from Oconto County by rail in 2015 was Primary Forest Materials. This shipment went to the Michigan Upper Peninsula.

Major Commodities Oconto County-Truck

Commodity	Inbound Truck Tons
Farm Products	470,782
Petroleum or Coal Products	105,198
Food or Kindred Products	104,894
Nonmetallic Minerals	94,658
Clay, Concrete, Glass or Stone	53,024
Secondary Traffic	34,855
All Others	91,458

Farm Products accounted for the most inbound tonnage shipped to Oconto County by truck. The highest tonnage commodity was Dairy Farm Products, which was shipped in from Manitowoc, Brown and Outagamie Counties (WI).

Food or Kindred Products is another commodity with large inbound tonnage to the county. Some of the top commodities include Prepared or Canned Feed shipped from Calumet County (WI) and Cheese and Dairy Products from Marathon County (WI).

Commodity	Outbound Truck Tons
Farm Products	714,620
Nonmetallic Minerals	421,836
Food or Kindred Products	94,040
Waste or Scrap Materials	68,111
Lumber or Wood Products	34,019
Pulp, Paper or Allied Products	29,761
All Others	55,419

Farm Products accounted for the most outbound tonnage shipped from Oconto County by truck. Grain is one high tonnage commodity, with shipments to Chicago (IL) and Calumet County (WI). Dairy Farm Products were shipped to Marathon and Brown Counties (WI).

Nonmetallic Minerals also accounted for a high percentage of outbound tonnage. The highest tonnage commodity was Gravel or Sand, with most shipments to Brown County (WI).

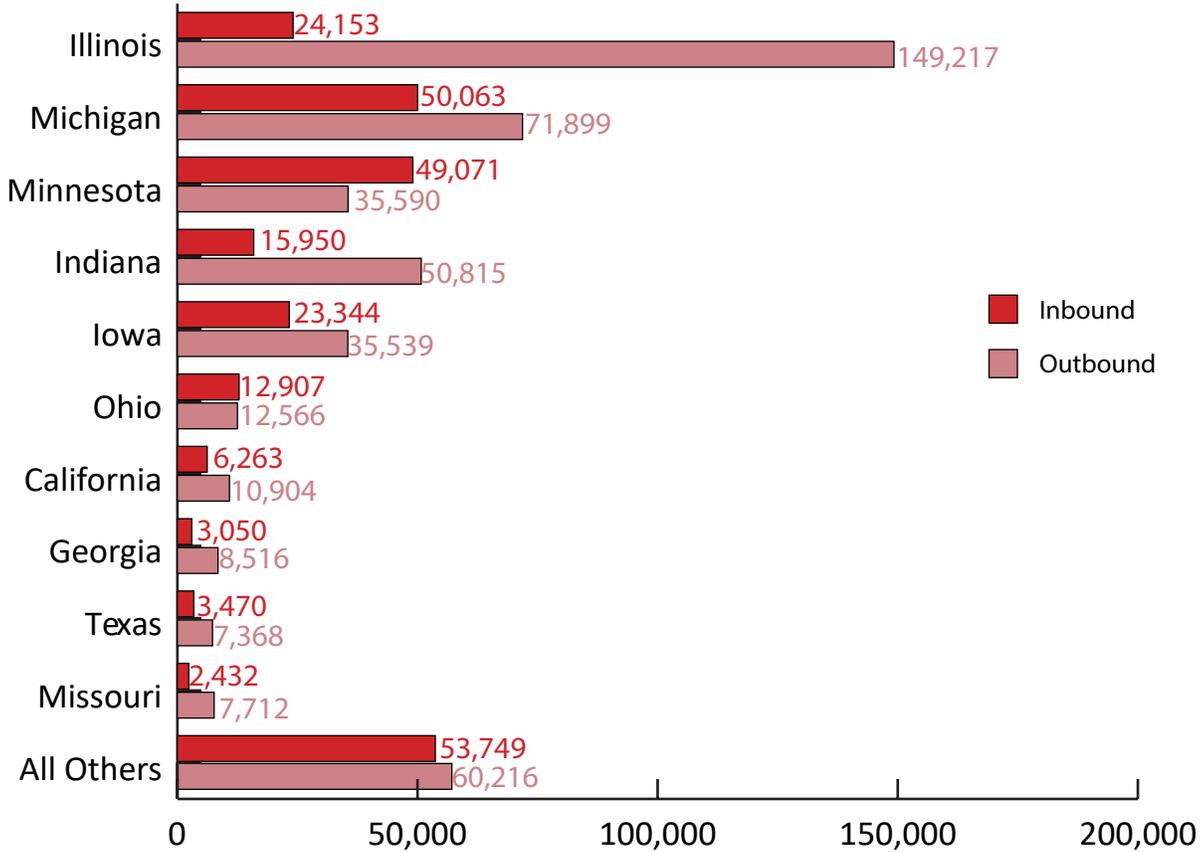
Commodity	Internal Truck Tons
Farm Products	20,828
Nonmetallic Minerals	20,344
Food or Kindred Products	3,152
Clay, Concrete, Glass or Stone	1,795
Lumber or Wood Products	551
Electrical Equipment	44
All Others	58

Farm Products accounted for the highest percentage of tonnage shipped by truck within the county. The highest tonnage commodities are Dairy Farm Products, Grain and Miscellaneous Field Crops.

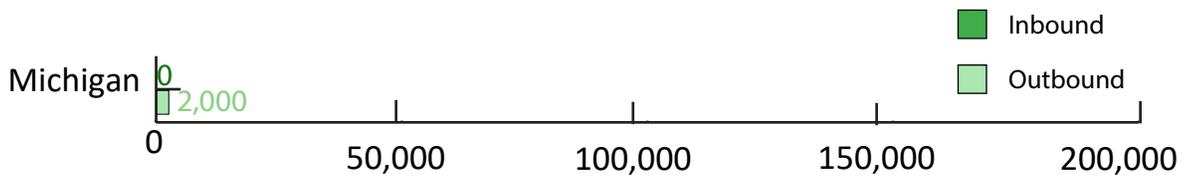
Nonmetallic Minerals also accounted for a high percentage of the tonnage within Oconto County.

Major Trading Partners by Mode - States

Truck - Inbound and Outbound Tons, 2015

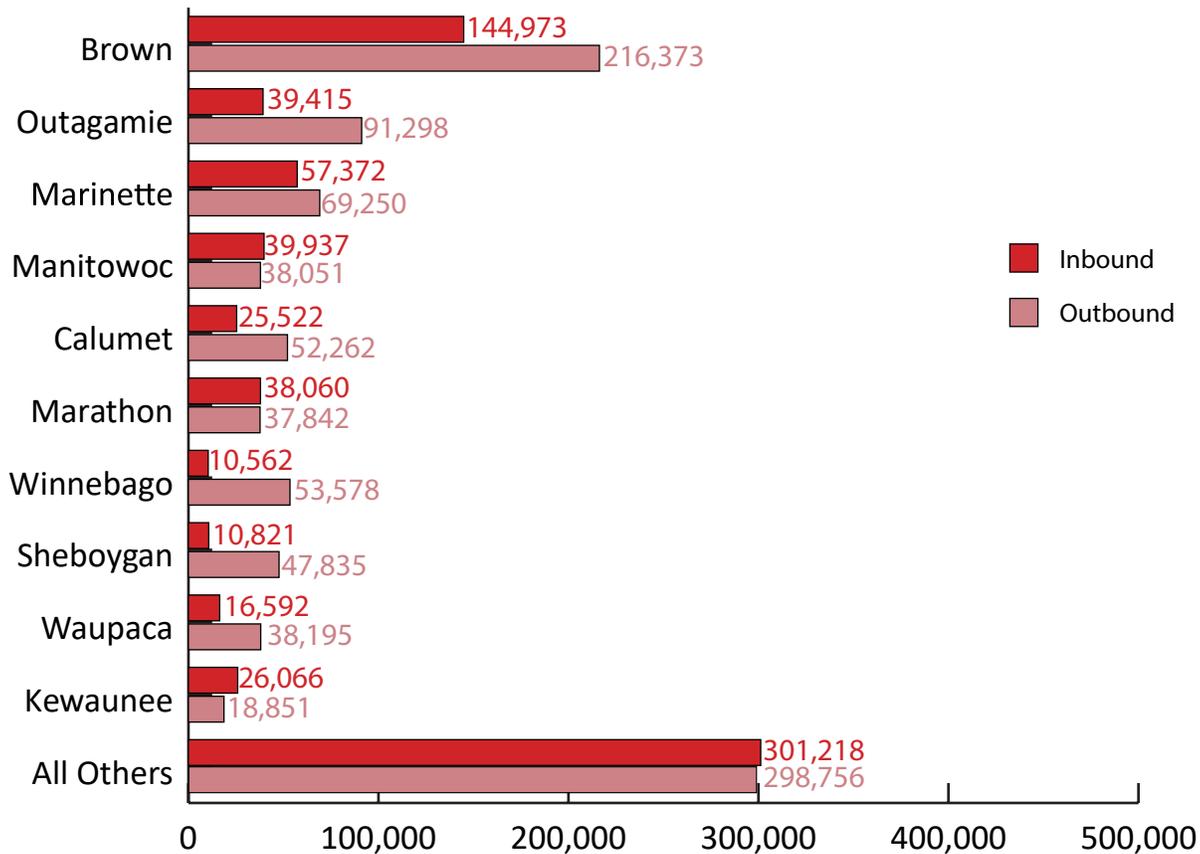


Rail - Inbound and Outbound Tons, 2015



Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015

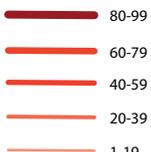


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.



Oconto County Freight Profile

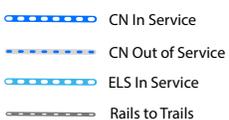
STN Highway Freight Score



Local Road Freight Score



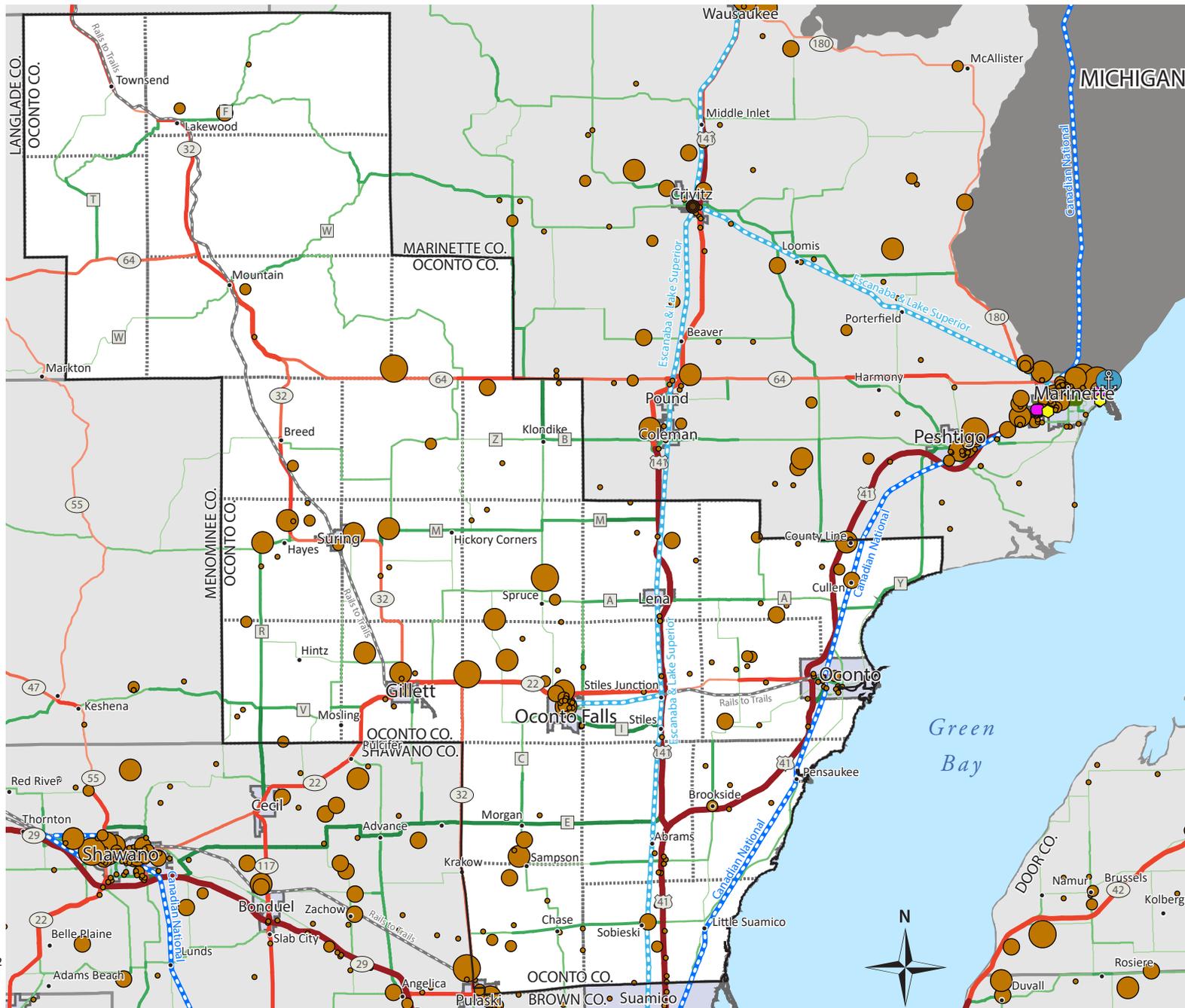
Freight Railroad Lines



Shippers/Recievers



Other Freight Facilities



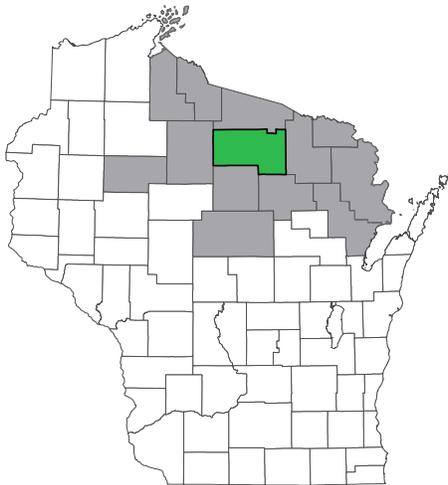
Oneida County Freight Profile

At a Glance

35,653	Population
1,350	Total Establishments
13,906	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)

Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
5.8%	-0.4%	\$46,516
4.6%	0.4%	\$53,357



Oneida County is predominantly rural, serving as a commercial and retail center for the entire Northwoods region. Major employers include ambulatory health care services, food services and drinking places, educational services, general merchandise stores, and executive legislative and general government.

Approximately 18% of the active labor force is employed in freight-intensive industries such as manufacturing, extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities

23.1	Miles of In Service Railroad
18.9	Miles of Out of Service Railroad
0.0	Miles of Rails-to-Trails
130.6	Miles of Oversize-Overweight Highways
66.5	Miles of High Clearance Highways
98.9	Miles of NHS Designated Roads
161.6	Miles of Long Truck Routes

Employment and Major Employers



Expera Specialty Solutions
Paper Mill



Marshfield Clinic
Hospital and other Medical Clinic



Ministry St. Mary's Hospital
Hospital and other Medical Clinic



Walmart Supercenter
Major Warehouse Store



Nicolet Area Technical College
Colleges & Universities



Howard Young Medical Center
Hospital and other Medical Clinic



Menards
Home Remodeling Store



Trig's Pharmacy
Pharmacies & Drug Stores



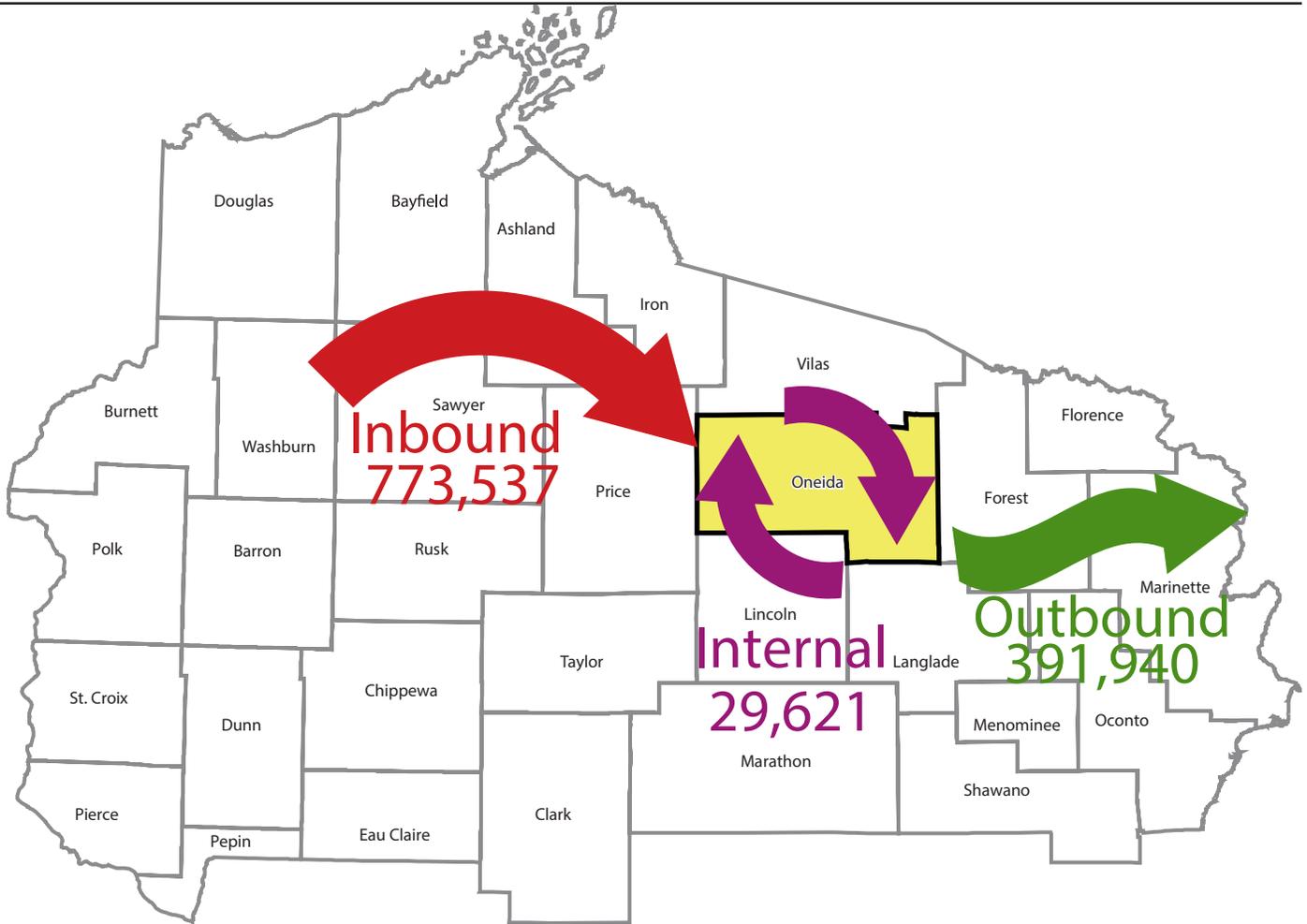
Doctors Foster & Smith
Marketing & Consulting Services

