WISCONSIN RAIL PLAN

# 2030

Wisconsin Rail Plan 2030

## Statewide Long-Range Rail Transportation Plan


Wisconsin Department of Transportation

# WISCONSIN RAIL PLAN 2030

# FINAL

# March 19, 2014

**Note to the reader:**

The Wisconsin State Rail Plan 2030 derives many of its policy recommendations from Connections 2030, the state's long-range multimodal transportation plan adopted in 2009. The initial draft of the rail plan provided critical freight and passenger data, including rail mileage, passenger volumes, top commodities shipped, revenues, and other quantified information. Policies for freight rail, passenger rail, and commuter rail, as well as the chapter on funding, were updated in 2013 during development of the final draft Wisconsin Rail Plan 2030. However, it is important to note that much of the data remains based on the earlier draft plan. Where known, the dates of the data are noted in the narrative and/or appendices of the plan. Future updates will incorporate more recent data, including improved freight commodity flow analysis and updates based on the 2010 Census.

**Wisconsin Department of Transportation**
www.dot.wisconsin.gov

Scott Walker
Governor

Mark Gottlieb, P.E.
Secretary

**Office of the Secretary**
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March 19, 2014

Dear Transportation Partner:

I am pleased to announce the Wisconsin Department of Transportation (WisDOT) has adopted *Wisconsin Rail Plan 2030*, the statewide long-range rail transportation plan. It provides the framework within which the state and related stakeholders may maintain, improve and plan for Wisconsin's rail network.

The plan focuses on the role freight, intercity passenger rail, and commuter rail have in the state's multimodal transportation system. It identifies priorities and strategies to establish a basis for future rail investments.

As a modal plan, it builds on the policies and actions identified in the state's long-range transportation plan *Connections 2030*. *Wisconsin Rail Plan 2030* supports the state's multimodal vision for transportation, as laid out in *Connections 2030*:

> *"An integrated multimodal transportation system that maximizes the safe and efficient movement of people and products through the state, enhancing economic productivity and the quality of Wisconsin's communities while minimizing impacts to the natural environment."*

I wish to personally thank you for your participation in the planning process. Your involvement and input ensures that *Wisconsin Rail Plan 2030* reflects the needs and desires of Wisconsin residents.

Sincerely,

Mark Gottlieb, P.E.
Secretary

# SCOTT WALKER
## OFFICE OF THE GOVERNOR
## STATE OF WISCONSIN

P.O. BOX 7863
MADISON, WI 53707


February 5, 2014

Mark Gottlieb, P.E., Secretary
Wisconsin Department of Transportation
4802 Sheboygan Avenue, Room 120B
P.O. Box 7910
Madison, WI 53707

Dear Secretary Gottlieb:

The Passenger Rail Investment and Improvement Act of 2008 (PRIIA), requires states to establish or designate, by State law or by the direction of the Governor, a "State Rail Transportation Authority" (SRTA). The SRTA is a State agency or official responsible for preparing, maintaining, coordinating, and administering the State Rail Plan. The SRTA establishes priorities and implementation strategies to enhance rail service in the public interest and works to ensure that the State Rail Plan fully reflects the state's policy on freight, passenger rail and commuter rail transportation.

PRIIA also requires states to establish or designate a "State Rail Plan Approval Authority" (SRPAA), with responsibility to review and approve the State Rail Plan. The SRPAA serves as the state approval authority for investment of public funds in rail projects. In most cases, the State Secretary of Transportation is designated as the authority that provides the final approval of the State Rail Plan. As with the SRTA, states have flexibility to designate the most appropriate official or organization within their state government as the SRPAA. The SRTA and SRPAA may be the same state entity or official.

Therefore, I designate you, Mark Gottlieb, Secretary, Wisconsin Department of Transportation, to be the State Rail Transportation Authority and the State Rail Plan Approval Authority for the State of Wisconsin, as defined in the Passenger Rail Investment and Improvement Act of 2008, Public Law 110-432. This designation includes the authority to prepare, maintain, coordinate, and administer the State Rail Plan, and to review and approve the State Rail Plan and serve as the State approval authority for investment of public funds in rail projects.

Sincerely,

Scott Walker
Governor

# APPROVAL

**System-Plan Environmental Evaluation (SEE)**

**for**

***Wisconsin Rail Plan 2030***

Submitted by:

State of Wisconsin, Department of Transportation

on

March 19, 2014

Comments on *Wisconsin Rail Plan 2030* were accepted November 8, 2013 through December 31, 2013.

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## ACKNOWLEDGEMENTS

The Wisconsin Rail Plan 2030 was prepared by the Wisconsin Department of Transportation (WisDOT), Division of Transportation Investment Management (DTIM), Bureau of Planning & Economic Development (BPED). The final plan was developed in collaboration with the other bureaus within DTIM, and the other divisions within WisDOT.

WisDOT extends its appreciation to the many citizens of Wisconsin who attended public meetings or submitted comments during the development of the plan. In addition, WisDOT also thanks:

- Federal and state environmental resource agencies and the Wisconsin tribal governments for participating in the environmental consultation process.

- Wisconsin Metropolitan Planning Organizations and Wisconsin Regional Planning Commissions for working with WisDOT staff in developing the plan.

# Chapter 1: Introduction

## Table of Contents

# Chapter 1: Introduction

## Overview

Wisconsin has a diverse multimodal transportation system that supports the state's quality of life and economic growth. Rail is a critical component to the state's entire transportation network. Substantial changes have taken place with regard to rail and continue to impact how the Wisconsin Department of Transportation (WisDOT) and other rail stakeholders respond. With projected increases in the state's population and steady growth in traffic congestion – particularly for truck traffic freight, passenger and commuter rail will become even more vital to the state's transportation system.

*Wisconsin Rail Plan 2030*, the state's 20 year rail plan, identifies future rail network issues and plan recommendations. It provides the framework within which the state and related stakeholders may maintain, improve and plan for the state's rail network. WisDOT will update the plan in the next five years to reflect changes and to meet federal requirements.

The plan takes a closer look at Wisconsin's rail system by focusing on the role freight, intercity passenger and commuter rail have in the state's multimodal transportation system. The rail plan discusses how:

- A strong rail system is important for maintaining and improving the state's economic vitality
- Rail supports livable communities
- Connections between rail and other transportation modes help improve the efficiency of the state's entire transportation system

The rail plan also identifies priorities and strategies to establish a basis for future rail investments.

Because this is a modal plan, it builds on the policies and actions identified in *Connections 2030*, the state's long-range multimodal transportation plan. *Wisconsin Rail Plan 2030* supports the state's multimodal vision for transportation:

> *"An integrated multimodal transportation system that maximizes the safe and efficient movement of people and products throughout the state, enhancing economic productivity and the quality of Wisconsin's communities while minimizing impacts to the natural environment*."

*Connections 2030* established the foundation for the future of the state's transportation system. The plan emphasized the importance of:

- Safety and security
- Preserving the existing and future transportation system
- Optimizing investment in the transportation system for continued safety, enhanced mobility and efficiency
- Responding to local, regional, national and intermodal economic trends to maintain the state's economic competiveness

- Considering environmental issues to maintain Wisconsin's quality of life
- Providing users with transportation choices

To further reflect these emphasis areas, the policies identified in *Connections 2030* were organized around seven themes:

- Preserve and maintain Wisconsin's transportation system
- Promote transportation safety
- Foster Wisconsin's economic growth
- Provide mobility and transportation choice
- Promote transportation efficiencies
- Preserve Wisconsin's quality of life
- Promote transportation security

Under each theme, WisDOT identified a series of policy statements. These policy statements are WisDOT's goals to achieve the *Connections 2030* vision for transportation. *Connections 2030* identified several policies directly related to rail. These policies were:

- Partner with stakeholders to ensure that freight movements are safe and reliable and provide positive environmental and community impacts
- Ensure that freight rail remains a viable transportation mode for Wisconsin shippers
- Support development of fixed-guideway transit services
- Increase intercity travel options by improving intercity passenger rail service
- Facilitate intermodal passenger connections

Other policies included rail-related activities or support of rail-related activities. Examples of these policies include:

- Provide grant and loan assistance to Wisconsin businesses and communities
- Maintain and improve waterways critical to Wisconsin's transportation system
- Improve intercity bus service and connections
- Emphasize air quality improvement
- Enhance the security of the transportation system by reducing vulnerability

*Wisconsin Rail Plan 2030* reaffirms the policies and actions identified in *Connections 2030*.

## *Compliance with the Passenger Rail Investment and Improvement Act of 2008 and 49 U.S.C Section 22102 requirements*

*Wisconsin Rail Plan 2030* is intended to bring the state of Wisconsin in compliance with the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) (Public Law No. 110- 432). The PRIIA legislation requires that states develop a long-range plan for freight, intercity passenger, and commuter rail, and update the plan at least every five years, to be eligible for federal funding. Section 303, Chapter 227

State Rail Plans outlines specific requirements for the development of state rail plans. *Wisconsin Rail Plan 2030* is designed to meet these requirements.

*Wisconsin Rail Plan 2030* brings the State of Wisconsin in compliance with Title 49 United States Code Section 22102 requirements, making the state eligible to receive financial assistance under this chapter based on compliance with regulations the United States Secretary of Transportation prescribes under this chapter as follows:

1) the state has an adequate plan for rail transportation in the state and a suitable process for updating, revising, and modifying the plan
2) a designated state authority administers or coordinates the state rail plan and provides for a fair distribution of resources
3) the State authority –
    a. is authorized to develop, promote, supervise, and support safe, adequate, and efficient rail transportation
    b. employs or will employ sufficient qualified and trained personnel
    c. maintains or will maintain adequate programs of investigation, research, promotion, and development with opportunity for public participation
    d. is designated and directed to take all practicable steps (by itself or with other state authorities) to improve rail transportation safety and reduce energy use and pollution related to transportation
4) the state ensures that it maintains adequate procedures for financial control, accounting, and performance evaluation for the proper use of assistance provided by the United States Government

## Wisconsin's Rail System

### *Wisconsin's rail history*

Railroads have been an integral part of Wisconsin's transportation system and economy since 1847 when the state's first freight service was introduced. The first intercity passenger rail service in Wisconsin began in 1851, carrying travelers between Milwaukee and Waukesha. From the 1860s until the late 1920s, private railroad companies built an extensive passenger and freight service network throughout Wisconsin and connected the state with the rest of the country. By the late 1920s, every county in the state had at least one depot. Wisconsin's railroad network peaked around 1920 with about 7,600 miles.

Throughout the 1950s and 1960s, government regulation, the rapid growth of truck and barge freight movement, the construction of the interstate highway system and inland waterway system, and huge losses in passenger operations led to a number of railroad bankruptcies and service abandonments, as well as deferred maintenance and general financial deterioration of the rail industry.

In 1970, Congress passed the Federal Rail Passenger Service Act, which created the National Railroad Passenger Corporation, commonly known as Amtrak, to operate the nation's intercity passenger rail services. Its purpose was to relieve the freight railroads from the huge losses incurred in passenger service that the railroads were required to provide.

In 1980, the Staggers Railroad Act provided widespread deregulation of the railroad industry. Prior to 1980, government regulation limited railroads' ability to adjust their rates, making it difficult for railroads to compete with other modes, particularly the trucking industry. The act allowed railroads to adjust their rates based on market demand. The act also allowed for easier abandonment of lines and led to significant changes among carriers as larger railroads "spun-off" their unproductive lines to newly created short-line and regional railroads. For more information see Chapter 5, Freight Rail.

## *Role of rail in Wisconsin*

Today, Wisconsin's rail network includes approximately 3,600 miles of track. Of that total, just over 530 miles are owned by the state and leased to railroad companies. Eleven freight rail companies operate in the state. In addition, Amtrak provides intercity passenger service on two routes, and Metra provides commuter rail service between Kenosha and Chicago.

Looking ahead to 2030, WisDOT foresees rail continuing to play an important role in Wisconsin's economy for several reasons:

- Rail service provides a low cost transportation alternative for high volume, lower value commodities that are essential to many of Wisconsin's manufacturing industries
- Rail freight movement between Wisconsin, Canada and Mexico is expected to continue to grow.
- Intercity passenger rail provides a travel option for those who cannot, or choose not to, drive or fly
- Both rail freight and passenger service provide an energy efficient way to move goods and people

## *Stakeholders/plan implementation*

Unlike the state's highway and local road system, which are owned by either WisDOT or local governments, the majority of the state's rail infrastructure is privately owned and operated. As a result, decisions regarding track maintenance and operation are made by private companies based on their business needs and investment priorities. Likewise, WisDOT does not directly provide any freight, intercity passenger or commuter rail service. Instead, WisDOT's role is focused on making investment decisions that support the state's transportation network and overall growth of the economy and supporting passenger rail services. In general, WisDOT does this by providing technical assistance relative to specific issues, and offering funding assistance limited to specific rail related needs and activities.

For these reasons, actions identified in this plan require coordination and cooperation among many different stakeholders. Since the rail industry is considered intercity commerce, the federal government has a key role in its regulation, even though the level of federal government involvement is much less today than it was prior to the Staggers Act. Below is a brief summary of some of the key stakeholders and their respective roles.

- Federal Railroad Administration (FRA) – the lead federal agency concerned with the safety and performance of the nation's freight rail, intercity passenger rail and roadway/railway crossings.
- Federal Transit Administration (FTA) – concerned with the safety and performance of commuter rail systems (a fixed-guideway transit system mode)
- Wisconsin Office of the Commissioner of Railroads (OCR) – monitors and addresses roadway/railway safety. OCR is also responsible for ensuring the proper drainage in railroad rights of way, maintaining sight clearance at crossings and regulating train crews
- Wisconsin Department of Transportation (WisDOT) – in terms of freight railroads, WisDOT administers grant programs for freight railroad improvements. WisDOT also owns track that is leased to local transit commissions. In terms of passenger rail, WisDOT and the Illinois Department of Transportation provide funding for Amtrak's *Hiawatha Service* between Milwaukee and Chicago. WisDOT has had a longstanding involvement in planning future intercity passenger rail service within the state and the Midwest region. WisDOT is working with Illinois to study increasing Chicago-Milwaukee Amtrak *Hiawatha Service* frequencies from 7 daily round-trips to 10 daily round-trips, and working with Minnesota and La Crosse County on a feasibility study of a second round-trip frequency between Chicago, Milwaukee, and Minneapolis/St. Paul on the existing Amtrak *Empire Builder* route. WisDOT has also provided funding for some commuter rail studies
- Amtrak – provides intercity passenger rail service. In Wisconsin, Amtrak operates the *Hiawatha Service* between Milwaukee and Chicago, and the *Empire Builder* service between Chicago and Seattle/Portland
- Metra – regional commuter rail system that serves the greater Chicago area. Currently, Metra provides daily service between Kenosha and downtown Chicago
- Freight railroads – own, operate and maintain the majority of track in Wisconsin
- Local governments – are responsible for development decisions within their communities. With primary responsibility for land use planning, they are responsible for decisions such as rail stations and surrounding development, as well as enacting community level whistle-blowing laws

# Chapter 2: Development Process and Outreach

## Table of Contents

# Chapter 2: Development Process and Outreach

## Introduction

Wisconsin has a long history of involvement in rail transportation, from planning and policy development to financial support. *Wisconsin Rail Plan 2030* reflects the Wisconsin Department of Transportation's (WisDOT's) significant investment and extensive resource commitment toward the state's rail transportation system. It is the result of a multi-year process that included the review and consideration of trends, federal actions and regional efforts affecting Wisconsin's transportation system; the adoption and incorporation of previous department planning and policy efforts; and the implementation of a concise public outreach process designed to identify statewide issues and needs, from the full range of stakeholder interests.

## Trends

Several trends affect rail transportation in Wisconsin and have direct implications for rail mode policy development and implementation activities:

- Population changes
- Travel and land use pattern changes
- Modal choice
- Economic activity

Chapter 3 Trends, in *Connections 2030* highlights a series of trends impacting Wisconsin's transportation system.

### *Population changes*

- Between 2000 and 2030, the state's population is predicted to increase by 22.0 percent.
- Between 2000 and 2030, Wisconsin's population of people 65 years and older is predicted to increase by 99.7 percent.
- Between 2000 and 2030, the average household size in Wisconsin is expected to decrease from 2.5 people (in 2000) to 2.3 people.

### *Travel and land use pattern changes*

- Between 2007 and 2030, traffic on Wisconsin's roadways is expected to increase 34 percent.
- Total vehicle miles traveled (VMT) in the state is estimated to be 80 billion miles in 2030.
- Truck VMT is expected to increase 64 percent between 2007 and 2030, while personal VMT is forecasted to increase 33 percent.
- From 1980 to 2006, the total number of roadway miles increased six percent.

- The 2000 U.S. Census revealed that the average travel time to work was 20.8 minutes for the 2.7 million people in Wisconsin's workforce.

### *Modal choice*

- In 2010, more than 74 million trips in Wisconsin were completed using public transit.
- Ridership for Amtrak's *Hiawatha Service*, which operates between Chicago and Milwaukee, increased by 86 percent between 2000 and 2010.
- In 2007, more than 116 million pounds of cargo moved through Wisconsin's air carrier airports.

### *Economic activity*

- The transportation system is and will continue to be vital to Wisconsin's economy.
- Low value, high volume commodities are typically transported by rail and are essential to the main industrial sectors of Wisconsin's manufacturing economy.
- Heavy machinery, auto assembly, and pulp and paper products are some of the state's key industrial sectors that are dependent upon rail to deliver high volume bulk raw commodities and finished products to domestic and foreign markets.
- Wisconsin businesses shipped more than 552 million tons of freight, valued at $1.182 trillion in 2007.
- Wisconsin's freight railroads contributed:
    - $392 million directly to the state's economy in 2006 through wages and retirement benefits to current and former railroad workers living in the state
    - Millions of dollars each year to the economy through investments, purchases and taxes

## National/Federal Actions

The Rail Safety Improvement Act of 2008 and the Passenger Rail Investment and Improvement Act of 2008 were signed by President Bush in October 2008. The Passenger Rail Investment and Improvement Act reflected some of the most aggressive language and federal requirements for states to undertake comprehensive state rail planning. The act also establishes an intercity passenger rail capital grant program for states. To qualify for new federal grants authorized through the Passenger Rail Investment and Improvement Act, states are required to adopt a state rail plan.

These state rail plans must:

- Promote state policy involving freight and passenger rail transportation, including commuter rail operations
- Present priorities and strategies to enhance rail service in the state that benefits the public
- Serve as the basis for federal and state rail investments

State rail plans must be updated at least once every five years. *Wisconsin Rail Plan 2030* fulfills these federal requirements.

In addition to the funding under the Rail Safety Improvement Act, the American Reinvestment and Recovery Act, authorized in 2009, provided $8 billion for passenger rail projects across the country.

## Regional Efforts

Wisconsin, along with eight other Midwestern states and the Federal Railroad Administration, began investigating the concept of enhanced regional intercity passenger rail service in 1996 as part of the Midwest Regional Rail Initiative. The goal of the initiative is to develop a passenger rail system that connects to multiple Midwest cities, and offers business and leisure travelers shorter travel times, additional train frequencies, and connections between urban centers and smaller communities. After extensive analysis, the states jointly proposed a regional intercity passenger rail system for the Midwest: the *Midwest Regional Rail System*.

Because of the department's 15 year commitment and involvement in this multi-state effort, the state's multimodal plan, *Connections 2030* and *Wisconsin Rail Plan 2030*, reflect and adopt the recommendations outlined in the Midwest Regional Rail Initiative and reflect them as part of this process.

In addition to these factors, department staff reviewed other planning-related documents developed by a range of stakeholder groups to ensure consistency between the state rail plan recommendations and those identified in each document.

## Previous Department Planning and Policy Efforts

WisDOT has conducted and participated in several planning efforts that directly relate to rail transportation and the rail plan development process. These include:

- *Wisconsin Rail Issues and Opportunities Report* (2004)
- *Connections 2030* (2009)

### *Wisconsin Rail Issues and Opportunities Report (2004)*

The *Wisconsin Rail Issues and Opportunities Report* discussed nine issues critical to Wisconsin's rail transportation future. The report documented the state's various rail system components, including the rail network, freight rail, intercity passenger rail, safety and legislative rail initiatives. The issues ranged from rail congestion and the movement of freight in Wisconsin, to safety and the transport of hazardous materials, along with rail corridor preservation. For each issue, an opportunity was defined to help WisDOT accomplish its mission of developing and maintaining a safe, efficient and balanced transportation system. The report concluded with a discussion of the emerging issues that may impact the future of Wisconsin railroads.

This early rail planning effort included a public involvement process designed to collect input from a broad based group of stakeholders including the general public, transportation interest groups, business and economic development representatives, environmental groups, community organizations, local governments, state and federal agencies, and minorities. These diverse groups of stakeholders contributed ideas that were used to shape and guide the *Wisconsin Rail Issues and Opportunities Report*, as well as the department's multimodal plan *Connections 2030*. They also were helpful in the early identification of potential issues for *Wisconsin Rail Plan 2030*.

### *Connections 2030*

Adopted in 2009, *Connections 2030* establishes the state's multimodal transportation vision and identifies a series of policies and actions to achieve the vision. The long-range multimodal plan includes policies and actions related to freight rail, passenger rail and commuter rail. The policies and recommendations outlined in the plan were the result of an extensive outreach effort that included a telephone survey, meetings with stakeholders, targeted outreach, numerous public meetings and hearings statewide. From start to finish, over 80 meetings were held statewide. See Chapter 4: Public Involvement, of *Connections 2030* for more information.

In addition to reviewing previous department plans, staff also reviewed other state planning documents to ensure consistency with broader state and local planning recommendations.

## Review and Comparison of Other Efforts that Impact Rail Planning

### *Wisconsin's local planning*

As of January 1, 2010, all actions and decisions made by communities in Wisconsin must be consistent with an adopted local comprehensive plan (Section 66.1001, Wis. Stats.). While *Wisconsin Rail Plan 2030* does not include specific elements of individual community plans, the plan development process recognizes these efforts and incorporates community-level concerns identified during the public outreach efforts.

### *Community/MPO/RPC/tribal government plan review*

The plan development process also included a review of rail-related recommendations developed by metropolitan planning organizations, regional planning commissions and tribal governments.

### *Wisconsin area commuter rail studies*

WisDOT also reviewed the commuter rail recommendations released by the Dane County Transport 2020 report and the Kenosha-Milwaukee-Racine (KRM) Commuter Link Draft Environmental Impact Statement. Refer to Chapter 7: Commuter Rail, for more information.

### *Neighboring state rail plans*

Many states have either completed or are in the process of completing state rail plans. WisDOT examined the available draft and adopted plans from neighboring states to identify actions that may affect Wisconsin. In addition, WisDOT reviewed other state rail plans to better understand how other states have developed their plans and met the state rail planning requirements identified in the Rail Safety Improvement Act of 2008.

### *Railroad business plans*

Finally, WisDOT requested that each railroad operating in Wisconsin provide a copy of its most recent business plan. The intent was to gain a better understanding of current operations within the state and identify goals or challenges. WisDOT staff also met with individual railroad operators.

In addition to reviewing documents and incorporating the key factors as described previously, the rail plan development effort also includes a public outreach and participation process. This is aimed at ensuring that issues and needs identified in earlier efforts are still relevant, defining the appropriate scope of the plan, providing information to the public on the department's proposed recommendations, and obtaining feedback into the plan's content.

## Rail Plan Public Outreach and Participation

A successful public involvement process informs, educates and ensures that the public has input into decisions that affect their quality of life. It provides participants with the information they need to take part in a meaningful way, and it communicates how their input influences decisions. A strong public involvement process is essential to creating a plan the public will support. WisDOT followed a balanced, three-phased plan development approach to provide the public opportunities to ask questions, review documents and offer feedback on the plan's content. The three phases included:

- Phase 1: Needs identification
- Phase 2: Draft plan review
- Phase 3: Final Plan

### *Phase 1: Needs identification*

The outreach efforts during this phase focused on needs and issues identification. Efforts during this phase focused on sharing information on the proposed plan development, educating the public on the department's anticipated rail plan scope, and obtaining feedback on potential issues and needs to include in the draft plan for public review. To ensure that the department received the information necessary to complete the draft plan, the department:

- Published a public participation plan
- Launched a rail plan web site
- Administered a web-based questionnaire and telephone questionnaire
- Hosted a stakeholder workshop
- Conducted consultation and outreach with other key stakeholder groups

**Wisconsin Rail Plan; public participation plan**

To help the department organize the outreach effort, WisDOT developed a public participation plan: *Wisconsin Rail Plan 2030* Public Participation Plan. The public participation plan describes the public involvement activities WisDOT used during the development of the long-range rail plan. The plan details the goals and purpose of the outreach process as well as specifics such as type of events, locations, and the proposed development timeline. The plan also includes a defined consultation process with tribes, state and federal agencies, metropolitan planning organizations, and regional planning commissions. In addition, the public participation plan describes specific outreach activities to low income and minority populations, as well as people aged 65 years and older, and people with disabilities.

WisDOT followed the public participation requirements identified under the Passenger Rail Investment and Improvement Act of 2008, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). In addition, the plan was developed pursuant to the requirements of section 135 of title 23, United States Code; and considers the goals within other pertinent rail plans, including the national rail plan.

**Wisconsin Rail Plan 2030 web site**

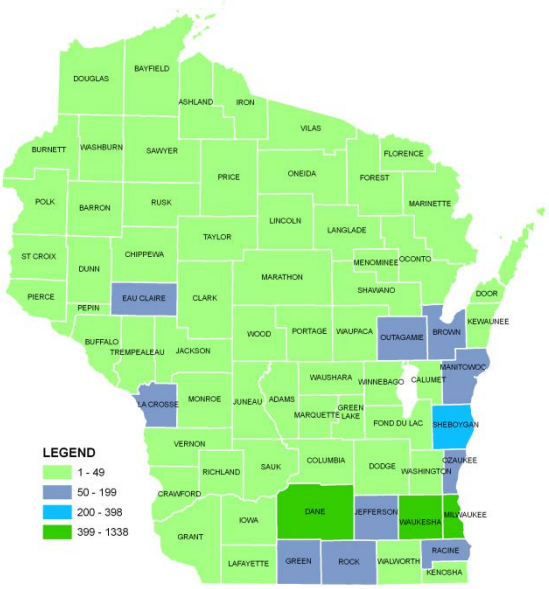
The *Wisconsin Rail Plan 2030* web site was created for the public to communicate information regarding the development process and meeting schedule, and to publish materials for review.

**Web-based questionnaire and telephone questionnaire**

As part of this early planning effort, the department developed an Internet-based questionnaire to obtain public input on rail issues and needs specific to freight, passenger and commuter rail in Wisconsin through 2030. The intent of the questionnaire was to capture concerns, as well as the level of support for future investment in the state's rail transportation network.

The web-based questionnaire was posted to the rail plan web site from March 2010 through April 2010. An announcement of the rail questionnaire was published as part of a mailing sent to rail stakeholders and individuals who had previously expressed an interest in rail planning. The department also announced the availability of the questionnaire with a statewide press release.

**Map 2-1: Number of responses per county to web-based questionnaire April, 2010**




The questionnaire consisted of a series of rail-related questions along with opportunities to provide additional feedback. Over 5,000 responses were received. Responses were received from residents in every county of the state. Overall, respondents support increased investment in freight, passenger and commuter rail. Issues, needs and concerns identified for each area focused on funding, ongoing maintenance and operation costs, coordination and multimodal connections. Refer to Appendix 2-A, *Wisconsin Rail Plan 2030* Online Questionnaire Results, to review the results summary. In addition to the comments received during the *Connections 2030* process, the feedback from the questionnaire provided valuable insight into the public's concerns and priorities about the future of rail transportation in Wisconsin.

WisDOT also conducted a telephone survey to collect comments from minority, senior and low income populations statewide. The survey results supplement the web-based questionnaire to provide WisDOT with a better understanding of the needs and issues of the state's residents relative to freight, intercity passenger rail and commuter rail.

Over 500 telephone surveys were conducted. Six specific groups were contacted: African American, Hispanic, Asian, urban low income, rural low income and respondents aged 65 years and over.

Respondents were selected using a targeted sampling strategy from areas with high proportions in each demographic group.

Approximately 50 percent of the respondents indicated living in a community that trains travel through. Of those that identified concerns, safety and noise were the most noted. The results indicate that most of the respondents across each demographic group would use passenger rail for trips over 200 miles. While respondents indicated a high level of support for expanding the state's passenger rail system, the personal importance attributed to passenger rail service was lower, this may be due, in part, to the limited service provided between Milwaukee and Chicago. Most participants, with the exception of the African American and urban low income members, indicated that they do not feel commuter rail service is very important to them personally. African American and urban low income participants indicated that they would be interested in this type of service.

Of those surveyed, lack of train service or a vehicle was generally identified as a barrier to using rail. Other barriers identified included lack of stops, lack of accommodations for people with disabilities and the general safety of train operations.

Freight rail was generally supported among those contacted; with some respondents indicating that the state should increase rail assistance so that more freight can be moved by rail.

For more information, see Appendix 2-B, *Wisconsin Rail Plan 2030* Environmental Justice Telephone Survey.

An executive order was issued calling for all state agencies to work cooperatively with Native American tribes on efforts that strengthen regional and statewide economies. In May 2005, WisDOT entered a first-of-its-kind Tribal Partnership Agreement with Wisconsin's 11 tribal governments that promotes communication and cooperation between the state and tribes on transportation issues. The agreement establishes a WisDOT Tribal Task Force comprised of WisDOT and tribal officials that serves as a forum to discuss transportation issues and policies impacting tribes.

**Tribal consultation**

In developing the initial scope of the draft plan, department staff conducted outreach to the state's eleven tribes[1]. Outreach included a presentation at the Tribal Transportation Conference held in March 2010, in Baraboo, Wisconsin. In addition, updates were provided at the Tribal Task Force meetings, and a consultation meeting was scheduled in conjunction with the normally scheduled Tribal Task Force meeting.

The consultation meeting was held May 2010, in Keshena, Wisconsin. In addition to the sitting members of the Tribal Task Force, the tribal historic preservation officers were also invited. Representatives from six of the federally recognized tribes were in attendance, as well as department personnel from

[1] Tribes having a historic interest in Wisconsin include those currently located in the state, as well as tribes that may have lived in the state at one time.

WisDOTRegion offices. Discussion focused on several elements for WisDOT to be aware of and potentially address in the plan:

- Revitalization of rail lines from trails and the coordination expectations with the tribal governments, as well as potential negative impacts to the surrounding communities
- Abandoned rail lines and the lack of coordination or communication with the tribal governments regarding future uses of the corridors
- Cost of tickets and the likely inability of many in the lower and middle classes to be able to afford to travel by passenger rail
- Lack of freight and passenger rail service and the need for increased services in northern Wisconsin

For more information regarding the discussion, see Appendix 2-C, *Wisconsin Rail Plan 2030* Tribal Consultation Summary. For more information see Chapter 12, Environmental Justice Analysis.

**Environmental resource agency consultation**

WisDOT held a consultation meeting with representatives of several environmental resource agencies. Those invited to participate are shown below; those followed by an asterisk participated in the meeting.

- *Federal Emergency Management Agency*
- *Federal Railroad Administration*
- *Federal Highway Administration*
- *Federal Transit Administration**
- *National Park Service*
- *Public Service Commission of Wisconsin**
- *US Army Corps of Engineers**
- *US Coast Guard-Eighth Coast Guard District*
- *US Department of Agriculture*
- *US Environmental Protection Agency**
- *US Fish and Wildlife Service*
- *USDA Forest Service*
- *WI Department of Administration**
- *WI Department of Agriculture Trade and Consumer Protection**
- *WI Department of Health Services**
- *WI Department of Natural Resources**
- *WI State Historical Society*

Wisconsin has 14 metropolitan planning organizations (MPOs) that share responsibility for transportation planning in 17 metropolitan areas (urbanized area populations greater than 50,000). Metropolitan planning organizations are:

- Primarily comprised of local elected officials
- Local decision-making entities for transportation issues of a regional nature
- Federally designated

Wisconsin has nine regional planning commissions. All but five counties in the state (Columbia, Dodge, Jefferson, Rock, Sauk) are served by an RPC.

Regional planning commissions:

- Are formed by executive order of the governor
- Provide intergovernmental planning and coordination for the physical, social and economic development of a region
- Are primarily comprised of members typically appointed by county boards and the governor

Participants raised issues related to air quality, safety, siting of railroad facilities such as rail yards, and potential impacts to the adjacent communities. For more information on the environmental resource agency consultation, see Appendix 2-D, *Wisconsin Rail Plan 2030* Environmental Agency Consultation Summary and Chapter 11: System-Plan Environmental Evaluation.