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	14	22
Mining, Quarrying & Extraction*	1	0-19
Construction*	185	836
Manufacturing*	46	1,355
Wholesale Trade*	35	475
Transportation & Warehousing	38	379
Utilities	2	20-99
Retail Trade	227	4,044
Health Care & Social Assistance	135	2,586
Accommodation & Food Services	197	1,678
All Other Sectors	470	2,531

*Freight Intensive Industry

Freight Movement and Modes



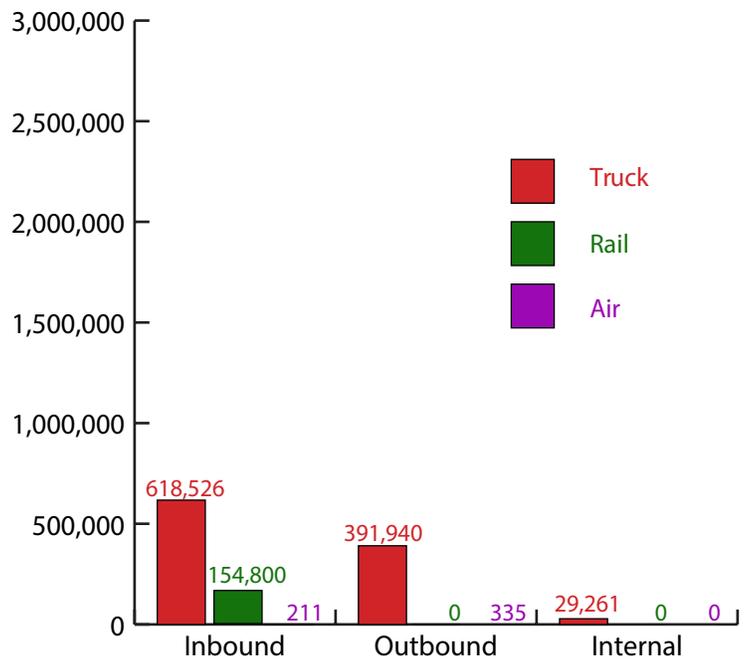
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Outbound Tonnage: Commodities shipped out of the county to other Wisconsin counties and states.

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*Tonnage amounts do not include "overhead tonnage", products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Highway Gravel & Sand	Rhineland	Brick, Stone, and Related Materials	Gravel or Sand
County Materials Corp.	Hazelhurst	Ready-Mix Concrete Manufacturing	Broken Stone or Riprap
Aqualand Manufacturing	Rhineland	Other Heavy and Civil Engineering Construction	Broken Stone or Riprap
Expera Specialty Solutions	Rhineland	Paper (except Newsprint) Mills	Gravel or Sand
Frito-Lay Inc.	Three Lakes	Confectionery Merchant Wholesalers	Broken Stone or Riprap

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Kemp Street 66/Remington Oil	Rhineland	Petroleum Products	Petroleum Refining Products
Expera Specialty Solutions	Rhineland	Paper (except Newsprint) Mills	Wallpaper
Printpack Inc.	Rhineland	Paper Bag Manufacturers	Paper Bags
Outdoor Recycling Co.	Rhineland	Recyclable Material Wholesalers	Misc Waste or Scrap
Brown Trucking	Rhineland	Logging	Primary Forest Materials

Major Commodities Oneida County - Rail and Air

Commodity	Terminating Rail Tons
Pulp, Paper or Allied Products	124,640
Food or Kindred Products	14,800
Clay, Concrete, Glass or Stone	7,880
Chemicals or Allied Products	3,760
Lumber or Wood Products	3,720

Pulp or Pulp Mill Products accounted for the highest amount of tonnage shipped to Oneida County by rail, with shipments from Alberta and British Columbia.

Food or Kindred Products also had a high tonnage commodity in Wet Corn Milling, shipped by rail from Chicago (IL).

Commodity	Terminating Air Tons
Small Packaged Freight Shipments	105
Machinery	102
Chemicals or Allied Products	2
Instruments, Photo Equipment, Optical Equipment	1

Small Packaged Freight Shipments accounted for the highest tonnage of all commodities shipped to Oneida County by air. These shipments came from Milwaukee County (WI) and the Michigan Upper Peninsula.

Machinery was also shipped by air from Milwaukee County (WI) and the Michigan Upper Peninsula.

Commodity	Originating Air Tons
Small Packaged Freight Shipments	168
Rubber or Misc Plastics	167
Miscellaneous Mixed Shipments	1

Small Packaged Freight Shipments accounted for the highest tonnage of all commodities shipped out of Oneida County by air. These shipments went to Milwaukee and Outagamie Counties (WI).

Rubber or Miscellaneous Plastics were also shipped to Milwaukee and Outagamie Counties (WI).

Major Commodities Oneida County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	306,903
Clay, Concrete, Glass or Stone	64,668
Chemicals or Allied Products	53,998
Secondary Traffic	52,259
Petroleum or Coal Products	36,589
Food or Kindred Products	32,766
All Others	71,467

Nonmetallic Minerals accounted for the highest amount of tonnage shipped into Oneida County by truck. The highest tonnage commodity was Broken Stone or Riprap, which was shipped from Langlade County (WI), the Michigan Upper Peninsula and Marathon County (WI).

Ready-mix Concrete was shipped into the county from Vilas and Lincoln Counties (WI), while Concrete Products were shipped from Marathon County (WI).

Commodity	Outbound Truck Tons
Pulp, Paper or Allied Products	98,393
Waste or Scrap Materials	71,194
Clay, Concrete, Glass or Stone	46,733
Farm Products	38,916
Rubber or Miscellaneous Plastics	37,206
Lumber or Wood Products	35,152
All Others	64,505

Pulp, Paper or Allied Products accounted for the highest amount of tonnage shipped out of Oneida County by truck. Some of these commodities include Wallpaper, which was shipped to Minneapolis (MN) and Paper or Building Board, also shipped to Minneapolis (MN).

Waste or Scrap Materials were another high tonnage commodity shipped out of the county, with destinations including San Francisco (CA) and Minneapolis (MN).

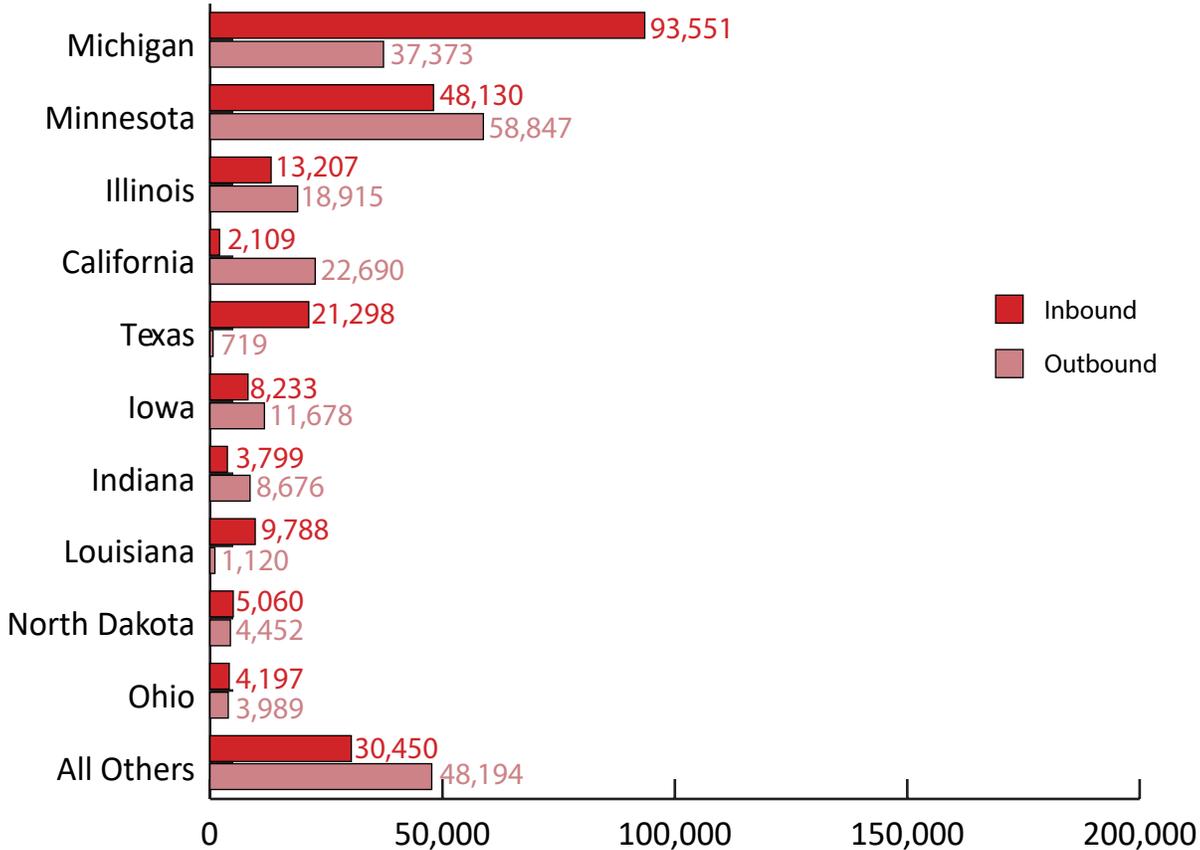
Commodity	Internal Truck Tons
Petroleum or Coal Products	17,522
Clay, Concrete, Glass or Stone	8,923
Pulp, Paper or Allied Products	705
Food or Kindred Products	564
Fabricated Metal Products	517
Rubber or Miscellaneous Plastics	437
All Others	954

Petroleum or Coal Products accounted for the highest amount of tonnage shipped within Oneida County by truck. Some of these commodities include Petroleum Refining Products and Liquefied Gases.

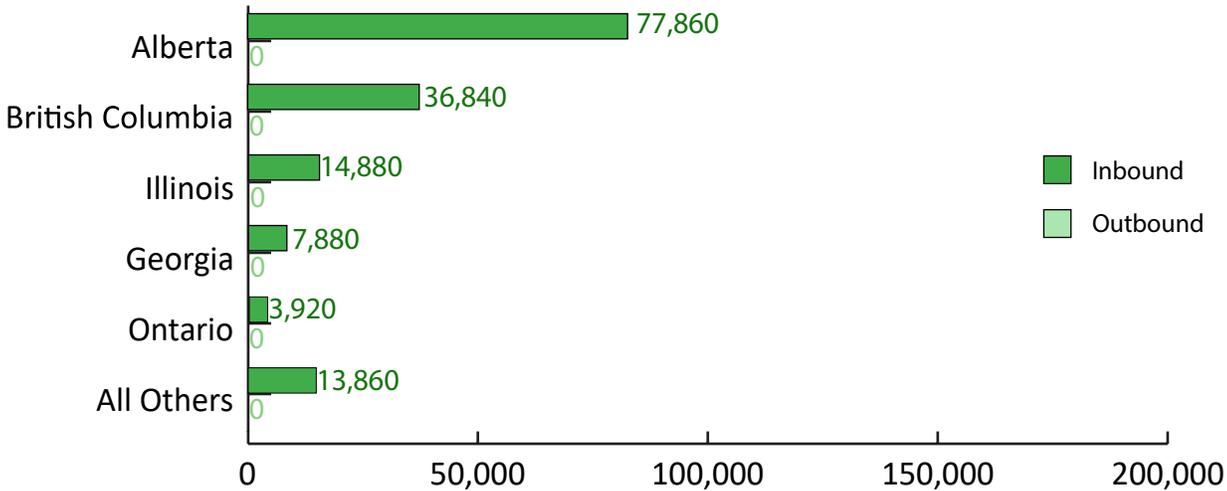
Other high tonnage commodities shipped within the county include Ready-mix Concrete and Concrete Products.

Major Trading Partners by Mode- States

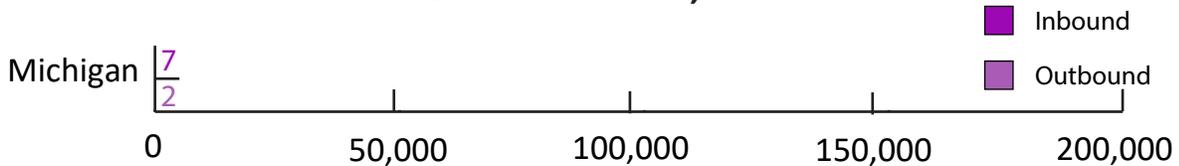
Truck - Inbound and Outbound Tons, 2015



Rail - Inbound and Outbound Tons, 2015

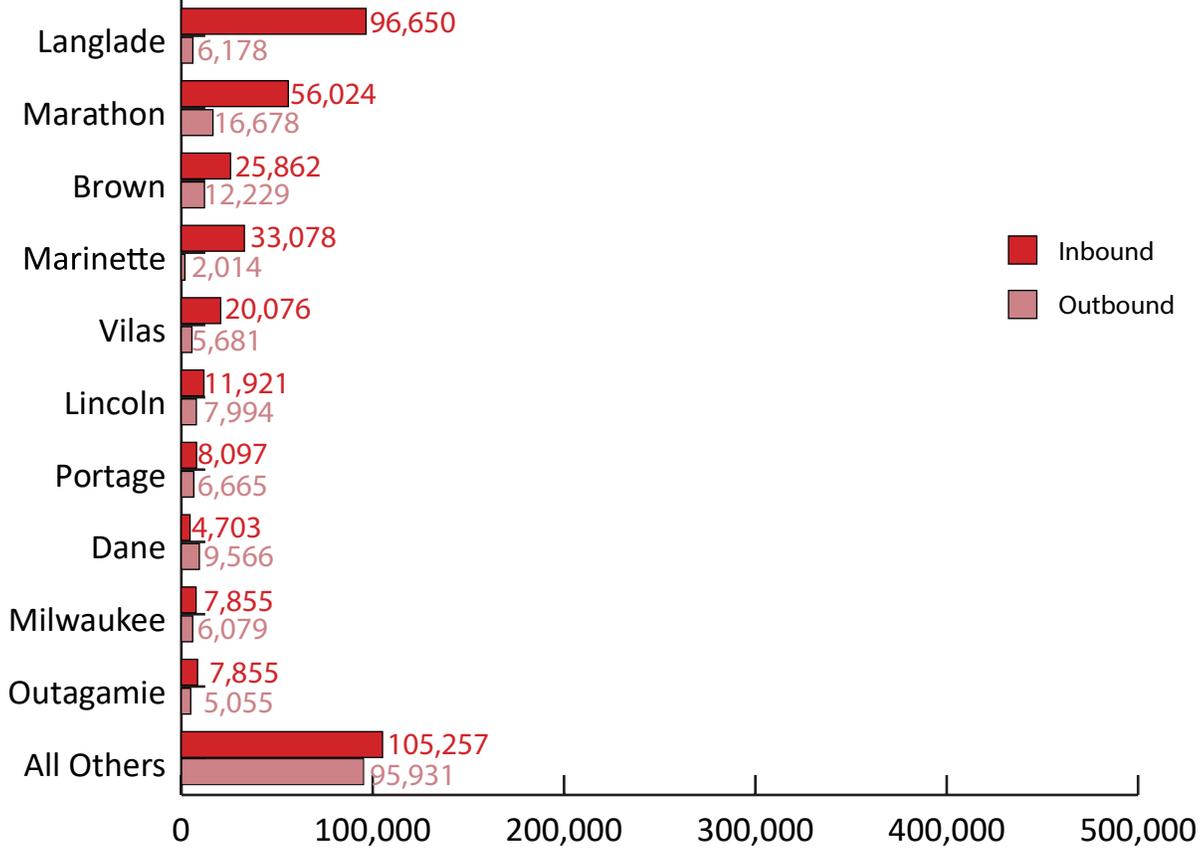


Air - Inbound and Outbound Tons, 2015

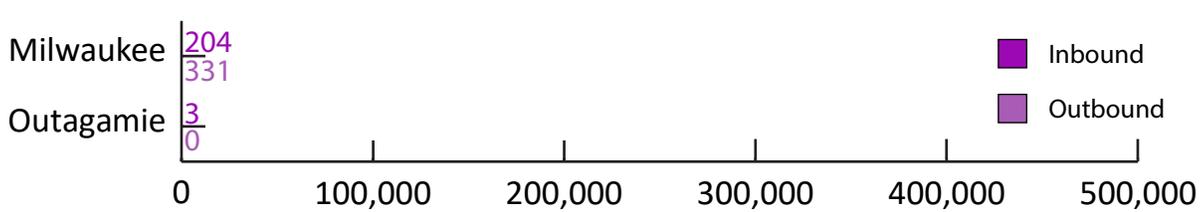


Major Trading Partners by Mode- Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015



Air - Inbound and Outbound Tons, 2015

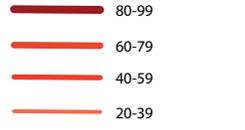


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.