**Stakeholder workshop**

In order to obtain feedback from specific rail stakeholder interests, the department hosted a workshop in Stevens Point in May 2010. Attendees included representatives from the railroad industry, environmental groups, local, state and federal government, special interests, and business and economic interests.

The participants discussed issues identified during previous public outreach activities and issues or concerns they felt were missing. Relying on the group's background and expertise, WisDOT staff worked with the participants to identify actions and opportunities to overcome the barriers and challenges of the implementation process. Refer to Appendix 2-E, *Wisconsin Rail Plan 2030* Stakeholder Workshop Summary, for more information related to the workshop.

**MPO/RPC outreach**

Wisconsin transportation planning is a partnership between the department, the 14 Metropolitan Planning Organizations and the eight Regional Planning Commissions. WisDOT works with these entities to ensure that statewide long range planning is consistent with urban and regional planning initiatives. Early outreach for the rail plan included briefings as part of the regularly scheduled quarterly meetings with the metropolitan planning organization and regional planning commission planning staff. In addition, updates and presentations to their committees and boards were made as requested.

## *Phase 2: Draft plan review*

WisDOT released the final draft *Wisconsin Rail Plan 2030* and its System-plan Environmental Analysis (SEE) in November 2013. This was communicated via a legal notice and statewide news release. A public hearing was held in Madison on December 10, 2013, and the comment period remained open through December 31, 2013. The draft plan was posted on WisDOT's web site and hard copies were available for review at WisDOT Region Offices in Madison, Waukesha, La Crosse, Eau Claire, Superior, Rhinelander, Wisconsin Rapids and Green Bay, and at state depositories. During the comment period, the public had the opportunity to provide individual oral and written testimony and provide comments for the official record via mail, phone and email.

## *Phase 3: Final plan*

Review and consideration of revisions to the draft rail plan, based on the comments received during the public comment period, are the culmination of a public involvement process that began with the development of *Connections 2030.* It continued with stakeholder feedback obtained during early development of *Wisconsin Rail Plan 2030*. More than 170 comments were submitted from 95 individuals and groups during the final comment period. The majority of these comments were general

in nature, indicating support for the plan without suggesting any major changes, or suggesting minor technical changes to the draft plan. A large majority of the comments suggesting changes reference intercity passenger rail. Other comments reference funding, economic development, and commuter rail. Based in part on this feedback, WisDOT staff made minor revisions to the draft plan to clarify wording and correct technical details. Comments suggesting the final plan be updated with more recent data were noted; these changes were not added to the final draft plan but will be considered during the development of the five-year update to *Wisconsin Rail Plan 2030*.

After final review of the remaining comments, there were several recommended revisions and changes. The revisions incorporated into the final plan are focused on two topic areas:

- Addition of language in several chapters to acknowledge increases in rail shipment of frac sand and oil and the impacts on the transportation system
- Clarification of language in Chapter 6 regarding intercity passenger rail corridors and options for intercity passenger rail service in the long-term (through the 2030 plan horizon)

Other final changes included minor editing and formatting revisions to ensure consistency and improve readability throughout the plan.

# Appendix 2-A: Online Questionnaire Results

## Introduction

During development of the draft *Wisconsin Rail Plan 2030*, the Wisconsin Department of Transportation (WisDOT) developed a questionnaire to obtain public input on rail issues and needs in Wisconsin through 2030. The questionnaire was administered online and available to prospective respondents from March 12, 2010 through April 6, 2010.

The percentages shown are based on the total number of responses to that question—not the total number of people who completed the questionnaire. The total number of responses to each question is shown in parentheses next to the percentage. Percentages are rounded to the nearest percent.

### *Methodology*

The purpose of the questionnaire was to gather input on rail issues and needs from now through 2030 from WisDOT's stakeholders and the general public. To maximize the opportunity for participation, WisDOT sent over 3,000 post cards and over 1,200 emails to stakeholders directing them to WisDOT's web site to complete the survey. WisDOT also distributed a press release to announce the release of the online questionnaire to the general public.

The questionnaire was developed and finalized with input from WisDOT planning staff, rail program staff, and management. It contained 11 multiple choice questions regarding inter-city passenger, freight and commuter rail. It also included one open-ended question for respondents to provide any additional information, and four demographic questions. The results of the online questionnaire are attached in Tables 2A-1 and 2A-2 at the end of Appendix 2-A.

### *Report structure*

This report provides an overview of the descriptive statistics and the results from the demographic, multiple choice and open-ended questions. The data included in the tables throughout the report show the percentages of responses to that specific question and, in parentheses, the total number of responses to that question. These response percentages do not add up to 100 percent because respondents were allowed to choose up to three response choices.

## Descriptive Statistics

WisDOT received over 5,300 responses to the questionnaire. Looking at gender, with a ratio of 66 percent to 31 percent, there were twice as many responses from men as from women.

| | |
|---|---|
| Male | 66% (2,849) |
| Female | 31% (1,310) |
| Prefer not to answer | 3% (131) |

The age ranges of respondents was skewed slightly, with people in the 50 to 59 range accounting for 27 percent of responses, and those 60 to 69 accounting for 20 percent of responses. These were the two largest groups of respondents, totaling just over 2,000 responses.

| | |
|---|---|
| <20 | 0 (10) |
| 20-29 | 9% (406) |
| 30-39 | 15% (660) |
| 40-49 | 19% (802) |
| 50-59 | 27% (1,162) |
| 60-69 | 20% (847) |
| 70-79 | 6% (241) |
| 80+ | 1% (30) |
| Prefer not to answer | 3% (149) |

The response rate was higher from the households with higher incomes. Fifty-eight percent of responses came from those with an annual household income of $50,000 or greater. Nearly 18 percent of the respondents who answered this question chose the 'prefer not to answer' choice.

| | |
|---|---|
| <$10K | 2% (65) |
| $10-25K | 6% (241) |
| $25-50K | 17% (720) |
| $50-100K | 37% (1,582) |
| $100K+ | 21% (906) |
| Prefer not to answer | 18% (751) |

The geographic spread of the results, determined by respondents' zip codes indicates:

- Responses were received from every county in the state.
- The largest concentrations of responses were from the Madison and Milwaukee areas.
- There was a slightly larger concentration of responses from the eastern side of the state, along Lake Michigan, compared with other broad geographic areas.
- There were concentrations of responses from the La Crosse and Eau Claire areas.
- There was a concentration of responses from the Sheboygan area.

Results from the close-ended multiple choice questions are summarized below, by category: Passenger, Freight and Commuter Rail.

The results of the "level of public investment/level of service" question allow us to examine any differences in the levels of support across the three rail categories.

For each of the rail categories, the highest percentage of respondents favor increased public investment/service: 51 percent for passenger rail, 37 percent for freight rail, and 49 percent for commuter rail.

In other words, within each category, more respondents are in favor of increased investment/service, than the number of those who favor the current level or a decreased level of public investment/service.

For passenger and commuter rail categories, the second highest response was for 'decreased investment/service'—nearly a third for each (31 percent and 33 percent respectively), indicating a more polarized opinion among respondents for these two categories. In contrast, for freight rail, 'decreased investment/service' had the *lowest* percentage, at 14 percent, which was even lower than those who responded no opinion/don't know (16 percent).

| | Decreased Investment/Service | Current Investment/Service | Increased Investment/Service | No Opinion/ Don't Know |
|---|---|---|---|---|
| Passenger | 31% (1,346) | 15% (637) | 51% (2,251) | 4% (158) |
| Freight | 14% (617) | 33% (1,453) | 37% (1,637) | 16% (685) |
| Commuter | 33% (1,464) | 12% (525) | 49% (2,161) | 6% (242) |

## *Demographic Breakouts*

**Age**

Across the three categories—passenger, freight, and commuter—the youngest respondents (age <20 and age 20 to 29) and oldest respondents (age 70 to 79 and age 80+) favor increased rail investment/service and do not favor decreased rail investment/service. Two of the middle age groups, age 30 to 39 and age 40 to 49, have the lowest percentages of respondents who favor increased investment/service and highest percentages of those who favor decreased investment/service. See Tables A.1 through A.3, attached.

**Income**

The differences between annual income ranges were smaller than the differences between age ranges discussed above. Also, the *spread within* income ranges among respondents who favor increased, decreased, or current levels of funding, was similar across the income ranges. The lowest income range (< $10,000/yr) did have a higher percentage of respondents who favor increased investment/service. In general, the highest percentages of respondents who favor decreased rail investment/service are from those in the $50,000-$100,000 annual income range. See Tables B.1 through B.3, attached.

**Geographic Area**

Geographic breakouts were determined by asking respondents for their zip code. The zip codes were then combined for determining breakouts by metropolitan area. In this section, the number of responses is shown in brackets after the percentage.

Passenger Rail

In looking at increased investment/service for passenger rail, respondents from La Crosse (84 percent [59]) and 72 respondents from Eau Claire (72 percent [72]) were the top two metropolitan areas. Fully two-thirds of respondents from three other metro areas—Green Bay (69 percent [99]), Madison (68 percent [823]), and Wausau (67 percent [18]) also support increased investment/service for passenger rail.

In looking at support for decreased passenger rail investment/service, Sheboygan was at the top of the list, with nearly half of respondents (47 percent [69]) indicating they favor less passenger rail investment/service. Southeast Wisconsin (which includes the Milwaukee/Racine/Kenosha metro area) was at 40 percent [452], and Fond du Lac, Janesville, and Beloit, each had about one third of the responses in favor of decreased investment/service for passenger rail [10, 15, and 6 responses, respectively].

Freight Rail

In the freight rail category, the percentages of respondents favoring increased investment/service are highest for Janesville (54 percent [25]), Beloit (50 percent [9]), and Green Bay (46 percent [66]), with Eau Claire and La Crosse each at 40 percent [40 and 28 responses, respectively]. Looking at those who favor decreases in investment/service for freight rail, the percentages of respondents from Sheboygan and Superior are the highest, at 21 percent [30] and 20 percent [2] respectively. Wausau has the next highest percentage of responses, at 19 percent [5], followed by Beloit and Southeast Wisconsin both at 17 percent [3 and 191 responses, respectively].

Commuter Rail

The responses for commuter rail roughly follow those for the passenger rail category, although in general, a slightly smaller percentage of respondents favor increased investment/service for commuter rail than for passenger rail. La Crosse had the highest percentage of respondents favoring increased investment/service (74 percent [52]), followed by Eau Claire (66 percent [66]), Madison (65 percent [786]), Green Bay (61 percent [87]), and Superior (60 percent [6]). Less than half of Wausau respondents favor increased investment for commuter rail compared with the two-thirds who favor increased investment for passenger rail (48 percent [13] versus 67 [18] percent).

In looking at respondents favoring decreased investment/service for commuter rail, the results again closely follow the passenger rail results. Sheboygan (51 percent [74]), Southeast Wisconsin (46 percent [519]), Fond du Lac (39 percent [11]), and Beloit (33 percent [6]) have the highest percentage of respondents who favor decreased public investment/decreased service for commuter rail.

## Issues Needs and Concerns

The next section looks at issues, needs, and concerns for passenger rail, freight rail and commuter rail. Note that throughout this section of the questionnaire, respondents could choose up to three responses. Therefore, the percentages will not add up to 100.

### *Passenger Rail*

**Issues**

The top five passenger rail issues WisDOT should consider through 2030 are shown. The top three responses, all with a response rate above 40 percent—relate to cost/funding issues.

- Funding for capital projects/investments (i.e., the cost to construct a new rail line) 45% (2,064)
- Ongoing costs for infrastructure maintenance and operation 43% (1,993)

- Cost versus benefit 40% (1,841)
- Location of passenger rail stations/terminals 29% (1,345)
- Mobility needs for the state's population 24% (1,119)

**Needs**

Of the five most frequently chosen passenger rail needs in Wisconsin, three relate to train travel: routes, terminals, and travel times. Funding was also cited, with 26 percent of responses.

- More routes 30% (1,394)
- Multimodal terminals
  (i.e., rent a car and access transit/bus and passenger rail in same terminal) 27% (1,228)
- Dedicated sources of state and federal funding for passenger rail projects 26% (1,217)
- Decreased travel times to destinations compared with current travel times 23% (1,051)
- No passenger rail needs require attention through 2030 22% (1,002)

**Concerns**

Here, costs received the greatest percentage of responses, with 52 percent of respondents choosing initial construction costs and 44 percent choosing ongoing costs for maintenance and operation. Also, 21 percent chose the response, “benefits from increases in passenger rail travel will not offset the additional costs.” Connectivity was a concern indicated by slightly over a third of respondents (35 percent).

- Cost to construct passenger rail projects 52% (2,387)
- Ongoing costs for maintenance and operation of passenger rail lines 44% (2,024)
- Lack of convenient connections to transit, intercity bus, ferries, and park-and-ride lots 35% (1,586)
- Schedule for passenger rail implementation too slow or not extensive enough 21% (975)
- Benefits from increases in passenger rail travel will not offset the additional costs 21% (967)

### *Freight Rail*

**Issues**

The two most frequently mentioned freight issues relate to ongoing costs for maintenance and operations, chosen by nearly half of respondents (45 percent), and funding for capital projects, chosen by over a third (36 percent). Capacity was chosen by a quarter (25 percent) of respondents and environment by 15 percent.

- Ongoing costs for infrastructure maintenance and freight operations 45% (1,993)
- Funding for capital projects/investments (i.e., the cost to construct a new rail line) 36% (1,604)
- System-wide capacity needs 25% (1093)
- Environment 15% (674)
- No opinion/don't know 18% (793)

**Needs**

The top five freight needs chosen by respondents include the increasing need for infrastructure repair/replacement (28 percent), the need for more intermodal transfer facilities (26 percent), the need for greater capacity (24 percent), and more routes in Wisconsin (17 percent).

- Increasing need for infrastructure repair/replacement 28% (1,262)
- More facilities where freight can be transferred between trains, trucks and ships 26% (1,139)
- Greater capacity—ability to accommodate more freight on railroads 24% (1,060)
- More routes between manufacturing and retail areas in Wisconsin 17% (751)
- No opinion/don't know 21% (950)

**Concerns**

Nearly one-third of respondents chose as their key concerns the lack of distribution centers in Wisconsin (31 percent) and reduced freight rail service to some businesses and communities (31 percent); nearly as many chose safety at rail crossings (28 percent). A quarter of respondents indicated a concern with freight traffic causing delays and restrictions for passenger rail.

- Not enough distribution centers in Wisconsin where freight can be transferred between trains and trucks 31% (1,380)
- Reduced freight rail service to some Wisconsin businesses and communities 31% (1,372)
- Safety at rail crossings 28% (1,253)
- Freight traffic on freight-owned shared tracks causing delays and service restrictions for passenger rail 25% (1,123)
- No opinion/don't know 19% (824)

## *Commuter Rail*

The questionnaire did not ask respondents about needs and concerns related to commuter rail. It did ask about commuter rail issues and included a larger number of response choices than for passenger and freight rail. The results are spread across a larger number of topics—with a greater number of responses chosen by respondents. Thus, the top 12 responses are included in the table below.

The two most frequently chosen issues are: local governments' share of commuter rail project costs (28 percent) and the State of Wisconsin's role in developing commuter rail (27 percent). Other frequently chosen issues include residential access (22 percent), affordability (18 percent), potential to reduce road congestion (18 percent), ongoing funding sources (17 percent), and availability of an alternative to road travel (17 percent).

- How local governments pay for their local share of commuter rail projects (generally 25 percent of total project cost) 28% (1,251)
- The state taking a more active leadership role in developing commuter rail in urban areas of Wisconsin 27% (1,198)

- Improving access to commuter rail in residential areas 22% (949)
- Affordability of fares/tickets 18% (786)
- Potential to minimize road congestion if some traffic is diverted from cars to commuter rail 18% (780)
- Creation of ongoing funding sources for commuter rail 17% (767)
- Availability of an alternative to traveling on congested roadways 17% (766)
- Improving access to key destinations (e.g., health care, employment and retail centers, educational institutions, government facilities, etc.) 15% (680)
- Energy efficiency of commuter rail 12% (533)
- Mobility for people who cannot or choose not to drive 12% (512)
- Potential traffic delays at rail crossings while commuter trains pass 11% (499)
- Other 15% (639)

## Qualitative Results

Also included in the questionnaire was an open-ended question asking participants if they had any other feedback. There were nearly 2,000 responses to this question. The range of topics addressed generally reflects those included in the multiple choice questions. Many responses specifically reference the Milwaukee-Madison intercity passenger rail project. This is not surprising given the fact that the federal funding was awarded shortly before the questionnaire was made available. The list below highlights the range of topics included in these responses:

- Funding – funding sources, funding levels, public funding mechanisms, private funding opportunities, self-sustaining/user-based
- Costs – initial cost, ongoing costs, capital costs, operations and maintenance costs, costs versus benefits
- Demand – level of current need for rail transportation, potential for future need/growth, inflexibility of rail
- Benefit – local, statewide, direct benefits for rail users, indirect benefits for non-users, property values near tracks/stations, regional/multistate benefits
- Connectivity between passenger rail, commuter rail, and local transit
- Rail routes and station locations within the state
- Tradeoffs between rail traffic and road traffic, both for passenger travel and freight shipping
- Ecological/Environmental issues, efficiency of passenger and freight rail
- Opinions about local, state, and federal government, in general

## Next Steps

The results of this questionnaire was used along with the other public and stakeholder input WisDOT received during the development of *Wisconsin Rail Plan 2030*. This information helped guide the development of the final draft plan before adoption.

**Table 2A-1: Level of Support for Public Investment in Rail and Rail Service in Wisconsin by Age**

The number of responses and percentage of responses for each age range are shown in the tables below.

**Public Investment for PASSENGER Rail, by Age**

| | < 20 yrs | | 20-29 yrs | | 30-39 yrs | | 40-49 yrs | | 50-59 yrs | | 60-69 yrs | | 70-79 yrs | | 80+ yrs | | prefer not | | No | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| **More $** | 7 | **70** | 219 | **54** | 309 | **47** | 394 | **49** | 596 | **51** | 443 | **52** | 143 | **60** | 14 | **48** | 79 | **53** | 27 | **59** | 2231 | **51** |
| **Current $** | | **0** | 58 | **14** | 112 | **17** | 117 | **15** | 150 | **13** | 132 | **16** | 28 | **12** | 6 | **21** | 15 | **10** | 10 | **22** | 628 | **14** |
| **Less $** | 3 | **30** | 120 | **30** | 221 | **33** | 267 | **33** | 361 | **31** | 241 | **29** | 58 | **24** | 8 | **28** | 46 | **31** | 8 | **17** | 1333 | **31** |
| **No Opinion** | | **0** | 9 | **2** | 18 | **3** | 21 | **3** | 51 | **4** | 29 | **3** | 11 | **5** | 1 | **3** | 8 | **5** | 1 | **2** | 149 | **3** |
| **No Response** | | **0** | | **0** | | **0** | 1 | **0** | | **0** | | **0** | | **0** | | **0** | 1 | **1** | | **0** | 2 | **0** |
| **Total #** | **10** | | **406** | | **660** | | **800** | | **1158** | | **845** | | **240** | | **29** | | **149** | | **46** | | **4343** | |

**Public Investment for FREIGHT Rail, by Age**

| | < 20 yrs | | 20-29 yrs | | 30-39 yrs | | 40-49 yrs | | 50-59 yrs | | 60-69 yrs | | 70-79 yrs | | 80+ yrs | | prefer not | | No | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| **More $** | 6 | **60** | 177 | **44** | 248 | **38** | 279 | **35** | 418 | **36** | 304 | **36** | 97 | **40** | 8 | **28** | 65 | **44** | 21 | **46** | 1623 | **37** |
| **Current $** | 2 | **20** | 128 | **32** | 220 | **33** | 272 | **34** | 391 | **34** | 297 | **35** | 73 | **30** | 11 | **38** | 34 | **23** | 15 | **33** | 1443 | **33** |
| **Less $** | 1 | **10** | 54 | **13** | 101 | **15** | 126 | **16** | 160 | **14** | 111 | **13** | 25 | **10** | 6 | **21** | 16 | **11** | 6 | **13** | 606 | **14** |
| **No Opinion** | 1 | **10** | 47 | **12** | 91 | **14** | 122 | **15** | 189 | **16** | 133 | **16** | 45 | **19** | 4 | **14** | 33 | **22** | 4 | **9** | 669 | **15** |
| **No Response** | | **0** | | **0** | | **0** | 1 | **0** | | **0** | | **0** | | **0** | | **0** | 1 | **1** | | **0** | 2 | **0** |
| **Total #** | **10** | | **406** | | **660** | | **800** | | **1158** | | **845** | | **240** | | **29** | | **149** | | **46** | | **4343** | |

**Public Investment for COMMUTER Rail, by Age**

| | < 20 yrs | | 20-29 yrs | | 30-39 yrs | | 40-49 yrs | | 50-59 yrs | | 60-69 yrs | | 70-79 yrs | | 80+ yrs | | Prefer not | | No | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| **More $** | 7 | **70** | 207 | **51** | 305 | **46** | 369 | **46** | 586 | **51** | 425 | **50** | 140 | **58** | 10 | **34** | 70 | **47** | 22 | **48** | 2141 | **49** |
| **Current $** | | **0** | 47 | **12** | 91 | **14** | 101 | **13** | 116 | **10** | 102 | **12** | 22 | **9** | 6 | **21** | 24 | **16** | 8 | **17** | 517 | **12** |
| **Less $** | 3 | **30** | 132 | **33** | 242 | **37** | 287 | **36** | 384 | **33** | 274 | **32** | 65 | **27** | 11 | **38** | 43 | **29** | 12 | **26** | 1453 | **33** |
| **No Opinion** | | **0** | 20 | **5** | 22 | **3** | 42 | **5** | 72 | **6** | 44 | **5** | 13 | **5** | 2 | **7** | 11 | **7** | 4 | **9** | 230 | **5** |
| **No Response** | | **0** | | **0** | | **0** | 1 | **0** | | **0** | | **0** | | **0** | | **0** | 1 | **1** | | **0** | 2 | **0** |
| **Total #** | **10** | | **406** | | **660** | | **800** | | **1158** | | **845** | | **240** | | **29** | | **149** | | **46** | | **4343** | |

**Table 2A-2: Level of Support for Public Investment in Rail and Rail Service in Wisconsin by Income**

The number of responses and percentage of responses for each income range are shown in the tables below.

**Public Investment for PASSENGER Rail, by Annual Household Income**

| | < $10K | | $10-25K | | $25-$50K | | $50-$100K | | $100K+ | | Prefer not to | | No Response | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| **More $** | 39 | **60** | 126 | **52** | 379 | **53** | 758 | **48** | 477 | **53** | 406 | **54** | 46 | **52** | 2231 | **51** |
| **Current $** | 8 | **12** | 37 | **15** | 107 | **15** | 234 | **15** | 119 | **13** | 103 | **14** | 20 | **23** | 628 | **14** |
| **Less $** | 15 | **23** | 72 | **30** | 208 | **29** | 536 | **34** | 271 | **30** | 210 | **28** | 21 | **24** | 1333 | **31** |
| **No Opinion** | 3 | **5** | 6 | **2** | 25 | **3** | 48 | **3** | 37 | **4** | 29 | **4** | 1 | **1** | 149 | **3** |
| **No Response** | | | | | | | 1 | **0** | | **0** | 1 | **0** | | **0** | 2 | **0** |
| **Total #** | **65** | | **241** | | **719** | | **1577** | | **904** | | **749** | | **88** | | **4343** | |

**Public Investment for PASSENGER Rail, by Annual Household Income**

| | < $10K | | $10-25K | | $25-$50K | | $50-$100K | | $100K+ | | Prefer not to | | No Response | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| **More $** | 32 | **49** | 110 | **46** | 269 | **37** | 566 | **36** | 335 | **37** | 278 | **37** | 33 | **38** | 1623 | **37** |
| **Current $** | 17 | **26** | 76 | **32** | 249 | **35** | 542 | **34** | 284 | **31** | 247 | **33** | 28 | **32** | 1443 | **33** |
| **Less $** | 8 | **12** | 28 | **12** | 94 | **13** | 233 | **15** | 129 | **14** | 100 | **13** | 14 | **16** | 606 | **14** |
| **No Opinion** | 8 | **12** | 27 | **11** | 107 | **15** | 235 | **15** | 156 | **17** | 123 | **16** | 13 | **15** | 669 | **15** |
| **No Response** | | | | | | | 1 | **0** | | | 1 | **0** | | | 2 | **0** |
| **Total #** | **65** | | **241** | | **719** | | **1577** | | **904** | | **749** | | **88** | | **4343** | |

**Public Investment for PASSENGER Rail, by Annual Household Income**

| | < $10K | | $10-25K | | $25-$50K | | $50-$100K | | $100K+ | | Prefer not to | | No Response | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % | # | % | # | % | # | % |
| **More $** | 37 | **57** | 121 | **50** | 361 | **50** | 734 | **47** | 458 | **51** | 391 | **52** | 39 | **44** | 2141 | **49** |
| **Current $** | 10 | **15** | 27 | **11** | 78 | **11** | 195 | **12** | 94 | **10** | 98 | **13** | 15 | **17** | 517 | **12** |
| **Less $** | 14 | **22** | 82 | **34** | 242 | **34** | 573 | **36** | 294 | **33** | 220 | **29** | 28 | **32** | 1453 | **33** |
| **No Opinion** | 4 | **6** | 11 | **5** | 38 | **5** | 74 | **5** | 58 | **6** | 39 | **5** | 6 | **7** | 230 | **5** |
| **No Response** | | | | | | | 1 | **0** | | 0 | **1** | 0 | | **0** | 2 | **0** |
| **Total #** | **65** | | **241** | | **719** | | **1577** | | **904** | | **749** | | **88** | | **4343** | |

# Appendix 2-B: Environmental Justice Survey

## Introduction

The *Wisconsin Rail Plan 2030* Environmental Justice Survey was conducted to provide the Wisconsin Department of Transportation (WisDOT) with an understanding of the issues and needs of minority, elderly and low income populations statewide.

### *Research Objectives*

The goal of this survey was to identify issues and needs related to freight, intercity passenger and commuter rail for *Wisconsin Rail Plan 2030*. Specifically, this survey addresses the following issues:

- Gauge the importance of passenger rail travel in Wisconsin among minority, elderly and low income demographic groups
- Determine what barriers play a role in keeping minority, elderly and low income groups from traveling by train in Wisconsin
- Gauge perceptions of rail freight traffic in Wisconsin by minority, elderly and low income groups
- Look into what financial role the state should play in supporting rail traffic in Wisconsin

Data from the survey will be used by WisDOT to better understand how Wisconsin's minority, elderly and low income groups perceive freight, intercity passenger and commuter rail issues and needs in the state, as well as their tendency to use passenger rail service and what barriers may keep them from utilizing it. Additionally, the results will assist WisDOT in assessing the overall picture of rail perceptions when combined with the general population web survey results. The survey questions are included in this report, following the analysis of the results.

### *Methodology*

The St. Norbert College Survey Center operated by Wegge Strategic Research, Inc. of De Pere, Wisconsin, conducted the Environmental Justice Survey with adult Wisconsin residents age 18 and older and who belonged to various specific demographic groups.

A total of 511 telephone surveys from targeted demographic groups of Wisconsin residents were completed for this study. Six specific targeted demographics were used in this study which included African Americans (n=101), Hispanics (n=101), Asians (n=103), urban low income (<$25,999/year household income) (n=100), rural low income (<$25,999/year household income) (n=50) and respondents age 65 and over (n=103)[1]. Three respondents did not indicate certain specific criteria and are therefore not included in the quota specific results. The interviews were conducted between May 17 and May 29, 2010, by Management Decisions, Inc. of Milwaukee, Wisconsin. Respondents were selected using a targeted sampling strategy in census tracts with high proportions of the subgroup populations to fill the goal of contacting and receiving responses from a predetermined number of

[1] "n" represents the number of respondents in each group. Since the goal of this survey was to gauge the opinions of minority, elderly and low income populations, a quota, or minimum number of respondents from each group, was established.

respondents for African-Americans, Asians, Hispanics, low income groups and the elderly (those aged 65 and older).

The margin of error for the Environmental Justice Survey is +/- 4.3 percent. With 511 completions we can be 95 percent confident that the survey results mirror those of the Wisconsin minority population based on the quotas set in the survey. This means that since 53 percent of all respondents said trains go through the community in which they live, using the margin of error we can be 95 percent confident the actual population percentage among those groups would be between 49 percent and 57 percent who have trains going through their community. The margin of error for individual quota subgroups will be greater, approximately +/- 9.8 percent. Please note: not all quota groups are mutually exclusive to each other and the total sample size will not reflect the sum total of all subgroups due to varying sample sizes in each subgroup as well as varying exclusiveness in each group's membership.

The report contains percentages that are rounded up at the .5 level and down for levels below .5, thus leading to some overall percentages not equaling 100 percent. Decimal point reporting for percentages is not necessary because this level of precision does not significantly impact the percentage rates and can affect figure and chart readability.

The questionnaire was based on input from Short Elliott Hendrickson, Inc. (SEH) and WisDOT as well as by the St. Norbert College Survey Center. Modifications of the draft questionnaire, including additional questions and deletions, were made by the St. Norbert College Survey Center in consultation with SEH and WisDOT. The final questionnaire was based on feedback from interviewers, supervisors and project staff in collaboration with SEH and WisDOT.

## Key Findings

1. When looking at the overall results of the survey, males and females are equally represented (50 percent each). While Caucasians hold the plurality (the largest percentage but not a majority) of responses (39 percent) they are followed by equal numbers of minorities (20 percent each of African Americans, Hispanics and Asians). This is a result of the elderly and low income quota groups including minorities and non-minorities. Total household income is almost evenly distributed across all levels, while the majority of respondents (65 percent) live in an urban setting. Overall age distribution is slightly weighted to the older cohorts due to the 65 and older group. Results for individual quotas are represented in the tables below.

2. Travel by automobile for a distance of 200 miles holds the highest level of intensity (those that definitely would use this type of transportation) across almost all surveyed groups. Travel by air comes in a close second, with trains as a third choice followed by bus. It should be noted, however, when including those that "probably would use" with those that "definitely would use" certain modes of transportation, trains garner a majority usage across all cohorts except for those in the rural low income group. This shows that many people would choose train travel, if given the opportunity.

3. There is a very high level of support for expanding Wisconsin's passenger rail system among all surveyed groups. However, the level of importance does not currently mirror this high support concerning personal access to a passenger rail system now or in the future. The level of importance can be expected to rise as more passenger rail services become available to more of the state's population.

4. Overall, the two most prevalent barriers to respondents using trains for travel are the lack of rail service close by and the lack of having a vehicle for their use when arriving at their destination. Different surveyed groups had various levels of agreement as to which barriers proved the most difficult. Other barriers mentioned also included lack of stops, lack of accessibility for persons with disabilities and the general safety of train operations.

5. Overall, most surveyed groups feel the biggest benefits of moving goods by rail are to reduce highway truck congestion and take advantage of the energy efficiency of trains compared to trucks. The majority of groups also agree that the state should increase assistance so that more freight can be carried by rail.

6. Most survey participants from the majority of surveyed groups do not feel commuter rail service is very important to them personally. The exception to this are African Americans and urban low income members who would be the most interested in this type of service. Overall, however, most respondents agree the state will have to provide assistance to make any commuter rail service viable.

7. About half of all respondents live in communities in which trains travel through, with Hispanics, those age 65 and older and Asians living near rail lines the most and African Americans and rural low income respondents living near rail lines the least. Very few respondents indicated any concerns about trains in their communities; however, of those that did, safety and noise are the most noted concerns. This was asked to see if environmental justice populations were experiencing negative community impacts from freight rail traffic.

## Characteristics of the Survey Sample Group

### *Key Finding #1*

As mentioned previously, 511 telephone surveys from targeted demographic groups of Wisconsin residents were completed for this study. The following provides a summary of some of the key results. Tables 1-5 depict the responses to the survey questions.

When looking at the overall results of the survey, males and females are equally represented (50 percent each). While Caucasians hold the plurality (the largest percentage but not a majority) of responses (39 percent) they are followed by equal numbers of minorities (20 percent each of African Americans, Hispanics and Asians). This is a result of the elderly and low income quota groups including minorities and non-minorities. Total household income is almost evenly distributed across all levels, while the majority of respondents (65 percent) live in an urban setting. Overall age distribution is slightly weighted to the older cohorts due to the 65 and older group. Results for individual quotas are represented in the tables below. The tables only list quota groups, so you will not find Caucasian or Native American responses listed with the others. WisDOT implemented a separate tribal consultation process and a web-based survey as part of the *Wisconsin Rail Plan 2030* public involvement process.[2]

- Overall, the gender breakdown for the survey (Table 1) is 50 percent female and 50 percent male. When looking at the individual surveyed groups, a majority of female responders are represented for African Americans and low income urban and rural participants. A majority of male responders is recorded for Hispanic and Asian groups. Those age 65 and over have an equal number of male and female respondents (50 percent each).

**Table 1 - Respondent Gender by Sample Groups**

| Gender | Total Sample | African American | Hispanic | Asian | Low Income Urban | Low Income Rural | 65 and Over |
|---|---|---|---|---|---|---|---|
| Male | 50% | 38% | 59% | 64% | 37% | 46% | 50% |
| Female | 50% | 62% | 41% | 36% | 63% | 54% | 50% |

- The overall ethnicity breakdown for the survey (Table 2) is 39 percent Caucasian (a portion of the elderly and low income group), 20 percent African American, 20 percent Hispanic, 20 percent Asian and one percent Native American. For each of the groups of African American, Hispanic and Asian there is 100 percent inclusion. For the breakdowns based on low income groups and those age 65 and over, respondents who are African American make up the plurality of those in the urban low income group (40 percent), compared to Caucasians who make up the plurality (the largest percentage but not a majority) in the rural low income group (36 percent). For those age 65 and over the plurality is made up of Caucasians (48 percent).

[2] Go to www.wisconsinrailplan.gov for information about WisDOT's public involvement process and results from the web survey.

**Table 2 - Respondent Ethnicity by Sample Groups**

| Ethnicity | Total Sample | African American | Hispanic | Asian | Low Income Urban | Low Income Rural | 65 and Over |
|---|---|---|---|---|---|---|---|
| Caucasian | 39% | 0% | 0% | 0% | 24% | 36% | 48% |
| African American | 20% | 100% | 0% | 0% | 40% | 22% | 20% |
| Hispanic | 20% | 0% | 100% | 0% | 24% | 24% | 14% |
| Asian | 20% | 0% | 0% | 100% | 11% | 16% | 16% |
| Native American | 1% | 0% | 0% | 0% | 1% | 2% | 2% |

- A very even distribution of income groups is witnessed when looking at the total respondent sample (Table 3). When looking at specific cohorts, the plurality (30 percent) of the African American group is considered low income (under $15,000 per year), while the plurality (24 percent) of Hispanics have yearly incomes of $26,000-$35,999, and the plurality (32 percent) of Asians indicate household incomes of $100,000 or more. The plurality (28 percent) of those age 65 and over has incomes of $15,000 to $25,999 per year.

**Table 3 - Respondent Income by Sample Groups**

| Income | Total Sample | African American | Hispanic | Asian | Low Income Urban | Low Income Rural | 65 and Over |
|---|---|---|---|---|---|---|---|
| Under $15,000 | 15% | 30% | 21% | 6% | 57% | 38% | 18% |
| $15,000 to $25,999 | 14% | 21% | 15% | 13% | 43% | 62% | 28% |
| $26,000 to $35,999 | 15% | 19% | 24% | 10% | 0% | 0% | 15% |
| $36,000 to $50,999 | 17% | 14% | 15% | 17% | 0% | 0% | 14% |
| $51,000 to $75,999 | 15% | 11% | 14% | 13% | 0% | 0% | 8% |
| $76,000 to $99,999 | 9% | 2% | 4% | 9% | 0% | 0% | 5% |
| $100,000 or more | 15% | 4% | 8% | 32% | 0% | 0% | 12% |

- The majority of total sample respondents live in an urban setting (65 percent) as shown in Table 4. African Americans record the highest number of urban dwellers (83 percent), while almost equal numbers of Hispanics, Asians and those age 65 and over live in an urban setting (65 percent -67 percent).

**Table 4 - Respondent Location by Sample Groups**

| Residence | Total Sample | African American | Hispanic | Asian | Low Income Urban | Low Income Rural | 65 and Over |
|---|---|---|---|---|---|---|---|
| Urban | 65% | 83% | 65% | 67% | 100% | 0% | 66% |
| Rural | 35% | 17% | 35% | 33% | 0% | 100% | 34% |

- Within the total sample, there is a slight lean toward the older cohorts as necessitated by the quota group of those age 65 and over as shown in Table 5. Sixty-three percent (63 percent) of the African Americans are age 45 and older, while 45 percent of the Hispanics are age 34 and younger, compared to 44 percent of Asians age 35 to 54. The plurality of both urban and rural low income respondents are age 65 & over (35 percent & 26 percent, respectively).

**Table 5 - Respondent Age by Sample Groups**

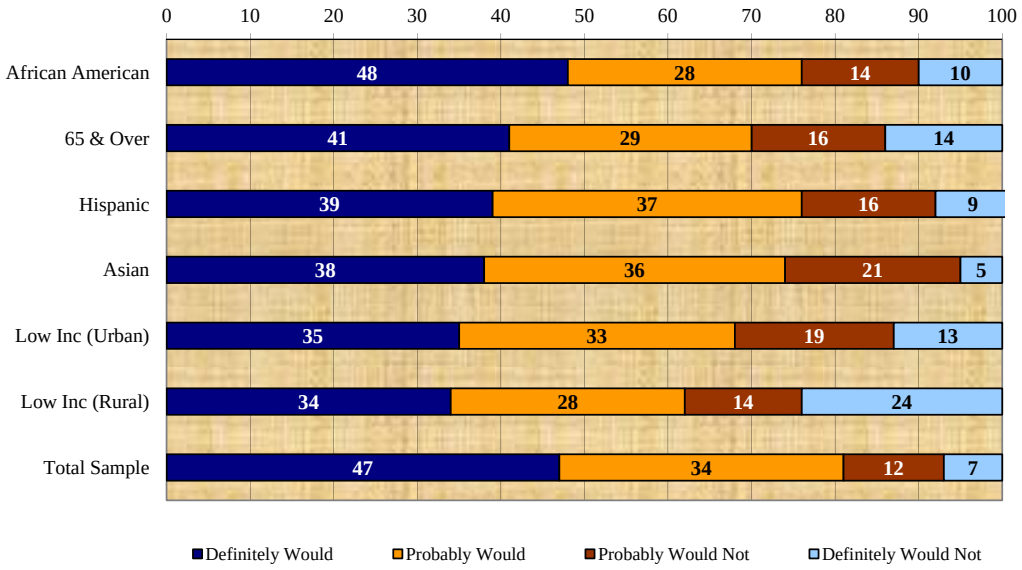
| Age | Total Sample | African American | Hispanic | Asian | Low Income Urban | Low Income Rural | 65 and Over |
|---|---|---|---|---|---|---|---|
| 18 to 24 | 10% | 6% | 21% | 14% | 10% | 16% | 0% |
| 25 to 34 | 13% | 12% | 24% | 11% | 12% | 12% | 0% |
| 35 to 44 | 18% | 20% | 14% | 23% | 10% | 12% | 0% |
| 45 to 54 | 22% | 22% | 15% | 21% | 22% | 16% | 0% |
| 55 to 64 | 17% | 20% | 13% | 15% | 11% | 18% | 0% |
| 65 and over | 20% | 21% | 14% | 16% | 35% | 26% | 100% |

## Forms of Transportation

### *Key Finding #2*

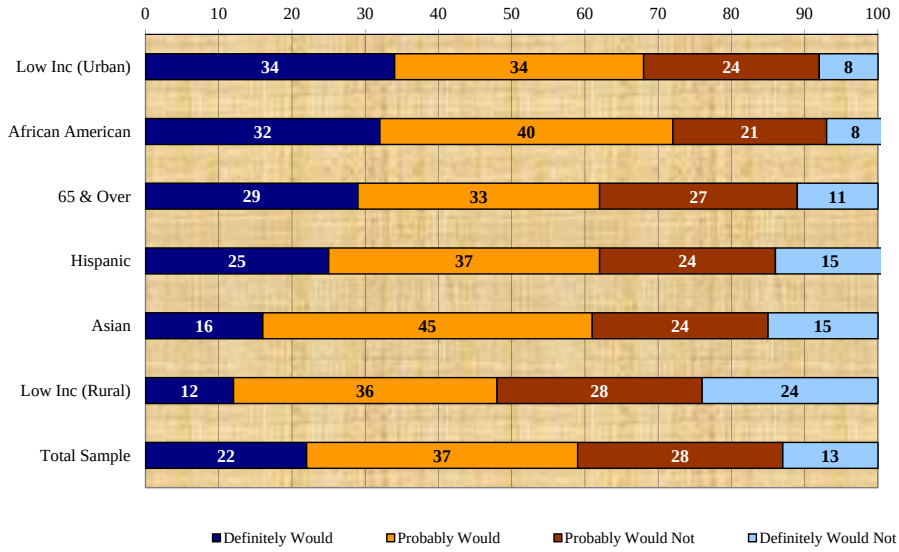
Travel by automobile for a distance of 200 miles holds the highest level of intensity (those that definitely would use this type of transportation) across almost all surveyed groups. Travel by air comes in a close second, with trains as a third choice followed by bus. It should be noted, however, when including those that "probably would use" with those that "definitely would use" certain modes of transportation, trains garner a majority usage across all cohorts except for those in the rural low income group.

**Figure 1 - How Likely Would You be to Use a Personal Automobile to Travel More Than 200 Miles?**



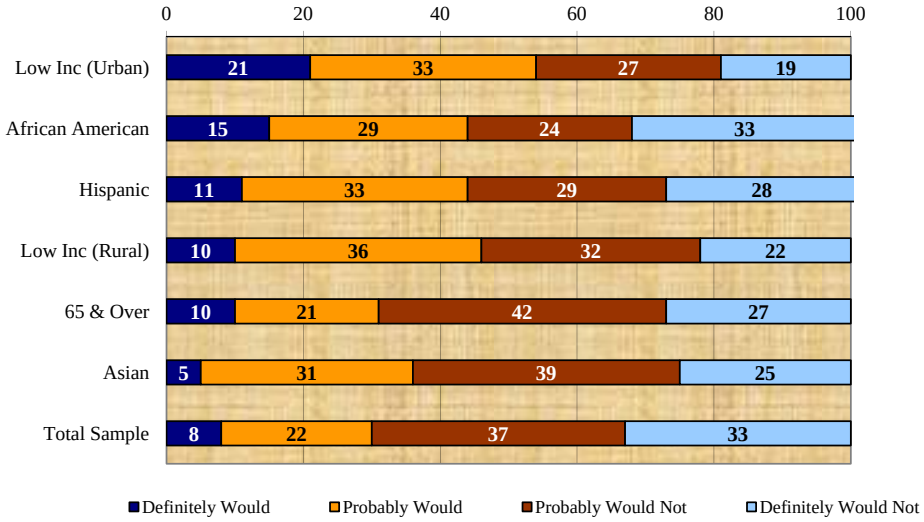

- Overall, 47 percent of the total sample "definitely would" use a car to travel more than 200 miles and when combined with those who "probably would" (34 percent) this constitutes 81 percent of the sample (Figure 1). African Americans are the most likely to use a car to travel 200 miles (48 percent "definitely would") while both those urban and rural low income respondents would use a car the least (35 percent and 34 percent respectively said they "definitely would").

**Figure 2 - How Likely Would You be to Use a Train to Travel More Than 200 Miles?**



- While only 22 percent of the total sample said they would definitely use a train to travel over 200 miles, 34 percent of urban low income respondents, 32 percent of African Americans, 29 percent age 65 and over and 25 percent of Hispanics said they would definitely use a train (Figure 2). When combining those that "definitely would" and those that "probably would" use a train, the majority across all quota groups indicated they would travel by train, with the exception of rural low income respondents registered 48 percent.

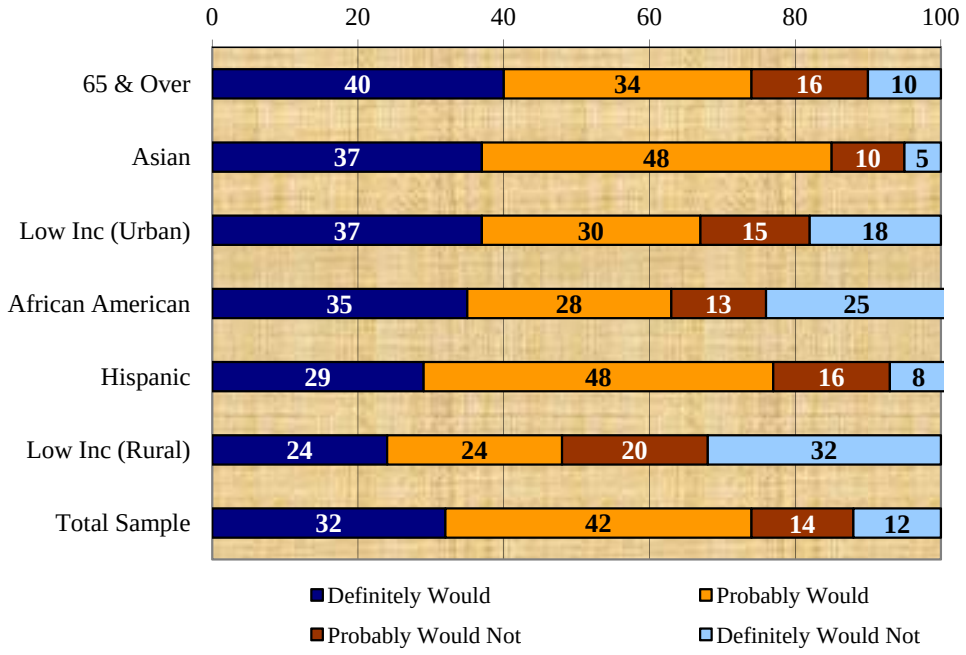
**Figure 3 - How Likely Would You be to Use a Bus to Travel More Than 200 Miles?**




- Bus travel garnered a very low acceptance by the total sample. Only eight percent of the total sample said they "definitely would" use a bus to travel more than 200 miles, while 22 percent indicated they "probably would" for a total of 30 percent usage (Figure 3). However, this number jumps to 54 percent (21 percent "definitely would" use and 33 percent "probably would" use) for those in the urban low income cohort. This group is the only group that registered a majority that would use the bus. The lowest total level of usage comes from those age 65 and over at 31 percent total likelihood of usage.

- A large majority (74 percent, 32 percent "definitely would" and 42 percent "probably would") of the total sample indicate they would use an airplane to travel more than 200 miles (Figure 4). While those age 65 and over, Asians, urban low income respondents and African Americans hold the highest level of intensity (definitely would) for using airplanes (35 percent to 40 percent "definitely would" use them to travel more than 200 miles), Asians hold the highest percentage of total likelihood of usage (85 percent combined "definitely" and "probably use").

**Figure 4 - How Likely Would You be to Use an Airplane to Travel More Than 200 Miles?**



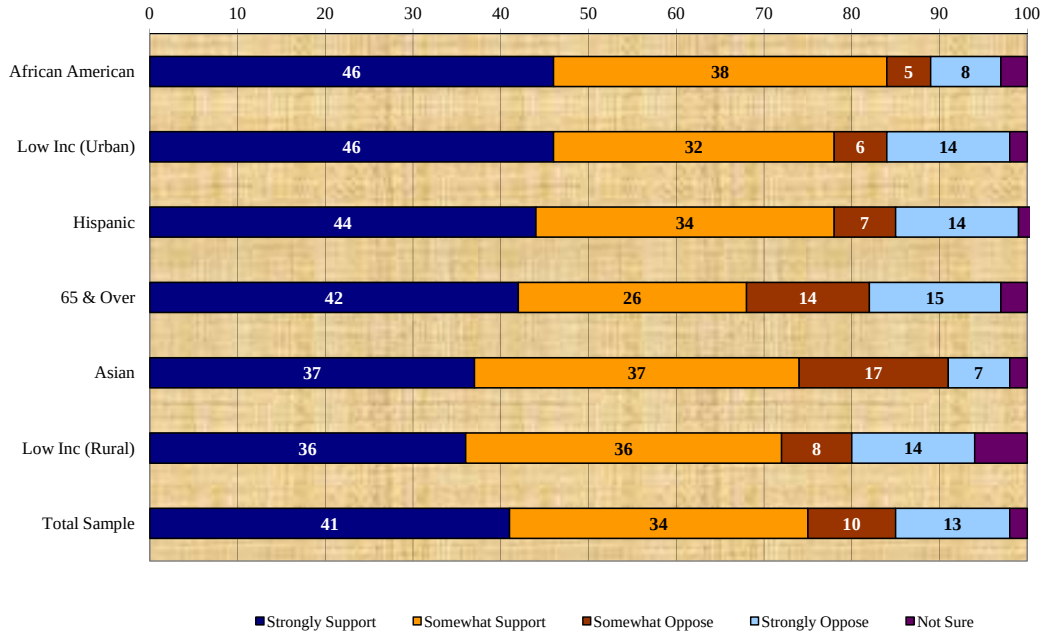

## Intercity Passenger Rail

***Key Finding #3***

There is a very high level of support for expanding Wisconsin's passenger rail system among all surveyed groups. However, the level of importance does not currently mirror this high support concerning personal access to a passenger rail system now or in the future. The level of importance can be expected to rise as more passenger rail services become available to more of the state's population.

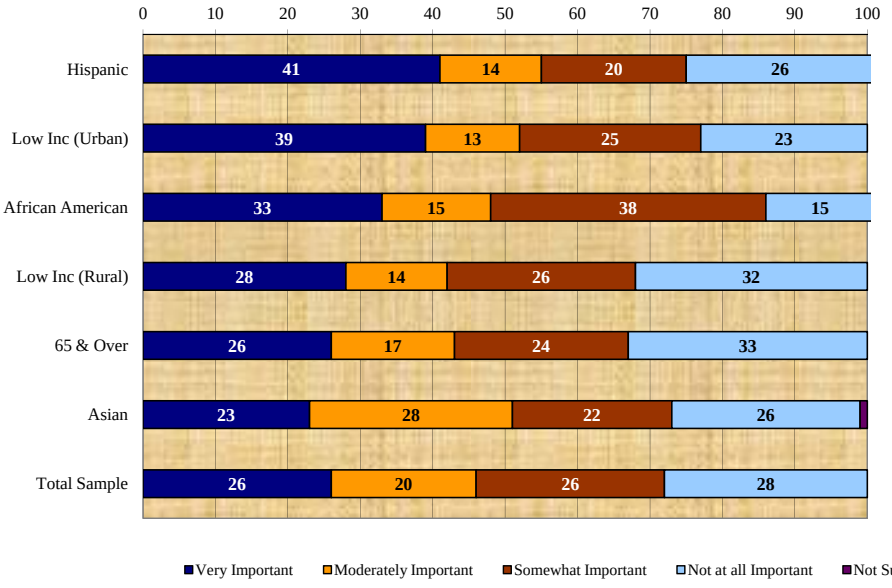
- There is an overwhelming level of support for expanding Wisconsin's passenger rail system (Figure 5). When looking at the total sample, 41 percent strongly support expanding the system followed by 34 percent who somewhat support it for a combined 75 percent level of support. African Americans, urban low income respondents and Hispanics are the most in favor of expanding the passenger rail system in Wisconsin (44 percent to 46 percent strongly support it and 32 percent to 38 percent somewhat support it for an overall level of support between 78 percent and 84 percent). Keep in mind total majority support does not come from just these cohorts, but from all surveyed groups.

**Figure 5 - How Much Would You Support or Oppose Expanding Wisconsin's Passenger Rail System?**




- Even though there is strong support for intercity passenger rail expansion, only a majority of Hispanics, urban low income respondents and Asians feel intercity passenger rail service is very or moderately important to them personally, now or in the future (Figure 6). If the high level of support is there for expansion, this may spill over into creating a higher level of importance once it is established.

**Figure 6 - How Important is Access to Intercity Passenger Rail to You Personally Now or in the Future?**



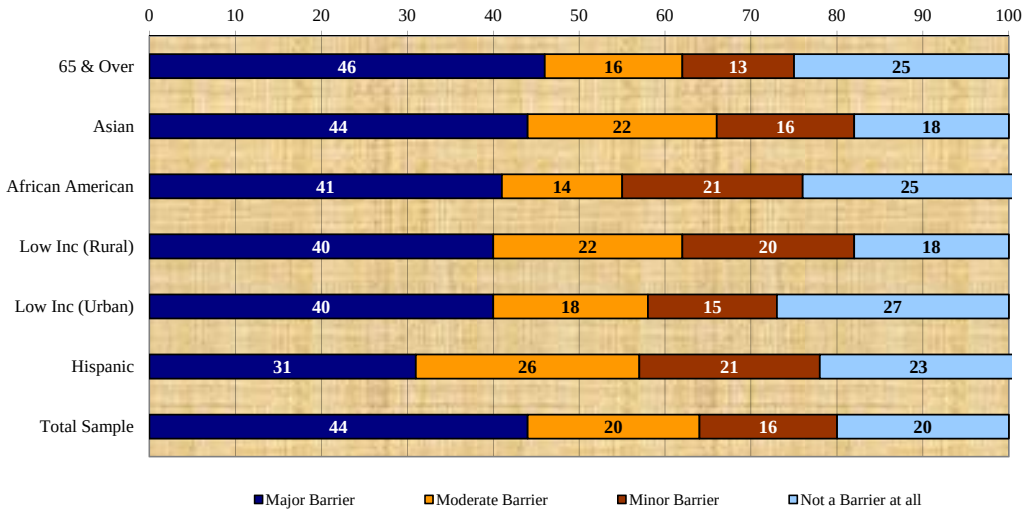
# Barriers to Passenger Rail Travel

## *Key Finding #4*

Overall, the two most prevalent barriers to respondents using trains for travel are the lack of rail service close by and the lack of having a vehicle for their use when arriving at their destination. Different respondent groups had various levels of agreement as to which barriers proved the most difficult. Other barriers mentioned also included lack of stops, lack accessibility for persons with disabilities and the general safety of train operations.

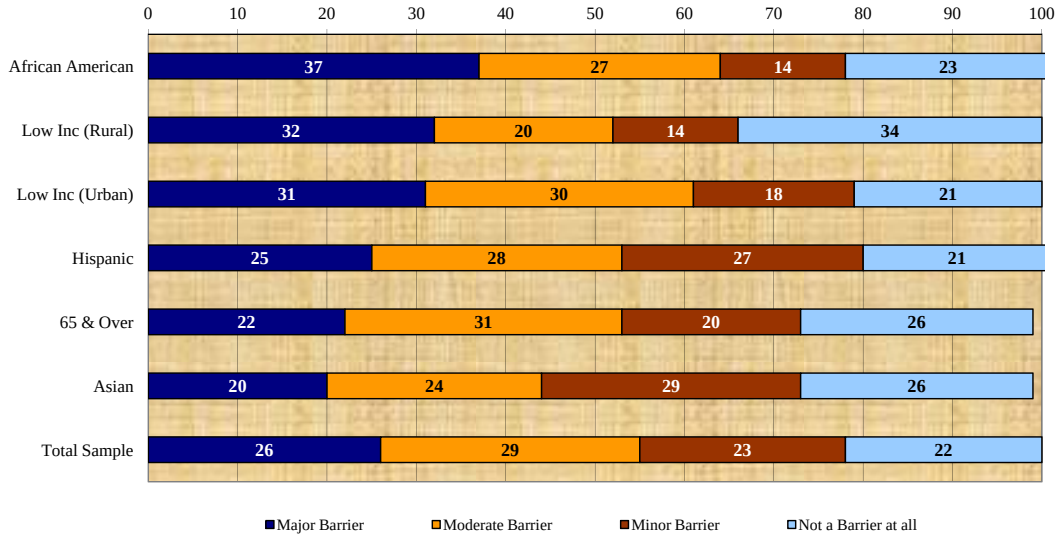
- When asked about the proximity of passenger rail service, 40 percent or more of almost all surveyed cohorts agreed that passenger rail service not being available close to where they live is a major barrier to traveling by train (Figure 7). Only those of Hispanic background agreed less (31 percent). Only a quarter (25 percent) or less of most cohorts said not having passenger service close to them was NOT a barrier to traveling by train. Therefore, a great majority of respondents indicate that proximity to a passenger service plays a major role in their not using train travel more often.

**Figure 7 - How Much of a Barrier is "Passenger Rail Service is Not Available Close to Where I Live" to You for Traveling by Train?**



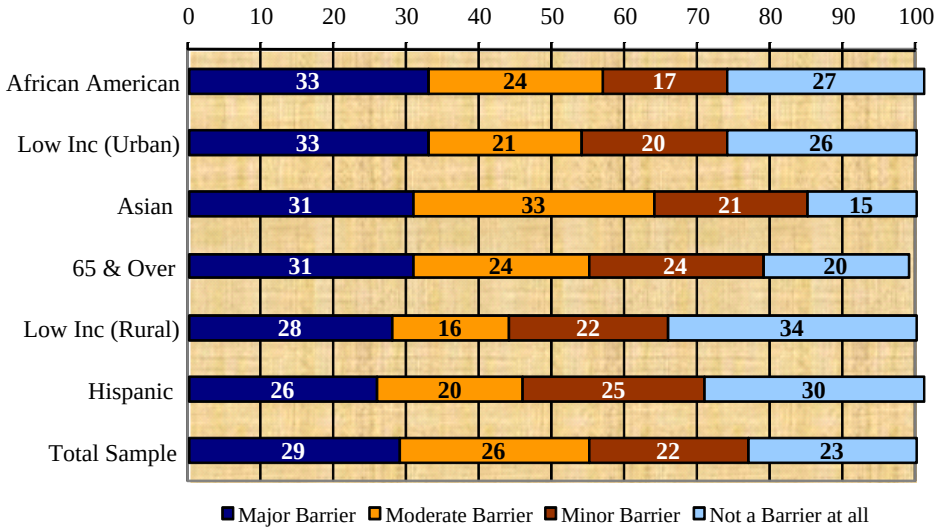
- Cost is not nearly as much of a factor when asked about barriers to traveling by train compared to proximity to rail service (Figure 8). Only 26 percent of total sample members indicated cost is a major factor of why they do not travel by train. Thirty-seven percent (37 percent) of African Americans feel cost is a major barrier compared to only 20 percent of Asians. Respondents in the rural low income group hold the highest percentage (34 percent) who do NOT feel cost is a barrier to rail travel.

**Figure 8 - How Much of a Barrier is "Cost" to You for Traveling by Train?**



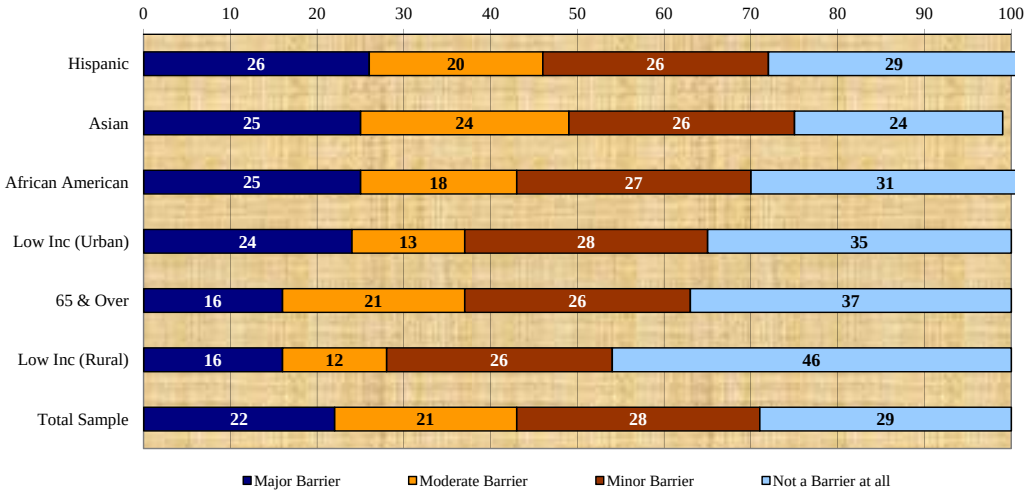

- Almost one third (29 percent) of the total sample feel a lack of departure times creates a major barrier to rail travel (Figure 9). Overall, there is little variation among quota cohorts for those who feel “there are not enough departure times to choose from” as a major barrier to rail travel (26 percent to 33 percent feel it is a major barrier). Rural low income respondents hold the highest percentage of those who feel this is NOT a barrier at all to their traveling by rail (34 percent).

**Figure 9 - How Much of a Barrier is "Not Enough Departure Times to Choose From" to You for Traveling by Train?**




- Similar to departure times, the length of time a rail trip takes is very low on the list of items that pose a major barrier to respondents traveling by train (Figure 10). Overall, only 22 percent of the total sample indicated this to be a major barrier to their traveling by rail. When looking at each individual minority cohort, Hispanic respondents felt the strongest that time is a major barrier (26 percent) compared to only

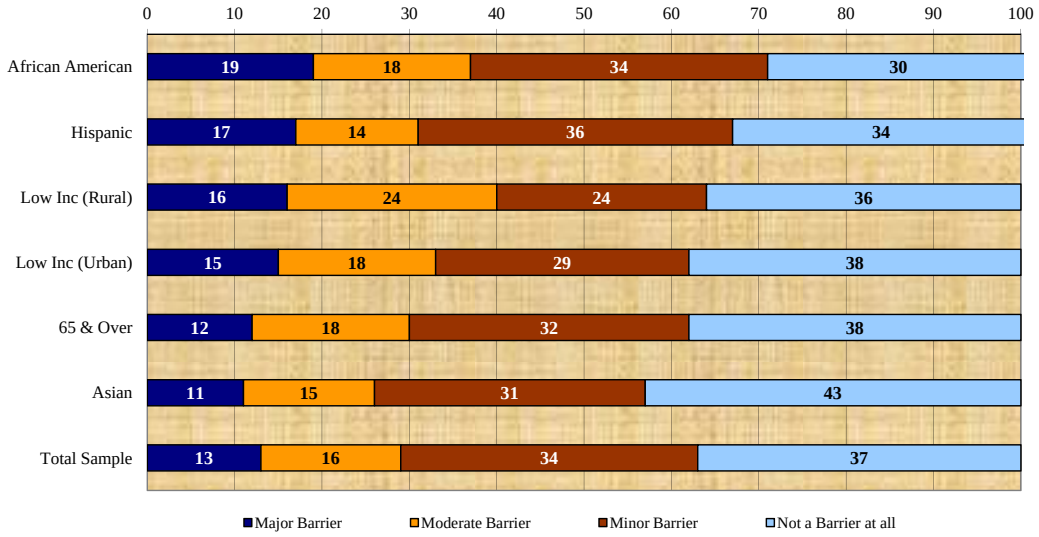
**Figure 10 - How Much of a Barrier is "Rail Trips Take Too Long" to You for Traveling by Train?**




16 percent of those age 65 and over and rural low income respondents.

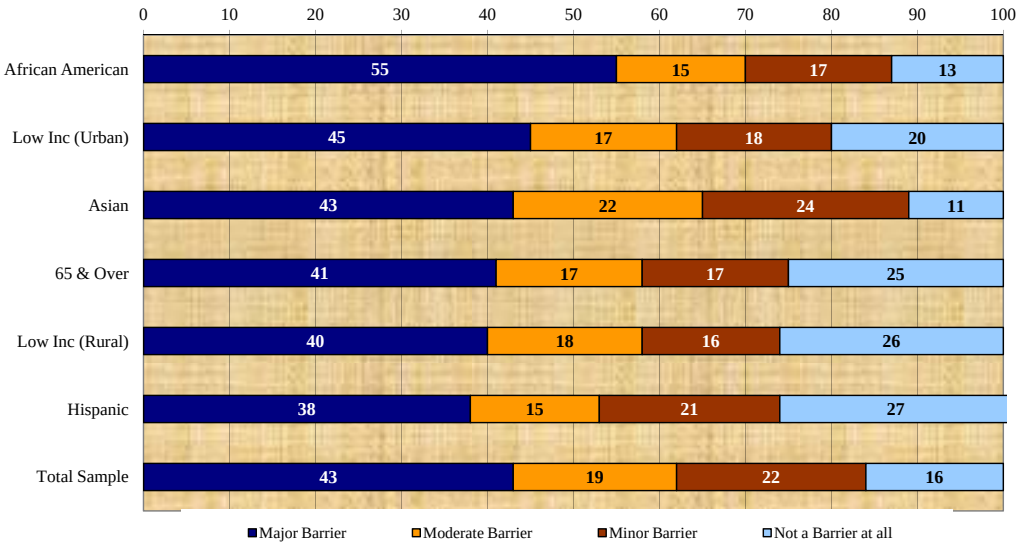
- Lack of amenities on a train is recorded as the least major barrier to travel by train (Figure 11). Only 13 percent of the total sample currently feel this is a major barrier, with the majority of minority cohorts indicating 11 percent to 19 percent.