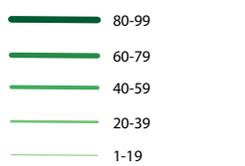


Oneida County Freight Profile

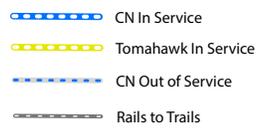
STN Highway Freight Score



Local Road Freight Score



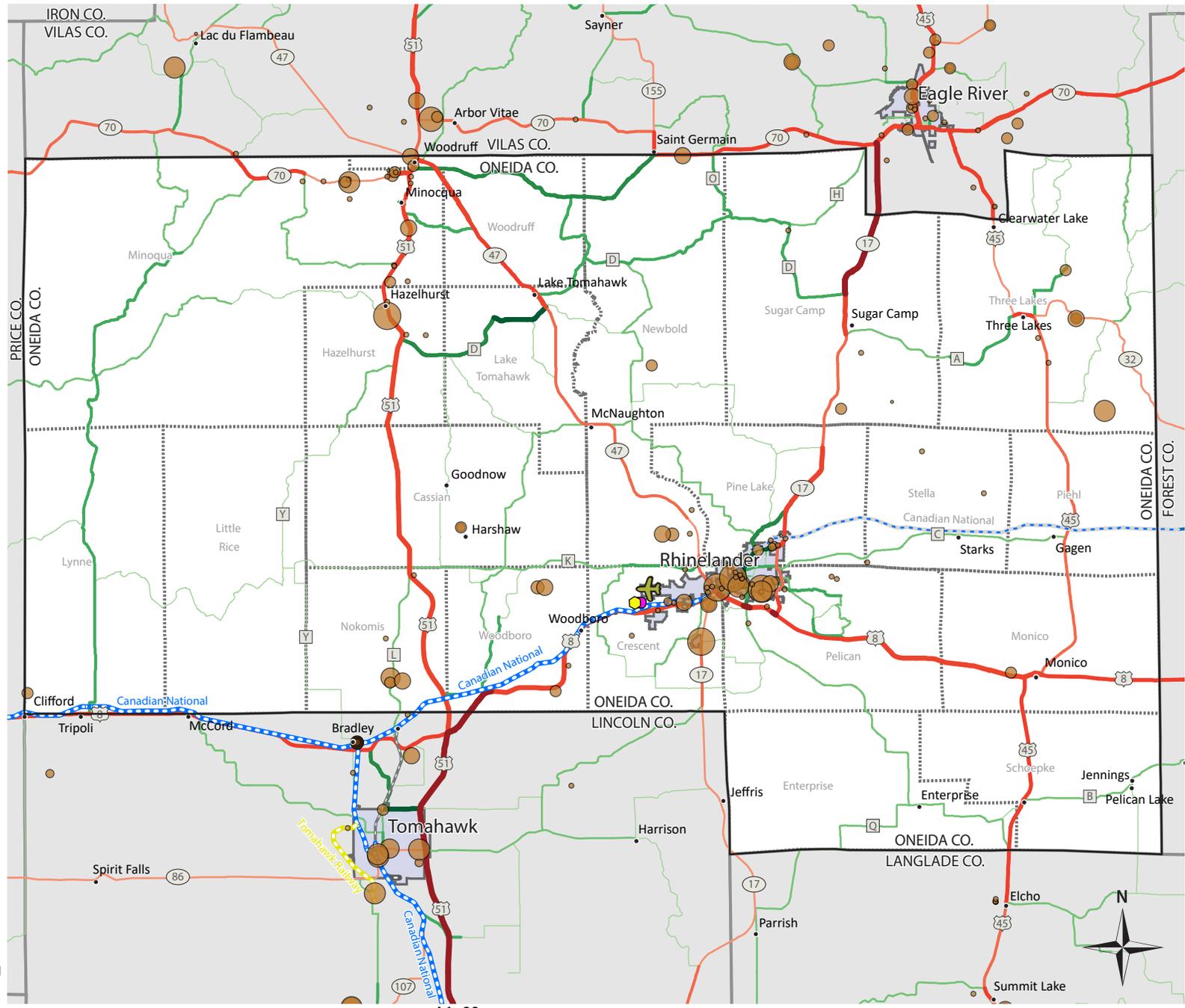
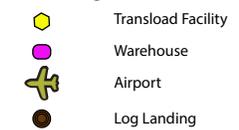
Freight Railroad Lines



Shippers/Recievers



Other Freight Facilities



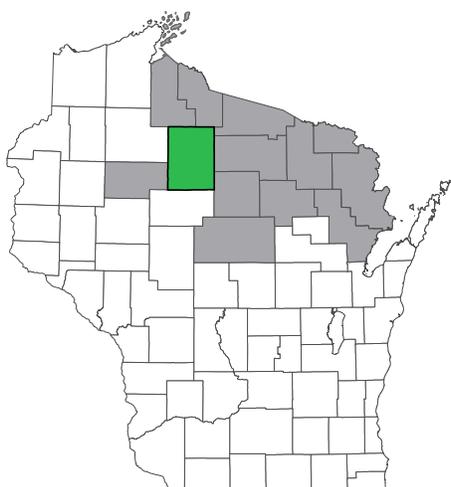
Price County Freight Profile

At a Glance

13,800	Population
414	Total Establishments
4,634	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)

Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
4.5%	-1.0%	\$43,137
4.6%	0.4%	\$53,357



Price County is predominantly rural. Manufacturing is the county's largest employment sector, with the machinery and wood product manufacturing as main subsectors.

Approximately 46% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities

49.5	Miles of In Service Railroad
19.6	Miles of Out of Service Railroad
9.3	Miles of Rails-to-Trails
110.6	Miles of Oversize-Overweight Highways
32.5	Miles of High Clearance Highways
78.2	Miles of NHS Designated Roads
156.3	Miles of Long Truck Routes

Employment and Major Employers



Weather Shield

Other Building Material Dealers



Park Manor

Vocational Rehabilitation Services



Aspirus Pleasant View

Assisted Living Facilities



Copps

Supermarkets and Grocery Stores



Marquip Ward United

Service Industry Machinery Mfg.



Flambeau River Papers

Paper Mills



St. Croix of Park Falls Ltd.

Sporting & Athletic Goods Mfg.



Caterpillar Forest Products

Construction & Mining Equip. Wholesalers



Flambeau Hospital

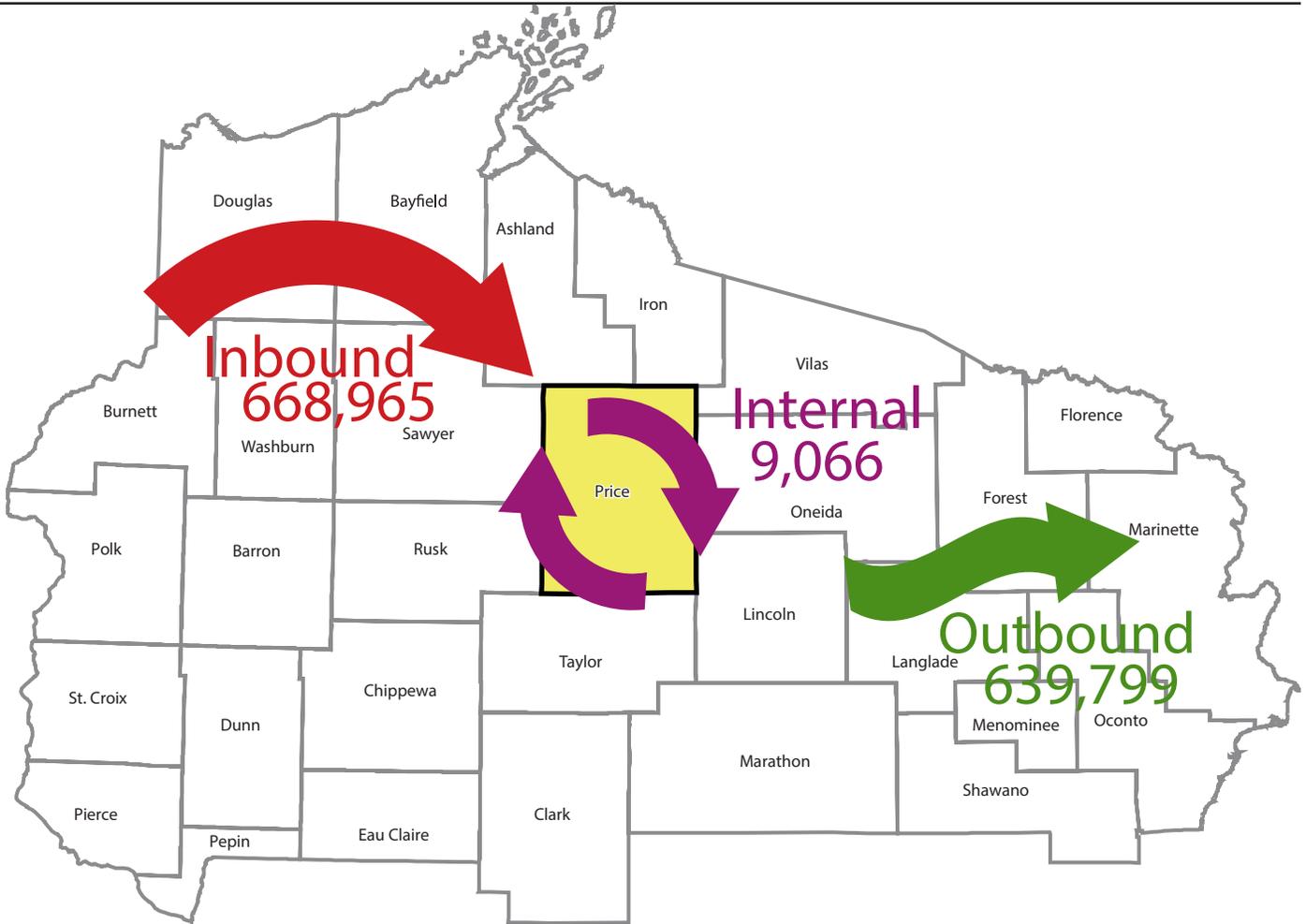
General Medical & Surgical Hospitals

Employment by Industry Sector

Industry Sector NAICS	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	14	33
Mining, Quarrying & Extraction*	1	0-19
Construction*	30	49
Manufacturing*	41	1,937
Wholesale Trade*	17	133
Transportation & Warehousing	18	79
Utilities	6	48
Health Care & Social Assistance	36	836
Retail Trade	72	564
Accommodation & Food Services	38	270
All Other Sectors	141	685

*Freight Intensive Industry

Freight Movement and Modes



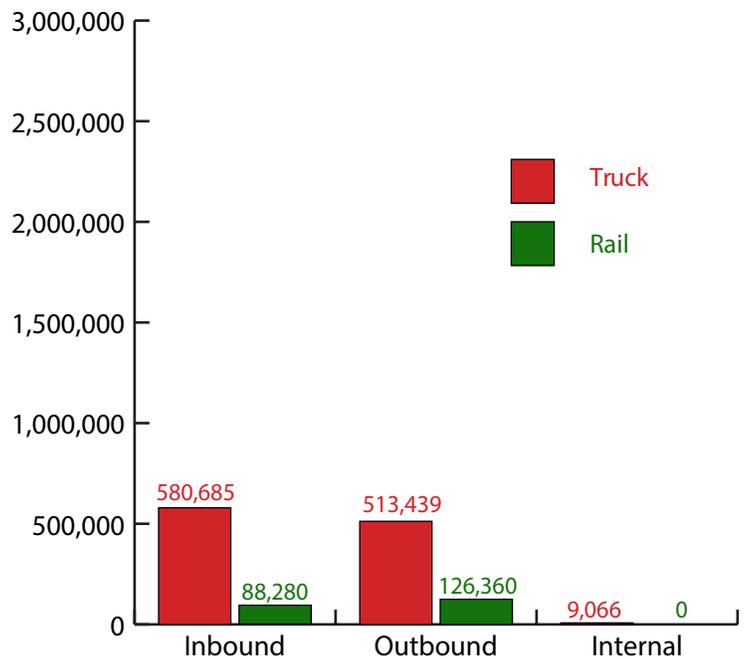
Definitions:

Inbound Tonnage: Goods shipped into the county from other Wisconsin counties and other states.

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Internal Tonnage: Goods that are shipped from one destination in the county to another destination within the county.

*Tonnage amounts do not include “overhead tonnage”, products that pass through the county and are not picked up or dropped off in the county.



Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Summit Lake Timber Corp.	Park Falls	Cut Stock, Resawing Lumber, and Planing	Primary Forest Materials
Beaver Creek Forest Products	Butternut	Sawmills	Primary Forest Materials
United Pride Dairy	Phillips	Dairy Cattle and Milk Production	Grain
Boness Logging	Park Falls	Logging	Primary Forest Materials
Specialty Minerals Inc.	Park Falls	Ground or Treated Mineral and Earth Manufacturing	Broken Stone or Riprap

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Boness Logging	Park Falls	Logging	Primary Forest Materials
Summit Lake Timber Corp.	Park Falls	Cut Stock, Resawing Lumber, and Planing	Miscellaneous Sawmill or Planing Mill
Moore's Logging	Catawba	Logging	Primary Forest Materials
Beaver Creek Forest Products	Butternut	Sawmills	Misc Sawmill or Planing Mill
Innomation Inc.	Phillips	All Other Miscellaneous Manufacturing	Wood Products

Major Commodities Price County - Rail

Commodity	Terminating Rail Tons
Pulp, Paper or Allied Products	32,920
Lumber or Wood Products	28,200
Food or Kindred Products	14,160
Petroleum or Coal Products	5,200
Clay, Concrete, Glass or Stone	4,000
Nonmetallic Minerals	3,800

Pulp or Pulp Mill Products were the highest tonnage commodity shipped into Price County by rail. Some of these shipments came from Ontario.

Food or Kindred Products also accounted for a high percentage of tonnage, with Wet Corn Milling shipped from Cedar Rapids (IA) the highest.

Commodity	Originating Rail Tons
Lumber or Wood Products	103,200
Pulp, Paper or Allied Products	23,160

Primary Forest Materials were the highest tonnage commodity shipped out of Price County by rail. Some of these shipments went to Wood and Outagamie Counties (WI).

Pulp or Pulp Mill Products were also shipped to Chicago (IL) by rail from Price County.

Major Commodities Price County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	304,323
Lumber or Wood Products	118,693
Petroleum or Coal Products	34,441
Chemicals or Allied Products	21,427
Clay, Concrete, Glass or Stone	19,101
Secondary Traffic	19,025
All Others	63,676

Nonmetallic Minerals accounted for the highest percentage of tonnage shipped by truck to Price County. The highest tonnage commodity was Gravel or Sand, with major shipments from Chippewa County (WI), Douglas County (WI) and Minneapolis (MN).

Lumber or Wood Products also accounted for a high percentage of inbound tonnage. Primary Forest Materials was the highest tonnage commodity, shipped from the Michigan Upper Peninsula and Duluth (MN).

Commodity	Outbound Truck Tons
Lumber or Wood Products	182,911
Pulp, Paper or Allied Products	118,524
Farm Products	110,504
Nonmetallic Minerals	33,213
Rubber or Misc Plastics	30,306
Clay, Concrete, Glass or Stone	13,850
All Others	24,312

Lumber or Wood Products accounted for the highest percentage of tonnage shipped by truck from Price County. Miscellaneous Sawmill or Planing Mill Products were one of these commodities, with shipments to Marathon and Rusk Counties (WI).

Pulp, Paper or Allied Products also accounted for a high percentage of tonnage. Paper was the highest tonnage commodity, with shipments to places such as Savannah (GA) and Minneapolis (MN).

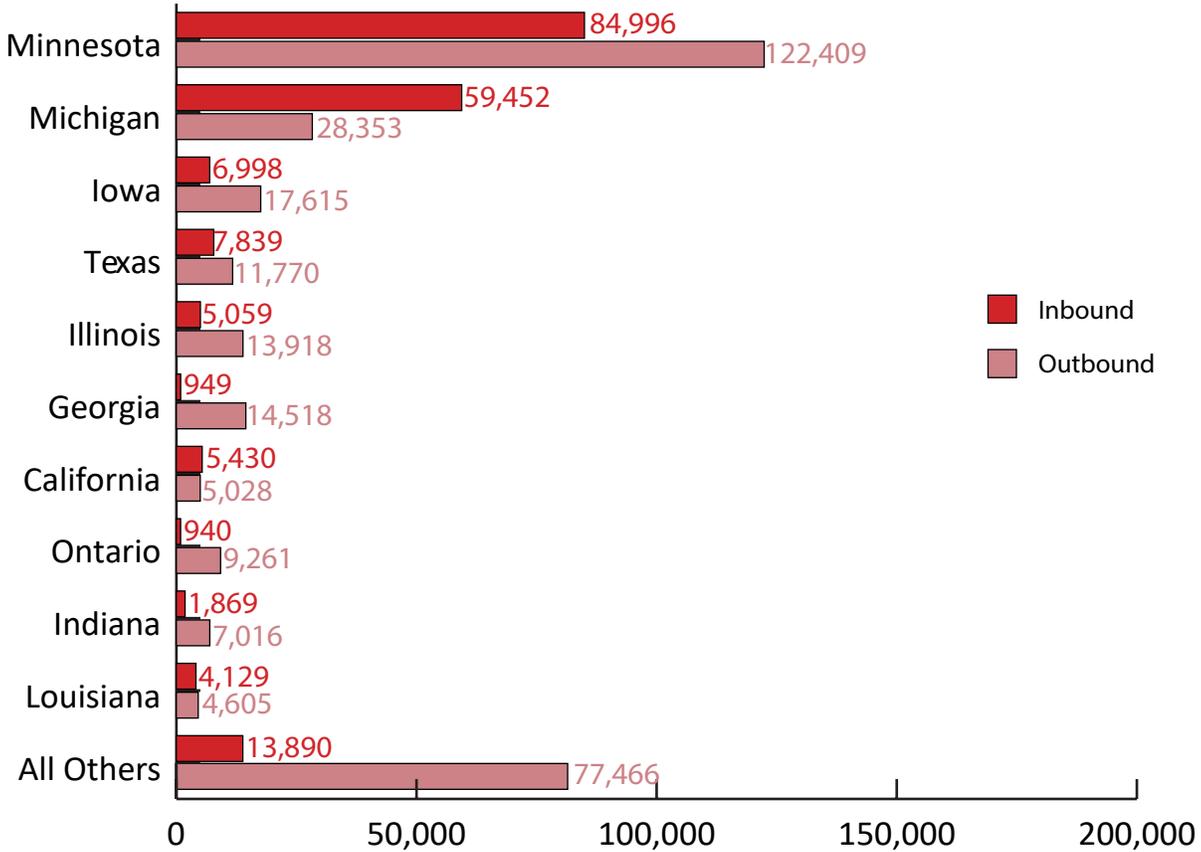
Commodity	Internal Truck Tons
Lumber or Wood Products	5,888
Misc. Manufacturing Products	1,038
Machinery	881
Nonmetallic Minerals	515
Fabricated Metal Products	250
Clay, Concrete, Glass or Stone	207
All Others	286

Lumber or Wood Products accounted for the highest percentage of tonnage shipped by truck within Price County. Some of the highest tonnage commodities in this group include Miscellaneous Sawmill or Planing Mill Products, Primary Forest Materials, and Wood Products.

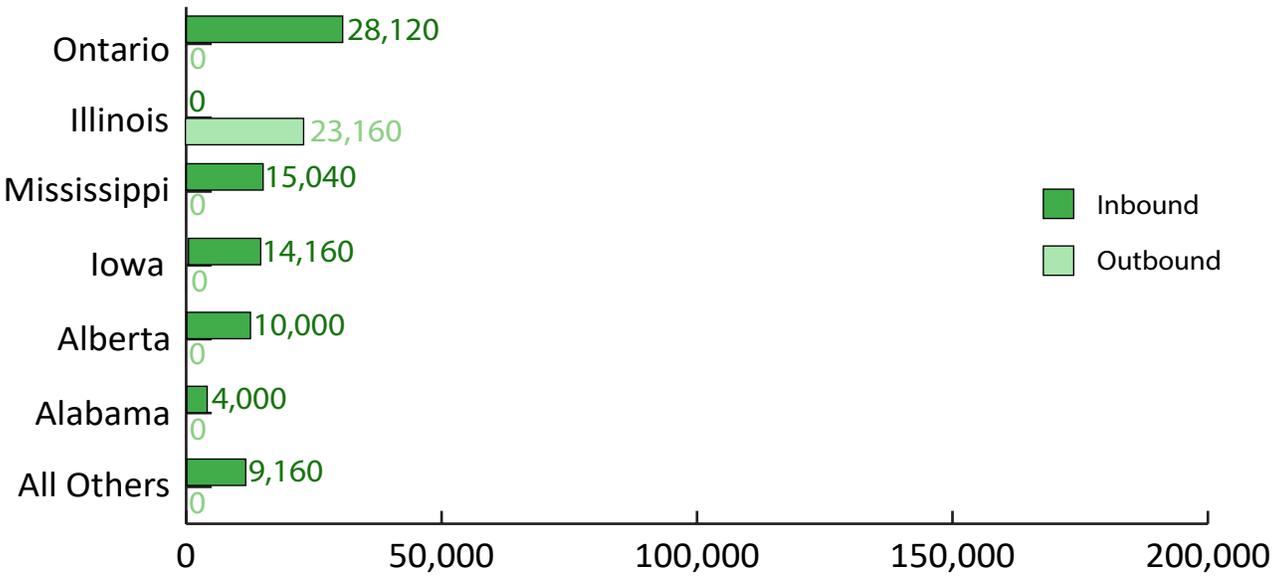
Miscellaneous Manufacturing Products also accounted for a large percentage of tonnage. Some of these commodities include Sporting or Athletic Goods, and Manufactured Products.

Major Trading Partners by Mode - States

Truck - Inbound and Outbound Tons, 2015

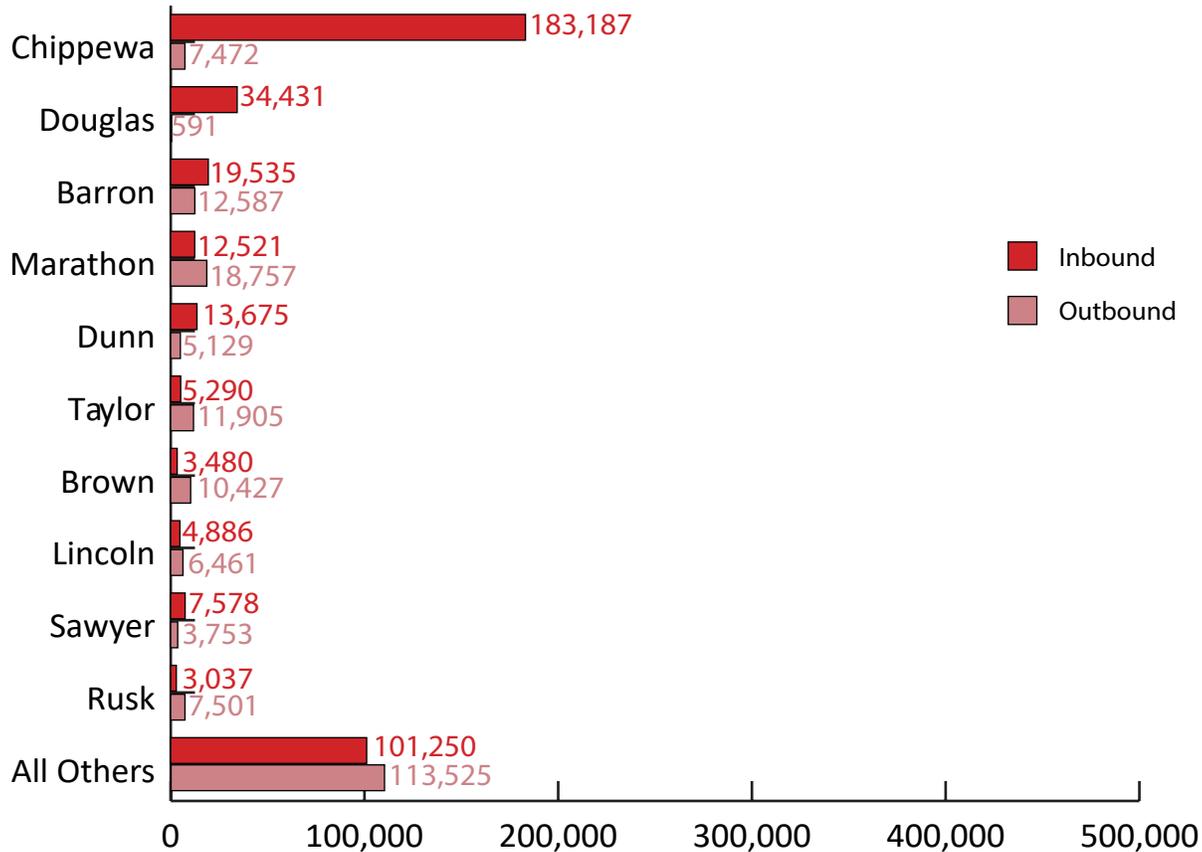


Rail - Inbound and Outbound Tons, 2015

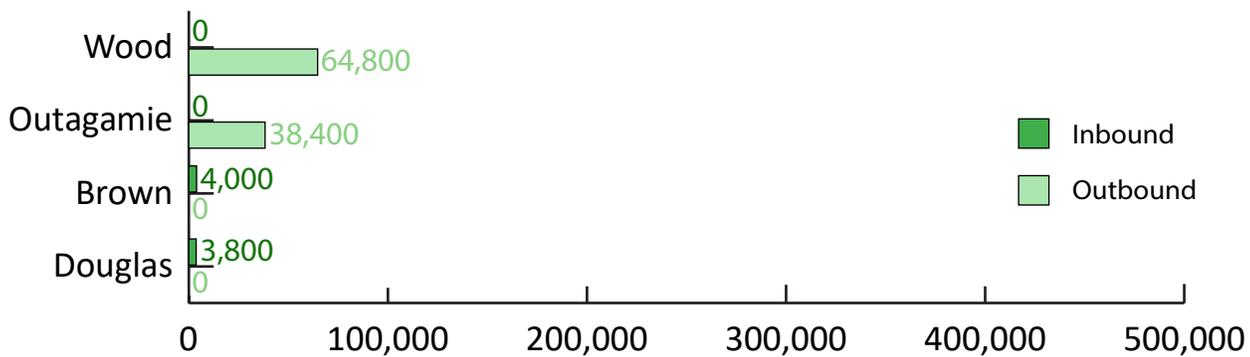


Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015



Rail - Inbound and Outbound Tons, 2015

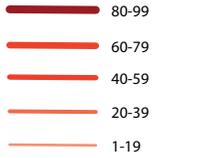


Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.

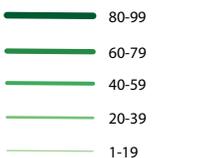


Price County Freight Profile

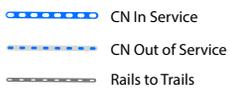
STN Highway Freight Score



Local Road Freight Score



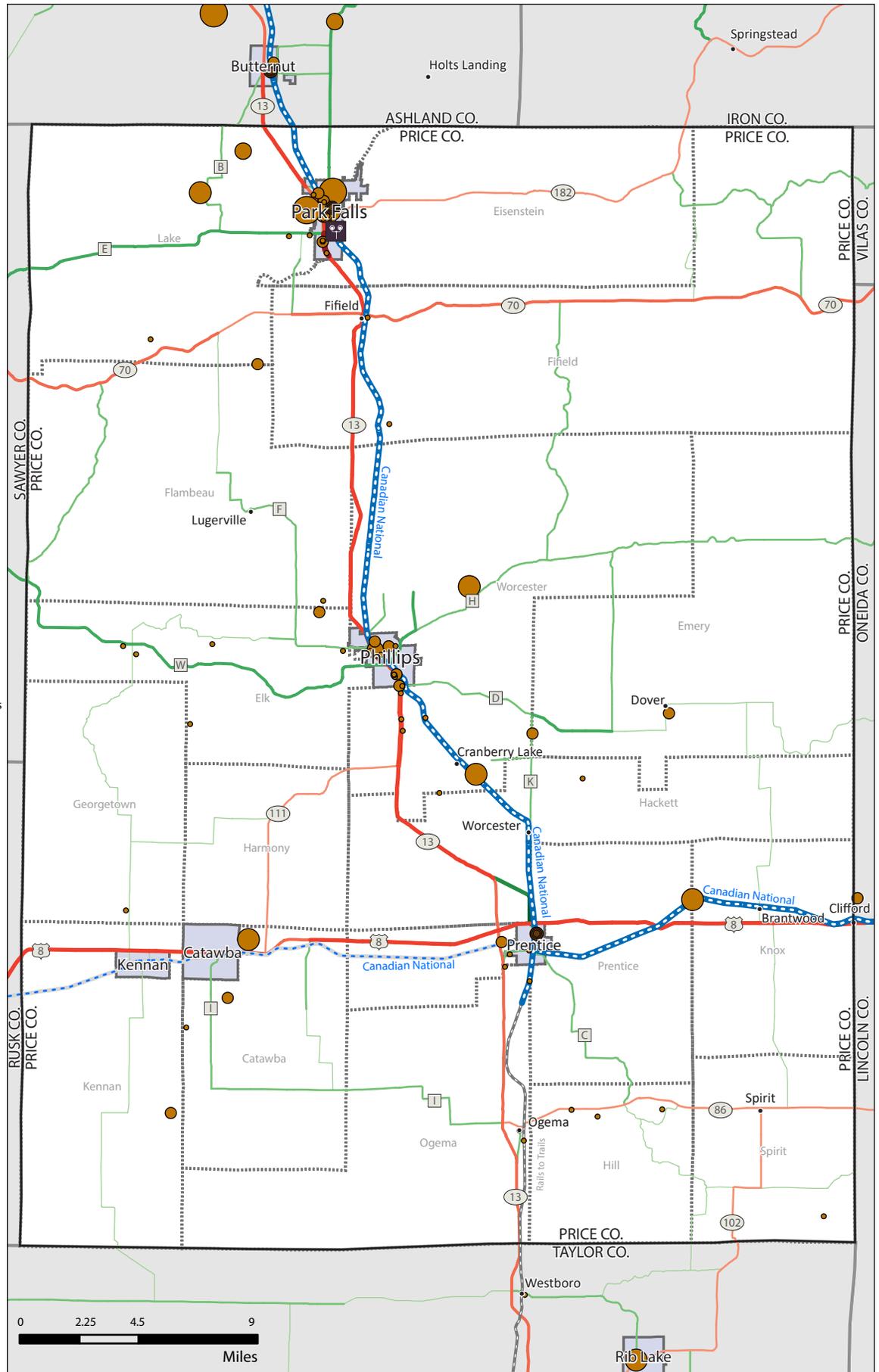
Freight Railroad Lines



Shippers/Receivers



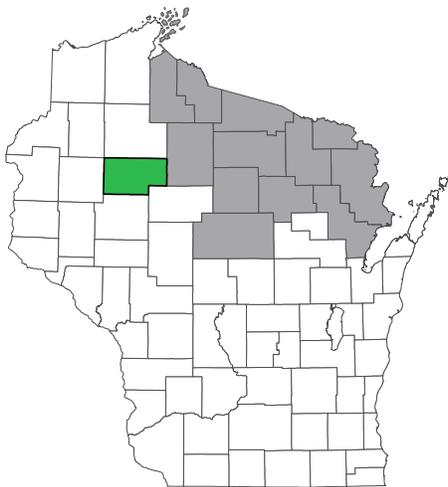
Other Freight Facilities



Rusk County Freight Profile

At a Glance	
14,357	Population
322	Total Establishments
4,391	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
5.5%	-0.7%	\$39,194
4.6%	0.4%	\$53,357



Rusk County is predominated by manufacturing, with the wood products subsector accounting for over half of the county's manufacturing employment.

Approximately 42% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
50.2	Miles of In Service Railroad
21.3	Miles of Out of Service Railroad
0.0	Miles of Rails-to-Trails
79.1	Miles of Oversize-Overweight Highways
24.0	Miles of High Clearance Highways
45.6	Miles of NHS Designated Roads
130.7	Miles of Long Truck Routes

Employment and Major Employers



Weather Shield

Metal Window & Door Mfg.



Rusk Co. Memorial Hospital

Hospital and other Medical Clinic



Gordy's County Market

Supermarkets & Other Grocery Stores



Walmart Supercenter

Major Warehouse Store



Artisans Inc.

Commercial Screen Printing



Marshfield Clinic Ladysmith

Frestanding Emergency Medical Center



Jeld-Wen Windows & Doors

Other Building Material Dealers



Rockwell Automation

General Purpose Machinery Mfg.



Bruce School District

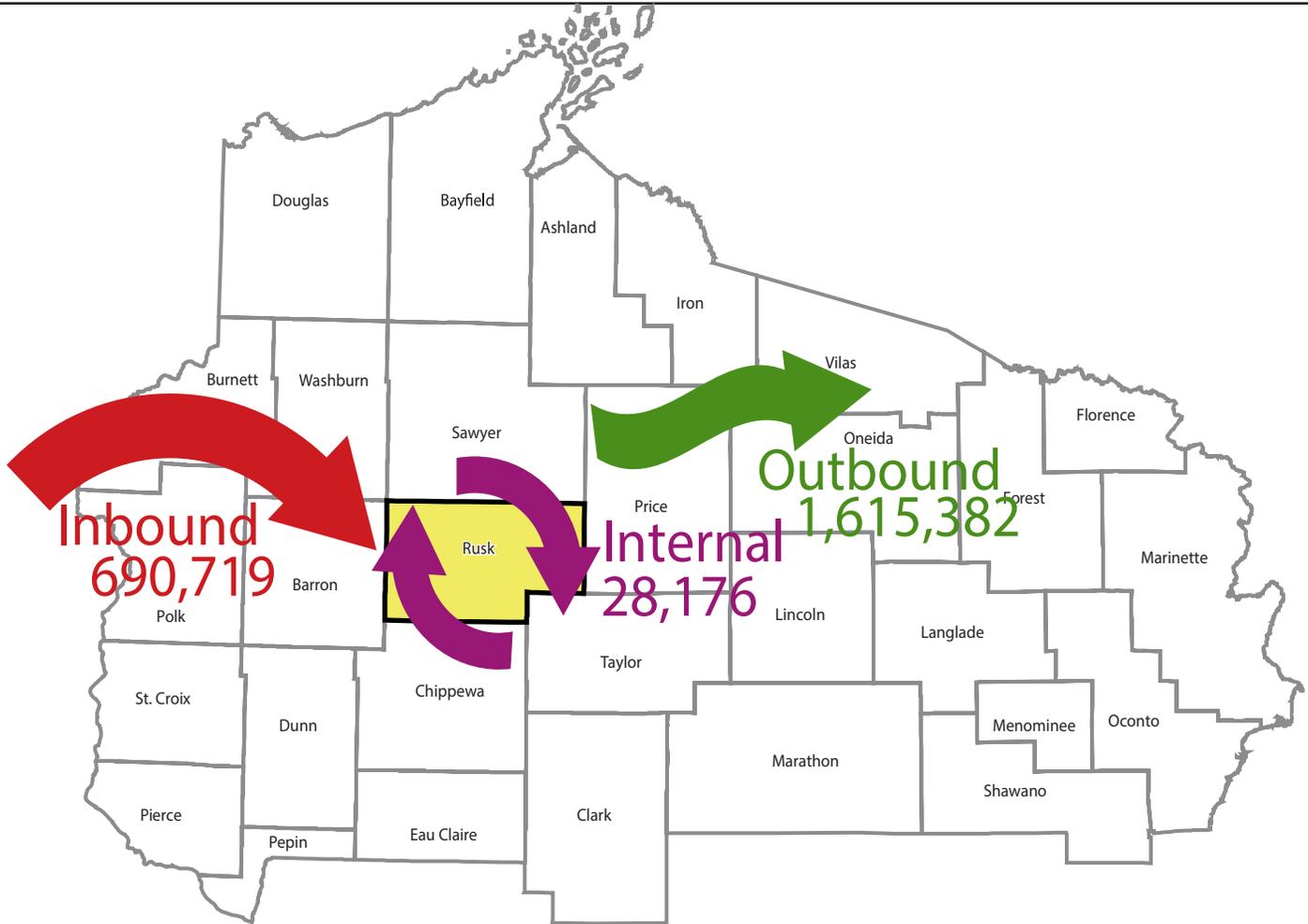
Elementary & Secondary Schools

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	4	14
Mining, Quarrying & Extraction*	2	0-19
Construction*	25	62
Manufacturing*	27	1,706
Wholesale Trade*	10	83
Transportation & Warehousing	23	206
Utilities	4	32
Health Care & Social Assistance	38	776
Retail Trade	51	620
Accommodation & Food Services	35	195
All Other Sectors	103	688

*Freight Intensive Industry

Freight Movement and Modes



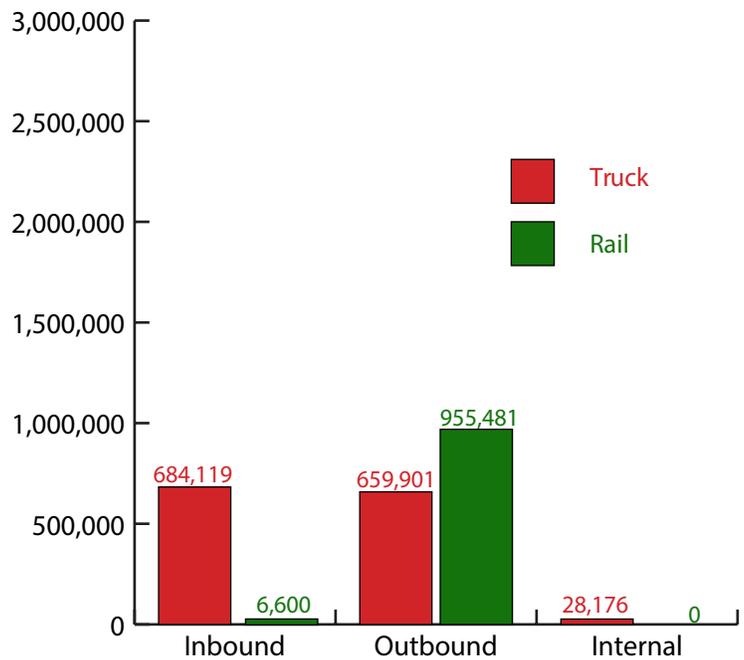
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Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Weather Shield Windows & Doors	Ladysmith	Metal Window and Door Manufacturing	Mineral Wool
Besse Lumber Co.	Ladysmith	Sawmills	Primary Forest Materials
Clearwater Paper Corp.	Ladysmith	Paper (except Newsprint) Mills	Primary Forest Materials
Enbridge Energy LP	Ladysmith	Pipeline Transportation of Crude Oil	Petroleum Refining Products
Rands Trucking	Ladysmith	Brick, Stone, and Related Construction Material Materials	Gravel or Sand

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
PJ Murphy Forest Products	Ladysmith	All Other Miscellaneous Wood Product Manufacturing	Wood Products
River Ridge Products LLC	Ladysmith	All Other Miscellaneous Wood Product Manufacturing	Wood Products
Van Doorn Logging LLC	Tony	Logging	Primary Forest Materials
Schmitz Farms Dairy	Bruce	Dairy Cattle and Milk Production	Dairy Farm Products
Burmeister Logging	Sheldon	Logging	Primary Forest Materials

Major Commodities Rusk County - Rail

Commodity	Originating Rail Tons
Chemicals or Allied Products	4,000
Petroleum or Coal Products	2,600

Nonmetallic Minerals accounted for the highest percentage of tonnage shipped by rail from Price County. Gravel or Sand was a major commodity shipped to Minot (ND) and Corpus Christi (TX).