**Figure 11 - How Much of a Barrier is "The Lack of Amenities on Trains" to You for Traveling by Train?**




- The preference of having a car available at their destination is also a major barrier for many respondents when it comes to train travel (Figure 12). Overall, 43 percent of all respondents feel this is a major barrier. When reviewing specific cohort responses, African Americans feel this is a major barrier the most (55 percent) while Hispanics feel it is a major barrier the least (38 percent).

**Figure 12 - How Much of a Barrier is "I Prefer to Have a Car Available When I Get to My Destination" to You for Traveling by Train?**



- When asked if there are any other barriers that prevent people from using trains for travel, 80 percent of all respondents indicated there are no other barriers. However, of those who did indicate additional barriers, no more than four percent indicated any one issue. Of the top three additional barriers indicated, four percent said the lack of stops/stations is a barrier, three percent indicated a lack of handicap accessibility and three percent are worried about the safety of trains (accidents/derailments).

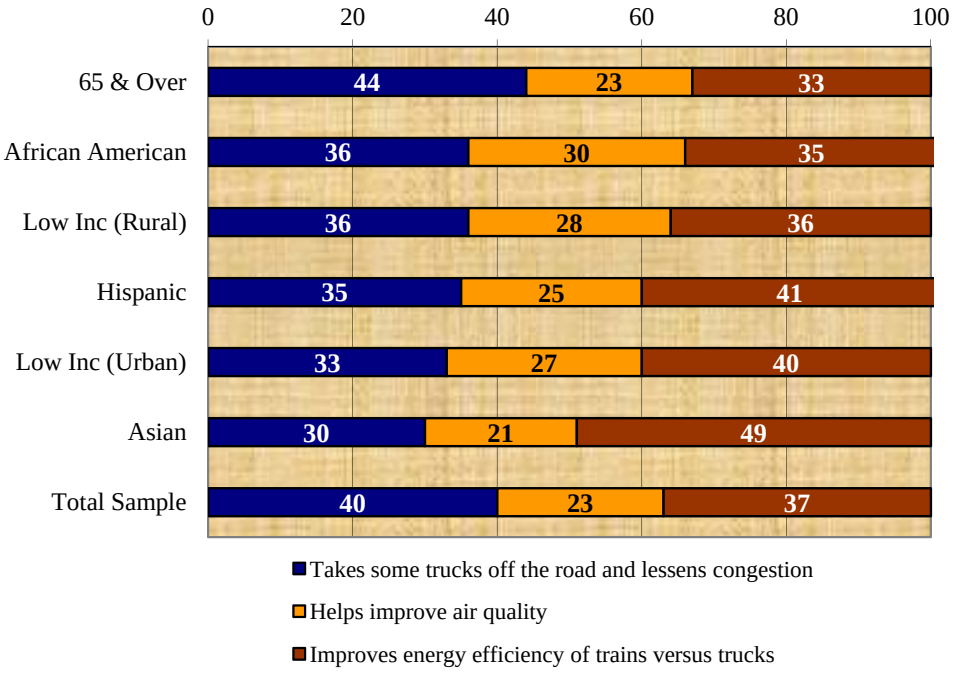
## Rail Freight Service

### *Key Finding #5*

Overall, most surveyed minority groups feel the biggest benefits of moving goods by rail are to reduce highway truck congestion and take advantage of the improvement in energy efficiency of trains compared to trucks. The majority of groups also agree that the state should increase assistance so that more freight can be carried by rail.

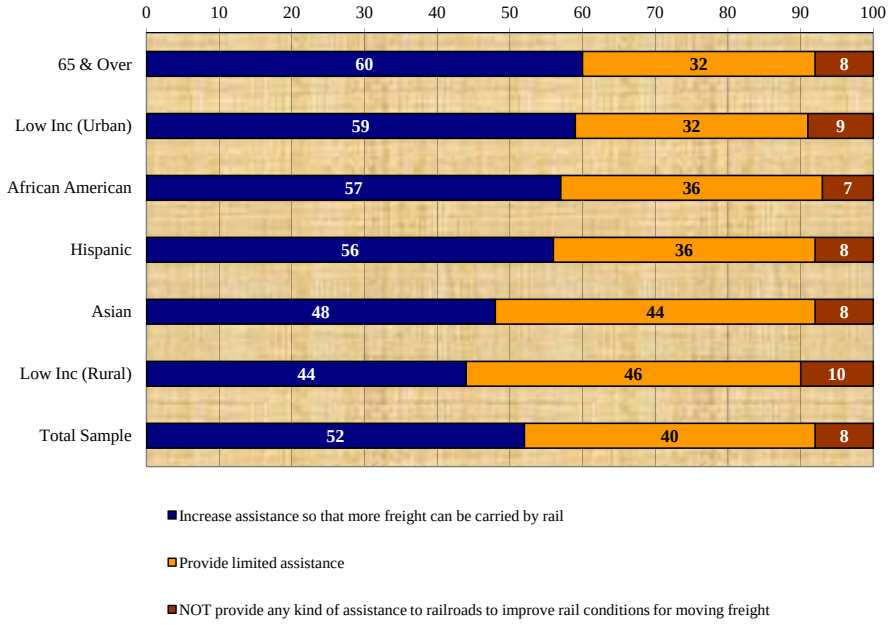
- Overall, the total sample believes taking trucks off the road to lessen congestion is the biggest benefit of moving goods by rail in the state (Figure 13). However, when looking at each minority segment, only those age 65 and over agree with this the most (44 percent). Fairly equal amounts of African Americans feel the biggest benefits are spread out over lessening congestion (36 percent), improving air quality (30 percent) and improving energy efficiency (35 percent). Those respondents from the rural low income group equally feel lessening congestion (36 percent) and improving energy efficiency (36 percent) are the biggest benefits, while the plurality of Asian (49 percent) Hispanic (41 percent), low income urban participants (40 percent) feel energy efficiency is the most important benefit of moving goods by rail.

**Figure 13 - What Do You Think is the Biggest Benefit to the State as a Whole Regarding Moving Goods by Rail?**



- The majority of the total sample believes the state should increase assistance so that more freight can be carried by rail (52 percent) as shown in Figure 14. Overall, this majority feeling is the same sentiment of all minority groups with the exception of a plurality (highest percentage but not a majority) of rural low income respondents who rather feel the state should only provide limited assistance (46 percent). Overall, there are very few respondents across all cohorts who feel the state should NOT provide any type of assistance to railroads to improve rail conditions for moving freight.

**Figure 14 - Prefered Level of State Assistance for Freight Rail**

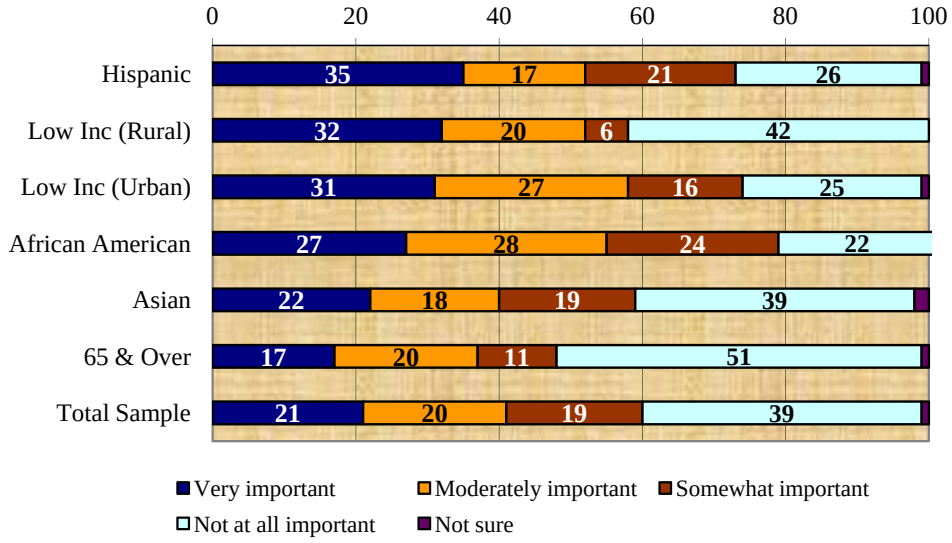



## Commuter Rail Service

### *Key Finding #6*

Most participants from the majority of surveyed minority groups do not feel commuter rail service is very important to them personally. The exception to this are African Americans and urban low income members who would be the most interested in this type of service. Overall, however, most respondents agree the state will have to provide assistance to make any commuter rail service viable.

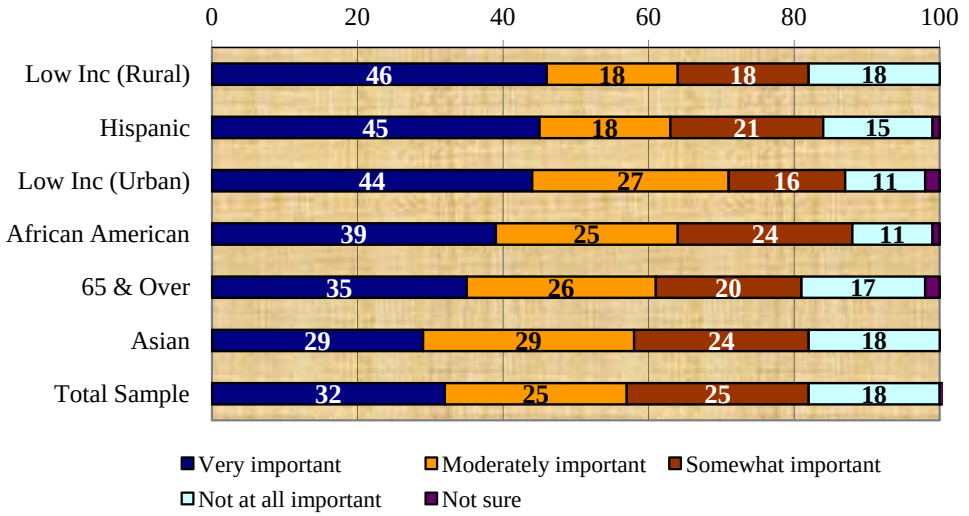
**Figure 15 - How Important is it for You Personallyto Have Access to Commuter Rail?**




- The plurality (highest percentage but not a majority) of total sample respondents (39 percent) indicate it is not at all important for them to personally have access to commuter rail service (Figure 15). The plurality of most surveyed minority groups feel access is not important with the exception of Hispanics (35 percent feel it is very important), urban low income respondents (31 percent feel it is very important) and African Americans (28 percent feel access for them is moderately important). When combining those who feel access is very or moderately important however, the majority of both urban and rural low income groups, Hispanics and African Americans agree that commuter rail service would be personally beneficial. Those age 65 and over have the least interest in any commuter rail system.

- Both the total sample (32 percent) as well as all the minority quota groups (29 percent to 46 percent) feels it is very important for the state to provide some financial support to make commuter rail service viable (Figure 16). Rural low income respondents (46 percent), Hispanics (45 percent) and urban low income respondents (44 percent) are the most in agreement, while Asian respondents are the least (29 percent).

**Figure 16 - How Important is it for the State to Provide Some Financial Support to Make Commuter Rail Service Viable?**



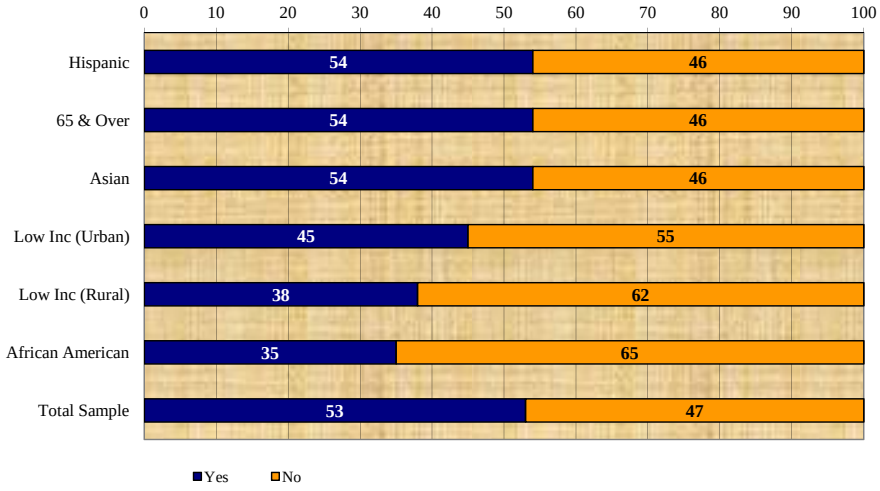

## Community Rail Traffic

### *Key Finding #7*

About half of all respondents live in communities in which trains travel through, with Hispanics, those age 65 and older and Asians living near rail lines the most and African Americans and rural low income respondents living near rail lines the least. Very few respondents indicated any concerns about trains in their communities, however, of those that did, safety and noise are the most noted concerns. This was asked to see if environmental justice populations were experiencing negative community impacts from freight rail traffic.

- Overall, 53 percent of the total sample lives in communities in which trains travel through them (Figure 17). Of the surveyed minority groups, 54 percent of Hispanics, those age 65 and over and Asians live in communities with rail lines. Only 35 percent of African Americans said trains go through the communities in which they live.

**Figure 17 - Do Any Trains Go Through the Community in Which You Live?**




- Those who indicated trains travel through their communities were asked if they have any specific concerns about those trains. Here, 67 percent indicated no concerns. However, eight percent have concerns about the overall safety, six percent mentioned the noise of the trains, six percent indicated a concern about traffic being stopped when a train is going through, five percent stated the train whistle is a concern to them and five percent are concerned about the lack of gates or lights at certain crossing points. The remaining responses represent one percent or less each.

# Appendix 2-C: Tribal Consultation Summary

## Meeting Summary

The general meeting notes, below, are intended to summarize key comments and questions, decision points and mitigation examples discussed during the *Wisconsin Rail Plan 2030* tribal consultation meeting. In general, the organization of these notes follows the meeting agenda. In some cases, and in response to certain comments, the Wisconsin Department of Transportation (WisDOT) provided clarification and additional information during the discussion. This information is noted as "meeting response" throughout these general meeting notes. WisDOT also reviewed the comments after the meeting. Any additional information in response to the comments is noted as "follow-up response."

### *General Meeting Notes*

**1. Introduction**
Aileen Switzer, WisDOT Bureau of Planning and Economic Development, opened the meeting by welcoming attendees and providing a broad overview of the consultation meeting as part of the *Wisconsin Rail Plan 2030* planning process.

**2. Purpose of Meeting**
Ms. Switzer provided an overview of the purpose and intent of tribal consultation as part of the *Wisconsin Rail Plan 2030* planning process.

- To ensure that the plan accounts for sensitive resources at a statewide and regional level
- To establish a better understanding of the role of the statewide planning process as the basis of future project implementation, particularly the purpose and need of future projects

**3. Overview of the planning process**
Ms. Switzer provided an overview of the department's tribal consultation process as it relates to the plan development process and also the purpose and proposed components of *Wisconsin Rail Plan 2030*. A summary of the key points of the discussion are provided below.

**A. WisDOT's tribal consultation process**

Tribal consultation is a critical component in the development of statewide, long-range transportation plans. WisDOT staff meets with tribal representatives, WisDOT region staff, the Bureau of Indian Affairs and the Federal Highway Administration to discuss transportation issues and needs, and integrate that information into the state's long range plans. Follow-up meetings can be scheduled to discuss the draft plan as requested.

Tribal consultation for region-level planning efforts includes annual outreach efforts to review planning goals and WisDOT's Six-Year Highway Program.

***Comment:*** Participants mentioned importance of education and cooperation between state, railroads and tribes.

***Comment:*** WisDOT and railroads need to remember tribes have sovereign rights.

**B. Rail plan purpose**

*Wisconsin Rail Plan 2030* plan will define a vision for rail, articulate policy statements specific to rail and further the state's efforts to plan for and implement a rail system that complements Wisconsin's other modes. Through the plan's defined policies decision-makers will identify priorities and strategies for future investment, while meeting federal and state legislative requirements. Key federal legislation includes the Passenger Rail Investment and Improvement Act of 2008 which requires states to adopt state rail plans to be eligible for federal funding opportunities. Rail plans must address freight, intercity passenger and commuter rail. The act also requires states to update these plans every five years.

**C. Benefits of rail**

Rail continues to be an integral part of the state's transportation system and offers many important benefits - such as increased economic competitiveness - by providing mobility for people and goods and supporting business, industry and job growth/retention.

Increased rail ridership and rail freight transport can help reduce highway congestion; a single freight train can take the load of 280 or more trucks off our overcrowded highways.

A rail system can help in the state's efforts to reduce energy use and greenhouse gas emissions. For example, a freight train moves a ton of freight an average of 457 miles on a single gallon of fuel. According to the Federal Railroad Administration, railroads are 1.9 to 5.5 times more fuel-efficient than trucks, depending on the commodity carried and length of the haul.

Finally, rail is part of the state's multimodal transportation network and will continue the state's efforts to provide a quality system that can safely move people and goods.

**D. Relationship to Wisconsin's Long Range Transportation Plan *Connections 2030***

To understand what we propose to do for the state rail plan, it is important to recognize the state's recently adopted multimodal 20 year plan, *Connections 2030*.

Adopted in 2009, *Connections 2030* defines Wisconsin's vision for transportation through the year 2030. The plan is organized around seven themes. The themes cover a broad range of topics from preservation and to quality of life, to mobility and choice. Within each of these

themes are series of policy and actions statements that will help guide decision-makers as they address future challenges and make transportation investment decisions.

*Connections 2030* is a multimodal plan that addresses all modes of transportation. For this reason, the *Wisconsin Rail Plan 2030* builds off of the policies and recommendations in *Connections 2030.*

**E. Rail plan components**

The state rail plan will contain 10 components to meet the Passenger Rail Investment and Improvement Act and state requirements. The plan will also meet the federal requirement for an environmental justice analysis and the state requirement for a system-plan environmental evaluation. The 10 rail components are:

- System inventory
- Economic development
- Freight rail
- Intercity passenger rail
- Commuter rail
- Livable and sustainable communities
- Safety and security
- Funding
- System-plan environmental evaluation
- Environmental justice review

**F. Plan development timeline**

The plan development process includes three phases:

Plan scoping – spring/early summer 2010 – This phase includes outreach designed to obtain feedback from the stakeholders and the general public pertaining to the rail related issues and needs. Specific outreach activities include administration of a web-based questionnaire supplemented with a telephone survey; a stakeholder workshop; as well as environmental resource agency and tribal consultation. The results of this outreach will be used to add to the scope of the rail plan and refine the discussion and content.

Draft plan outreach – late summer 2010 – This phase of outreach is structured to present the draft plan for review and comment. Public hearings and targeted outreach meetings will be held across the state to obtain feedback and further refine the discussion of needs and issues included in the plan.

Plan adoption – late fall 2010 – During this final phase, the comments received during the draft plan outreach will be used to amend the plan as needed. The final plan will be submitted to the Secretary for consideration and approval. Once the plan is officially adopted, a copy will be sent to the Federal Railroad Administration.

**4. Chapter review**

System Inventory

The system overview includes a review of all rail lines primarily focused on the state's freight network. The recommended passenger and commuter rail systems statewide are proposed to run on existing freight corridors.

***Comment:*** Mileage of rail lines in tribal lands – Right of way differences between what the deed says and land lease remains an issue for the Menominee Tribe. In the 1980s the rail line was improved and later abandoned. Because this rail line went straight through Menominee and Stockbridge lands, and provided a direct connection to the Crandon Mine, many had concerns about the potential for hazardous spills. In addition, the Department of Energy (DOE) was transporting spoils from nuclear sites through tribal lands. Because each rail line is chartered individually, abandonment procedures require the railroads to go through resorted easement or release. When the process is complete, the rail road no longer has rights to the rail line. In the case of the Menominee line, parts of it have not been deeded to Menominee. Instead, the railroad is indicating that the tribe must purchase it.

Economic Development

This section will investigate the important role rail has in Wisconsin's economy. It will include a discussion of the economic significance of the railroad industry including a review of industry sectors dependent upon rail. It will also review the volume, value and types of commodities transported by rail in, out and through the state. This plan element will also analyze the economic benefits of passenger and commuter rail such as increased property values, job creation and increased tourism opportunities.

***Comment:*** The conversion of trails back to rails was raised as a concern for a few of the tribal representatives. For some tribes, they would like to see freight rail lines revitalized for economic development; other tribes noted that they would rather maintain the lines as trails. From their perspective, trails provide greater economic development opportunities. Participants indicated support for analyses that assessed the economic impact rail service would have for their areas. One participant asked if rail lines go back to use, and they pass through tribal lands, would the tribes weigh in and be part of the process?

Freight Rail

An analysis of the freight rail system will also be included as part of the rail plan. This will include a review of the system's current network including commodity flows through, into and out of the state. The discussion will also include a review of the state's rail infrastructure, system condition and rail line abandonments statewide. WisDOT will work with freight railroad owners and operators and related stakeholder interests to identify issues and needs.

***Comment*:** Revitalization of rails in Wisconsin was identified as a concern for some participants. Participants asked whether some rail lines would be revitalized to accommodate passenger and freight

service needs. Participants asked if rail lines are revitalized, what types of control would the tribes have with what passes through tribal lands?

***Comment:*** Some participants asked what happens to the state funds if a rail line goes out of service, and whether those dollars become available for highway needs. In northern Wisconsin around WIS 8, there is no other way to transport goods or people except by highways. As a result, with the construction work underway along WIS 8, tourism revenues are going down.

***Comment:*** Do Rail Transit Commissions have responsibility for rail freight?

**Meeting Response:** Rail Transit Commissions (RTCs) were formed as a mechanism to purchase rail lines and manage rail service. They generally provide matching funds for the purchase and rehabilitation of rail corridors. RTCs continue to be valuable partners in efforts to preserve freight rail service even though they were created before a change to the Wisconsin Constitution allowed the state to make direct investments in rail infrastructure.

***Comment:*** A participant raised concerns about the Crandon Mine, asking what happens if the mine is reopened? Would mine materials be transported by rail?

<u>Intercity Passenger Rail</u>

In addition to discussing freight rail, the rail plan will also assess the state's passenger rail system. The plans and decisions made as part of the nine states Midwest Regional Rail Initiative will be adopted as part of the rail plan. In addition, the passenger rail discussion includes an inventory of the existing services and infrastructure. This discussion will also document the ownership and operation of the passenger rail service and discuss the performance within the state.

The chapter will also identify the various studies that are underway to implement passenger rail statewide. Similar to the freight element, WisDOT will conduct outreach to the various passenger rail stakeholder interests to identify needs and issues that might be included in the rail plan.

***Comment:*** A participant asked about the likely cost of a passenger rail ticket between Madison and Milwaukee. The person indicated that they had heard that the cost was $55 one-way between Madison and Milwaukee. The concern about whether this price or something similar was affordable for low-income individuals

***Comment:*** Another participant indicated that getting people to northern Wisconsin is a concern. With highway projects making travel by highway less convenient, tourism is down in the area.

Commuter Rail

To date, WisDOT has provided support for commuter rail studies on a case-by-case basis.
The rail plan will include four policies to support commuter rail activities. The policies range from continuing funding for fixed-guideway transit[1] studies, to developing a program to support capital and operating needs of commuter rail in major metro areas. Given that commuter rail is considered a local initiative, WisDOT's role continues to be one of providing technical and funding support for elements of the proposed study. It will also document the studies currently underway, as well as those proposed by communities statewide. The chapter will also include an inventory of services offered, and the system's condition. Similar to the other chapters, the department will conduct outreach with commuter rail interests to identify issues and needs for possible inclusion in the plan.

Livable and Sustainable Communities

The rail plan will document WisDOT's continued emphasis on connectivity and mobility. This chapter encompasses the recent national discussions and federal emphasis on livable and sustainable communities. In addition, the chapter will discuss how freight moves between modes – such as rail to port, and rail to truck. The chapter includes a broad definition both livability and sustainability to include land use planning, air quality, energy consumption, and the natural and built environment.

Safety and Security

Safety and security continue to be the department's top priority. This element will provide an analysis of the current data; as well as discuss current and anticipated initiatives both in Wisconsin and nationally. The chapter will also identify potential issues to be addressed in the future.

***Comment:*** Concerns were raised regarding hazardous waste material transport and the possibility of hazardous spills. Other participants raised concerns about possible impacts to historical sites resulting from spills.

Funding

A requirement identified in the federal Passenger Rail Investment and Improvement Act is the development of a funding plan and a long-range rail investment program as part of the state rail plan. This section will review current funding sources available for rail-related activities. It will also include a list of any rail capital projects that the state anticipates participating in over the 20 year life of the plan.

***Comment:*** For the Chippewa; they have fought 30-40 years to build and maintain their quality of life. The Wolf River State Trail is very important to the tribe. The Chippewa do not want rail service in their area and do not want the Department of Energy to convert the trail back to rail.

[1] Fixed-guideway operates on a permanent, separate right of way for the exclusive use of transit vehicles, existing freight railroad tracks, or on-street-rail. Examples include commuter rail (diesel or electric trains) light rail (electric vehicles, including street cars), and bus rapid transit (buses on exclusive right of way).

System-Plan Environmental Evaluation and Environmental Justice Analysis

Both the system-plan environmental evaluation and the environmental justice analysis will provide a qualitative look at the potential impacts which may occur from implementing the policies and actions identified in the plan. The system-plan environmental analysis is a state requirement under Trans 400[2]. The system-plan environmental evaluation focuses on the potential impacts to the natural and built environments if the rail plan recommendations are implemented. The environmental justice analysis is required by Presidential Executive Order 12898 and focuses on potential impacts to minority and low-income populations resulting from implementation of the rail plan's recommendations. Both analyses are at a statewide level. As a result, they do not replace the more detailed project level analysis.

*Comment:* Any transportation work must ensure that historic sites and burial grounds along the railroads are protected.

[2] Trans 400 establishes rules for analyzing the environmental effects of transportation plans under the Wisconsin Environmental Policy Act. The SEE is required during the preparation of a statewide, system level transportation plan when WisDOT determines that the plan contains "major and significant new proposals" likely to affect the quality of the human and natural environment.

**Meeting Participants**

| Name | Organization |
|---|---|
| Chad Waukechon | College of Menominee Nation |
| Craig Anderson | American Indian Chamber of Commerce-WI |
| Angela Jacobson | Forest County Potawatomi |
| Jill Tiegs | Stockbridge-Munsee Community |
| Bill Stark | FHWA – WI Division Office |
| Joe Miller | Stockbridge-Munsee Council |
| Matt Kunstman | Oneida Total Integrated Enterprises |
| Joe Miller | Stockbridge-Munsee Council |
| Rick Warrington | Menominee Nation, Community Development |
| Cheryl Cloud Westlund | Bad River |
| David Grignon | Tribal Historic Preservation Officer Menominee Tribe |
| Pete McGesheck | Mole Lake |
| Jennifer Queram | WisDOT – SW Region |
| Roger Larson | WisDOT – SW Region |
| Ruth Alfaro | WisDOT – SW Region |
| Sandy Stankevich | WisDOT – NC Region |
| Brent Pickard | WisDOT – NW Region |
| Don Berghammer | WisDOT – SE Region |
| Mark Higley | WisDOT – NE Region |
| Jim Becker | WisDOT - Bureau of Equity and Environmental Svcs |
| Alyssa Macy | WisDOT - Bureau of Equity and Environmental Svcs |
| Jennifer Murray | WisDOT – Bureau of Planning |
| Aileen Switzer | WisDOT – Bureau of Planning |
| Bobbi Retzlaff | WisDOT – Bureau of Planning |

# Appendix 2-D: Environmental Agency Consultation Summary

## Introduction

In the absence of Federal Railroad Administration state rail plan development guidelines, the Wisconsin Department of Transportation (WisDOT) followed the public participation requirements identified under the Passenger Rail Investment and Improvement Act of 2008 and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

SAFETEA-LU required states to develop their long-range statewide transportation plans in consultation with state, tribal and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation. The consultation process included a comparison of the draft plan to state and tribal conservation plans or maps, if available, and to inventories of natural and historic resources, if available.

As part of the environmental consultation activities, WisDOT conducted environmental consultation with federal and state agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation.

As part of the rail plan development effort, two environmental consultation meetings were held. WisDOT and the Wisconsin Department of Natural Resources (WisDNR) met on March 1, 2010. The second, all-agency, meeting was held on June 3, 2010 with state and federal environmental agencies. The feedback received during these meetings helped to shape and refine the content and focus of the long-range plan.

## Meeting Summary
## WisDNR- March 1, 2010

**1. Welcome and Introductions**

Aileen Switzer, WisDOT Bureau of Planning and Economic Development, opened the meeting by welcoming attendees and providing a broad overview of the purpose and intent of consultation as part of the *Wisconsin Rail Plan 2030* planning process.

The group discussed how the proposed Clean Energy Jobs Act fits into this effort. Any requirements of the proposed law would be followed by the department; however, the time noted in legislation would presumably come after the rail plan process.

Development of *Wisconsin Rail Plan 2030* followed a comprehensive process that included a public involvement component (detailed in *Wisconsin Rail Plan 2030* Chapter 2), as well as considerable feedback received during previous and other current efforts. These include *Connections 2030* outreach, work and analysis conducted as part of the Midwest Regional Rail Initiative and early rail plan outreach conducted between 2001 and 2004.

**2. System-plan Environmental Evaluation**

Jennifer Murray, WisDOT Bureau of Planning and Economic Development, described the System-plan Environmental Evaluation (SEE) framework, participant roles, plan comparison efforts and SEE requirements defined in Trans 400.

**3. Environmental Topics for Rail Planning**

Staff representatives from WisDOT and WisDNR discussed current issues regarding rail planning. Topics included incorporating the *Strategic Energy Assessment (Public Service Commission*); invasive species; prairie remnants on rail right-of-way; trails-to-rails; biomass production; air quality; greenhouse gases; wetlands; storm water management and brown fields.

**4. Facilitated, Open Discussion**

WisDOT and WisDNR discussed broad, planning level issues that might be covered in the SEE. Discussion touched on the proposed impacts related to construction, reiterating what was said in *Connections 2030* and educating the public on rail issues.

**5. Decisions and Wrap-up**

Aileen closed the meeting. It was noted that WisDOT will hold one consultation meeting with all identified environmental agencies. This was supported by WisDNR.

## Meeting summary
## All agency - June 3, 2010

**1. Introduction, Purpose and Overview**

Jennifer Murray, WisDOT Bureau of Planning and Economic Development, opened the meeting by welcoming attendees and providing a broad overview of the purpose and intent of the consultation meeting. During introductions, each participant commented on an environmental or health-related issue related to freight, passenger or commuter rail that their agency is currently concerned or interested. Copies of the rail plan overview and the PowerPoint presentation are provided in this Appendix.

Comments and questions raised as part of this discussion included: What are the things that can help improve drainage? How do we address issues in the SEWRPC plan, like the Hank Aaron Trail? What are some of the future sensitivities related to trails-to-rails? How do we address people's health? What about rail yards? How do we address agricultural impacts? How do we address changing right-of-way needs and the new requirements of the high-speed rail system? Many of these questions were discussed in general terms to ensure all participants were informed.

**2. Agency and Rail Relationships**

As part of the discussion, each agency was asked to discuss its relationship with railroads operating in Wisconsin.

WisDOT

Supports the range of rail activities in Wisconsin through loans and grant programs that help to preserve current service as well as possible future service, preservation activities, loan programs, supports *Hiawatha Service*, plans activities with the Midwest Regional Rail Initiative. Work with Office of the Commissioner of Railroads, Department of Revenue and others.

Wisconsin Department of Natural Resources (WisDNR)

WisDNR works with WisDOT railroad issues - Interactions are program-based, generally centered on freight. The department oversees regulatory programs, facilitates the trails group, and works on Brownfield re-development. WisDNR works through HAZMAT issues with Wisconsin Emergency Management. WisDNR has a role in NEPA/WEPA process as a cooperating and commenting agency and work on conformity analysis for projects.

Wisconsin Department of Human Services (WisDHS)

No direct relationship with railroads – WisDHS develops policies for better health in communities and health improvement. WisDHS is interested in alternative transportation besides the single-occupant vehicle, transport issues, whistle ban issues. The agency is also concerned with air quality, noise, water quality and Brownfield redevelopment.

US Army Corp of Engineers

The Corps' relationship is exclusive to regulatory programs (permitting process); Section 10 of the Rails and Harbors Act and Waterways. The Corps regulates discharge/fill into US waterways. They are cooperating agency in NEPA process. The Corps' uses a watershed approach to compensatory mitigation; their focus is on mitigation efforts applied over an area, not to a single point.