Lumber or Wood Products were also shipped to Wood County (WI).

Commodity	Originating Rail Tons
Nonmetallic Minerals	909,801
Lumber or Wood Products	45,600
Transportation Equipment	80

Nonmetallic Minerals accounted for the highest percentage of tonnage shipped by rail from Price County. Gravel or Sand was the major commodity, shipped to Ontario and Minot (ND).

Lumber or Wood Products were also shipped to Wood County (WI).

Major Commodities Rusk County - Truck

Commodity	Inbound Truck Tons
Waste or Scrap Materials	207,340
Nonmetallic Minerals	151,619
Lumber or Wood Products	132,180
Petroleum or Coal Products	57,862
Farm Products	56,881
Clay, Concrete, Glass or Stone	23,476
All Others	54,760

Waste or Scrap Materials accounted for the highest percentage of tonnage shipped to Rusk County by truck. One major commodity is Miscellaneous Waste or Scrap, with shipments from Minneapolis (MN) and Chippewa County (WI).

Nonmetallic Minerals also accounted for a high percentage of the tonnage shipped to the county. The commodity with the highest amount of tonnage is Gravel or Sand, with shipments from Chippewa County (WI) and Minneapolis (MN).

Commodity	Outbound Truck Tons
Farm Products	279,051
Lumber or Wood Products	262,082
Clay, Concrete, Glass or Stone	83,154
Pulp, Paper or Allied Products	12,238
Waste or Scrap Materials	9,018
Electrical Equipment	4,495
All Others	9,863

Farm Products accounted for the highest percentage of tonnage shipped from Rusk County by truck. Some commodities include Grain, which was shipped to Minneapolis (MN) and Dunn County (WI). Dairy Farm Products were shipped to Marathon and Clark Counties (WI).

Wood Products were shipped to Detroit (MI) and Minneapolis (MN) from the county.

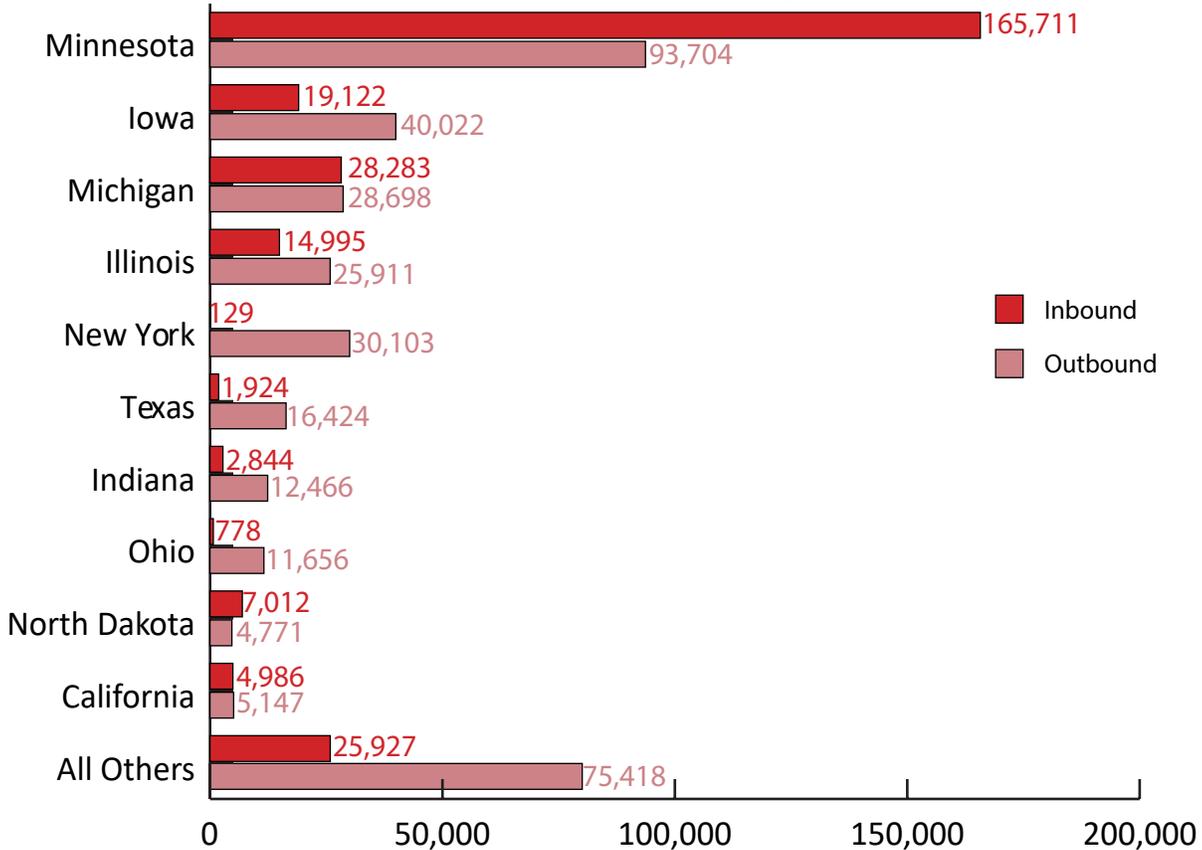
Commodity	Internal Truck Tons
Clay, Concrete, Glass or Stone	18,765
Lumber or Wood Products	7,089
Farm Products	986
Waste or Scrap Materials	968
Electrical Equipment	266
Forest Products	59
All Others	42

Clay, Concrete, Glass and Stone accounted for the highest percentage of tonnage shipped within Rusk County by truck. The main commodity in this group is Mineral Wool.

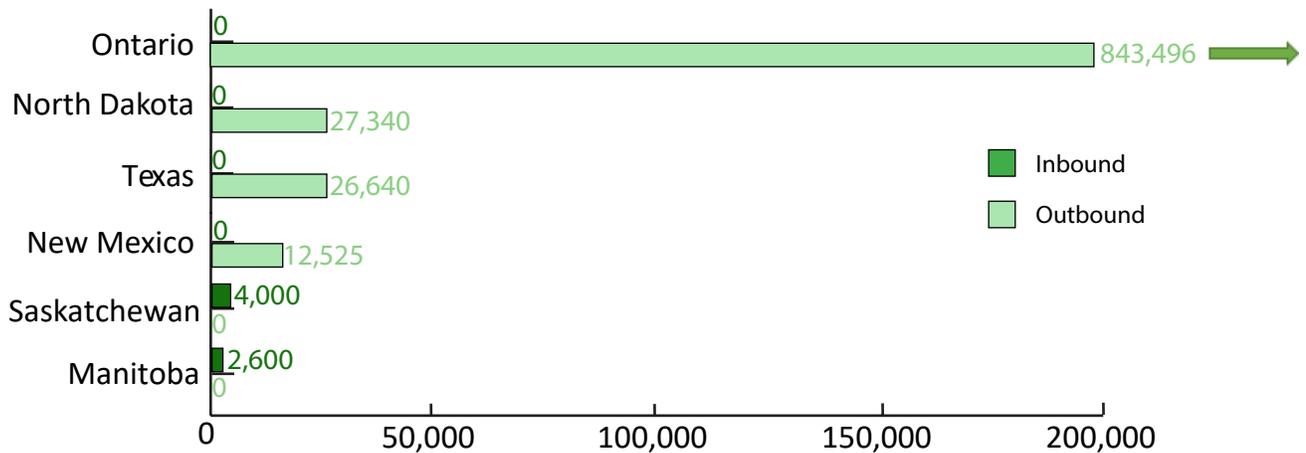
Lumber or Wood Products accounted for a high percentage of tonnage shipped within the county. Some of the commodities in this group include Wood Products, Lumber or Dimension Stock and Miscellaneous Sawmill or Planing Mill Products.

Major Trading Partners by Mode - States

Truck- Inbound and Outbound Tons, 2015

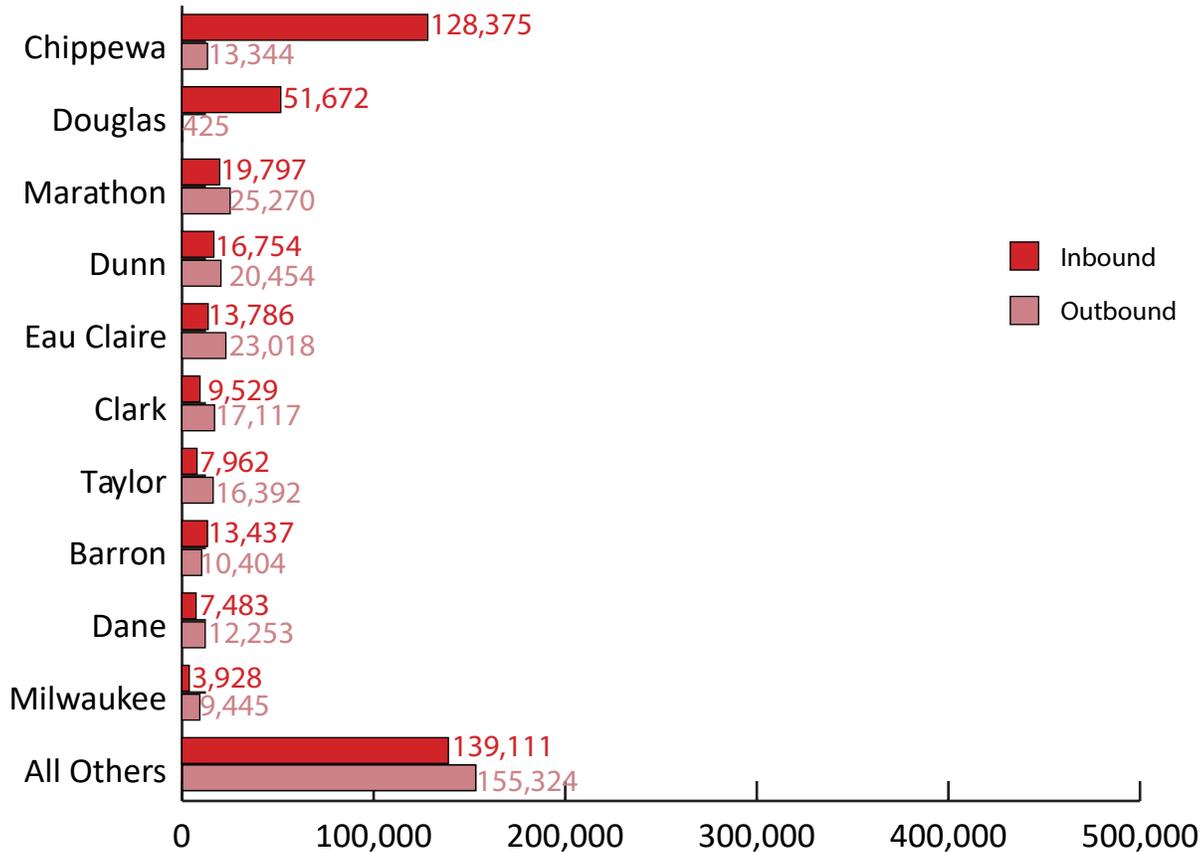


Rail - Inbound and Outbound Tons, 2015

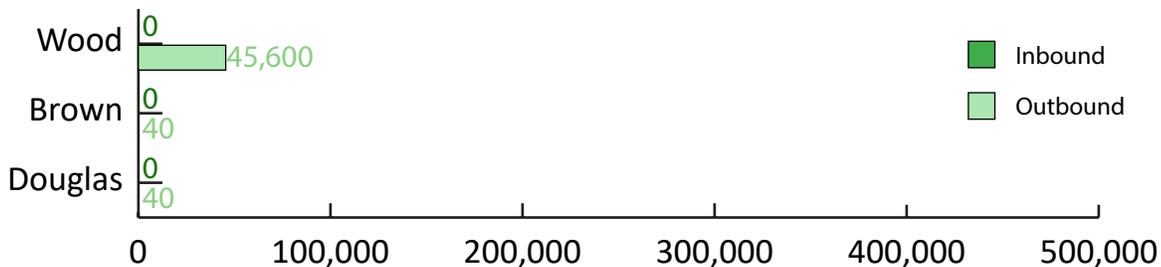


Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015



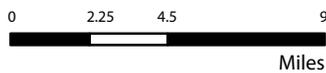
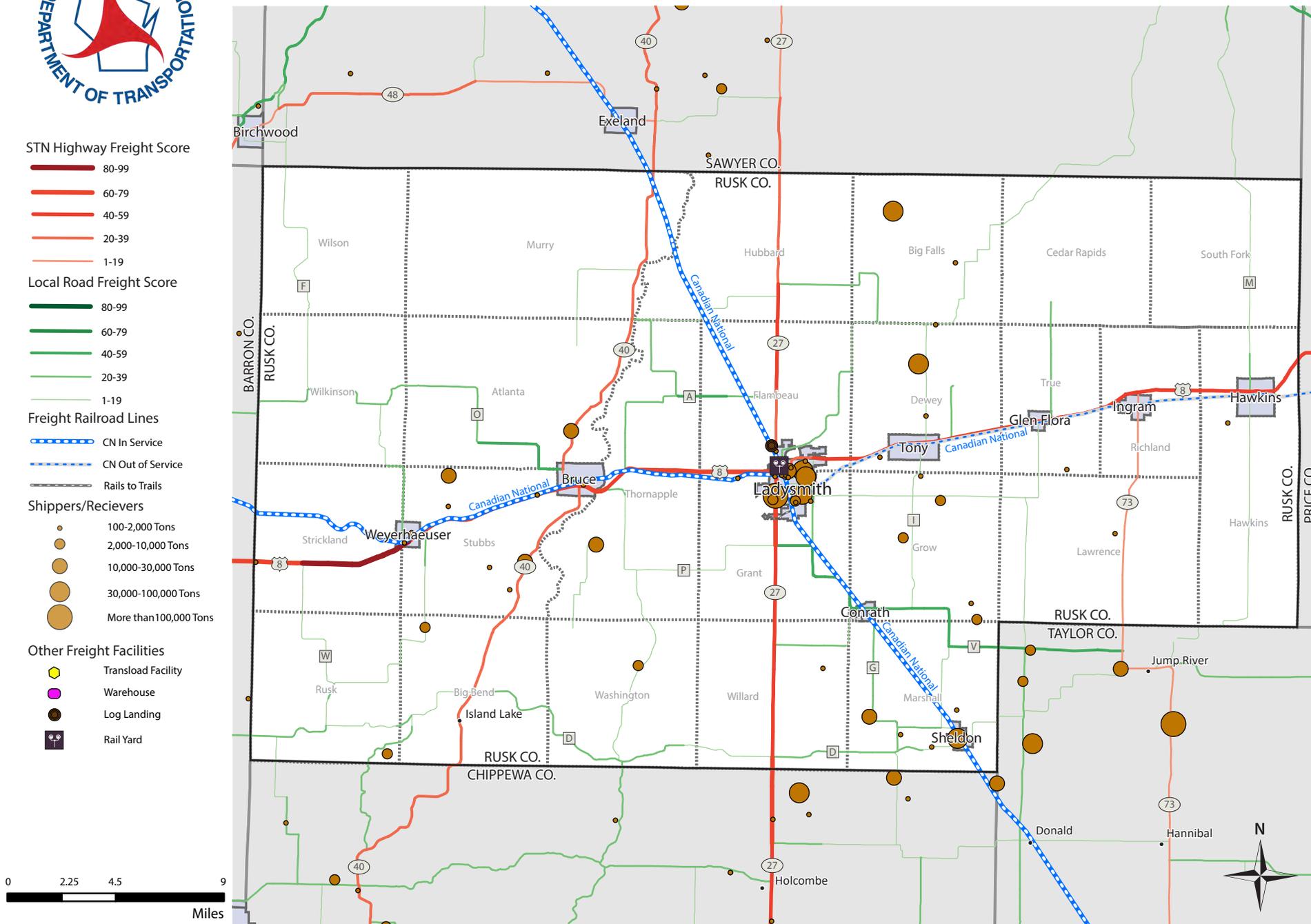
Rail - Inbound and Outbound Tons, 2015



Sources: US Census Bureau: County Business Patterns, 2015; US Census Bureau: American Community Survey, 2006-2010 & 2011-2015 5 Year Estimates; Bureau of Labor Statistics: Local Area Unemployment Statistics, 2015; 2017 Infogroup, ReferenceUSA.gov; 2015 IHS Freight Finder; 2015 IHS Transearch Database; 2017 WisDOT GIS Data.



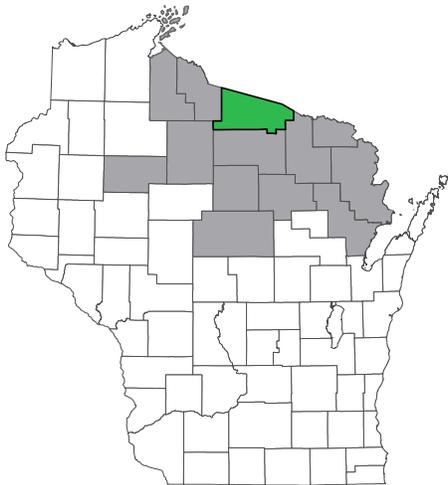
Rusk County Freight Profile



Vilas County Freight Profile

At a Glance	
21,355	Population
929	Total Establishments
5,645	Total Employees

Indicator Comparison to State of Wisconsin (WI in grey)		
Unemployment Rate 2016	Compound Annual Pop. Growth Rate 2010-2015	Median Household Income 2015
7.0%	-0.4%	\$41,061
4.6%	0.4%	\$53,357

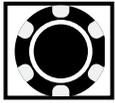


Vilas County's economy is tourism and recreation based, with more lakes, rivers and streams than any other Wisconsin County. Natural resource-based businesses, such as timber producers, are important economic drivers in Vilas County.

Approximately 16% of the active labor force is employed in freight-intensive industries such as manufacturing, mining, quarrying, and extraction, construction, wholesale trade, and agriculture, forestry, fishing, and hunting.

Freight Facilities	
50.2	Miles of In Service Railroad
21.3	Miles of Out of Service Railroad
0.0	Miles of Rails-to-Trails
79.1	Miles of Oversize-Overweight Highways
24.0	Miles of High Clearance Highways
45.6	Miles of NHS Designated Roads
130.7	Miles of Long Truck Routes

Employment and Major Employers



Lake of the Torches Casino
Casinos



MJ Electric LLC
Electrical Contractors



Eagle River Memorial Hospital
Hospital and other Medical Clinic



North States Utility Contractors
Power & Communication Line Constr.



Camp Ramah
Recreational & Vacation Camps



Pick'n Save
Supermarkets



Camp Timberlane
Recreational & Vacation Camps



Simpson Electric Company
Surgical & Medical Instrument Mfg.



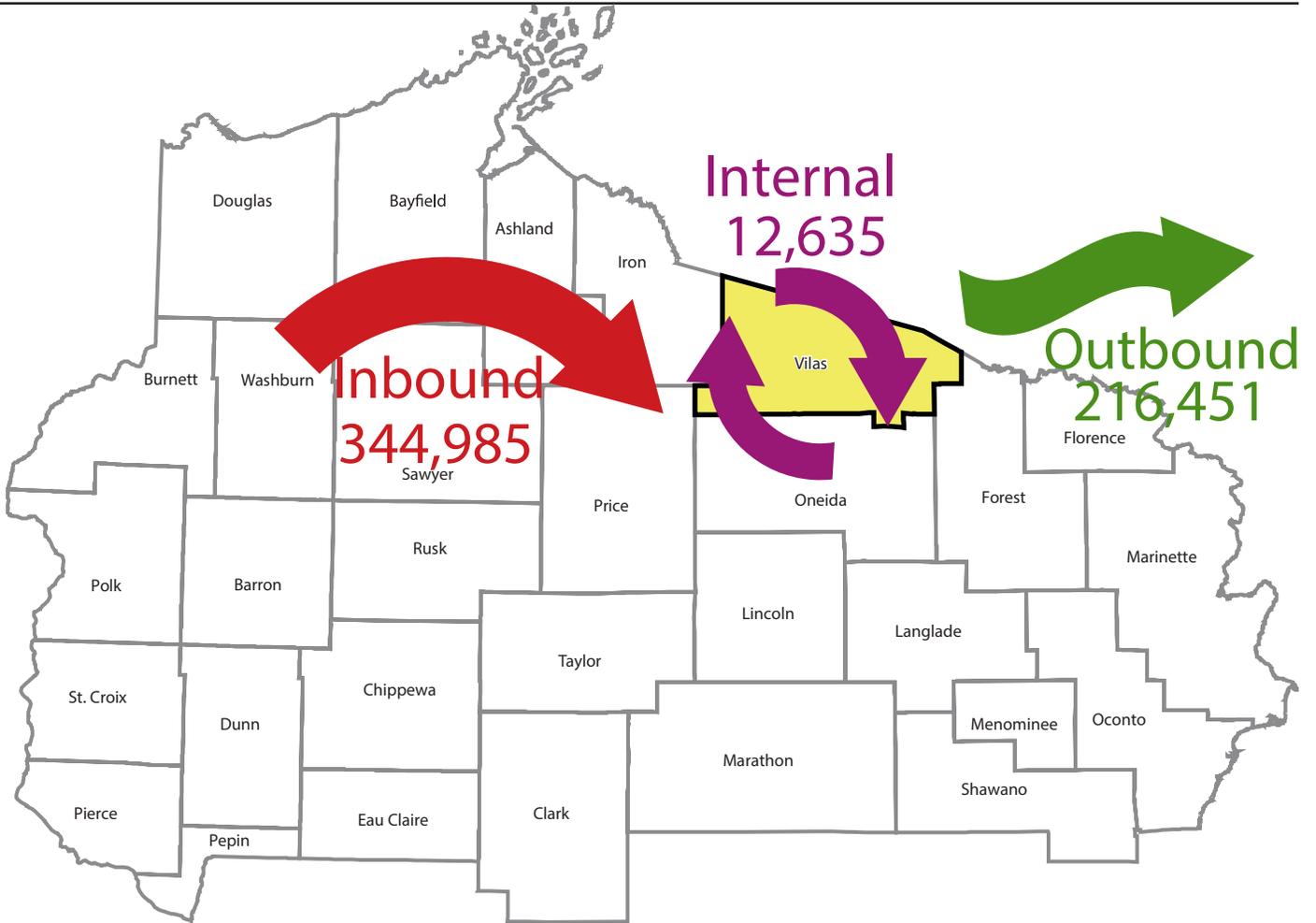
Trig's
Supermarkets

Employment by Industry Sector

Industry Sector (NAICS)	Establishments	Average Annual Employment
Agriculture, Forestry Fishing & Hunting*	9	20
Mining, Quarrying & Extraction*	2	0-19
Construction*	159	391
Manufacturing*	31	308
Wholesale Trade*	13	159
Transportation & Warehousing	25	107
Utilities	1	0-19
Accommodation & Food Services	209	1,918
Retail Trade	149	1,068
Health Care & Social Assistance	47	584
All Other Sectors	284	1,071

*Freight Intensive Industry

Freight Movement and Modes



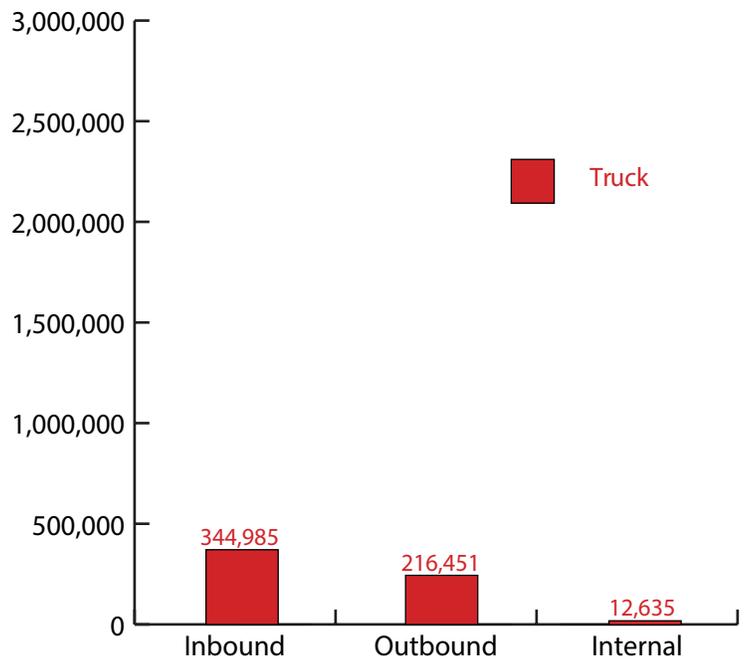
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Tonnage and Direction by Mode, 2015

Major Freight Receivers-Generators

Major Freight Receivers

Business	Location	Primary Industry	Primary Terminating Commodities
Pukall Lumber Co.	Woodruff	Other Building Material Dealers	Broken Stone or Riprap
Harold E Johnson Sand & Gravel	Lac Du Flambeau	Brick, Stone, and Related Construction Material	Gravel or Sand
Krist Oil-Propane-Woodruff	Conover	Petroleum and Petroleum Products Merchant Wholesalers	Petroleum Refining Products
Felix Zeloski Farm	Eagle River	All Other Miscellaneous Crop Farming	Broken Stone or Riprap
Hilgy's LP Gas	Woodruff	Petroleum and Petroleum Products Merchant Wholesalers	Petroleum Refining Products

Major Freight Generators

Business	Location	Primary Industry	Primary Originating Commodities
Pukall Lumber Co.	Woodruff	Other Building Material Dealers	Miscellaneous Sawmill or Planing Mill
Chris Klessig Logging	Eagle River	Logging	Primary Forest Materials
Ellis Logging	Conover	Logging	Primary Forest Materials
Valeria Contracting	Eagle River	Logging	Primary Forest Materials
Performance Fabrication & Tow	Eagle River	All Other Miscellaneous Manufacturing	Manufactured Products

Major Commodities Vilas County - Truck

Commodity	Inbound Truck Tons
Nonmetallic Minerals	215,471
Petroleum or Coal Products	32,268
Clay, Concrete, Glass or Stone	30,553
Secondary Traffic	24,205
Lumber or Wood Products	19,183
Food or Kindred Products	11,495
All Others	11,880

Nonmetallic Minerals accounted for the highest percentage of tonnage shipped into Vilas County by truck. Broken Stone or Riprap was one major commodity in this group, with shipments from the Michigan Upper Peninsula and Marinette County (WI). Another major commodity was Gravel or Sand, which was shipped from Minneapolis (MN) and Iron County (WI).

Petroleum Refining Products were also shipped into the county by truck, with Douglas County (WI) the major origin.

Commodity	Outbound Truck Tons
Clay, Concrete, Glass or Stone	80,814
Lumber or Wood Products	63,348
Waste or Scrap Materials	41,938
Food or Kindred Products	12,906
Farm Products	12,378
Primary Metal Products	2,469
All Others	2,599

Clay, Concrete, Glass or Stone accounted for the highest percentage of tonnage shipped from Vilas County by truck. Ready-mix Concrete was one of these commodities in this group, with major shipments to Oneida County (WI) and the Michigan Upper Peninsula.

Lumber or Wood Products also accounted for a large amount of tonnage. Miscellaneous Sawmill or Planing Mill Products is one major commodity in the group.

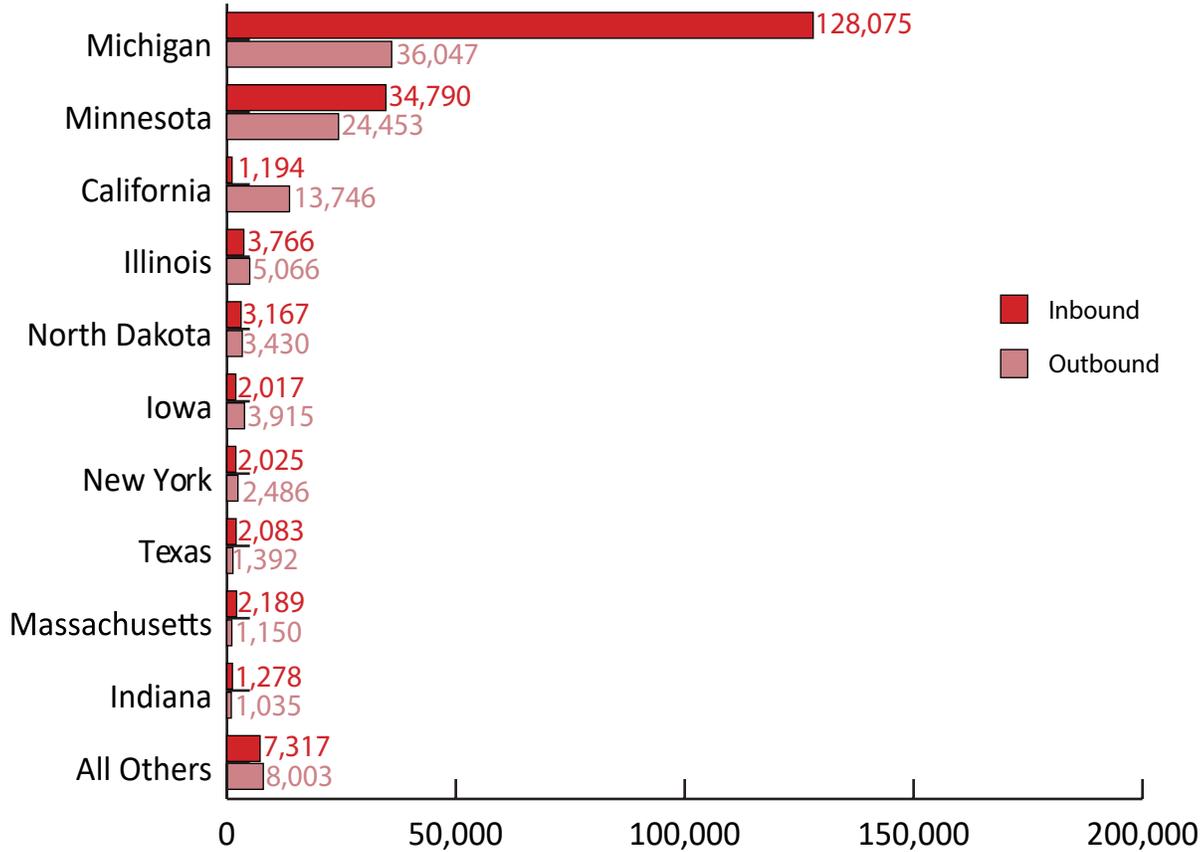
Commodity	Internal Truck Tons
Clay, Concrete, Glass or Stone	11,256
Lumber or Wood Products	939
Food or Kindred Products	413
Farm Products	26

Clay, Concrete, Glass or Stone accounted for the most tonnage shipped within Vilas County by truck. Some of the commodities in this group include Ready-Mix Concrete, and Cut Stone or Stone Products.

Lumber or Wood Products also accounted for a high percentage of tonnage shipped within the county. Some of the commodities in this group include Lumber or Dimension Stock and Miscellaneous Sawmill or Planing Mill Products.

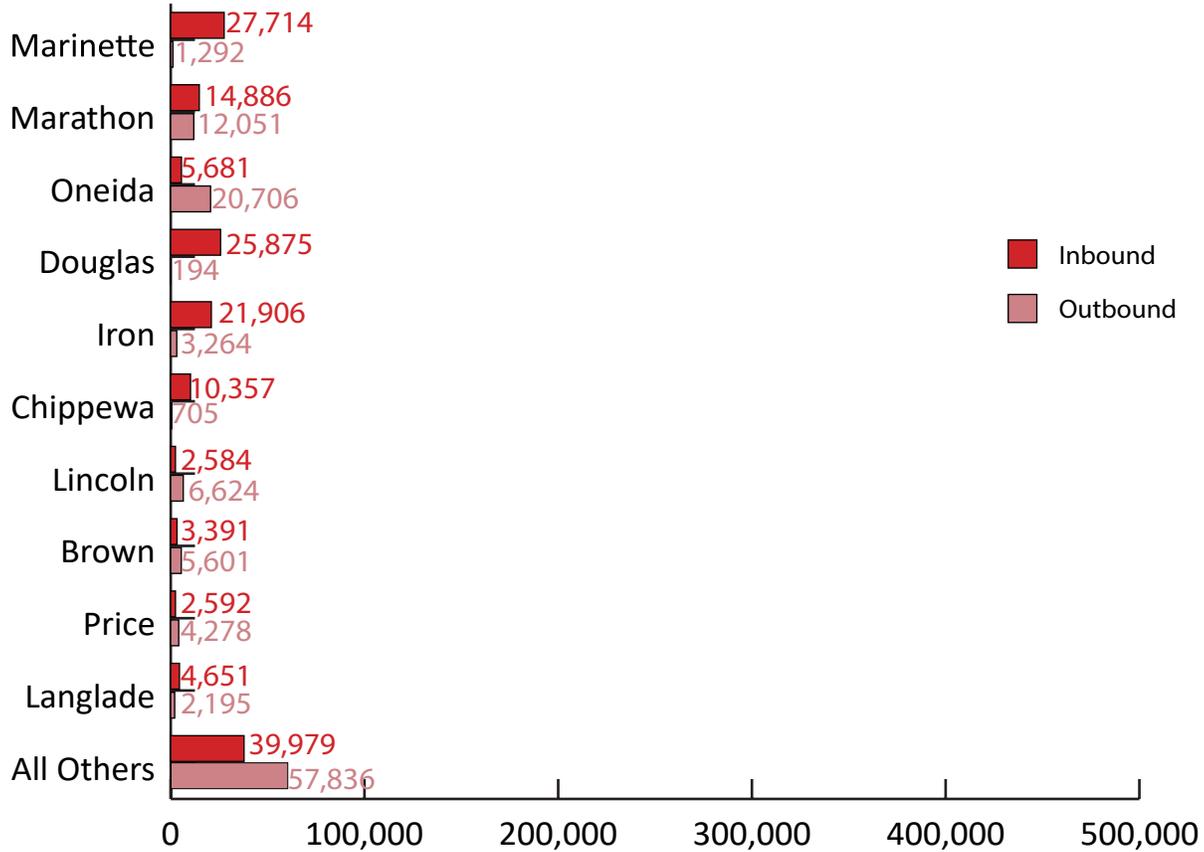
Major Trading Partners by Mode - Wisconsin Counties

Truck - Inbound and Outbound Tons, 2015



Major Trading Partners by Mode - States

Truck - Inbound and Outbound Tons, 2015

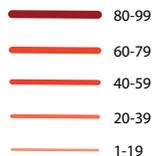


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Vilas County Freight Profile