Wisconsin Department of Administration (WisDOA) – Coastal Management Program

WisDOA interacts with the Corp of Engineers and WisDNR on railroad permits and abandonments. Ensures environmental goals are met.

Wisconsin Public Service Commission (WisPSC)

WisPSC interacts with railroads during construction and review. Coal transported by rail is regulated by the WisPSC. Water, gas and electric corridors can cross rail corridors for a fee per administrative rule.

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

WisDATCP interacts with the railroads regarding the Agriculture Chemical Cleanup Program – with the agency getting involved if pesticides are spilled in the corridor. The agency does not have any specific policies. WisDATCP is administers licenses for pesticide applicators.

United States Environmental Protection Agency (US EPA)

EPA is concerned with waters, wetlands and air. The EPA is also reviewing potential concerns with breaking and noise requirements, size and shape of ballast. In addition, smart growth and sustainability

are issues of interest. Another area of interest is the protection of watersheds to address runoff. The EPA regulates the transport of HAZMAT, provides guidance regarding spills and response techniques.

**3. Initial Plan Comparison**

WisDOT staff presented an overview of the plans and policies available (at the time) from each of the participating agencies. Additional plans or policy actions were noted by the participating agencies. In some instances, the agency may not have had a specific plan to point to, but identified policies that could influence the development of the rail plan.

<u>WisDNR</u>

- Cooperative agreement with WisDOT
- Maximize existing infrastructure
- Sustainability focus
    - Environmental
    - Economic

<u>WisDHS</u>

- Rail-related emphasis on health-related issues
- Rails-to-Trails; Potential loss of alternative use
- *Healthy Wisconsin 2010 Plan* (soon to be updated) – includes health indicators/priorities; air quality, environmental justice
- Work on all-hazards mitigation and cleanup plans (efforts include working with communities, Wisconsin Emergency Management and the Department of Military Affairs)

<u>US Army Corps of Engineers</u>

- Primary related interest: permitting
- NEPA Phase II (Tier 1 and Tier 2 project level)
- Look for least impacts on aquatic resource impacts with understanding of no other negative effects on other resources
- Works with WisDNR

<u>WisDOA – Coastal Management Program</u>

- Wisconsin Coastal Management Program

<u>WisPSC</u>

- No additional plans
- Can request additional information regarding air quality when reviewing projects but no authority
- Energy conservation work with utilities

WisDATCP

- Working Lands Initiative
- Agriculture Chemical Clean-up Program

US EPA

- Not specific to railroads – all adaptive
- PM2.5 (fine particulate matter) may become an issue in the future (at the time of writing, the EPA was evaluating possible air quality concerns and determining if guidance would be distributed)

**4. Discussion on Initial Mitigation Strategies**

At the consultation meeting environmental agency representatives discussed possible mitigation actions regarding rail related activities. To help facilitate the discussion, a handout was provided with the agenda with a list of possible mitigation activities for each participant to consider. Using this as a starting point, the following summary identifies other actions identified during the discussion.

Energy Efficiency

The group noted that at this time, there are no fuel efficiency standards for rail, however, emissions standards do apply. Participants suggested that Wisconsin should encourage plantings around rail corridors and stations to reduce greenhouse gas emissions.

Congestion

One participant asked why the department could not put passenger rail lines down the middle of the highways. "If maximum speed 125 mph, why not higher speeds if looking long-term?" Due to costs and right of way constraints this is not a viable option for future passenger rail. The group agreed that education was necessary to explain why we can't/haven't established dedicated lines. In addition, participants suggested that WisDOT work with carriers to define infrastructure needs.

Air Quality

Participants raised concerns about air quality due to idling engines (vehicle and train) and increased PM2.5 readings at rail yards as train speeds increase. The use of grade separations, particularly in urban areas and potential for a positive impact to air quality was discussed. Several suggested that WisDOT encourage the use of available programs – such as WisDNR's retrofit program to address air quality concerns around yards and stations. Consideration should be given to draft recommendations for communities to consider when siting buildings (especially serving sensitive populations - EPA noted that they just released their hot spot analysis for transportation guidance. Participants also suggested that the department encourage multimodal connections at stations (e.g., bike racks at stations, bikes on trains). In addition, participants agreed that stations must provide adequate parking.

Economic Growth

Some participants recommended continued efforts to optimize existing infrastructure. WisDOT should review community plans to look for opportunities and provide feedback to communities, as well as use

programs to help increase economic development. Finally, participants agreed that WisDOT should hire local people to work on construction projects.

Communities and Cultural Resources

WisDOT should provide alternative crossing locations. Avoid creating more barriers and look for opportunities to address those that exist. Efforts should encourage revitalization of Brownfields and revitalization of "main streets."

Environmental Effects

Transportation projects should use invasive species best practices. Department efforts should include cooperating on state-owned property. As projects are implemented, the department should identify opportunities to address impacts that may have occurred previously. Finally, participants agreed that protecting species and prairie remnants was important.

Land Use

Use emergency management plans for flood-prone areas. Work to improve damaged waterways whenever possible. Implement activities that can help to mitigate or avoid climate change.

Other areas

Communicate on spill issues. Study and communicate with affected communities during actions on trails-to-rails or rails-to-trails. Communicate with utilities when moving power lines. Follow utility guidelines for utility corridors across tracks. Communicate with railroads on issues.

**5. Consultation Meeting Wrap-Up**

The afternoon concluded with a summary of the next steps of the rail plan process, including an outline of the public involvement activities that are on-going.

## Summary of Consultation and Next Steps

***Incorporation of consultation feedback***

Information from this environmental consultation was used to refine and inform the development of *Wisconsin Rail Plan 2030*. Comments and suggestions were reviewed by the WisDOT project team to identify issues that should be included in the plan.

***Next steps***

The Environmental Consultation efforts are part of the public outreach efforts regarding *Wisconsin Rail Plan 2030*. The release of the draft plan will be followed by a public comment period and a public hearing to gather feedback from Wisconsin residents. After the public outreach efforts have concluded,

comments will be incorporated and the plan will be submitted to the WisDOT Secretary for approval and adoption.

## Meeting Attendees - March 1, 2010

**Attendees:**

- Sandy Beaupré, Bureau Director, WisDOT
- Aileen Switzer, Statewide Planning Chief, WisDOT
- Ron Adams, Rails & Harbors Chief, WisDOT
- Pat Trainer, Environmental Policy and Community Impacts Chief, WisDOT
- Dan Scudder, Environmental Services Chief, WisDOT
- Cameron Bump, WisDNR
- Dave Siebert, WisDNR
- Bobbi Retzlaff, WisDOT
- Jennifer Murray, WisDOT

## Invited Attendees - June 3, 2010

**Federal Emergency Management Agency:**

Amanda Ratliff
Environment and Historic Preservation

**Federal Highway Administration:**

Dave Jolicoeur
Community Planner

**Federal Railroad Administration:**

Wendy Messenger
Environmental Protection Specialist

Ramon Munos-Raskin
Community Planner

**Federal Transit Administration:**

Stewart McKenzie (attended workshop 5/26)
Community Planner

William Wheeler (attended workshop 5/26)
Community Planner

**National Park Service:**

Thomas Gilbert
Superintendent

**Public Service Commission of Wisconsin:**

Kathy Zuelsdorff
Environmental Review Coordinator

Marilyn Weiss (attended consultation 6/3)
Environmental Analysis

**U.S. Army Corps of Engineers:**

Tamara Cameron
Chief of Regulatory Branch

Rebecca Graser (attended consultation 6/3)

Wisconsin Lead Project Manager

Simone Kolb (attended consultation 6/3)
Project Manager

**U.S. Coast Guard – Eighth Coast Guard District:**

Mark Redford

William Knutson

Dave Orzechowski

Eric Washburn
Chief of Bridge Branch

**U.S. Coast Guard – Ninth Coast Guard District:**

Robert Bloom, Jr.

Scot Striffler
Bridge Program Manager

**U.S. Department of Agriculture:**

Patricia Leavenworth
State Conservationist

**U.S. Environmental Protection Agency:**

Sherry Kamke
Environmental Mgmt – Transportation

Norm West (attended consultation 6/3)
NEPA Review

**U.S. Fish and Wildlife Service:**

Louise Clemency
Field Supervisor

**U.S. Department of Agriculture, Forest Service:**

Charles Lapicola
Regional Transportation Engineer

**Wisconsin Department of Administration:**

Michael Friis
Wisconsin Coastal Management Program

Kate Angel (attended consultation 6/3)
Coastal Management

Peter Herreid
Resource Policy Team

**Wisconsin Department of Agriculture, Trade and Consumer Protection:**

Peter Nauth
Agriculture Impact Statement

Alice Halpin (attended consultation 6/3)
Agriculture Impact Statement

**Wisconsin Department of Health Services:**

Jennifer Boyce

Marjory Givens (attended consultation 6/3)
UW Population Health Institute Fellow

Jonathon Morgan (attended consultation 6/3)

**Wisconsin Department of Natural Resources:**

Mike Thompson (attended consultation 6/3)
Environmental Analysis & Review
Team Supervisor

**Wisconsin State Historical Society**

Kimberly Cook

Michael Stevens
State Historic Preservation Officer

Amy Wyatt
Historic Preservation Specialist

# Agenda and Materials for June 3, 2010
# Environmental Consultation Meeting

## Agency Consultation Meeting

**June 3, 2010, 10 a.m. to 3 p.m.**

Wisconsin Department of Transportation – Southwest Region Office
Columbia and Dane Rooms
2101 Wright Street, Madison WI 53704

| Agenda Item | Schedule | Participation |
|---|---|---|
| 1. Introductions | 10:00-10:15 | All |
| 2. Purpose of meeting and Overview of Rail Plan | 10:15-11:00 | WisDOT |
| 3. Identification of Agency and Rail Relationships | 11:00-11:45 | All |

- How does your organization interact with railroads in Wisconsin?
- Are there concerns that your organization has at a policy level that might inform later rail related project or operations decisions?
- Does your organization gear any specific mitigation or policy measures toward rail?

| | | |
|---|---|---|
| 4. Lunch Break | 11:45-12:45 | All |
| 5. Initial plan comparison | 12:45-1:30 | All |

- Agency plans and policies with issues concerning rail
- Areas of disagreement

| | | |
|---|---|---|
| 6. Break | 1:30-1:45 | All |
| 7. Initial mitigation strategies | 1:45-2:45 | All |

- Policies in *Connections 2030*
- Strategies identified elsewhere
- Other discussion

| | | |
|---|---|---|
| 8. Wrap Up | 2:45-3:00 | WisDOT |

a. Follow up on plan comparison and mitigation strategies

b. Chapter comments and review process

**c.** Draft plan schedule

# Overview of Wisconsin Rail Plan 2030

The *Wisconsin Rail Plan 2030* is Wisconsin's statewide long-range rail plan. The plan focuses on freight rail, intercity passenger rail and commuter rail activities.

## Timeline for *Wisconsin Rail Plan 2030*

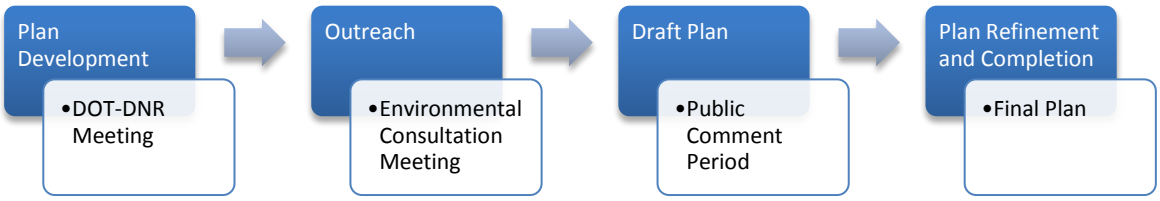



**Figure 1: *Wisconsin Rail Plan 2030* Timeline.**

## Plan Purpose

- ✓ Provide a vision for rail transportation in Wisconsin
- ✓ Identify issues and needs for the state's rail network
- ✓ Establish an investment policy for funding future rail needs
- ✓ Meet federal and state rail planning requirements

## Relationship to Other Efforts

Several other rail-related environmental reviews are occurring during the *Wisconsin Rail Plan 2030* timeframe. These are separate and distinct from the *Wisconsin Rail Plan 2030*. These include:

- **Tier 1 Environmental Assessment (Service Level NEPA)**
  - Chicago-Milwaukee corridor (A Wisconsin DOT sponsored project)
- **Tier 1 Environmental Impact Statement (Service Level NEPA)**
  - Milwaukee-Twin Cities corridor (A Minnesota DOT project)

# System-Plan Environmental Evaluation Primer

## What is the SEE?

The **System-Plan Environmental Evaluation** (SEE) is a requirement of WisDOT's long-range planning process and is unique compared to other states. The SEE is a conceptual, qualitative and general document and is prepared as part of the *Wisconsin Rail Plan 2030*. Trans 400 requires that the SEE examine the range of potential *system impacts* related to:

- Congestion
- Energy consumption
- Air quality impacts
- Land use
- Economic development
- Communities
- Environmental effects
- Qualitative costs and expected benefits

The SEE will identify cumulative and indirect impacts and mitigation actions. The mitigation actions may offset the effects of the impacts in the plan.

The *Wisconsin Rail Plan 2030* SEE will **not** provide the kind of quantitative detail found in project-level environmental reports (e.g., environmental assessments, environmental impact statements), nor does it replace those reviews. Figure 2 is an illustration of intercity passenger rail planning and environmental reviews. Freight rail and commuter rail follow a slightly different process.

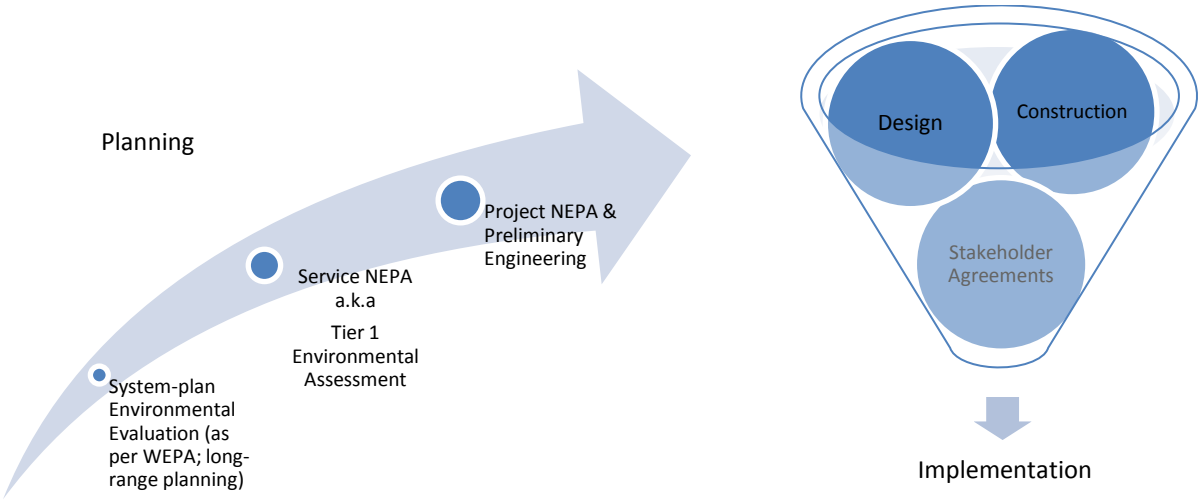



**Figure 2: Federal Railroad Administration (FRA) environmental review process as it relates to planning, design and construction for intercity passenger rail.**

# Mitigation Actions for the *Wisconsin Rail Plan 2030*

At the consultation meeting on June 3, environmental agencies will discuss and agree on mitigation actions. The agencies should come prepared with ideas about the kinds of mitigation strategies appropriate for the *Wisconsin Rail Plan 2030*.

> In general – A long-range transportation plan shall include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.
>
> Consultation – The discussion shall be developed in consultation with federal, state, and tribal wildlife, land management and regulatory agencies.
>
> -Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2008

*Connections 2030* long-range plan actions help define the actions that are further refined in the *Wisconsin Rail Plan 2030*. The following actions present a starting point (taken from *Connections 2030*) as related to plan implementation. Note that WisDOT's role is limited in rail mitigation actions[i] and standard practices toward mitigation would be followed on any transportation project, as required.

## Congestion

- Preserve corridors (through acquisition of abandonments)
- Conduct diversion and other types of congestion-related studies
- Improve coordination among transportation modes
- Cooperate with other entities to monitor effectiveness of communication systems with regard to quick clear and accurate dissemination of information to all involved parties during and after rail incidents
- Support research, development and/or demonstration of advances in signal, communication and/or train control systems on existing rail lines

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[i] WisDOT has a limited role with respect to rail in Wisconsin. The SEE helps guide transportation decision-making through a presentation of the environmental impacts at the planning level. It is a broad, over-arching approach that does not take the place of future environmental reviews typically done for projects. WisDOT actions and cumulative actions related to plan implementation may not quantify every action by entities like private railroads, shippers, communities or other agencies.

## Energy Efficiency

- Partner with consumers and businesses to increase transportation sustainability
- Track changes and analyze responses to transportation energy use and costs
- Continue to strive toward goals outlined in the Midwest Governors Greenhouse Gas Reduction Accord, the State Office of Energy Independence and the Governor's Task Force on Global Warming to reduce fuel dependency

## Air Quality

- Comply with existing policies and regulations for improving air quality
- Continue to support and monitor emerging air quality issues
- Support increasing access to alternative modes of transportation besides the single occupant vehicle
- Participate in air quality improvement programs
- Support actions that support freight rail over hauling freight by truck

## Economic Growth and Development

- Upgrade public rail infrastructure, where needed, to accommodate heavier, faster trains
- Continue to invest in programs that improve railroad tracks, roadbeds and crossings on state-owned rail corridors
- Monitor and implement improvements to state highway locations where crossings are unsafe
- Provide funds for intermodal facilities, including working with local communities and the private sector to identify opportunities for intermodal stations
- Continue community sensitive solutions to discuss project impacts early
- Preserve the viability of modes through infrastructure preservation

## Communities and Cultural Resources

- Recognize the importance of archeological sites and historic properties through compliance with State Statute 44.40 and Section 106 of the National Historic Preservation Act of 1966
- Avoid and minimize impacts to sensitive natural areas, historical and archeological sites and mitigate unavoidable impacts
- Improve emergency response efforts
- Cooperate with local and federal agencies
- Continue to work with the Office of Commissioner of Railroads to ensure proper safety upgrades at rail crossings of state highways
- Improve crossings and accelerate a program to upgrade intercity passenger rail corridor crossings
- Continue to integrate approaches to transportation and environmental issues
- Preserve and enhance positive land use and transportation relationships
- Incorporate environmental justice in all transportation decisions
- Seek public involvement early and throughout transportation processes
- Coordinate community sensitive solutions

- Encourage projects that minimize negative impacts while supporting and preserving local character
- Consider local comprehensive plans in developing cooperative approaches among partners

## Environmental Effects

- Identify sensitive resources early in the planning process and avoid or minimize impacts
- Develop guidance and procedures to discourage transportation development activities from intensifying the spread of invasive plants
- Provide assistance to and follow the governor's policies on climate change and other state and national initiatives and continue to track ways to reduce transportation related carbon emissions
- Control erosion at transportation construction sites and adhere to "no net loss" wetland strategies
- Identify feasible, cost-effective solutions that avoid, minimize or mitigate impacts

## Land Use

- Preserve and enhance a positive land use and transportation relationship
- Continue to work with the Department of Agriculture, Trade and Consumer Protection to assess impacts of rural projects on agricultural lands
- Work with and coordinate with the Natural Resource Conservation Service
- Consider the importance of agriculture lands when making project level decisions and continue to focus efforts on minimizing the negative impacts on agriculture
- Address the direct land use effects of transportation
- Evaluate and address indirect, cumulative and community land use effects of transportation projects
- Integrate land use and transportation through coordinated planning at all levels of government

# Appendix 2-E: Stakeholder Workshop Summary

## 1. Introduction

1.1 Overview and Purpose

The Wisconsin Department of Transportation (WisDOT) is developing the state's 20 year rail plan. *Wisconsin Rail Plan 2030* will identify issues and priorities to enhance rail service in Wisconsin over the next 20 years and help position the state to compete for federal funding. The development of the plan relies heavily on public input from a variety of stakeholders, specifically those with rail interests.

In an effort to meet with stakeholders, WisDOT convened a variety of community members, rail operators and businesses at a Stakeholder Workshop on May 26, 2010, in Stevens Point, Wisconsin. The purpose of the workshop was to educate participants regarding WisDOT's efforts related to the development of *Wisconsin Rail Plan 2030* and to ask participants for their feedback and comments on specific issues and needs regarding rail in Wisconsin. The feedback obtained at this important stakeholder workshop will be used to inform and refine *Wisconsin Rail Plan 2030*. Participants' comments, suggestions and concerns will be addressed, where appropriate and necessary, in the final plan.

1.2 Participants

A variety of stakeholders were invited to attend the *Wisconsin Rail Plan 2030* Stakeholder Workshop. The list of invitees included major stakeholders that operate and utilize freight rail, passenger and commuter rail operators, special interest groups and rail advocacy groups as well as elected officials and representatives from a variety of state and local governments. For a complete list of invitees, see Appendix A.

**2. Workshop Structure and Activities**

2.1 Background

WisDOT's planning team has been researching rail issues, meeting with stakeholders and rail experts, and compiling information from existing plans to develop *Wisconsin Rail Plan 2030*. During the planning process for *Wisconsin Rail Plan 2030*, a number of issues have been identified that warrant further review and feedback from stakeholders. Stakeholder and outreach meetings have already taken place and more are planned in order to further refine some important issues and topics identified in the development of a draft of the plan.

A number of planning activities have already taken place informing *Wisconsin Rail Plan 2030*. Namely, *Connections 2030*, Wisconsin's long-range multimodal transportation plan, as well as the Midwest

Regional Rail Initiative passenger rail efforts, 2004 *Rail Issues and Opportunities* report and the 1992 *Freight Rail Policy Plan*.

*Connections 2030* addresses all forms of transportation in Wisconsin and acknowledges the contribution and importance transportation has on the economic health of Wisconsin. It also addresses freight, passenger and commuter rail. *Connections 2030* specifically calls for WisDOT's support of regional transit authorities, increased intercity passenger rail service, intercity bus, freight focus, intermodal passenger connections, and the continued support and growth of freight rail operations in Wisconsin. Developed as part of an extensive, multiyear plan development effort, these policies have provided the basis of *Wisconsin Rail Plan 2030*.

## 2.2 Workshop Introduction

The workshop began with an overview and background of *Wisconsin Rail Plan 2030* by WisDOT staff. Department staff provided background on the planning process as well as an overview of draft chapters. In addition, each attendee received a workshop primer document. The document provided detailed information about the plan purpose, WisDOT's role in rail, the current use of rail in Wisconsin, projections of future rail demand, as well as a synopsis of the key points addressed in the draft chapters. A number of other background materials were provided, including a summary document of *Connections 2030*.

## 2.3 Workshop Activities

The stakeholder workshop was divided into two general sessions: a morning session and an afternoon session. The morning session consisted of a discussion of rail topics. The afternoon session included a presentation on passenger rail from the WisDOT project team and a panel discussion.


**Above: Group Table Discussions**

### 2.3.1 Morning Session: Mixed Groups and Topics

In the morning session, participants were divided into groups of six to eight people representing a diverse mix of expertise and geographic area. This was done in order to maximize the diversity of experience and knowledge of each group member. Each group had a designated facilitator and note taker from the WisDOT Rail Plan Development team.

While in their groups, participants were asked to review a list of issues and discussion topics such as funding, safety, security, public/private partnerships, mobility and infrastructure issues. (See Appendix B for a complete list of topics.) Participants reviewed the complete list and determined if any topics or issues were missing, and considered if any were unclear and required refinement or further definition. Groups self-selected the topics they focused on.

The new and refined issues were posted along with the ones provided and participants voted on issues they supported and issues they would not support. See page 3.2 and 3.3 of this document for the voting results.

### 2.3.2 Afternoon Session: Professional Background Groups and Topics

During the afternoon session, workshop participants were assigned to groups based on shared interest, experience and/or professional background. For example, rail operators were grouped at one table while elected officials and/or their staff were grouped at a different table. Participants were given a list of issues from the morning discussion specific to their background such as freight rail operations, local involvement in rail planning, and passenger/commuter rail connectivity. Participants further clarified issues and identified actions and opportunities to address each issue over the next 20 years.

### 2.3.3 Afternoon Panel Discussion

The afternoon concluded with a panel discussion. Panel members included representatives from Wisconsin and Southern Railroad (WSOR), the Port of Milwaukee, Amtrak, Canadian National Railway, and the Southeastern Wisconsin Regional Planning Commission. Panel members were asked to highlight key elements of the day, discuss rail-related challenges facing Wisconsin over the next 20 years and identify opportunities to address them.

The panel provided an overview of key themes they heard throughout the day from participants including funding, public education and ongoing coordination. Panelists discussed the need to improve and expand rail markets – for both people and freight - and to better connect people to those markets. Panelists reiterated the need for the new high speed rail project. In addition, they recapped and discussed the issue of funding, pointing out the discrepancies in highway funding versus rail funding.

**Above: Afternoon Panel Discussion**

## 3. Stakeholder Feedback Results

3.1 Dominant Themes: Funding, Public Education and Coordination

Participants expressed a variety of viewpoints throughout the day. Several issues dominated group conversations and emerged as recurring themes: funding, public education and coordination.

3.1.1 Funding: Group discussions included concerns over the capital-intensive nature of rail projects and how best to establish a consistent and sustainable funding source for the development and long-term maintenance/operation of rail in Wisconsin. Funding discussions also centered on supporting the creation of Regional Transit Authorities (RTAs) and the need for elected official support to champion the array of benefits rail investments can provide.

3.1.2 Public Education: Participants repeatedly suggested the need for more public education and awareness about the benefits and importance of rail investments in the state. This includes educating the public about the environmental, fuel efficiency and cost benefits of rail use rather than automobile use, as well as further explaining concerns about safety and security of rail crossings. Participants suggested a variety of formats to market these issues including videos, news releases, web sites, handouts and public meetings.

3.1.3 Coordination: Participant discussions noted the importance of ongoing coordination of planning efforts. This includes coordination with and among commuter, passenger and freight operators on track sharing; coordination with local communities and regional or metropolitan planning bodies on the future location of rail stops and connections to transit; and coordination with adjacent states and the federal government for long-term planning and funding.

3.2 Highest Priority Topics or “Can Support” Topics

At the end of the morning session, participants were asked to vote on the issues provided by the WisDOT Rail Plan Development team and further refined during the morning discussions. Participants were given five “yes” votes to indicate issues or topics they could support.

**Top 10 topics participants could support**:

1. Coordination and connectivity between passenger and commuter rail and transit (30)
2. Public relations and marketing of rail use (21)
3. Mobility needs, including statewide mobility (17)
4. Funding for passenger rail: capital costs, funding structures, maintenance and operational costs (16)
5. Funding for transit (16)
6. Station/terminal locations for passenger rail (15)
7. Regional/local entity involvement in planning process (10)
8. System-wide capacity needs (10)
9. Funding for commuter rail (9)
10. Funding for freight rail (9)

Other issues that received support included safety for passenger rail and freight rail, the overall role of public transit, improving access to key destinations, and community quality of life issues such as livability and energy efficiency.

3.3 Lowest Priority Topics or "Can't Support" Topics

Participants were given two "no" votes to indicate topics or issues which they would not support or consider important for further discussion.

The number one issue not supported by participants (14 votes) related to what government entity is responsible for commuter rail. Specifically, voters indicated they did not support WisDOT's position that commuter rail is a local issue.

**Top 10 least important/supported topics**:

1. Commuter rail roles and responsibilities (14)
   [WisDOT's position that commuter rail is a local issue]
2. Converting rails-to-trails back to rails (2)
3. Public/private partnerships - Passenger (2)
4. Station design/usability - Passenger (2)
5. Track sharing - Passenger (2)
6. Safety - Freight (2)
7. Rail impacts on community (1)
8. Environment and noise pollution (1)
9. Community - livability and land use (1)
10. Track sharing - Freight (1)

## 3.4 Issue Summaries

Below is a summary of the major issues discussed in both the morning and afternoon sessions.

### 3.4.1 Funding

Participants felt public support and funding exists for highways but does not exist in the same way for rail. They expressed the view that transportation policies should equally benefit highways and rails. Participants suggested a number of funding options, specifically in regards to passenger and commuter rail.

*Federal Government*
Infrastructure and upfront capital costs should be covered by the federal government, while the state should pay for ongoing maintenance and operational costs.

*Gas Tax*
The state should increase the gas tax to cover a portion of rail costs. There was some disagreement with this. Participants were concerned about the ability to collect taxes on gas because vehicles have become less gas dependent (fuel efficiency standards and hybrids) and fewer people are projected to drive.

*Bonding*
Create a bonding authority as a way of funding capital expenditures.

*Regional Transit Authorities*
Assist and support communities in launching Regional Transit Authorities.

*Local Municipalities*
Require funding from local municipalities for passenger/commuter rail that stops in their community or offers other benefits to their community.

*Value Engineering*
Participants suggested approaching projects from a value engineering stand point.

*Corporate Sponsorships*
Offer corporate naming rights or sponsorships for rail stations or trains.

### 3.4.2 Safety & Security

*Rail Crossings*
There is a need for more public education and outreach regarding rail safety and crossings. This is integral to the public's perception and support of rail projects.

In order to increase safety, participants suggested the following:

- Look at additional crossing closures, understanding these can improve safety but are sometimes difficult to accomplish and have impacts on nearby property owners and residents
- Separate passenger and freight uses whenever possible

- Provide train schedules to residents near train routes so they are aware of when trains would be passing
- Utilize barrier safety enhancements such as fencing

*Positive Train Control*

Participants discussed the benefits and challenges of Positive Train Control (PTC), a rail safety management system. Some freight rail operators indicated this system is required for 110 MPH tracks/ operation. The challenges mentioned include system-wide implementation and funding. There are different perspectives and technologies when implementing for freight versus passenger rail. These issues will have to be addressed.

*Working with Office of Commissioner of Railroads*

There was concern over the lack of knowledge regarding the Office of Commissioner of Railroads (OCR) petition process for rail crossings. A clear understanding of the timeline needed for OCR review of crossings is needed. Based on this, WisDOT's timetable could be longer than assumed and may need to be adjusted.

*Rail Security*

Participants suggested looking to the federal government on standards and procedures to address rail security issues as this topic is covered by multiple federal agencies.

3.4.3 Public/Private Partnerships

*Working with Freight Operators*

Some freight operators are open to shared use of tracks but all parties must come to agreement on the scope and dimension of any project. In addition, several crucial issues must be addressed: liability, compensation for use of the lines, capacity issues and speeds/safety. Freight rail experts present at the meeting expressed some concern that if rail operation is along a Class I operated corridor, passenger rail will not "pull its own weight." Other participants said there is a need to break down barriers to investing state dollars into privately owned and operated rail lines.

*Station Ownership and Management*

Other discussions regarding public/private partnership centered on train station ownership and use. Several participants noted that this is an opportunity to make a station part of a community. There must be vested interest by whoever owns and manages a station to ensure success and these owners must support intermodal stations.


**Above: Large Group Discussion**

3.4.4 Station Locations

*Public Involvement*

The public should be engaged in future decisions about station locations. Public involvement is needed as a way to eliminate/reduce acrimony regarding station locations.

*Intermodal Connectivity/Mobility*

Intermodal stations are ideal and important to creating ridership and connections and mobility for patrons. Locating intermodal stations could begin in big markets with several transit options and build incrementally from there. Stations could include a large digital screen that shows buses and other transit modes and when and where each is leaving and going. Looking at examples from other cities that use these systems will be helpful.

*Design*

*Wisconsin Rail Plan 2030* should provide guidelines on design, construction and general location criteria/guidelines for intermodal stations. Green construction guidelines should be considered. Platforms should be uniform with those across the country and should be ADA compliant. The reuse of historic depots can be encouraged where/if appropriate.

*Amenities*

Stations should have convenient intermodal options and should consider wireless Internet connections, rental car connections, bike parking and overnight parking.

*Density/Mixed-use*
Municipalities that have stations can be encouraged to develop high density, mixed-use, and transit-oriented developments near them.

*Routes/Locations*
Several group discussions offered suggestions for future passenger rail routes, including:

- Madison - St. Paul
- Milwaukee - Green Bay
- Eau Claire - St. Paul
- Madison - Beloit - Chicago
- Stevens Point - Rhinelander
- Green Bay - St. Paul
- North Central Route

3.4.5 Ticket Costs

*Affordability*
Participants suggested that methods to help make ticket prices more affordable could be explored. This could be done under the leadership of RTAs. Each RTA could decide on ticket prices/subsidies for their area in regards to commuter rail. State resources should be used to help ensure connectivity and coordination in order to avoid municipal border funding issues.

*Payment System and Fare Structure*
In order to create ease-of-use for rail patrons, a system-wide payment and ticketing system could be considered especially for intermodal stations. Ticketing options that allow users to purchase tickets in one transaction for their entire trip when using multiple modes would help users reach their end destination more easily and avoid confusion. An example is Amtrak's Thruway system.

3.4.6 Freight Operations

In general, comments from participants reflected the importance of freight rail to Wisconsin's economic viability. Policies and recommendations in *Wisconsin Rail Plan 2030* should reflect this.

*Track sharing*
Track sharing is going to be a very important issue, as passenger and commuter rail plans move forward, and should be at the forefront for WisDOT. Issues of liability and capacity constraints will be challenging and must be addressed. WisDOT needs to work with freight railroads to accommodate passenger trains without losing freight capacity.

*Rail Market Share*
Comments from some freight rail operators suggest that the system now benefits long-haul shipping. These operators believe that policies are needed to support short-haul, regional, or single-car freight

movement. Short-haul trips could further reduce dependency on trucks and reduce highway congestion. Policies that support increased freight rail share and market competition should be included in the plan.

### 3.4.7 Right-of-Way Acquisition

There were several suggestions that as WisDOT plans for and acquires land for highway expansion, they should also acquire rail right-of-way alongside highways for future rail use. It is understood this is not allowed today but should be considered. WisDOT should also consider acquiring land for bike and pedestrian trails alongside rail corridors.

### 3.4.8 Environmental and Economic Benefits

*Passenger/Commuter Rail*
Public outreach efforts could educate residents on the numerous benefits of passenger rail such as reduced road congestion and improved air quality. Fact sheets and information could be developed to help people understand these benefits.

*Freight Rail*
Outreach efforts should also include awareness of freight rail as a more effective and environmentally friendly way of transporting commodities. Freight rail helps reduce truck traffic and highway congestion.

*Energy Efficient Equipment*
WisDOT should consider establishing standards for the use of energy efficient train equipment. It is understood this may not be enforceable by WisDOT but could be through the Environmental Protection Agency (EPA) or another government agency.

*Economic*
WisDOT could consider including an economic analysis in *Wisconsin Rail Plan 2030* that illustrates positive community and economic benefits from rail such as access to jobs, increased tourism, and increased development/property tax collections for transit-oriented development.

### 3.4.9 Local/Regional Involvement

Overall, many comments reflected the need for local communities to work with counties and metropolitan planning organizations to plan for and ensure the eventual success of passenger and commuter rail. This is especially true for communities that would like to see rail stops in their municipality. WisDOT should engage local communities early-on in the planning process. This could be done though identifying and engaging metropolitan and regional planning commissions.

*Outreach Efforts*
Participants suggested that more public outreach and participation needs to happen on a local level. There could be local stakeholder meetings with citizen groups and local officials, and public information campaigns with printed materials and interactive web sites that illustrate rail projects.

*Include Rail in Local/Regional Planning Efforts*
Several comments suggested that communities need to be proactive in including rail in their ongoing planning activities and planning documents like neighborhood plans, transportation plans and comprehensive plans.

*County Mobility Manager*
Other suggestions included establishing transportation coordination committees at a regional and/or county level to coordinate transportation plans and activities. This could be done through regional planning commissions and metropolitan planning organizations.

*Oversight Authority*
Participants suggested creating an entity with joint oversight authority, similar to an RTA. Authority members would consist of planners, community representatives, and local officials. This authority would be helpful in coordinating and communicating plans on the regional level.

3.5 New Issues Identified by Stakeholders

*Public Education*
Keeping the public educated and informed on rail developments was repeatedly mentioned throughout the stakeholder workshop.

*Compare Funding Levels Across All Modes*
The existing differences in funding levels for transportation could be presented in the plan and include some evaluation of this issue.

*Station Land Use/Zoning*
There was discussion around the incorporation of land use/zoning standards around rail facilities.

*Multimodal Funding Source*
Agencies that operate transit and commuter or bus operations are limited because they cannot mix funds to support each operation. WisDOT should consider exploring policies that would allow for the mixing of funds to allow for easier implementation of transit options.

*Terminology*
Participants suggested refraining from using “subsidies” when referring to rail funding. Instead, the term “investments” should be used, as is used for highways.

*220 MPH*
Some participants suggested looking at possibilities for passenger rail tracks and operations that support 220 MPH trains.

3.6 Action Items

*Create Public Education and Awareness Marketing Campaign*
A robust public education and awareness marketing campaign is needed in order to get the word out about the rail projects and the benefits of all rail use (commuter, passenger and freight). Regular communication with local officials and suggestions for mediums to disseminate information include interactive web sites with up-to-date project information, handouts, maps, advertisements, fact sheets and public meetings.

*Highlight Benefits of Rail Use*
Part of the public education campaign should include highlights of the benefits of rail use as an alternative mode of transportation. Fact sheets and other materials should be developed to highlight benefits such as reduced emissions when compared to automobiles or trucks.

## 4. Conclusion and Next Steps

4.1 Incorporation of Stakeholder Feedback

Information from this stakeholder workshop will help refine and inform the development of *Wisconsin Rail Plan 2030*. Stakeholder comments and suggestions will be reviewed by the WisDOT Rail Plan Development team to identify issues that warrant further discussion and consideration. The WisDOT team will also research and investigate new issues that were identified at the workshop.

Information collected at the stakeholder workshop will be reviewed and combined with previous and future public outreach efforts, the results of which will be reflected in the final version of *Wisconsin Rail Plan 2030*.

4.2 Next Steps

The stakeholder workshop held on May 26, 2010, is one of many public outreach efforts regarding *Wisconsin Rail Plan 2030*. The release of the draft plan will be followed by a public comment period and a public hearing to gather feedback from Wisconsin residents. After the public outreach efforts have concluded, the plan will be finalized and submitted to the Secretary for approval and adoption.

**5. Stakeholder Workshop Summary Appendices**

Appendix A: List of Invitees

Appendix B: List of Workshop Discussion Items

Appendix C: Compilation of all Participant Votes

## Appendix A: List of Invitees

**Wisconsin Rail Plan 2030 Workshop Invitee List:**

**Freight railroads:**

Michael Payette

VP Government Affairs - Central Region
*Union Pacific*

John Huber, Director, Government Affairs Midwest
*Canadian Pacific Railway*

Don Heron, Director, Passenger Rail
*Canadian Pacific Railway*

Brian Sweeny, Executive Director of Government Affairs
*BNSF Railway*

Chris Bigoness, Manager, Public Funding
*BNSF Railway*

Kevin Soucie
*Canadian National*

Ben Meighan
*WSOR*

Tom Klimek, V.P. Marketing
*Escanaba & Lake Superior Railroad*

Lon Van Gemert, CEO
*Progressive Railroad*

Suzie Klinger, General Manager
*Tomahawk Railway L.P.*

**Shippers, Carriers, Distributors, and Utilities:**

James Coonan
*Ashley Furniture*

*Lands End*

*Harley Davidson*

Paul Rasmussen
*Universal Foods Corporation*

Paul Sacotte
*Super Steel Products Corporation*

*Miller Brewing Co*

*Wal-Mart*

*Walgreen's*

Ken Popp
*Alliant Energy*

*Madison Gas & Electric*

Tom Bartel
*Schneider National*

Virginia Dennis
*United Transportation Union*

Tom Howells
*Wisconsin Motor Carriers Association*

*USPS*

*FedEX*

*UPS*

**Ports:**

Dean Haen
*Port of Green Bay*

Glenn Sweeney
*Port of Superior*

Eric Reineld
*Port of Milwaukee*

**Intercity Bus Operators:**

Randy Isaacs
*Greyhound Bus*

Bonnie Buchanan
*Jefferson Lines*

Steve VanGalder
*VanGalder Lines/Coach USA*

Allen Lamers, President
Eric Stadler, Sales Exec.
King Kramer, Safety Director
*Lamers*

Chad Cushman, VP
*Indian Trails*

John Meier, President/Owner
Scott Kreisler
*Badger Bus*

**Passenger Rail Operators:**

Mike Franke
Ray Lang, Senior Director of Gov. Affairs
Dick Hoffman
Bruce Hilblom
*Amtrak*

**Passenger Rail Advocates:**

Mike McCoy
*ProRail*

John Parkyn
*Wisconsin Association of Railroad Passengers*

Frank Ingram
*NewRails*

*Empire Builder Group*

*Eau Claire – I-94 group*

*Stevens Point Group*

*MWRRI Governor's Association*

*MWRRI Technical Committee*

**Commuter Rail Operator and Commuter Rail Advocates:**

*Metra*

*KRM*

David Trowbridge
*Transport 2020*

**Transit Operators and Transit Advocates:**

*Madison Metro*

Anita Gulotta-Connelly, Managing Director
*Milwaukee County Transit System*

*Valley Transit*

*Green Bay or is it Brown County Transit*

*Eau Claire Transit*

David Mumma
*Janesville Transit System*

*Wisconsin Urban and Regional Transit Association*

*SERTA*

*Dane County RTA*

**Urban Community Groups:**

*Urban League – Milwaukee, Madison*

*Wisconsin Alliance of Cities and Villages*

*Planning and Public Works Directors – Statewide*

**Rural Community Groups:**

*Wisconsin Towns Association*

*Wisconsin Counties Association*

*Farm Bureau of Wisconsin*

*Ethanol Producers – trade association*

*UW-Extension county community outreach specialists*

**Universities:**

*UW-Superior*

*UW-Milwaukee*

*CFIRE, Midwest Transportation Research Center, UW-Madison*

*Center on Wisconsin Strategy*

**Environmental Groups:**

*Midwest Environmental Advocates*

Kevin Pomeroy, Planning Director
Steve Hiniker, President
*1000 Friends of Wisconsin*

Dr. Shala Werner
*Sierra Club of Wisconsin*

**Business & Economic Development Groups:**

Andy Lewis, Community Development Specialist
Bill Ryan, Downtown Revitalization Specialist
*UW-Extension Center for Community and Economic Development*

John Varda, Pulp and Paper Attorney

*WMC*

*Community Development Authorities – Statewide*

*Downtown Associations and Business Improvement Districts – statewide*

Jim Engel
*Wisconsin Main Street Program – Dept. of Commerce*

**Special Interest Groups:**

Pat Goss, *WTBA*

Craig Thompson
*TDA*

*WISPIRG*

*APTA*

Tom Frazier
*Coalition of Wisconsin Aging Groups*

*ACLU of Wisconsin*

Tom Frymark, *AAA of Wisconsin*

Rhonda Border-Boose – Regional Director
Eric Oberg – Manager, Trail Development
*Rails-to-Trails Conservancy*
*Midwest Regional Office*

**Local, State, Federal Agencies:**

Dwight Mc Comb
Dave Jolicoeur
Carlos Pena
*FHWA*

*FRA*

*FTA*

*EPA*

*Federal Motor Carriers Association*

*Wisconsin DNR*

*Wisconsin Dept. of Commerce*

Roger Breske
*Office of the Commissioner of Railroads*

*Wisconsin DOA*

*Wisconsin DATCP*

*Wisconsin DHS*

*Wisconsin Dept. of Tourism*

**Legislators:**

Sen. Jim Holperin (Transportation Committee Chair)

Sen. Pat Krietlow

Sen. Dan Kapanke

Rep. John Steinbrink (Transportation Committee Chair)

Rep. Ted Zigmunt (Transportation Committee Vice-Chair)

Rep. Kristen Dexter

Rep. Jeff Smith

Rep. Jennifer Shilling

**Airports:**

*Milwaukee General Mitchell*

*Dane Co. Regional*

**Appendix B: List of Workshop Discussion Items**

# *Wisconsin Rail Plan 2030*

# Stakeholder Workshop

## Issues for Discussion

As part of the *Wisconsin Rail Plan 2030* development process, the Wisconsin Department of Transportation (WisDOT) is interested in gauging stakeholders and interested parties on their positions relative to a number of topics pertaining to the railroad mode.

Below is a list of issues WisDOT has identified that could be considered during the development of the *Wisconsin Rail Plan 2030*. These issues will not only help stimulate today's discussion, but also will help WisDOT to consider if issues have been missed, if they are unclear, or if they are a priority.

Where appropriate, questions or specific examples have been provided to help illustrate the issue's meaning.

**Topic #1 – Passenger Rail**

Funding

- Capital projects and/or investments (i.e., cost to construct rail lines)
- Structures (taxes, subsidies, private funding)
- Maintenance and operations

Safety

- Crossings
- Derailments

Security

- Trespassing
- Terrorism/vandalism

Public/private partnerships
Station and/or terminal locations
Mobility needs
Track sharing
Ticket costs
The role of public transit

**Topic #2 – Freight Rail**

Funding

- Capital projects and/or investments (i.e., cost to construct rail lines)
- Structures (taxes, subsidies, private funding)
- Maintenance and operations

Safety

- Crossings
- Hazardous materials
- Derailments

Security

- Trespassing
- Terrorism/vandalism

Public/private partnerships

Intermodal facility location

Freight movement on rails versus roadways

Track sharing

Future of Wisconsin's shoreline railroads

Network capacity to sustain shipping needs (i.e., integrating Wisconsin's freight rail system into logistics, just-in-time shipping)

**Topic #3 – Commuter Rail**

Funding

- Capital projects and/or investments (i.e., the cost to construct)
- Structures (taxes, subsidies, private funding, ongoing funding sources)
- Maintenance and operations

Roles and Responsibilities

- Local cost share requirement (generally 25 percent of the total project cost)
- WisDOT's position is that commuter rail is a local issue and WisDOT has provided some funding and technical support as needed

Improving access to services or key destinations

Ticket costs

Track sharing

Safety at crossings

**Topic #4 – Transit**

Improving access to services or key destinations

Dedicated sources of state and federal funding for passenger/commuter rail projects

Coordination of service with passenger rail and commuter rail

**Topic #5 – Shipping**

Network capacity to sustain shipping needs (i.e., integrating Wisconsin's freight rail system into logistics, just-in-time shipping)
Impacts of abandonments, mergers, and acquisitions
Intermodal facility location
Opportunities across modes, coordination

**Topic #6 – Environment**

Energy efficiency
Congestion
Air quality
Converting rails to trails back to rail
Use of remediated lands for railroad use

**Topic #7 – Community**

Rail impacts
Access to stations
Safety at crossings
Livability and land use
Community development

## Appendix C: Compilation of all Votes

| *Wisconsin Rail Plan 2030* Workshop, May 26, 2010 | | |
|---|---|---|
| **Topics/Issues Voting Results** | | |
| | **Votes For (Green)** | **Cannot Support (Red)** |
| Coordination/connectivity between passenger rail, commuter rail, and transit | 30 | 0 |
| Public relations/marketing of rail use | 21 | 0 |
| Mobility needs (incl statewide mobility) | 17 | 0 |
| Funding - Passenger Rail (Capitol costs, funding structures, maintenance and operations costs) | 16 | 0 |
| Funding - Transit | 16 | 0 |
| Station/Terminal locations - Passenger Rail | 15 | 0 |
| Commuter Rail Roles & Responsibilities (WisDOT's position that Commuter Rail is a local issue) | 0 | 14 |
| Regional/Local Entity Involvement in Planning Process | 10 | 0 |
| System-wide capacity needs | 10 | 0 |
| Funding - Commuter Rail | 9 | 0 |
| Funding- Freight Rail | 9 | 0 |
| Role of public transit | 6 | 0 |
| Safety - Passenger Rail | 5 | 0 |
| Public-Private Partnerships - Freight | 5 | 1 |
| Freight movement on rails instead of roads | 5 | 0 |
| Network capacity to sustain shipping needs | 4 | 0 |
| Safety - Freight Rail | 4 | 2 |
| Improving access to key destinations - Transit | 4 | 0 |
| Environment: Energy Efficiency | 4 | 0 |
| Community: Livability & land use | 4 | 1 |
| Track Sharing - Freight Rail | 3 | 1 |
| Safety at crossings | 3 | 0 |
| Ticket costs - Commuter Rail | 3 | 0 |
| Security - Passenger Rail | 2 | 0 |
| Improving access to service & key destinations | 2 | 0 |
| Future of Wisconsin's shoreline railroads | 2 | 0 |
| Shipping: Opportunities across modes | 2 | 0 |
| Environment: Congestion | 2 | 0 |
| Environment: Use of remediated lands for railroad use | 2 | 0 |
| Environment: General | 2 | 0 |
| Converting rails-to-trails back to rails | 2 | 2 |
| Public-Private partnerships - Passenger Rail | 2 | 2 |

| | | |
|---|---|---|
| Station Design/Usability - Passenger Rail | 2 | 2 |
| Track sharing - Passenger Rail | 2 | 2 |
| Changing demographics | 2 | 0 |
| Ticket costs - Passenger Rail | 1 | 0 |
| Security - Freight Rail | 1 | 0 |
| Shipping: Intermodal facility location | 1 | 0 |
| Community: Access to stations | 1 | 0 |
| Community: Community development | 1 | 0 |
| Track sharing - Commuter | 0 | 0 |
| Safety at crossings - Commuter | 0 | 0 |
| Community: Rail Impacts | 0 | 1 |
| Environment: Noise Pollution | 0 | 1 |

# Appendix 2-F: Summary of Outreach with Freight Rail Carriers and Port Operators in Wisconsin

The following provides a summary of outreach conducted with various freight rail carriers and port operators to identify rail related issues and needs. The results of this outreach were used to further refine the scope and content of the draft *Wisconsin Rail Plan 2030*.

## Meeting Attendees - March 1, 2010

**Attendees:**

- Sandy Beaupré, Bureau Director, Wisconsin Department of Transportation (WisDOT)
- Aileen Switzer, Statewide Planning Chief, WisDOT
- Ron Adams, Rails & Harbors Chief, WisDOT
- Pat Trainer, Environmental Policy and Community Impacts Chief, WisDOT
- Dan Scudder, Environmental Services Chief, WisDOT
- Cameron Bump, WisDNR
- Dave Siebert, WisDNR
- Bobbi Retzlaff, WisDOT
- Jennifer Murray, WisDOT

## Port Operator Outreach

| **Port of Green Bay** | Dean Haen, Port Manager |
|---|---|

The Port of Green Bay, in Brown County, is a receiving port for coal and inbound construction materials, road salt and other bulk commodities. Inbound product is moved to final destination via truck; rail is not a significant factor in decisions to make use of the port's facilities. Canadian National Railway is the primary rail service provider.

While merchandise traffic is not involved in today's port operations, University of Wisconsin - Green Bay is leading a collaborative study effort with port interests on the potential movement of container traffic to and from Green Bay. This study is part of an expanded use of Highway H2O - the 2,400-mile water route from the Atlantic Ocean, traversing the St. Lawrence River, St. Lawrence Seaway and the Great Lakes.

| **Port of Milwaukee** | Eric Reinelt, Port Director |
|---|---|

The Port of Milwaukee is actually a department of the city of Milwaukee. As such, the mission of the port is to promote economic development, trade and job creation within the Milwaukee region regardless of mode. Much of the freight activity at the port is therefore unrelated to its status as a marine facility.

The Port of Milwaukee is served directly by both Canadian Pacific Railway (CP) and the Union Pacific (UP) on a time-separated basis. CP services its clients at the port daily, while UP comes in around five times per week. Trackage within the port itself is publicly-owned, but only these two carriers directly connect to the port lead. Most traffic is inbound and includes road salt, industrial salt (for the paper industry), steel construction materials, cement and heavy industrial machinery. The port is seen as an attractive location for transload of power plant and wind generation components, which then move west via rail or truck to destinations in Wisconsin, Minnesota and Iowa. A portion of this latter category can only be forwarded by rail due to dimension and weight concerns.

A Canadian Pacific intermodal operation is run, under contract, on a parcel of land leased from the port. Roughly 15,000 to 20,000 import/export containers per year are handled via Milwaukee with 90 percent destined to or from the Port of Montreal. The balance of traffic is freight handled via the Port of Vancouver.

Milwaukee port officials believe rail infrastructure is sufficient for current volumes, although weight restrictions on a bridge near the end of the port rail lead are sometimes cause for concern. Of greater interest would be direct access to WSOR and CN line haul services. Some shorter-haul Wisconsin destination traffic moved west from the port would benefit from the geographic coverage offered by these two carriers.

| **Port of La Crosse** | John Noyes, Robers Terminal |
|---|---|

Bulk commodities and cargo moving via La Crosse are handled by one of two privately-operated dock facilities served by Canadian Pacific Railway. Robers Terminal is open to a variety of users and handles steel, coal, cement, lumber and dimensional steel. The adjacent facility specializes in the movement of oil and asphalt products. Rail service is provided by a local CP switching crew based in La Crosse and is deemed adequate "by railroad standards" according to local port managers. There have been some cutbacks in rail crew availability due to the recent recession, with crews on duty for "on call" service 12 hours per day rather than 24 hours as had previously been the case. Rail facilities are deemed adequate for handling of current port volumes.

| **Ports of Duluth/Superior** | Adolph Ojaard, Port Director | Teleconference |
|---|---|---|

Superior, Wisconsin is the site of the state's highest-volume marine operations, with a variety of bulk cargoes moving via privately owned dock facilities to and from vessels that ply the Great Lakes and the St. Lawrence Seaway. Key commodities include coal, grain, taconite and other ore and mining-related products. General merchandise traffic moves via facilities across the state line in Duluth. The Port Authority of Duluth/Superior is a Minnesota-chartered organization that owns facilities only in Minnesota but serves as the advocacy and marketing entity for port interests in the region as a whole.

The port has experienced a significant increase in wind energy component handling over the past five years, but this traffic moves via the Duluth facilities that are equipped to handle merchandise and industrial goods shipments. Minnesota Steel's long-term plans for new rolling mill facilities in the Iron Range may in time create demand for new rail service and/or new merchandise marine handling via the Lakes, but any such traffic would again be handled via the Duluth side of the bi-state port complex.

Four Class I carriers serve the Twin Ports:

- Canadian National Railways, by virtue of its acquisition of Duluth, Minnesota and Iron Range and Wisconsin Central Railroad properties in 2001
- Canadian Pacific Railway, through trackage rights access from the south over Burlington Northern Santa Fe (BNSF)
- Union Pacific Railroad, through trackage rights access from the south over BNSF
- BNSF Railway, which accesses the port over its own lines from both the west and south

Port management describes rail service as reliable from all serving carriers, consisting of regularly scheduled merchandise service and special commodity-specific unit train movements of grain, coal and other bulk commodities. Both inbound and outbound bulk commodity traffic is nearly always transferred to ground before furtherance via the connecting mode due, in part, to the seasonal nature of Great Lakes shipments. These "buffer stocks" eliminate most concerns over the specific timing of train movements as related to connecting marine vessels.

At present, there are no significant rail facility needs related to the Superior port operations.

**Rail Carrier Outreach**

| | |
|---|---|
| **Amtrak** | Bruce Hillblom, Senior Director-State Partnerships |
| Amtrak's engagement with Wisconsin for new services is through the context of the Midwest Regional Rail Initiative and the ARRA-funded *Hiawatha* extension project. Amtrak is also working with WisDOT on issues surrounding station development and ownership for present and anticipated services. | |
| **Burlington Northern Santa Fe (BNSF) Railway** | Chris Bigoness, Manager Public Funding; Paul Nowicki, AVP Government and Public Policy |
| BNSF's main track infrastructure is considered adequate for current traffic volumes. Planners have identified potential future investments, if volumes grow significantly. Most of these projects target "missing sections" of what today are for the most part double-track alignments. A total of 12 miles of new second track would be involved. | |
| **Canadian National Railway (CN)** | Kevin Soucie, Senior Manager Government Affairs |
| A System Diagram map, traffic density by line and detailed engineering data for each of CN's 16 Wisconsin subdivisions was provided to WisDOT. | |
| **Canadian Pacific Railway (CP)** | Judy Mitchell, Manager Commercial Development; Herb Jones, Manager of Public Affairs |
| Replacement of La Crosse-La Crescent bridge is a key infrastructure issue and has been ranked as a high priority by the Army Core of Engineers. CP also has periodic high water problems with the main line via the Reeseville swamp and sought funding assistance under the Federal TIGER grant funding program in 2009 for reconstruction and elevation of their alignment in that area. CP sees safety and appropriate treatment of passenger service investments, including protection of freight service capacity, as priority issues for the state. | |
| **Union Pacific (UP) Railroad** | Mike Payette, AVP Government Affairs; Mark Bristol, Gen. Director, Network and Business Development |
| UP has requested that WisDOT consider public assistance for removal of vertical clearance restrictions to permit double stack operations through Wisconsin; 11 discrete projects would be involved between Glen Oak and the Illinois border south of Milwaukee. UP is also seeking state support for a branch line rail bridge upgrade at Chippewa falls to permit 286,000lb car loadings on this branch. WisDOT has offered to purchase this line but UP is unwilling to cede ownership at this time. | |

| | |
|---|---|
| **Wisconsin & Southern Railroad (WSOR)** | Ken Lucht, Director of Public Affairs; Ben Meighan, Engineering Superintendent |
| WSOR looks forward to continuing strong support from the state as they gradually upgrade all of their lines to minimum FRA Class II status. WisDOT's consulting team met with WSOR engineering staff to review proposed medium and long-term infrastructure targets and associated capital plans. A sample of field inspections was also performed to evaluate track conditions. Enhanced access to the Chicago gateway (through trackage rights) would support further development of carload traffic. WSOR is presently restricted to one brace of trains daily due to restrictions imposed by Metra over lines that Metra owns and dispatches. | |
| **Escanaba and Lake Superior (EL&S)** | Tom Klimek, VP Marketing |
| E&LS is concerned over decreasing traffic volumes and the difficulty of marketing carload traffic with their current Class I connector. | |
| **Wisconsin Northern Railroad (WNR)** | Lon VanGemert, CEO |
| WNR operates a successful rail franchise of around 3,500 annual carloads of primarily inbound traffic. WNR would benefit from an upgrade of rail facilities to 286,000lb loading standards on the connecting UP route over Chippewa Falls. | |
| **Tomahawk Railway** | Suzie Klinger, GM |
| No written data received. | |

# Chapter 3: System Inventory

## Table of Contents

# Chapter 3: System Inventory

## Introduction

This chapter describes the rail industry in Wisconsin from a number of different perspectives. It begins with an overview illustrating how Wisconsin's rail system connects people and goods to the national rail network. It also details ownership, its implications for rail service in the state, and the operational strategies that railroads use to remain competitive. A profile of each railroad is also provided. A description of the rail infrastructure system in the context of rail capacity is explored. Finally, a discussion of at-risk lines for abandonment focuses on Wisconsin's rail service and rail corridor preservation efforts. Together, these perspectives provide relevant background information for the state's long-range planning.

Data in this chapter serves as a benchmark for future state rail plans in assessing capacity needs for shared freight and passenger rail demands and may be used to develop performance measures. The Wisconsin Department of Transportation (WisDOT) acknowledges the recent increase in the movement of frac sand and oil products by rail in Wisconsin and its impact on the rail network. WisDOT will continue to study the impacts of these commodity flows and address them in updates to the Plan.

## Overview of Wisconsin's Network

Wisconsin's rail system consists of a network of mainlines, branches, industrial leads, spurs, rail yards and terminals. The rail network also includes out-of-service corridors that have been preserved for possible future transportation use[1].

As of January 2010:

- 59 out of 72 counties in the state are served by at least one of the state's 11 freight railroads
- Active rail mileage totals over 3,600 track miles
- Of the 3,600 miles, Amtrak operates over 236 miles to provide passenger rail service
- 7.3 miles are used for commuter rail provided by Metra between Kenosha and Chicago
- The public sector owns over 530 miles of track
- Intersecting the railroads are approximately 7,200 rail crossings with 4,800 located on public roads

Wisconsin's proximity to Chicago – one of the nation's most important interchange hubs handling one-third of the U.S. freight rail – underscores the importance of the state's rail system to the national system for both freight and passenger movement.

[1] The corridors are protected under rail banking agreements or they are currently being used as trails under the protections of the National Trails Act.

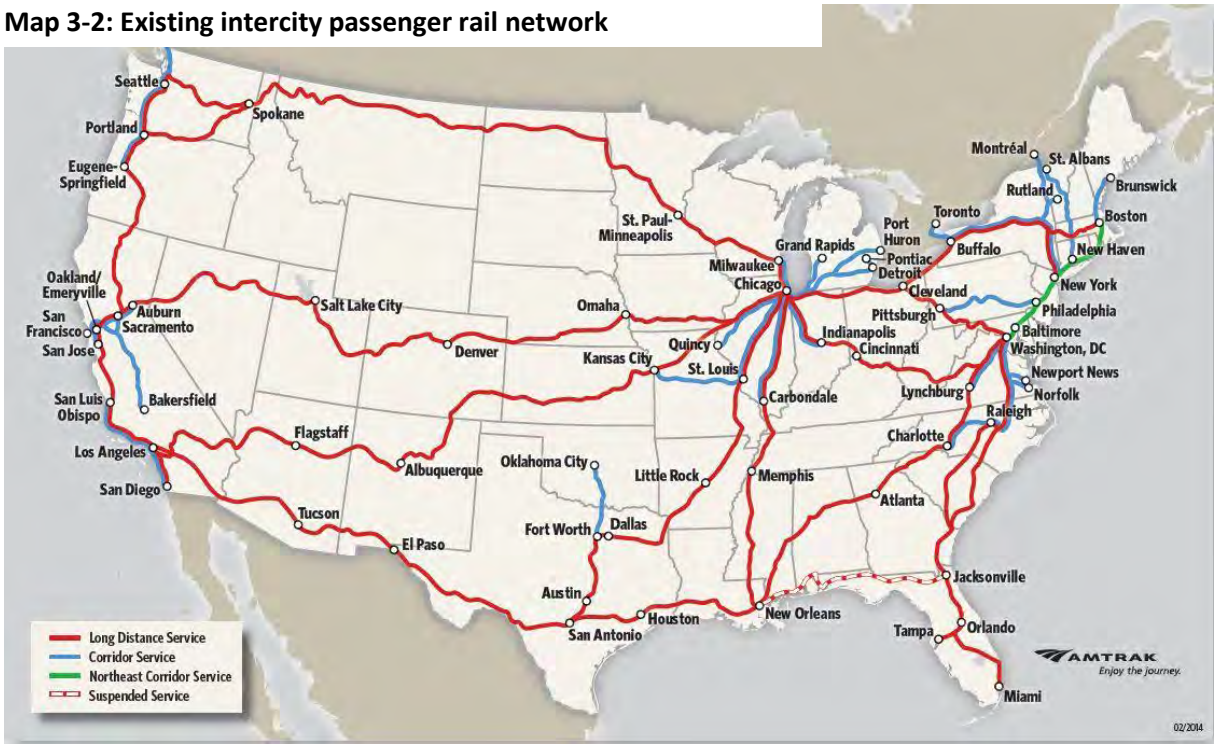
Map 3-1 shows the number of tons of freight flowing over the national rail system and illustrates that Wisconsin is north of a high density west to east freight rail corridor. Other corridors passing through Wisconsin originate in Seattle, Washington and Vancouver and Prince Rupert, British Columbia. Many of Wisconsin's lines feed into these corridors.

**Map 3-1: Domestic Freight Rail Traffic - Year 2000**


**Source: Reebie Associates' TRANSEARCH and U.S. DOT Freight Analysis Framework Project**

In addition to the transport of freight, Wisconsin is part of the national passenger rail network. Map 3-2 shows the national intercity passenger system (Amtrak), major population centers or mega-regions, and where intercity passenger rail service currently exists. There are two passenger rail routes serving the state: the *Hiawatha Service* between Chicago and Milwaukee, and the *Empire Builder* between Chicago and Seattle or Portland. These services and planning for future implementation of improved intercity passenger rail are discussed in Chapter 6: Intercity Passenger Rail.

**Map 3-2: Existing intercity passenger rail network**




**Source:** ***Amtrak***

### *Wisconsin's rail network as part of national defense*

The Strategic Rail Corridor Network (STRACNET) (Map 3-3) is an interconnected and continuous rail line network consisting of over 38,000 miles of track serving over 170 defense installations. The Railroads for the National Defense Program, in conjunction with the Federal Railroad Administration, established this network to support defense deployment and peacetime needs. Rail transportation is extremely important to the Department of Defense since the majority of heavy and tracked vehicles would deploy by rail to seaports of embarkation. In Wisconsin, the STRACNET line is the same line that is used by Amtrak for passenger rail travel. See Chapter 9: Rail Safety and Security, for more information about STRACNET.