STN Highway Freight Score



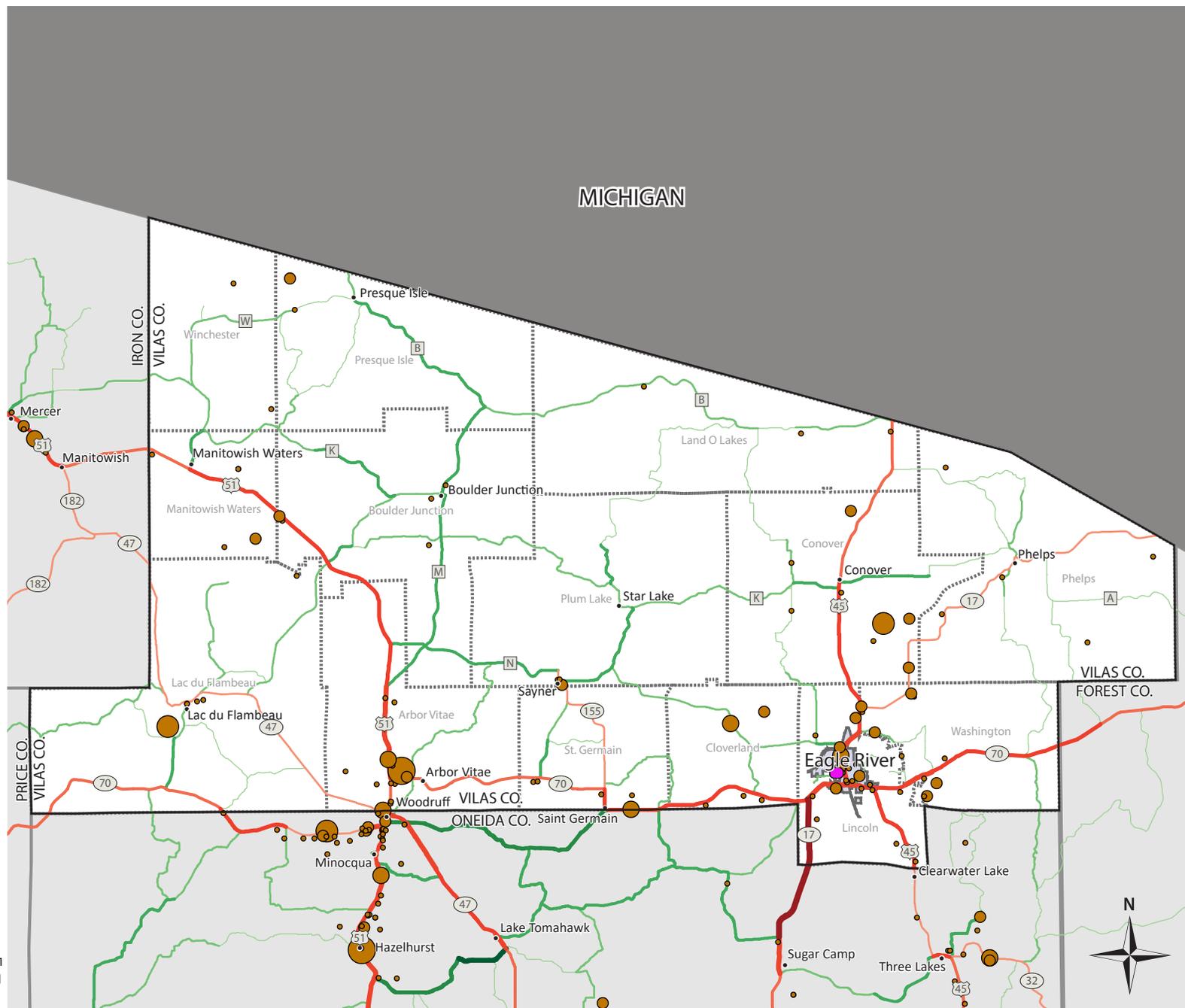
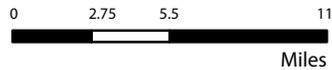
Local Road Freight Score



Shippers/Receivers



Other Freight Facilities



Appendix 2: Meeting Minutes

Location: Conference Call
Client: Wisconsin Department of Transportation
Date: July 19, 2017
Subject: Project ID: 0095-75-01
Northwoods Rail Study – NRTC Phone Meeting

Attendees:
Dan Thyges, WisDOT
Paul Chellevold, SRF
Wendy Gelhoff, Florence County
Andy Albarado, Rusk County
Dale Kupczyk, Ashland County
Betsey Harries, Ashland County

From: SRF Consulting Group Inc.

Purpose of Meeting:

To officially introduce the Northwoods Study to the Northwoods Rail Transportation Commission (NRTC) Chair members and discuss project goals, background, and schedule.

Summary of Meeting

1. The meeting began at 3 PM with welcome and introductions. Dan provided a brief background of the last Northwoods Study completed in 2013, stating the goal of this study is to:
 - a. document the potential for increased service for railroads in northern Wisconsin
 - b. keep existing area railroads operational
 - c. explore possibilities of reopening out-of-service railroads.

This study will build upon the data findings and survey questions from the 2013 study. SRF will assist with data collection, public involvement, and soliciting feedback from economic officials, businesses, and railroad operators in Wisconsin's northern counties and those in the Upper Peninsula of Michigan.

2. Paul presented the project schedule. He noted the schedule is subject to change but the general timeline includes five main tasks:

- a. After today's conference call, set up a meeting with Economic Development Commission officials, identify additional contacts, and modify survey questions
 - i. Expand database of 80 previously identified businesses that currently use or are interested in using railroads. Ideally, the list will expand to about 150 businesses, with the help of the economic officials **(Completed in August)**
 - b. Conduct in-person meetings with two railroads including: Canadian National and Genesee and Wyoming Railroad **(Conducted in August - September)**
 - c. Conduct phone meetings when appropriate with economic officials, Escanaba and Lake Superior Railroad, Upper Peninsula rail users, NRTC members, and/or other identified businesses **(Conducted in August – October)**
 - d. Plan for and schedule a half-day in-person project workshop focus group - **(Conducted in October)**
 - e. Assemble a draft report with survey results, findings, and recommendations - **(Conducted from November/January 2018)**
3. The group discussed potential meeting format, venue, and invitation list for the first in-person NRTC meeting. The following individuals would form the core group for the meeting:
- | | |
|-------------------|---------------------|
| a. Andy Albarado | h. Paul Ehrfurth |
| b. Wendy Gelhoff | i. Henry Schienbeck |
| c. Dale Kupczyk | j. Collin Buntrock |
| d. Betsey Harries | k. Dan Thyess |
| e. Roger Luce | l. Paul Chellevoid |
| f. Kelly Klein | m. Pasi Lautala |
| g. Angie Close | n. Nikkie Johnson |

A preferred meeting date of August 30th has been selected. The venue and time are TBD. A recommendation was made by Wendy to hold the meeting at:

Oneida County Economic Development Corporation
 3375 Airport Road
 Rhinelander, WI 54501

Action Items

A list of action items follows. Please have all action items completed by Tuesday, August 1st.

1. **Dan will prepare an email to those on today's phone call. He will send the group:**
 - a. **database/list of previously identified businesses located in each county**
 - b. **previous survey questions/results from 2013 study**

2. Wendy will follow up with Roger to see if the date and venue will work for the in-person meeting the morning of August 30th. The meeting will be scheduled for two hours.
3. Andy, Wendy, and Dale will review the list received from Dan and recommend other individuals they feel could add value to the meeting, and provide their name, title, organization, and email address. Individuals to add can be sent to Paul Chellevold at pchellevoid@srfconsulting.com.
4. Upon completion of action items 1-3, Paul will set up an official invite to the August 30th meeting.

Location: Rhinelander Airport – Lower Level Conference Room
Client: Wisconsin Department of Transportation
Date: August 30, 2017
Subject: Project ID: 0095-75-01
Northwoods Rail Study – Economic Development Officials Focus Group

Attendees: Dan Thyges, WisDOT
Paul Chellevold, SRF Consulting Group Inc.
Wendy Gelhoff, Florence County EDC
Andy Albarado, Rusk County Development
Dale Kupczyk, NRTC Representative – Ashland County
Betsey Harries, Ashland Area Development Corp.
Roger Luce, Oneida County EDC
Marie Steenlage, Wisconsin EDC
Danielle Jones, Wisconsin EDC
Paul Schuytema, Iron County ED
Patrick Tucker, Ontonagon EDC
Collin Buntrock, WDNR Forest Products

On the Phone:

Kelley Klein, Iron County ED
Angie Close, Langlade County EDC
Jeff Ratcliffe, Keweenaw ED Alliance
Paul Ross, Price County ED Association
Vince Bevins, MDOT Superior Region
Pasi Lautala, Michigan Tech Transportation Inst.
Rich Kedzior, WisDOT
Steph Falkers, SRF Consulting Group Inc.

From: SRF Consulting Group Inc.

Purpose of Meeting:

- Officially introduce the Northwoods Study to the Economic Officials and stakeholders
- Discuss background materials, past studies, project schedule, draft business lists, and potential survey questions
- Establish next steps and a timeline for railroad operator coordination

Summary of Meeting

1. The meeting began with welcome and introductions for those in attendance and on the phone.
2. Paul Chellevoid provided background information for the study. He indicated the meeting invite was sent to approximately 40 people representing all 13 Wisconsin counties as well as several key officials in the Upper Peninsula. Paul emphasized that economic development officials “know the pulse” of existing and potential businesses in their area and for this study to be successful, WisDOT would be counting on economic development officials to actively participate, be vocal, and explore potential business opportunities in each of their counties.
3. The project purpose and goals are to:
 - Develop and identify potential rail users/businesses in northern WI/MI. Conduct meetings with Northwoods Rail Transit Commission (NRTC) members, local economic development officials, business owners, shippers, rail users, and other interested stakeholders
 - Expand our business list and identify an additional 70-80 businesses to send survey to, and determine economic impacts of additional rail lines
 - Generate a study and final report that is useful for all parties involved including businesses, operators, and stakeholders
4. The project schedule was shared.
 - Project began in mid-June and will extend into early 2018
 - Falls into three main categories including meetings, survey and report
 - Survey will be vetted by EDCs and sent out late September/early October
 - Meet with railroads operators and leaders via phone and in-person meetings.
 - Host additional half day workshop to work through findings, messaging, and recommendations moving forward
 - Conduct open meetings as needed with local economic officials, stakeholders and with businesses that have concerns
 - Report to commence in November and have a draft version completed by end of 2017. Final draft in February 2018.
5. Andy Albarado provided updates on behalf of the Northwoods Rail Transit Commission (NRTC). There are concerns from his members and the newly formed Tri-County group, which consists of approximately 30 members in Marathon, Clark, and Taylor Counties. Concerns included:
 - Quality of service and lack of a short line service
 - Feeling of railroads dictating where businesses go
 - Lack of open communication between railroad operators and businesses/users
 - Inefficiencies in movement of goods and services, unnecessary need to truck goods to Duluth for cheaper and affordable rates, leading to the feeling of “whatever freight makes the most money is the only items the operators want to haul”

6. Andy Albarado indicated that Barron County has very reliable service due to their frac sand movements, and thought they might benefit from this study if they were included.
7. Rich Kedzior (WisDOT) provided a few updates:
 - The status of the CN negotiations with regards to leasing to another operator. At this point, an offer has been presented to CN, however the negotiations details are not yet known.
 - Tri-County group held a meeting yesterday (August 29, 2017). Specific questions of content should be directed at Sheila Nyberg, Clark County EDC.
 - Two railroad assistance programs designed to increase the use of rail transportation in Wisconsin.
 - Freight Railroad Infrastructure Improvement Program (FRIIP) is a loan program that has plenty of funds available and this money can be used to go outside of public ownership.
 - Freight Rail Preservation Program (FRPP), a grant program which can fund up to 80 percent of the project cost to purchase abandoned rail lines or rehabilitate infrastructure such as tracks or bridges is rolled into the state budget delays and the governor's request for this budget cycle was \$12 million. This money is used for publicly owned lines.
8. Dan Thyges (WisDOT) discussed the 2013 Wisconsin Northwoods Freight Rail Market Study. He indicated that our current 2017 effort will build upon the findings of that report and the goal would be to identify where there is railroad potential, and increase business survey participation (about 17 percent of businesses responded in 2013). The goal will be to expand the database of 80 previously identified businesses that currently use or are interested in using railroads to over 150 businesses, with the help of the economic officials.
9. An open discussion commenced. Individual observations and concerns included:
 - There are ongoing talks between Genesee & Wyoming (G&W) and CN regarding the leasing lines to serve local demands. Lines of note include:
 - Mosinee to Bradley
 - Bradley to Prentice
 - Prentice to Ladysmith (currently out of service)
 - Prentice to Ashland
 - Bradley to Rhinelander
 - Rhinelander to Goodman (currently out of service) / Pembine
 - Vince Bevins said Nikki Johnson would be coordinating a 50/50 Category A Program in Michigan
 - Pasi Lautala is trying to secure funds for a railroad study in the Upper Peninsula, but would share data from their previous study
 - Dale Kupczyk indicated there is discussions regarding an east-west connection to Escanaba and up to the Upper Peninsula. If this happens, Dale is concerned that if/when mines do open, the timber industry would likely be negatively impacted

because operators would only agree to ship the most expensive cargo. There would then be a need for businesses to come together to combine loads in order to get service. Would the operators even be willing to haul them?

- Pasi Lautala stated that Wisconsin should consider transload facility locations. He said the number of “big player” companies aren’t as many as you would think, but we should try to analyze all the movements from northern Wisconsin into the UP and to some of the Minnesota log mills.
- Wendy Gelhoff indicated that it will be critical to include pulp mills in this study
- There is mine exploration work occurring north of Wakefield. Patrick Tucker indicated the White Pine Mine has enormous potential via a \$300 million operation

Additional group comments included:

- not tolerating railroad operators who refuse to serve area businesses
- importance for more business opportunities in the northwoods and those businesses to have options for rail service
- a desire to improve relationships and work more closely with railroads and operators
- disinclined to share business names with railroad operators
- improved railroad infrastructure (bridges and tracks) are needed in several areas –
- Some feel that meeting with CN railroad isn’t useful,
 - CN is only interested in long haul routes (Duluth to Chicago) and
 - CN doesn’t want to serve intermittent customers
 - CN is reluctant to serve non-service or low volume lines

Action Items

A list of action items follows. Please have all action items completed by Tuesday, August 1st.

1. EDCs to review business lists and add businesses that use or have the potential to use railroad service (**Deadline: Thursday, September 28th**).
2. EDCs to review business survey and comment on existing or additional questions to add **Update of the survey to come in a separate email from Dan Thyges (Deadline: Thursday, September 28th)**.
3. Dan Thyges to follow up with Pasi Lautala regarding incorporating Michigan study results
4. WisDOT/SRF to schedule and meet with CN Railroad (Brian Buchanan)

Appendix 3: NRTC Mining Editorial

Northern Wisconsin is home to some of the most beautiful lakes, rivers, and forests in the Midwest – if not the world. It is also home to an aging population and unemployment rates that lag behind the rest of the state.

Over the last 15 years, the older generation has been retiring and the younger generation continues to move elsewhere in search of greater opportunities. Other factors have compounded this loss of population: less forestry habitat management on the national forests and a school funding formula that hurts the property-rich tourism communities. Many factors have caused businesses in northern Wisconsin to dwindle and close. To Southern Wisconsin residents this may seem inconsequential. Many think tourism jobs are enough to sustain the economy.

Unfortunately, the seasonality, low wages and boom and bust nature of the Tourism industry are not enough to sustain vibrant communities. Northern Wisconsin needs a balanced economy to stem the exodus of young people and to have opportunity available for the next generation. Mining could provide the necessary spark for industry and population growth in the Northwoods.

Across the borders in Michigan and Minnesota, mining towns are reawakening. The Eagle Mine in Upper Michigan for example, currently employs several hundred people. These are family sustaining jobs. The total economic impact from just this one mine has been estimated at \$2 billion.

Mining could be an anchor industry in Northern Wisconsin. We have the natural resources and technical knowhow to mine safely and responsibly right here in the Badger state. The Flambeau Mine in western Wisconsin is an example of a mine that was safely operated, closed, and reclaimed. It now provides recreational opportunities. Mining could provide jobs and opportunity for rural residents and help stabilize and grow industry in northern Wisconsin. With the proper tax policy, it could provide additional tax revenue to the local communities for much needed infrastructure improvements.

Along the same lines, mining may very well be the industry to revitalize freight rail in our region. As the former five-year chair of the Northwoods Rail Transit Commission, a collection of 20 Wisconsin and Michigan counties working to restore rail service in the Great Lakes area, I strongly believe that rail service is critical to the survival of existing businesses and communities in northern Wisconsin and the Upper Peninsula. However, over the last five years, it has become very difficult for manufacturing businesses to find affordable and reliable freight service. It is less and less profitable for rail line operators to maintain and service our light density rail line network.

Mining would provide long term freight contracts that would compel rail line operators to restore and upgrade rail lines in our region, or lease the lines to a short line operator who is interested in doing so. This would reduce transportation costs for businesses, including our forest products and paper industries, and would make our region more attractive for other manufacturing businesses looking to expand or relocate to our area.

Northern Wisconsin needs a diverse economy to grow and prosper. We don't need to choose mining over tourism – we can have both. Mining can be done both safely and responsibly. We need to take advantage of the opportunity to bolster industry in rural Wisconsin.