**Map 3-3: STRACNET**


## Ownership

The institutional structure of the rail industry in North America is different from the other transportation modes. Highways, air, water, etc. have typically been the subject of public planning studies and policy development efforts and are generally publicly-owned and maintained and, therefore, accessible to any licensed operator. In contrast, rail carriers provide not only the service, but also maintain and control the tracks and other facilities required for service.

> Railroads are typically categorized by measures of size and geographic reach. This classification is important in that carrier size is an important determinant of the rail services that are available within a region, competitive posture, market access, physical condition and financial strength.

Understanding how the rail industry is structured, and the varying scale, ownership and operating arrangements present in Wisconsin are important factors for developing responsive strategies that will meet the goals set forth in the vision for rail. While the North American rail system is an integrated network, the individual carriers – which range from very small railroads operating in only a small number of counties to the largest carriers that service much of the nation – have varying perspectives and needs.

### *Classification*

The Association of American Railroads (AAR) classifies U.S. freight railroads based on a combination of revenues and carrier characteristics. The Surface Transportation Board (STB) uses a classification scheme

that is purely revenue based.[2] Railroads serving Wisconsin are classified, using the AAR's definition, as follows:

**Class I –** Railroads must be U.S.-based and have operating revenue (for 2010) exceeding $398.7 million. Currently there are seven Class I railroads in the U.S.[3] Four have operations in Wisconsin:

- Burlington Northern Santa Fe (BNSF)
- Canadian National (CN) / Wisconsin Central, LTD.
- Canadian Pacific (CP) / Soo Line Railroad
- Union Pacific (UP)

Regional and short line railroads fall into the following three categories:

**Regional –** Are non-Class I line-haul railroads operating 350 miles or more with operating revenues of at least $31.9 million but less than $398.7 million. They generally operate in at least two states, and as many as four states. Wisconsin currently has two regional railroads, Wisconsin & Southern Railroad, and Dakota, Minnesota and Eastern Railroad.

**Local –** These railroads operate less than 350 miles and have revenues of less than $31.9 million. The vast majority earn less than $5 million per year. They generally perform point-to-point service over short distances. Most operate less than 75 miles in a single state. There are five railroads In Wisconsin that are considered local railroads:

- Escanaba & Lake Superior (ELS)
- Municipality of East Troy Railroad Company (METW)
- Progressive Rail, Inc. (PGR)
- Tomahawk Railway (TR)
- Wisconsin Great Northern (WGN)

**Switching or Terminal –** A railroad engaged primarily in switching and/or terminal services for other railroads (i.e., they are not typically involved in line-haul moves between two geographical locations). Switching and terminal railroads are often categorized with short line railroads due to their operational and revenue characteristics, except in cases where they are owned by one or more Class I carriers. The Rail + Transload, Inc. (located in Watertown) is considered a switching railroad.

[2] The STB classification for 2010: Class I - $398.7 million or more, Class II - $31.9 million to $398.6 million, Class III – less than $31.9 million. For 2009, the thresholds were $378.8 million and $30.3 million, respectively; for 2008, the thresholds were $401.4 million and $32.1 million, respectively.

[3] Two Canadian railroads, CN and CP, have enough revenue that they would be U.S. Class I railroads if they were U.S. companies. Both companies also own railroads in the United States that, by themselves qualify as Class I railroads. Two Mexican railroads, Ferrocarril Mexicano and Kansas City Southern de Mexico, would also be Class I railroads if they were U.S. companies.

## *Other ownership arrangements*

Small railroad ownership takes on different forms, of which many are represented by one or more Wisconsin railroads:

**Industry –** Usually operated for one industry, but can provide service to other unrelated firms. The most common owners are steel and forest products companies. Over the years, Wisconsin has had several industry-owned railroads, including Duluth, Missabe and Iron Range (DMIR), which was acquired by Canadian National in 2004 from an affiliate of U.S. Steel.

**Holding Company –** A railroad that is owned by a corporation holding several short lines. There are three holding companies operating in Wisconsin, including Watco, Genesee & Wyoming, and Progressive Rail. Watco owns and operates Wisconsin & Southern, as well as 29 other lines in North America. Genesee & Wyoming Inc. (GWI) owns and operates the Tomahawk Railway in Wisconsin, as well as 110 other lines on three continents. Progressive Rail operates Wisconsin Northern, one of its nine lines across five Midwestern states.

**Independent –** Railroads that are independently owned and operated (e.g., Wisconsin Great Northern and Escanaba & Lake Superior), with the underlying infrastructure either directly owned by the operator or by a third party, such as a Class I railroad or public agency.

**Public –** This category includes ownership by a state, county, city, municipality, or even the federal government (typically for military purposes). There are no publicly operated railroads in Wisconsin; however, several Wisconsin short line railroads have agreements to operate over trackage that is owned by a rail transit commission (see Table 3-2). Wisconsin & Southern and Wisconsin Great Northern Railroad are companies that operate over publicly-owned lines.

**Figure 3-1: Wisconsin and Southern locomotives**

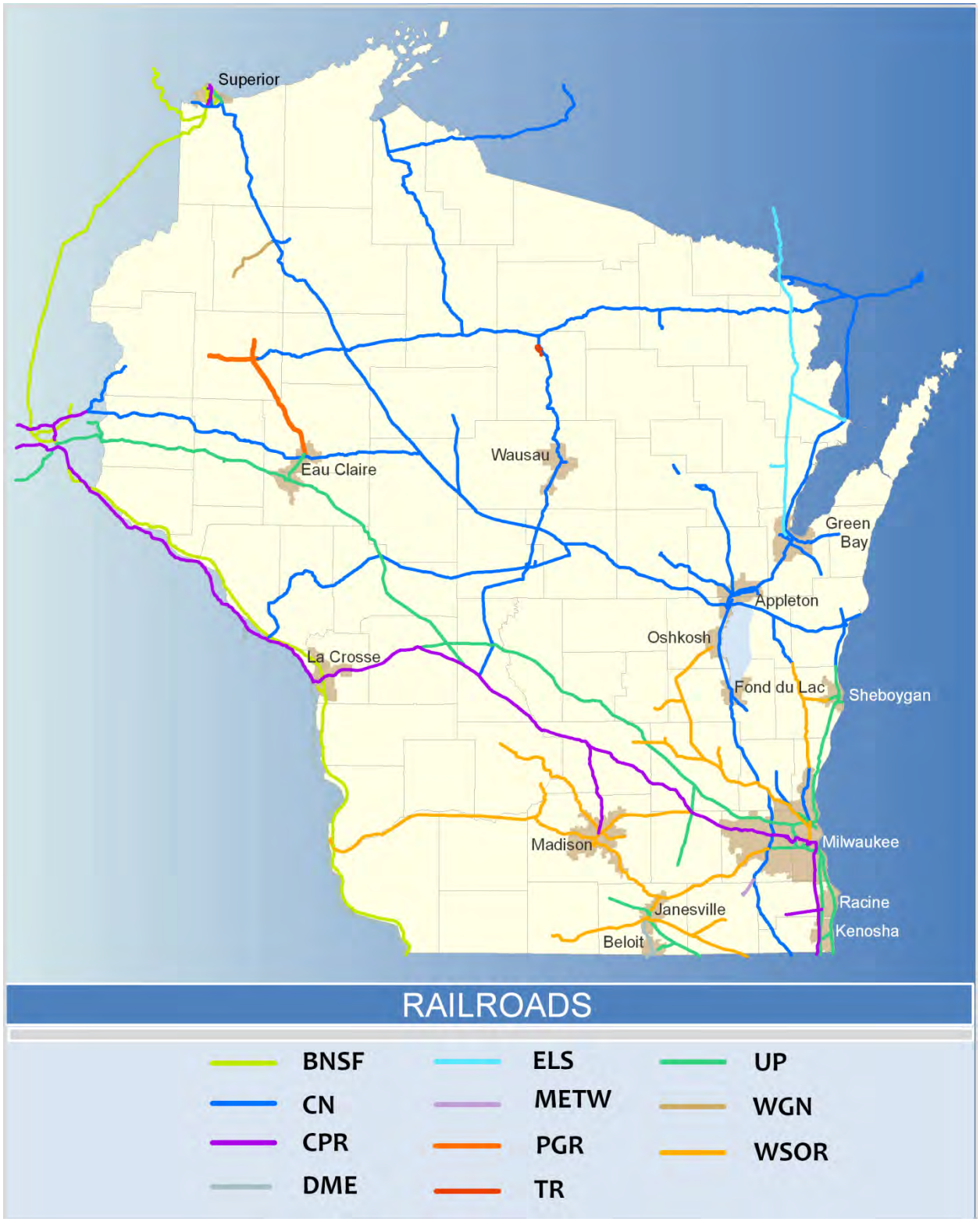
***Photo courtesy of WSOR***

Table 3-1 lists each of Wisconsin's active freight railroads, their parent companies and miles operated. In the case where the railroad property is owned by a public entity, the owning agency and parent company of the operator are both indicated. Map 3-4 shows the Wisconsin rail system by operator.

| Table 3-1: Mileage by classification | | | | |
|---|---|---|---|---|
| **Railroad** | **SCAC[4]** | **Parent company/ owning agency** | **Miles operated in Wisconsin[5]** | **Percent of total miles** |
| **Class I Railroads** | | | | |
| Burlington Northern Santa Fe Railway Company | BNSF | Berkshire Hathaway | 276 | 7.7% |
| Canadian Pacific [6] | CP | | 310 | 8.6% |
| Union Pacific Railroad Company | UP | | 623 | 17.3% |
| Canadian National [7] | CN | | 1,578 | 43.8% |
| **Regional & Local Railroads (Class II & III)** | | | | |
| Dakota, Minnesota & Eastern[8] | DME | Canadian Pacific | 14 | .4% |
| Escanaba & Lake Superior Railroad Company | ELS | | 109 | 3% |
| Municipality of East Troy Wisconsin | METW | | 7 | .2% |
| Progressive Rail, Inc. / Wisconsin Northern | PGR | | 61 | 1.7% |
| Tomahawk Railway Limited Partnership | TR | Genesee & Wyoming | 4 | .1% |
| Wisconsin & Southern Railroad Company | WSOR | State's RTCs & Watco | 602 | 16.7% |
| Wisconsin Great Northern Railroad, Inc. | WGN | | 19 | .5% |
| **Switching and Terminal Railroads** | | | | |
| Rail + Transload, Inc. | RTI | | 0 | - |
| **Total Miles Operated** | | | **3,603** | 100% |

[4] Standard Carrier Alpha Code, an industry standard 2 to 4 letter designation.
[5] Mileage does not include trackage rights.
[6] Soo Line Railroad Co. is the legal operating name for almost all CP assets in Wisconsin.
[7] Grand Trunk Corporation, owner of the Wisconsin Central Ltd., the Sault Ste. Marie Bridge Company, and the Duluth, Missabe, and Iron Range, is the legal operating entity for CN in Wisconsin (and throughout the United States).
[8] DM&E has since been formally absorbed into Soo Line.

**Map 3-4: Railroads operating in Wisconsin – 2010**




**Source: Wisconsin Department of Transportation**

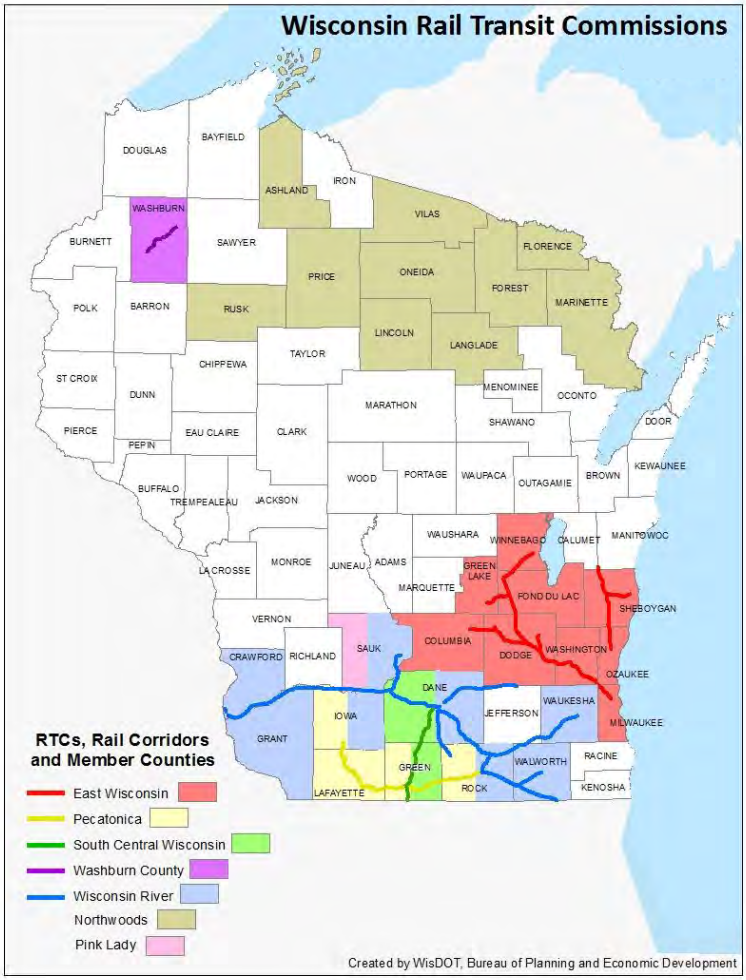
## *Rail Transit Commissions (RTCs)*

Viable railroad lines are sometimes purchased to retain freight service for smaller communities. The State of Wisconsin has over 530 miles of publicly-owned rail lines that are jointly owned by the state and a combination of RTCs, Consortia, and/or Transit Authorities (collectively Rail Transit Commissions).

RTCs were 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. The state's publicly-owned lines and the corresponding RTCs are depicted in Map 3-5 and Table 3-2.

Much of the responsibility for railroad operations and management is conferred on RTCs which, in turn, contract with private railroads for service. The contracts typically pass nearly all the responsibility for the operation, maintenance and liability to the railroad. Most RTCs in Wisconsin are multi-county in nature. However, some are single-county, in partnership with the cities, villages, and/or towns within that county. RTCs are statutorily empowered to take any action that their member municipalities have assigned them in the establishing agreement.

RTCs originally emerged as a mechanism to provide state funding when the state was constitutionally prohibited from funding rail improvements. Even though the 1992 passage of an amendment to the constitution allows state funds to be used for railroad improvement purposes, the mechanism of public ownership with the RTCs remains. Grant agreements between WisDOT and RTCs determine how the lines can be used.




**Map 3-5: Rail Transit Commissions**

RTCs are staffed by their member municipalities and, in some cases, by regional planning commission staff. As can be seen from the brief descriptions in Table 3-2, their respective level of activity and scope of efforts vary. The commissions continue to be an important partner 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 3-2: Rail Transit Commissions | | | |
|---|---|---|---|
| **Name** | **Created** | **Counties** | **Purpose** |
| East Wisconsin Counties Rail Consortium | 1980 | Winnebago, Dodge, Green Lake, Washington, Fond du Lac, Columbia, Ozaukee, Sheboygan, Milwaukee | Manages 198 miles of track in the member counties. Contracts with WSOR for operations. |
| Forest County Transit Commission | 1979 *Since dissolved* | Forest and Florence | Assisted in preservation of 37.8 miles of trackage between Wabeno and Tipler. Contracted with Nicolet, Badger and Northern Railroad for operations. |
| Geneva Lake Area Joint Transit Commission | Mid 1960s | Walworth | Created to promote commuter rail service between Lake Geneva and Chicago. |
| Northeast Wisconsin Rail Transit Commission | Late 1970s *Since dissolved* | Brown, Oconto, and Marinette | Assisted in preservation of 88 miles of trackage between Green Bay and the WI/MI State line. Contracted with Escanaba & Lake Superior Railroad for operations. |
| Pecatonica Rail Transit Commission | 1978 | Green, Iowa, Lafayette, Rock | Manages 34 miles of track operated by the WSOR between Monroe and Janesville, as well as a recreational trail. |
| Pink Lady Rail Transit Commission | 1988 | Sauk County, City of Baraboo, City of Reedsburg and Village of Prairie du Sac | Created to work with Union Pacific, communities, and shippers to maintain area rail service. |
| South Central Wisconsin Rail Transit Commission | 1978 | Dane, Green | Manages 59 miles of line that is currently a recreational trail. |
| Washburn County Rail Transit Commission | 1998 | Washburn | Manages 18 miles of line and currently has an operating agreement with the Wisconsin Great Northern Railroad. |
| Wisconsin River Rail Transit Commission | 1980 | Crawford, Dane, Grant, Iowa, Rock, Sauk, Walworth, Waukesha | Manages 278 miles of track. Contracts with WSOR to provide service over its network. |
| Northwoods Rail Transit Commission | 2012 | Ashland, Florence, Forest, 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. |

## Characteristics of Railroads Operating in Wisconsin

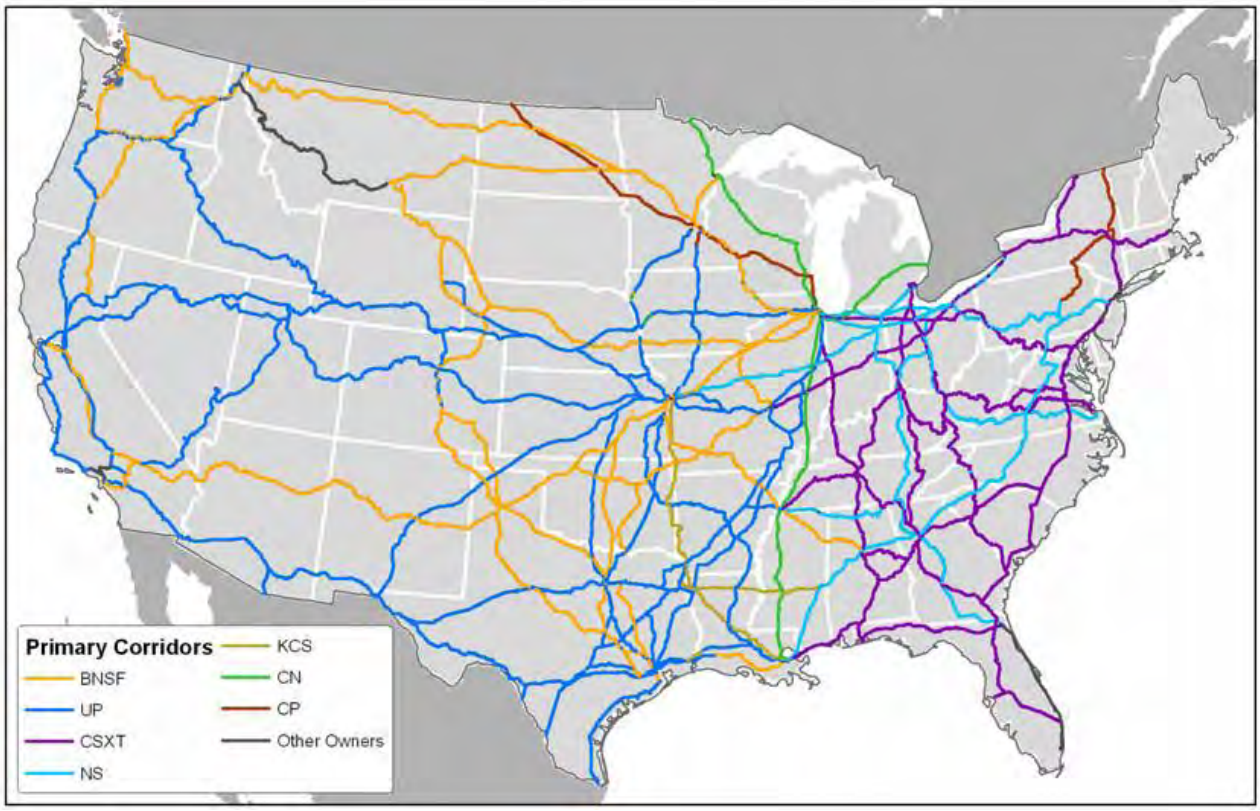
Meaningful public policy stems from an understanding of how railroads operate and use the rail infrastructure. This section covers the following topics:

- Railroad operational agreements
- Wisconsin railroad profiles
- Capacity of the rail system in Wisconsin
- Intermodal facilities

### *Railroad operational agreements*

The railroad industry is highly concentrated in the hands of the Class I railroads but they are limited by their own networks. While Map 3-6 does not depict a comprehensive view of the North American rail system, and only illustrates the primary corridors of the Class I networks, it does show their geographic extent. For example, BNSF and UP's networks are in the western part of the country, while CN's network spans from north to south in the middle of the country. The eastern part of the country is served by Norfolk Southern and CSX.

**Map 3-6: Class I U.S. Primary Rail Corridors**




**Source: Cambridge Systematics, Inc. prepared for the American Association of Railroads, 2007.**

Railroads have developed several methods to extend their reach over each others' lines to satisfy shipper needs and achieve corporate efficiency goals.

**Joint rate/route –**Two railroads, by agreement, establish one rate from an origin on the first rail line to a destination on the second rail line. One of the partnered railroads sends one bill, the shipper returns one check, and the billing railroad pays the other its share of the revenue. Each railroad remains individually responsible for providing locomotives and crews over its lines and loss and damage to the freight while in its possession. Joint rate/route agreements are subject to STB regulation and are a matter of public record.

**Union Station/Union Terminal**
A union station or union terminal is the term used in North America for a train station where tracks and facilities are shared by two or more railway companies, allowing passengers or freight to connect conveniently between them.

**Trackage rights –** Under this type of arrangement, the owning railroad retains all rights but allows another railroad to operate over certain sections of its track. Trackage rights can be "full service," where the tenant has the right to serve shippers on the owner's line, or "overhead" or "bridge" meaning that the tenant cannot carry freight to and from the owner's customers. Trackage rights can be temporary or long-term. Temporary rights agreements are typically made when a disaster affects one railroad while a parallel railroad line is fully operational. Long-term agreements can be made to allow competing railroads access to potentially profitable shippers or to act as a bridge route between otherwise disconnected sections of another railroad. Unlike joint route/rate, trackage rights agreements specify that the tenant railroad is solely responsible to the shipper for providing transportation service and for loss and damage to the freight.

Trackage rights agreements are subject to STB regulation and are a matter of public record. Labor provisions are attached to trackage rights agreements. If the employees on an owning railroad lose work or their jobs because a new tenant takes away traffic, they are entitled by federal law to up to six years pay.

**Haulage rights –** Under this type of arrangement, the railroad receiving haulage rights has control of marketing. It negotiates the rate or contract with the customer over the entire route. It also supplies the cars and is responsible for loss and damage. The railroad granting the haulage rights, meanwhile, retains direct control over operations. It provides the track, train crews, dispatching services, and sometimes the locomotives. In return, the host railroad gets a cents-per-unit payment for each car moved, but it is not privy to the haulage road's deals with the shippers.

Because haulage rights are outside of the STB's trackage rights jurisdiction, they are not a matter of public record and the owning railroad employees do not receive labor protection.

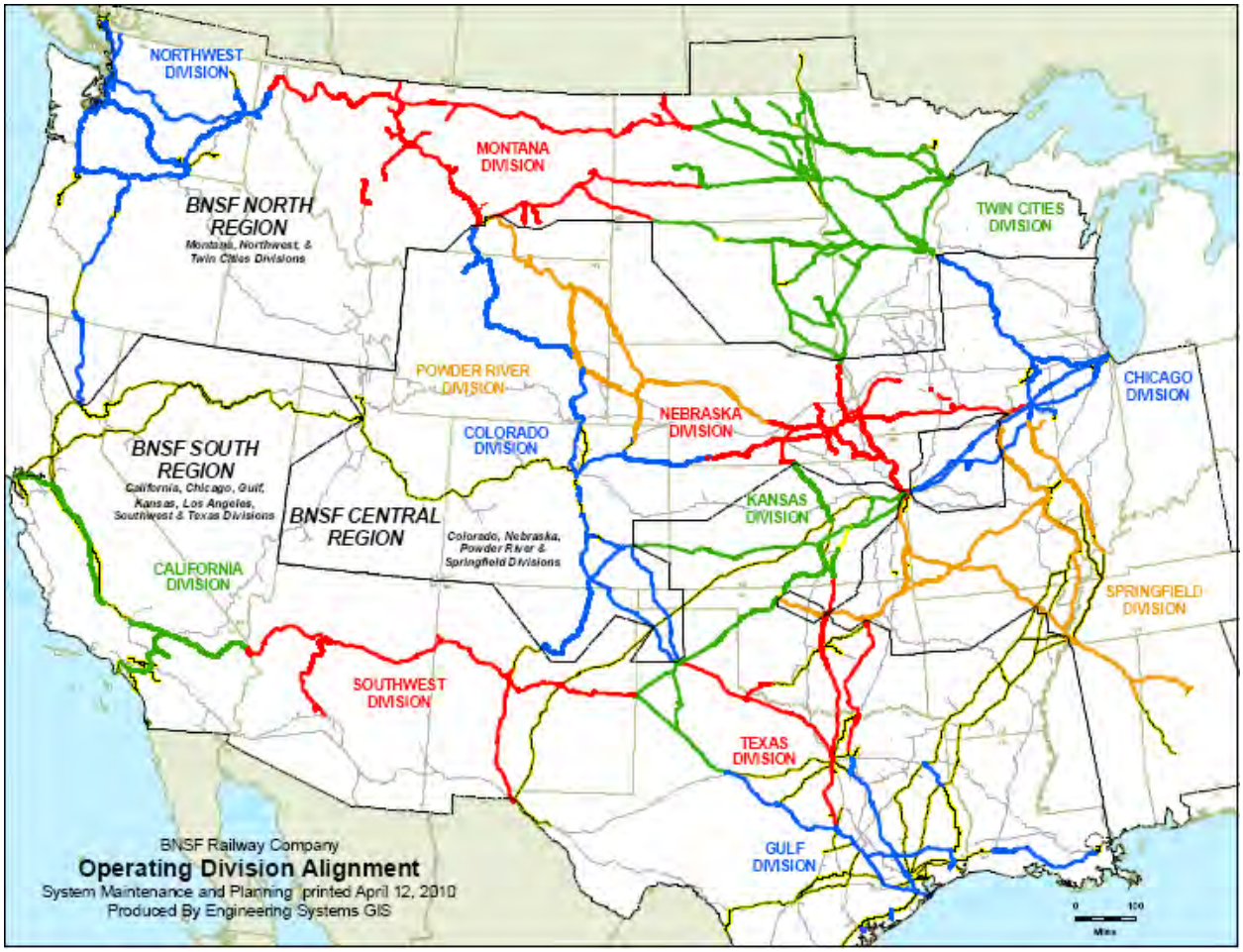
## Wisconsin Railroad Profiles

This section profiles the 11 active freight railroads operating in Wisconsin. A table summarizes each railroad's operations in Wisconsin.[9]

### *Burlington Northern Santa Fe Railway*

In September 1995, Burlington Northern Inc. and the Santa Fe Pacific Corporation merged to form one of the largest networks in North America. In February, 2010 the railroad became a wholly-owned subsidiary of Berkshire Hathaway, Inc.

**Map 3-7: BNSF's System**




Burlington Northern Santa Fe's (BNSF's) 32,000 route miles cover the western half of the U.S., serving all of the major markets in the region and connecting to eastern markets through all five primary gateways (Chicago, St. Louis, Kansas City, Memphis and New Orleans) and several other interchange locations, including a southeastern connection at Birmingham, Alabama. North American service is provided

[9] Railroad timetables were used as the primary source for each railroad's operating profile.

through connections with Canadian and Mexican railroads. The network spans over 28 states and two Canadian provinces. In 2009, BNSF employed 38,000 people and served over 40 ports nationwide.

BNSF moves more intermodal traffic than any other rail system in the world. In 2008, more than 4.6 million intermodal shipments (truck trailers or containers) were transported on BNSF's rail lines. According to BNSF, it is among the largest grain-hauling railroads in the United States, transporting more than one million carloads of agricultural commodities in 2008, nearly one-half of which were corn and wheat movements. Among the industrial products carried by BNSF's carload services are lumber, newsprint, printing paper, paperboard, propane, lube oil, motor oil, asphalt, canned beverages, coiled sheet steel, recycled iron and steel, cement, asphalt, gypsum, crushed stone, limestone, iron ore, soda ash for glass, and kaolin clay for paper.

BNSF has had an aggressive campaign to close grade crossings across the country. In addition, the railroad has helped to develop new markets by creating "shuttle" trains in Texas, and an Ethanol Express service from the Midwest to California. In 2008, BNSF completed nearly 16 miles of a third main track through Cajon Pass in Southern California, increasing capacity of the transcontinental route between Chicago and Los Angeles from 100 to 150 trains per day. In April 2010, BNSF completed a $200 million expansion and rebuilding of its Memphis Intermodal Facility which will increase its lift capacity to one million lifts by the time the facility is built out. BNSF's average length of haul was reported to be 1,090 miles in 2008.

In 2009, the railroad had operating annual revenues of $14 billion, a $4 billion decrease from 2008. BNSF is headquartered in Fort Worth, Texas.

**Table 3-3: BNSF operating profile in Wisconsin**

| **Mileage** | **Division** | |
|---|---|---|
| 276 | Twin Cities | |
| **Subdivisions** | **From** | **To** |
| Allouez Branch | Saunders | Allouez |
| Aurora | Aurora, Il | North La Crosse |
| Hinckley | Boylston | MN State Line (Foxboro) |
| Lakes | Superior, WI | Cass Lake, MN |
| St. Croix | North La Crosse | MN State Line (Burns) |
| **Major Yards** | | |
| Allouez, Superior, La Crosse | | |
| **Terminal Operations** | | |
| None in Wisconsin | | |
| **Trackage Rights** | | |
| Over CP, North La Crosse to Winona<br>Over CN, Saunders to Ranier, MN | | |
| **Port Connections** | | |
| Superior/Duluth | | |

BNSF operates (Table 3-3) about 276 miles of track in Wisconsin which is mostly double-tracked. BNSF's main Wisconsin line connects Chicago and the Twin Cities via the Mississippi River Valley from East Dubuque, Illinois, through Prescott (Pierce County). The mainline primarily carries overhead traffic through the state. Only a small percentage of BNSF traffic originates or terminates in Wisconsin. The predominant commodity terminating in Wisconsin is western coal at the Port of Superior. The railroad employs 673 people in Wisconsin with a payroll of $42 million.

## *Canadian National*

Canadian National (CN), headquartered in Montréal, Canada, operates the largest rail network in Canada. The railroad operates approximately 21,094 route miles in eight Canadian provinces and 16 American states (Table 3-4). CN serves the ports of Vancouver and Prince Rupert in British Columbia; Montréal; Halifax; New Orleans, Louisiana; and Mobile, Alabama; and the key metropolitan areas of Toronto, Buffalo, Chicago, Detroit, Duluth, Minnesota/Superior, Wisconsin, Green Bay, Minneapolis/St. Paul, Minnesota, St. Louis, Memphis, Tennessee, and Jackson, Mississippi, with connections to all points in North America.

**Map 3-8: Canadian National System and Elgin, Joliet and Eastern Railway Co (EJE) Acquisition Inset**


**Source: 2009 Investor Fact Book**

| Table 3-4: CN operating profile in Wisconsin | | |
|---|---|---|
| **Mileage** | **Division** | |
| 1,578 | North | |
| **Subdivisions** | **From** | **To** |
| Ashland | Ashland | Ashland Jct. |
| Bradley | Ladysmith | Argonne Jct. |
| Chilton | Hilbert | Kiel |
| Dresser | MN St. Line (Osceola) | Dresser |
| Fox River | Green Bay | Neenah North |
| Manistique | MI State Line | Green Bay |
| Manitowoc | Neenah | Cleveland |
| Marinette | Green Bay | Marinette |
| Medford | Medford | Spencer |
| Minneapolis | MN St. Line (Withrow) | Owen |
| Neenah | Hoover | Fond du Lac |
| Pembine | Crandon | MI St. Line (Hermansville) |
| Plover | Stevens Point | Wisconsin Rapids |
| Saukville | Saukville | Mill |
| Shawano | Shawano | Shawano Jct. |
| Stinson | Stinson Yard | Ambridge |
| Superior | MN State Line | Hoover |
| Valley | New Lisbon | Bradley |
| Waukesha | Fond du Lac | North State Line |
| West Bend | Rusco | Milepost 99.5 |
| White Pine | WI/MI State Line | Marengo Junction |
| Whitehall | Wisconsin Rapids | East Winona |
| **Major Yards** | | |
| Fond du Lac | | |
| **Terminal Operations** | | |
| *Not available* | | |
| **Trackage Rights** | | |
| *Not available* | | |
| **Port Connections** | | |
| Green Bay , Superior | | |

Through a series of acquisitions that began in 1999 with the purchase of the Illinois Central, CN gained control of an extensive network in the central United States along the Mississippi River Valley from the Great Lakes to the Gulf of Mexico.