Wendy Gehlhoff- Director

Florence County Economic Development

P.O. Box 410 (501 Lake Ave – Courthouse)

Florence, Wisconsin 54121

Office (715)528-3294 Fax (715)528-5071

Appendix 4: List of Businesses Surveyed

Company Name	Address	City/Village/Town	County	State	ZIP
Nordine Land Management, Inc.	PO Box 479	Land O Lakes	Vilas	WI	54540
Greater Munising Bay Partnership & Munising DDA	129 E. Munising Ave	Munising	Alger	MI	49862
Ashland County Highway Department	PO Box 25	Highbridge	Ashland	WI	54846
Ashland Industries	1115 Rail Drive	Ashland	Ashland	WI	54806
Ashland Mat	3610 Ellis Avenue	Ashland	Ashland	WI	54806
Chicago Iron	702 22nd Avenue E	Ashland	Ashland	WI	54806
Columbia Forest Products	606 Wilderness Drive	Mellen	Ashland	WI	54546
Deltco Plastics	601 Industrial Park Road	Ashland	Ashland	WI	54806
Louisiana Pacific	16571 W. US 63	Hayward	Ashland	WI	54843
North Country Lumber	PO Box 499	Mellen	Ashland	WI	54546
Terry Peters Logging	105 S. Main Street	Mellen	Ashland	WI	54546
Great Lakes and Land Real Estate Company	12 W. Broad Street	L'Anse	Baraga	MI	49946
Pettibone	1100 Superior Avenue	Baraga	Baraga	MI	49908
Bell Timber	4 Berger Ave	Barron	Barron	WI	54812
Big Bike Parts	2300 Pioneer Ave	Rice Lake	Barron	WI	54868
H & W Logging	1945 6 1/2 St	Cumberland	Barron	WI	54829
Indianhead Holsteins	1659 10 1/2 St	Barron	Barron	WI	54812
McFarland Cascade	1014 S. 1st Street	Cameron	Barron	WI	54822
Rice Lake Weighing Systems	230 W Coleman St	Rice Lake	Barron	WI	54868
Shadow Plastics	2301 Pioneer Ave	Rice Lake	Barron	WI	54868
Superior Silica Sands LLC	19 County SS	New Auburn	Barron	WI	54757
Country Forest Products	133 Division Street	Withee	Clark	WI	54498
Heartland Cooperative Services	100 Park Drive	Dorchester	Clark	WI	54425
Northwest Hardwoods	461 S Linden Street	Dorchester	Clark	WI	54425
Travis Krizan Trucking	W11383 Worden Road	Stanley	Clark	WI	54768
Vacho Trucking	W7885 E Townline Road	Dorchester	Clark	WI	54848
Basic Marine	440 N 10th Street	Escanaba	Delta	MI	49829
Besse Forest Products	933 N 8th Street PO Box 352	Gladstone	Delta	MI	49837
Lake Shore Systems	2141 Woodward Ave	Kingsford	Dickinson	MI	49802
Louisiana Pacific	PO Box 100, N8504 M-95	Sagola	Dickinson	MI	49881
Northern Products of WI	W8969 Frei Drive	Iron Mountain	Dickinson	MI	49801
Northern Star Industries	1819 N Stephenson Ave	Iron Mountain	Dickinson	MI	49801
Northwoods Manufacturing, Inc.	850 East Blvd	Kingsford	Dickinson	MI	49802
Systems Control	3201 East Industrial Drive	Iron Mountain	Dickinson	MI	49801

Company Name	Address	City/Village/Town	County	State	ZIP
Verso Paper, Quinnesic Mill	W6791 US Highway 2	Quinnesec	Dickinson	MI	49876
Chitko Bros. Lumber	11226 Shannon Road	Tipler	Florence	WI	54542
CTL Timber Harvesting	11771 Halsey Road, PO Box 34	Long Lake	Florence	WI	54542
Florence Hardwoods	5843 Tower Drive, PO Box 16	Florence	Florence	WI	54121
G & G Forest Products	5274 Turtle Creek Road	Florence	Florence	WI	54121
G & G Lumber	5278 Turtle Creek Road	Florence	Florence	WI	54121
G Meyer Logging Inc.	PO Box 6, 7535 Maple Drive	Fence	Florence	WI	54120
Long Lake Lumber Co.	133 Division Street	Withee	Florence	WI	54498
Nichols Enterprises	7900 Rock Creek Drive	Florence	Florence	WI	54121
No Name - Anonymous	–	Florence	Florence	WI	54121
Northern Products Inc	2792 County N	Florence	Florence	WI	54121
Pride Manufacturing	5787 Forward Drive	Florence	Florence	WI	54121
Schomer Forest Products	1961 Elmer Street	Niagara	Florence	WI	54151
Albrecht Trucking Inc.	4962 Airport Lane	Laona	Forest	WI	54541
C & H Walentowski Forest Products	260 Black Joe Road	Crandon	Forest	WI	54520
Flannery Trucking	607 E. Pioneer St., PO Box 336	Crandon	Forest	WI	54520
G & G Lumber	4962 Airport Lane	Laona	Forest	WI	54541
Millan Forestry Care	8490 Millan Road	Armstrong Creek	Forest	WI	54103
Neil Schallock Logging	11548 Schallock Lane	Crandon	Forest	WI	54520
Paul Cleereman Logging	7901 Highway 139	Cavour	Forest	WI	54511
TPJ Brothers Logging	8377 Woznick Road	Armstrong Creek	Forest	WI	54103
Wes Kadubek	7635 Kadubek Ln.	Armstrong Creek	Forest	WI	54103
Bessemer Plywood	1000 Yale Avenue	Bessemer	Gogebic	MI	49911
Copperwood Mine	–	–	Gogebic	MI	
Corullo Forest Products Corp	300 S Massie Ave	Bessemer	Gogebic	MI	49911
Keweenaw Land Association	PO Box 188 1801 East Cloverland Dr.	Ironwood	Gogebic	MI	49938
Ottawa Forest Products	1243 Wall St	Ironwood	Gogebic	MI	49938
Action Floor Systems LLC	4781 S. Hwy 51	Mercer	Iron	WI	54547
Alexa Forest Products	137 Duirkman Road	Iron River	Iron	MI	49935
Christiansen Custom Woodworking	4037 US Hwy 2	Iron River	Iron	MI	49935
Connor Sports Flooring	–	–	Iron	MI	
Greg Townsend & Son Logging	586 Amvets Hwy	Iron River	Iron	MI	49935
Hilberg Logging, Inc	824 Erie Avenue	Crystal Falls	Iron	MI	49920
International Paper	–	–	Iron	MI	
J & K Lumber Inc	102 Homer Rd	Iron River	Iron	MI	49935
John J Gendzwill Forest Prods	115 Gendzwill Drive	Iron River	Iron	MI	49935
Krist Oil Company	303 Selden Road	Iron River	Iron	MI	49935

Company Name	Address	City/Village/Town	County	State	ZIP
Lester Detterbeck Enterprises Ltd	3390 US 2 East	Iron River	Iron	MI	49935
Magiglide	257 Industrial Park Rd	Crystal Falls	Iron	MI	49920
Northeastern Products Corp (NEPCO)	85 N. Brady Ave	Caspian	Iron	MI	49915
Piowski Brothers Logging	893 Gibbs City Road	Iron River	Iron	MI	49935
Ponozzo Logging	153 Gibbs City Road	Iron River	Iron	MI	49935
R & R Shamion Trucking	653 Sunset Lake Road	Iron River	Iron	MI	49935
Shamco Inc.	4128 US Highway 2	Iron River	Iron	MI	49935
Snowbelt Hardwoods, Inc.	345 Ringle Drive	Hurley	Iron	WI	54534
VanOss Forestry Services	704 Michigan Ave	Crystal Falls	Iron	MI	49920
Woodland Equipment Inc	1581 W Adams St	Iron River	Iron	MI	49935
TiEnergy	275 Sola Drive	Gilberts	Kane	IL	60136
Antigo Block Co	230 Milton St	Antigo	Langlade	WI	54409
Insight FS	PO Box 54 2311 Clermont Street	Antigo	Langlade	WI	54409
Lucky Devil Farms	809 Violet Way	Antigo	Langlade	WI	54409
Marshall Logging, Inc.	N4802 River Road	Antigo	Langlade	WI	54409
Schumitsch Seed Co	420 Wausau Rd	Antigo	Langlade	WI	54409
Fisher Logging	W7097 County HWY CC	Tomahawk	Lincoln	WI	54487
Hilgy's LP Gas	122 S Tomahawk Ave	Tomahawk	Lincoln	WI	54487
Lincoln Wood Products Inc	PO Box 375, 1400 W Taylor St	Merrill	Lincoln	WI	54452
Louisiana Pacific Corporation	PO Box 190, 927 Southgate Dr	Tomahawk	Lincoln	WI	54487
Merrill Equipment	2209 Sturdevant Street	Merrill	Lincoln	WI	54452
Mitchell Wreath Rings	905 S State St	Merrill	Lincoln	WI	54452
Packaging Corporation of America	N9090 County E	Tomahawk	Lincoln	WI	54487
Quality Wood Products Inc	N2183 Pier St	Merrill	Lincoln	WI	54452
Krueger Lumber Co.	21324 US 151	Valders	Manitowoc	WI	54245
3M Wausau	144 W Rosecrans St	Wausau	Marathon	WI	54401
American Wood Fibers	100 Alderson St	Schofield	Marathon	WI	54476
Cedar Grove Warehouse	1103 Grossman Dr	Schofield	Marathon	WI	54476
Central Storage and Warehouse	1212 West St	Wausau	Marathon	WI	54401
Cisler Quarry	115 Bird Ln	Mosinee	Marathon	WI	54455
County Materials Corp	406 Winton St	Wausau	Marathon	WI	54403
Crystal Freight	2610 Ross Ave	Schofield	Marathon	WI	54476
Domtar	200 N Grand Ave	Rothschild	Marathon	WI	54474
Eastbay	211 S 1st Ave	Wausau	Marathon	WI	54401
EJ Dairy Market and Cold Storage	PO Box 628	Marathon	Marathon	WI	54455
Expera Specialty Solutions	100 Main St	Mosinee	Marathon	WI	54455
Foremost Farms	10202 Foremost Dr	Rothschild	Marathon	WI	54474

Company Name	Address	City/Village/Town	County	State	ZIP
Foundation Building Materials	835 S 66th Ave	Wausau	Marathon	WI	54401
Gordon Aluminum Industries	1000 Mason St	Schofield	Marathon	WI	54476
Graphic Packaging International	200 Central Bridge St	Wausau	Marathon	WI	54401
Green Bay Packaging	6845 Packer Dr	Wausau	Marathon	WI	54401
Greenheck	4545 Alderson St	Schofield	Marathon	WI	54476
Hartland Lubricants & Chemicals	840 S 66th Ave	Wausau	Marathon	WI	54401
Kraft Foods	1007 Townline Rd	Wausau	Marathon	WI	54403
Land O' Lakes Inc.	306 S Park St	Spencer	Marathon	WI	54479
Ligno Tech USA Inc.	100 Grand Ave	Rothschild	Marathon	WI	54474
Merrill Iron and Steel	900 Alderson St	Schofield	Marathon	WI	54476
Mosinee Cold Storage	751 Maple Ridge Rd	Mosinee	Marathon	WI	54455
No Name - Anonymous	-	-	Marathon	WI	-
No Name - Anonymous (Cheese)	-	-	Marathon	WI	-
Norlen Inc	900 Grossman Dr	Schofield	Marathon	WI	54476
ProVison Partners Cooperative	210 North Madison	Unity	Marathon	WI	54488
Saia LTL Freight	901 Grossman Dr	Schofield	Marathon	WI	54476
Schulz's Recycling	1000 Mcdonald St	Wausau	Marathon	WI	54403
Shidell Wood Products	1784 Old Hwy 51	Kronenwetter	Marathon	WI	54455
Sonoco Rigid Plastics	833 S. 60th Avenue	Wausau	Marathon	WI	54401
Wausau Homes	10805 Old Hwy 51	Rothschild	Marathon	WI	54474
Wausau Scrap and Recycling	2900 Sherman St	Wausau	Marathon	WI	54401
Wausau Tile	PO Box 1520	Wausau	Marathon	WI	54402
West Side Warehousing Wausau	840 62nd Ave S	Wausau	Marathon	WI	54401
Wolf's Sawmill	Karau Ave	Spencer	Marathon	WI	54479
WOW Logistics	3606 Concord Ave	Schofield	Marathon	WI	54476
Goodman Veneer & Lumber Co	200 "C" Avenue	Goodman	Marinette	WI	54125
Marshal Giese Trucking	W7645 Airport Road	Crivitz	Marinette	WI	54114
Niagara Fabrication, Inc.	PO Box 4 100 Woodyard Road	Niagara	Marinette	WI	54151
Precision Lumber	W8018 Aspen Lane	Pembine	Marinette	WI	54156
Robert W. Biernasz Logging	W3151 State Hwy 180	Wausaukee	Marinette	WI	54177
Wild Rivers Forestry, Inc.	W6666 Judy St	Wausaukee	Marinette	WI	54177
Potlach Land & Lumber	650 Avenue A	Gwinn	Marquette	MI	49841
Enstrom Helicopter Corp.	2209 22nd Street	Menominee	Menominee	MI	49858
R. W. Fernstrum & Company	PO Box 97, 1716 11th Ave	Menominee	Menominee	MI	49858
Triest Forest Products	E LaBelle Road 38	Spalding	Menominee	MI	49886

Company Name	Address	City/Village/Town	County	State	ZIP
Abrams Feed and Supply	5916 Main St, Abrams, WI 54101	Abrams	Oconto	WI	54101
AISCO Industrial Couplings	701 Ralph Lemorande Dr.	Oconto Falls	Oconto	WI	54154
BPM Converting	705 Ralph Lemorande Dr.	Oconto Falls	Oconto	WI	54154
Hanstedt Wood and Recycling	5731 Lade Beach Road	Little Suamico	Oconto	WI	54141
McDermid Transportation	114 E. Highland Dr.	Oconto Falls	Oconto	WI	54154
McDermid Warehousing	160 Marks Dr.	Oconto Falls	Oconto	WI	54154
Pomps Services	5973 County Rd S	Sobieski	Oconto	WI	54171
S & M Machine Services	109 E Highland Drive	Oconto Falls	Oconto	WI	54154
Saputo Cheese USA Inc.	317 N. Rosera St.	Lena	Oconto	WI	54139
ST Paper LLC	106 E Central Ave	Oconto Falls	Oconto	WI	54154
Techniply	711 Ralph Lemorande Dr.	Oconto Falls	Oconto	WI	54154
United Cooperative	720 N Main St	Oconto Falls	Oconto	WI	54154
WA Rusch	719 Ralph Lemorande Dr.	Oconto Falls	Oconto	WI	54154
Advanced Barrier Extrusions	4390 Anderle Dr	Rhineland	Oneida	WI	54501
Airpro Fan & Blower	425 W Davenport St.	Rhineland	Oneida	WI	54501
Argonne Lumber	1015 W Davenport St.	Rhineland	Oneida	WI	54501
ATL Equipment, LLC	3197 Highway 17	Rhineland	Oneida	WI	54501
Charter NEX Films	3606 Red Arrow Drive	Rhineland	Oneida	WI	54501
Drs. Foster & Smith	2253 Air Park Road, P.O. Box 100	Rhineland	Oneida	WI	54501
Expera Specialty Solutions	515 W Davenport	Rhineland	Oneida	WI	54501
Great Lakes Timber Professionals Association	3243 Golf Course Road	Rhineland	Oneida	WI	54501
Hypro	1111 Air Park Rd	Rhineland	Oneida	WI	54501
Lake Shore Systems Inc	3600 Lakeshore Ln	Rhineland	Oneida	WI	54501
Lake States Yeast	428 W Davenport St	Rhineland	Oneida	WI	54501
Northstar Steel Fabrications	753 Washington St.	Rhineland	Oneida	WI	54501
Oneida County Highway Department	730 W. Kemp Street	Rhineland	Oneida	WI	54501
Sowiński Farms	5816 Fire Ln	Rhineland	Oneida	WI	54501
Superior Diesel	3250 S. Fox Ranch Rd.	Rhineland	Oneida	WI	54501
Technology for Agriculture	1855-A W Davenport St	Rhineland	Oneida	WI	54501
Printpack	3500 State Highway 17	Rhineland	Oneida	WI	54501
St. Croix Valley Hardwoods, Inc.	PO Box 120, 230 S. Duncan Street	Luck	Polk	WI	54853
Biewer Wisconsin Sawmill Inc.	PO Box 230	Prentice	Price	WI	54556
Blomberg Logging	W3907 STH 86	Ogema	Price	WI	54459
BW Papersystems	1300 N Airport Rd	Phillips	Price	WI	54555
DeBoth Brothers Logging	W5050 County Road X	Prentice	Price	WI	54556
Ericson Forest Products LLC	PO Box 155 N4425 West Road	Kennan	Price	WI	54537

Company Name	Address	City/Village/Town	County	State	ZIP
Flambeau River Papers	200 1st Ave N	Park Falls	Price	WI	54552
NewPage Corp	P.O. Box 243, Ash St	Fifield	Price	WI	54524
Phillips Lionite Wood Products, LLC	5817 Forward Drive, PO Box 138	Phillips	Price	WI	54555
Richard Patterson Logging	455 Saunders Avenue	Park Falls	Price	WI	54552
Ron Heikkinen Forest Products	W651 Pokela Road	Brantwood	Price	WI	54513
Tony Smugala Logging, Inc.	W8158 Hobbles Creek Road	Catawba	Price	WI	54515
Weather Shield	400 Legacy Lane	Park Falls	Price	WI	54552
Besse Lumber Company	401 Gustafson Rd	Ladysmith	Rusk	WI	54848
Clearwater Paper Corporation	1215 Worden Ave E	Ladysmith	Rusk	WI	54848
Indeck Bio Fuel	1951 Meadobrook Rd	Ladysmith	Rusk	WI	54848
Jeld-Wen Windows and Doors	811 Factory St	Hawkins	Rusk	WI	54530
No Name - Anonymous	–	–	Rusk	WI	
Source Energy Services (Frac)	W14251	Weyerhaeuser	Rusk	WI	54895
Weather Shield Manufacturing	1201 Adams Ave	Ladysmith	Rusk	WI	54848
Allen Suzan Logging	4351 N. Helsing Road	Ojibwa	Sawyer	WI	54862
Bayside Timber	9676 N. Kruger Road	Hayward	Sawyer	WI	54843
Butler Forest Products Inc	5077 N. Butler Rd.	Winter	Sawyer	WI	54896
Flambeau River Papers	9676 N. Kruger Road	Hayward	Sawyer	WI	54843
Futurewood Corp.	9676 Kruger Road	Hayward	Sawyer	WI	54843
Louisiana Pacific	16571 W US Highway 63	Hayward	Sawyer	WI	54843
Hamann Logging & Trucking, Inc.	W4328 County Road M	Medford	Taylor	WI	54451
Frontier Builders	6373 US Highway 45	Land O Lakes	Vilas	WI	54540
TSI Logging, Inc.	PO Box 2206	Eagle River	Vilas	WI	54521
Ericson Logging	PO Box 278 - 600 Denninger Drive	Minong	Washburn	WI	54859
Koerner Forest Products, LTD	5628 W. Fisk Ave	Oshkosh	Winnebago	WI	54904
Verso: ATTN Fiber Supply	PO Box 8050	Wisconsin Rapids	Wood	WI	54495
Verso Corp	–	–	–	–	–
Yooper Shirts, Inc	503 N 3rd St	Marquette	–	MI	49855