In 2001, CN acquired Wisconsin Central Transportation Corporation's North American railroad subsidiaries based in Wisconsin: Wisconsin Central Ltd (WCL), Fox Valley & Western Ltd (FVW), Sault St. Marie Bridge Company (SSAM), as well as Wisconsin Chicago Link Ltd., and Algoma Central based in Michigan. WCL's acquisition allowed CN to obtain its own through route to Chicago, thereby forming a transcontinental link from western Canada through the United States, as well as access to St. Paul from the east.

Other acquisitions have improved the efficiency of CN's network in North America. The Duluth, Missabe & Iron Range (DMIR) was acquired in 2004 (12 rail miles in Wisconsin). This acquisition included access to the ports of Twin Harbors and Duluth/Superior, making CN the largest carrier of iron ore in North America. In 2008, CN acquired Elgin, Joliet and Eastern Railway Co. (EJE) after intense public debate. The line consists of a rail corridor through the Chicago suburbs that essentially bypasses Chicago's congestion and allows trains to travel south without delays or interchanges in Chicago. Map 3-8 shows an inset of the former EJE lines.

Other system improvements include a $100 million modernization of CN's Memphis yard in 2009. This yard serves as the gateway to company's operations in the Gulf Region.

In terms of commodities, no individual commodity group accounted for more than 18

percent of revenue. Nineteen percent of revenue came from the U.S., 28 percent from transborder traffic, 24 percent from Canadian domestic traffic, and 29 percent from overseas traffic. CN is the originating carrier for approximately 85 percent of traffic moving along its network, which allows it both to capitalize on service advantages and build on opportunities to efficiently use assets.

CN operates over 1,578 miles of track in Wisconsin as part of its North Division. The railroad has been involved with Wisconsin rail since 1995 when it entered into a long-term agreement with WCL, to provide haulage services for CN's carload and bulk commodity trains between Superior and Chicago. CN has one public intermodal facility at Chippewa Falls, and one private intermodal facility operated for Ashley Furniture in Arcadia, Wisconsin.

In 2009, the firm employed an average of 21,793 people, of which 6,696 are U.S. citizens, 440 located in Wisconsin. CN reported freight revenue of $6.6 billion in 2009 down from $7.6 billion in 2008.

## *Canadian Pacific Railway*

Canadian Pacific Railway's (CP) network spans 14,000 miles in Canada and the United States from Vancouver to Montréal, and also serves major northern cities in the United States such as Minneapolis, Chicago and New York City. CP has port operations in Vancouver, Montréal, Philadelphia and New York. In 2009, 2.36 million carloads generated revenues of C$4.3 billion, down from 2008's C$4.9 billion. Over one-half of the CP's freight traffic is coal, grain and intermodal freight. It also ships automotive parts and automobiles, sulfur, fertilizers, other chemicals, forest products and other types of commodities.

**Map 3-9: Canadian Pacific System**


**Source: 2009 Investor Book**

CP has had a lengthy presence in Wisconsin through its controlling ownership of the Soo Line Railroad, which served the upper Midwest. In 1985, Soo purchased the remaining assets of the Chicago,

| Table 3-5: CP operating profile in Wisconsin | | |
|---|---|---|
| **Mileage** | **Division** | |
| 310 | St Paul & Chicago Service Areas | |
| **Subdivisions** | **From** | **To** |
| C & M | Il State Line (Wadsworth) | Milwaukee |
| Duluth-Superior Terminals | Superior | Superior |
| M & P | Portage | Madison |
| Tomah | Portage | MN Line |
| Watertown | Milwaukee | Portage |
| **Major Yards** | | |
| Milwaukee, Portage, La Crosse, Superior | | |
| **Terminal/Intermodal/Transload Operations** | | |
| Intermodal facility-Milwaukee,<br>Transload facilities –Milwaukee and La Crosse<br>Passenger stations: La Crosse, Tomah, Wisconsin Dells, Portage, Columbus, Milwaukee, Milwaukee Airport, Sturtevant | | |
| **Trackage Rights** | | |
| Over CN, from New Lisbon to Weston<br>Over WSOR, Watertown to Madison<br>Over WSOR, Janesville to Madison<br>Over BNSF, Superior to Foxboro and Superior to Duluth | | |
| **Port Connections** | | |
| Superior, Milwaukee | | |

Milwaukee, St. Paul and Pacific Railroad (Milwaukee Road), giving it a more direct through route between Chicago and the Twin Cities. Combined with Soo's existing lines west of the Twin Cities, a stronger link between Chicago, the upper Midwest and western Canada was established through gateways at Portal, North Dakota and Noyes, Minnesota. CP fully acquired the Soo in 1990 through a stock purchase. CP proceeded to shrink its U.S. network until 2007 when it initiated acquisition of Dakota Minnesota and Eastern (DME) and its affiliate Iowa, Chicago, and Eastern (ICE), which had been spun off by CP in 1997.

In Wisconsin, CP operates over 310 miles of track and leases five miles of track to Wisconsin & Southern Railroad (WSOR). CP's mainline connects Chicago, Milwaukee and the Twin Cities via La Crosse. It is a key link in CP's rail service from Vancouver, British Columbia, to Chicago. CP's mainline through Wisconsin serves as the route of Amtrak's *Empire Builder* service between Chicago and the Twin Cities, as well as the route of Amtrak's *Hiawatha Service* between Milwaukee and Chicago. The railroad sold the Waterloo Spur, the line between Watertown and Madison to WSOR in 2003. The State of Wisconsin purchased the line from WSOR in 2009.

CP operates over five subdivisions in Wisconsin; its 2009 Wisconsin payroll was $38 million for about 800 employees. As of May 2010, CP has 500 employees in Wisconsin.

### *Union Pacific Railroad Company*

Union Pacific Railroad (UP), headquartered in Omaha, Nebraska is the largest railroad in North America. The railroad operated over 32,100 route miles in the western United States in 2009. The railroad serves 23 states, every major West Coast and Gulf Coast port, and the five largest gateways between the East and West at Chicago, St. Louis, Memphis, Kansas City and New Orleans. The railroad has one of the most diversified commodity mixes in the industry, including chemicals, coal, food and food products, forest products, grain and grain products, metals and minerals, automobiles and parts, and intermodal. UP is the nation's largest hauler of chemicals, much of which originate along the Gulf Coast near Houston, Texas. With access to the coal-rich Powder River Basin in Wyoming and coalfields in Illinois, Colorado, and Utah, the railroad moves more than 250 million tons of coal annually.

**Map 3-10: Union Pacific System**


UP began operating in Wisconsin when it acquired Chicago & North Western in 1995. The railroad owns approximately 753 miles of track in Wisconsin, of which it leases 130 miles to WSOR and Progressive Rail Inc., for a total of 623 operating miles of track. UP also operates roughly over an additional 300 miles through trackage rights. In Wisconsin, UP's line connects Chicago, Milwaukee, and the Twin Cities via Eau Claire. Another spoke reaches Evansville in southern Wisconsin.

| Table 3-6: UP operating profile in Wisconsin | | |
|---|---|---|
| **Mileage** | **Divisions** | |
| 623 | Chicago and Twin Cities | |
| **Subdivisions** | **From** | **To** |
| Adams | BJ South | Adams |
| Albert Lea (Duluth Superior Terminal | Superior | South Itasca |
| Altoona | Altoona | MN State Line (Stillwater) |
| Chippewa Falls | Cameron | Yukon Jct. |
| Clyman | Clyman Junction | Fort Atkinson (EOT) |
| Harvard | Evansville | IL State Line (Harvard) |
| Kenosha | Saint Francis | IL State Line (Zion) |
| Milwaukee | FVW Connection | IL State Line (Gurnee) |
| Shoreline | BJ East | Edgewater Jct. |
| Winona | Wyeville | Winona |
| Wyeville | Adams | Altoona |
| **Major Yards** | | |
| Milwaukee, Janesville | | |
| **Terminal Operations/Intermodal/Transload** | | |
| Intermodal: Milwaukee<br>Transload: Glacier States, Kenosha, CSW Warehouse, Eau Claire | | |
| **Trackage Rights** | | |
| Over CN, Necedah to Superior | | |
| Over CP, Tunnel City to Tower CK | | |
| **Port Connections** | | |
| Duluth, MN/Superior WI, Milwaukee, La Crosse | | |

Commuter rail service is provided by UP under contract to Metra in Southeast Wisconsin.[10] UP employs 42,700 people of which 325 work in Wisconsin with an annual payroll of $32.1 million.

UP's Global III intermodal facility, located in Rochelle, Illinois is an important interchange hub and loading/unloading terminal for intermodal shipments heading to and from Wisconsin. UP has four other intermodal facilities in the Chicago metropolitan area.

UP will be implementing Positive Train Control in 2013 for the Adams, Harvard and Kenosha Subdivisions, and in 2015 for Altoona, Wyeville and Milwaukee Subdivisions.

Union Pacific operates over 11 subdivisions in Wisconsin as shown in the operating profile, Table 3-6.

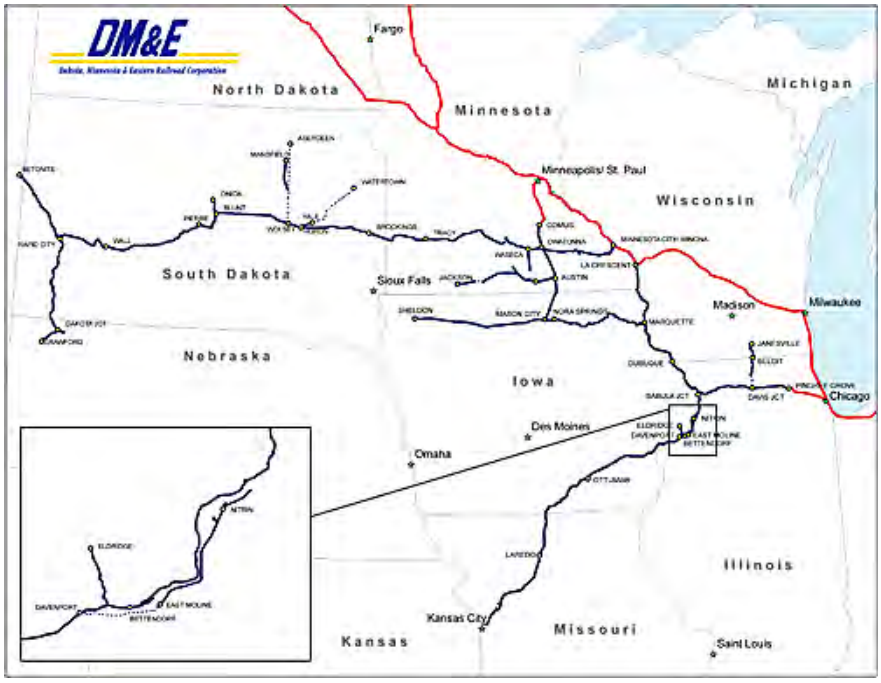
### *Dakota, Minnesota & Eastern Railroad*

Although considered a regional railroad, Dakota, Minnesota & Eastern Railroad (DME) has been a subsidiary of Canadian Pacific Railway since October 30, 2008.[11]

[10] Metra is the commuter rail agency serving Cook, DuPage, Will, Lake, Kane and McHenry counties in the Chicago area. It is the sister agency to the Chicago Transit Authority, which provides mass transit rail (the L) and bus service to Chicago and some suburbs, and Pace, which provides bus service primarily in the suburbs.

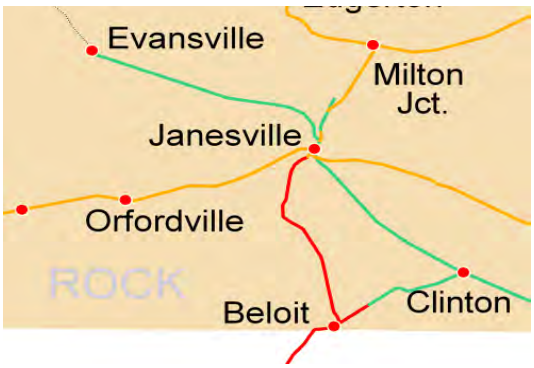
[11] http://www.stb.dot.gov/decisions/readingroom.nsf/WebDecisionID/39346?OpenDocument

**Map 3- 11: Dakota, Minnesota and Eastern Railroad System**




DME, headquartered in Sioux Falls, South Dakota, began operations in 1986 from the remnants of a line slated for abandonment by Chicago & North Western Railroad. It has since become one of the largest regional (Class II) railroads in the United States, with over 2,500 miles of track. DME's mainline extends from the Mississippi River at Winona, Minnesota, across southern Minnesota and central South Dakota to Rapid City. DME's system map shows its rail lines in blue and CP's lines in red. DME serves 200 communities in Iowa, Illinois, Minnesota, Missouri, Minnesota, Nebraska, South Dakota and Wisconsin and employs 1,000 people.

DME manages over 7,000 rail cars and operates nearly 200 locomotives. The system transports over 300,000 carloads of freight yearly through the upper Midwest. The principal commodities include grain and grain products, coal, chemicals, bentonite and cement, steel products, scrap materials, biofuels and forest products. Much of the system's traffic base is bulk commodity.




**Map 3-12: DME in Rock County (red lines)**

DME trackage in Wisconsin was previously part of the Soo Line Railroad. In 1997 the lines were sold to Iowa Minnesota Rail Link (IMRL) which operated them until 2002 when DME acquired the lines. For legal and regulatory historical reasons, IMRL was brought into DME as a separate entity—Iowa, Chicago & Eastern (ICE) Railroad—yet both DME and ICE were operated as a single system under common management by Cedar American Rail Holdings.

Today, DME operates over 14 miles in Rock County, between Beloit and Janesville. Major commodities include: marine engines, vegetable oil, plastics, petroleum products, canned goods, and lumber. DME has connections to UP and WSOR in Janesville.

### *Wisconsin & Southern Railroad Company*

Wisconsin & Southern Railroad (WSOR), Wisconsin's second largest railroad, is the main operator of the state-owned lines in Wisconsin. This network includes many former Milwaukee Road tracks that were designated for abandonment in the late 1970s and early 1980s. These tracks are now owned and managed cooperatively by the State of Wisconsin and 18 counties with which WSOR has a 50 year operating agreement.

**Table 3-7: WSOR operating profile in Wisconsin**

| **Mileage** | **Divisions** | |
|---|---|---|
| 273 | Northern, Southern | |
| **Subdivisions** | **From** | **To** |
| Cambria | Cambria | Horicon |
| Cottage Grove | Madison | Cottage Grove |
| Elkhorn | Bardwell | Elkhorn |
| Fox Lake | Janesville | IL State Line (Belden) |
| Madison | Madison | Janesville |
| Markesan | Markesan | Brandon |
| Milwaukee | Horicon | Grand Avenue |
| Monroe | Monroe | Janesville |
| Oshkosh | Oshkosh | Horicon |
| Plymouth | N. Milwaukee | Kiel |
| Prairie | Prairie du Chien | Madison |
| Reedsburg | Brooklyn | Reedsburg |
| Sauk | Badger Ordnance | Mazomanie |
| Watertown | Madison | Watertown |
| Waukesha | Waukesha | Madison |
| **Major Yards** | | |
| Horicon, Janesville, Madison, Milwaukee | | |
| **Terminal/Intermodal Terminals/Transload** | | |
| Terminals: Horicon, Janesville, Madison, Milwaukee<br>Transload: Horicon, Janesville, Madison, Milwaukee, Oshkosh, Plymouth, Ripon | | |
| **Trackage Rights** | | |
| Over BN, in Prairie du Chien<br>Over CN, Slinger to Grand Avenue<br>Over CP, Milwaukee to Chicago<br>Over Metra, Fox Lake to Chicago<br>Over UP, Kohler to Kohler Junction | | |
| **Port Connections** | | |
| Prairie du Chien | | |

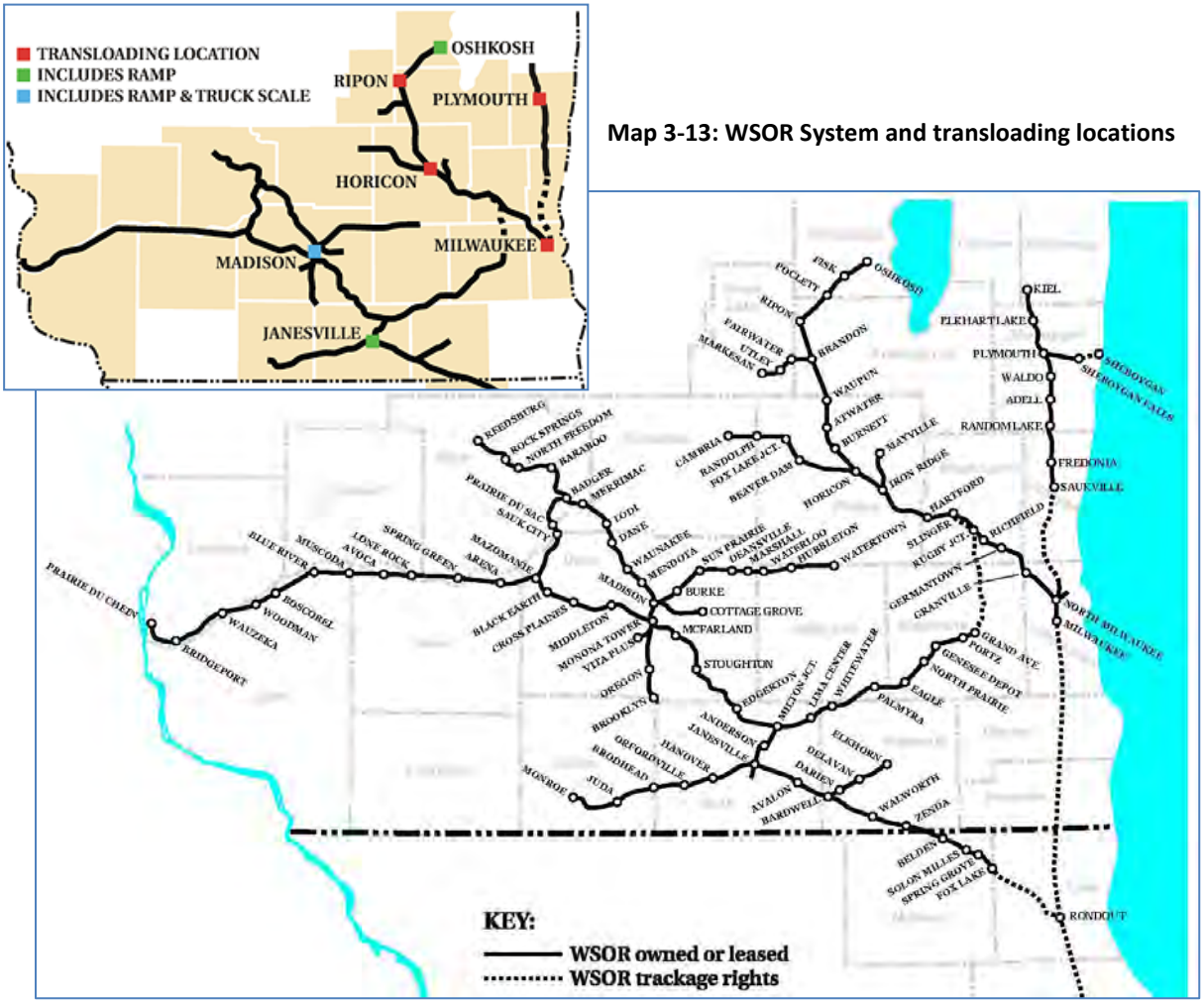
WSOR's network (Map 3-13) spans over 21 counties and 530 miles in southern Wisconsin and northeast Illinois. The network is comprised of trackage owned by the railroad (20 miles), 92 miles leased from UP (1996), five miles from CP (1998), with the remainder state-owned.

The Northern Division consists of five lines radiating from Horicon to Cambria, Markesan, Oshkosh, Mayville and Milwaukee (North Glendale Yard).

The Southern Division, which was formerly Wisconsin and Calumet Railroad (1992), consists of a line from Fox Lake, Illinois to Prairie du Chien, with branches terminating at Prairie du Sac, Elkhorn, Monroe, Waukesha and Watertown, and trackage rights to Chicago over Metra. The leased lines from UP consist of Madison to Reedsburg, Madison to Cottage Grove and Madison to Central Soya. WSOR also holds trackage rights from UP between Kohler to Kohler Junction. WSOR has trackage rights on the CN to connect the northern and southern divisions between Waukesha and Slinger. It also has trackage rights on CP's line from Milwaukee to Chicago.

Traffic includes food products, grain, fertilizer, limestone, lumber, steel, plastic, aggregates, salt, pulp board, paper and chemicals.

WSOR is headquartered in Milwaukee, where all dispatching duties are carried out. Branch offices are located in Madison, Janesville and Horicon. Locomotive maintenance is centered in Janesville; WSOR's Horicon paint shops often do contract work on both rolling stock and locomotives.




**Map 3-13: WSOR System and transloading locations**

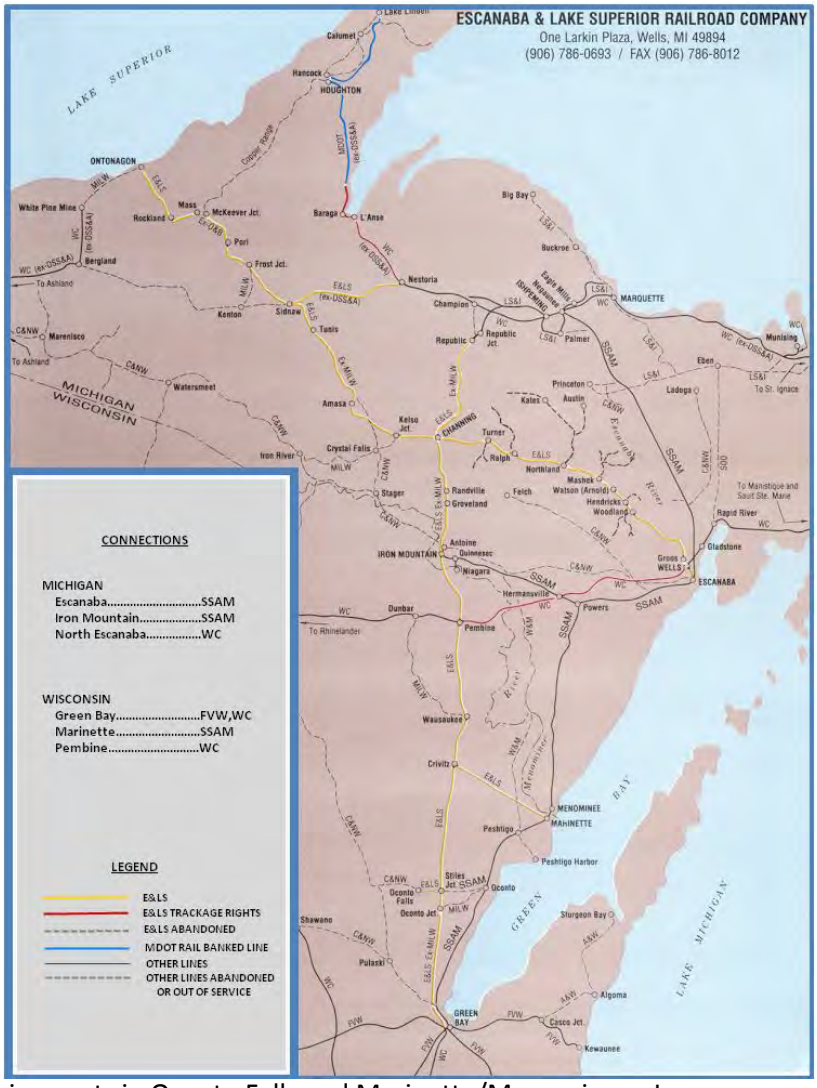
WSOR has connections to the western Class I railroads: BNSF, CN, CP and UP. It also has access to harbor facilities on the Mississippi River at Prairie du Chien and maintains several transloading sites within its system.

WSOR's operating revenue exceeded $35 million in 2009. As of January 1, 2010, it had 182 full-time employees. In January 2012 WSOR was sold to Watco, a Kansas-based rail-holding company.

## *Escanaba & Lake Superior Railroad Company*

Escanaba & Lake Superior Railroad (ELS) is a Class III short line carrier (STB classification) based in Wells, Michigan. ELS has been in operation since 1978 when it took over 65 miles of ex-Milwaukee Road trackage. Since then the railroad has grown to a 235-mile system with a diversified traffic base that includes wood pulp, pulpwood logs, oriented strand board, lumber, wood bark, canned goods, steel, scrap metal, aggregate, chemicals, and agricultural products (corn, grains, feed, and fertilizers).

**Map 3-14: Escanaba & Lake Superior System (2007)**




ELS's system (Table 3-8) is comprised of two primary lines and two branch lines:

- The first stretches north-south and connects Green Bay, with Republic, Michigan and Lake Superior & Ishpeming Railroad
- The other line connects Escanaba with Baraga via Channing, Sidnaw and Nestoria
- Key Wisconsin branches are the six mile Stiles Junction to Oconto Falls line and the 21 mile Crivitz, to Marinette/Menominee, Michigan line.

The railroad has connections with CN in Green Bay. ELS provides a minimum of five days per week service over the mainline from Channing to Green Bay and customizes service to meet shipper requirements in Oconto Falls and Marinette/Menominee. In Michigan, ELS's petitioned abandonment of the line from Sidnaw to Ontonagon has not been finalized due to negotiations with other interested parties.

The ELS has trackage rights over CN from North Escanaba, Michigan to Pembine, Wisconsin connecting with it in four locations: Green Bay, Pembine, Escanaba, and Iron Mountain, Michigan.

Starting in 1982, Wisconsin has provided ELS financial assistance in the form of loans or grants for its system in Wisconsin. This assistance has been used for acquisition and rehabilitation of track. The Northeast Wisconsin Rail Transit Commission served as the intermediary until it was dissolved.

| Table 3-8: ELS operating profile in Wisconsin | | |
|---|---|---|
| **Mileage** | **Division** | |
| 109 | None | |
| **Subdivisions** | **From** | **To** |
| Channing to Crivitz | Channing, MI | Crivitz |
| Crivitz- Green Bay | Crivitz | Green Bay |
| Crivitz-Menominee/Marinette | Crivitz | Menominee |
| Stiles Jct. –Oconto Falls | Stiles Jct. | Oconto Falls |
| **Major Yards** | | |
| Crivitz (Menominee, MI) | | |
| **Intermodal Ramp** | | |
| Howard | | |
| **Trackage Rights** | | |
| Over CN, North Escanaba to Pembine, WI | | |
| **Port Connections** | | |
| None in Wisconsin, Connection to Port of Menominee, MI | | |

### *Municipality of East Troy Railroad*

East Troy Electric Railroad is a standard gauge, common carrier railroad, operating over seven miles of track in Walworth and Waukesha Counties. The line runs from East Troy to Mukwonago, where it connects to CN. Farm products, lumber and tubing are the commodities shipped. Currently, the railroad's largest shipper, Burlington Co-op, unloads its farm products on a spur at the south end of Young Street in the East Troy Industrial Park. Trent Tube, manufacturers of specialty stainless-steel tubing, also ships via its spur off Young Street.

The Municipality of East Troy Wisconsin, its former owner, was built in 1906-07 by the Milwaukee Electric Railway and Light Company, as part of its 200-mile system of streetcar and interurban service. East Troy was the terminus of one line that ran from Milwaukee. This segment survived the abandonment of the rest of the East Troy line due to a need for freight service to sustain the industries located in the area.

The line was transferred from the Milwaukee Electric Railway and Light Company to the village of East Troy in 1939. The village operated the railroad with its own employees for freight purposes. A deal was formed between the village and Wisconsin Electric Railway Historical Society, and it began operations on Memorial Day 1972. They operated the East Troy Trolley Museum through 1984 on a line leased from the village.

In 1985, an agreement was struck with the village for freight and the entire operation was taken over by Wisconsin Trolley Museum Inc., under the name of the East Troy Electric Railroad.

The not-for-profit Friends of East Troy Railroad Museum, Inc. was first formed in 1975 to assist the development of the museum. As the 1990s began, its mission was redefined with a much wider scope. It was decided to bring the entire railroad – the vehicles, artifacts and operations into the organization.

This goal was achieved in stages, first with the purchase of the railroad property itself in January 1995. Then it bought all of the privately-held rolling stock and parts on the line, which was executed in parcels and completed in September 2000. The operating corporation was brought under Friends of East Troy Railroad Museum in December 2000. East Troy Electric Railroad is operated entirely by a volunteer workforce.

## *Progressive Rail, Inc.*

Wisconsin Northern Railroad (WNR) is an operating division of Progressive Rail Incorporated (PGR), headquartered in Lakeville, Minnesota. PGR has a total of nine separate rail operations: five in Minnesota; and one each in Wisconsin, Iowa, Illinois, and Missouri.


**Map 3-15: Progressive Rail Inc., in Wisconsin**

WNR began operations on November 29, 2004, leasing its trackage from UP and Wisconsin Central Ltd. (WC). UP trackage extends north from Norma, Wisconsin, a junction with the UP in northern Chippewa Falls, to Cameron. It was completed by Chippewa Falls and Northern Railway, a predecessor of the Chicago and North Western Transportation Company, in 1883.

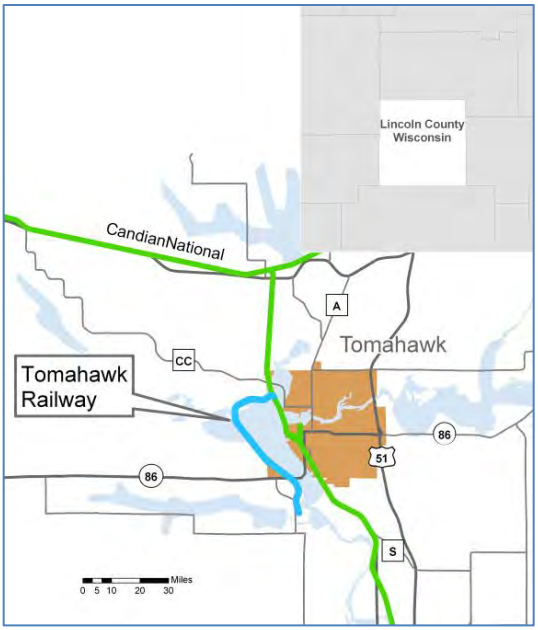
In 2009, the railroad handled over 1600 carloads of rail freight, generating almost 35,000 car miles or 3.28 million ton miles of work. Major commodities handled include: plastic resins, scrap materials, logs, fertilizer, chemicals, steel, feed grade grains, aggregate, and tallow. Annual revenues were $1.05 million.

WNR has five employees locally in train operations and track maintenance. Administrative functions are handled by system staff at PGR's Lakeville, Minnesota headquarters.

## *Wisconsin Great Northern Railroad, Inc.*

The Wisconsin Great Northern Railroad (WGN) is a historic excursion and dinner train operating on 19 miles of former Chicago & North Western track between the northern Wisconsin municipality of Spooner and town of Springbrook, with connections to CN's track at Stanberry Junction. The excursion train operates under a permit issued by the WisDOT's Railroads and Harbors Section. WGN is certified for freight service, but there is no scheduled freight service at this time.

**Map 3-16: Tomahawk Railway network**



### *Tomahawk Railway*

Tomahawk Railway (TR), owned by Genesee & Wyoming Railroad, operates over four miles of track in Lincoln County, Wisconsin. TR has two locomotives and 17 employees. Primary products shipped are coal and waste paper into the Packaging Corporation of America's containerboard mill. Finished products are switched onto the long-distance freight lines via CN. The railroad operates 365 days per year.

### *Rail + Transload, Inc.*

Rail + Transload, Inc., is owned by Mark K. Smith and operates approximately 1,100 feet (0.208 miles) of railroad and track that extends from a point of connection with CP's Waterloo Spur to a terminus approximately 200 feet northeast of Specialty Ingredients, LLC (SIL) at Watertown.

## Capacity of the Rail System in Wisconsin

Since the passage of the Staggers Act in 1980, when hundreds of miles of track were abandoned, physical capacity (as measured by miles of rail) has steadily decreased to today's streamlined trans-national system. Growth in intermodal traffic and coal has necessitated railroads to double and triple track in heavy use corridors. Any disruption to the U.S. rail system, such as unanticipated or even anticipated increased levels of demand – fall grain shipments, weather, infrastructure failure or operational issues – impacts the entire system causing delays throughout. The level of sensitivity and how resilient the system is depends on the capacity and redundancy of the network.

Additional capacity gives railroads the ability to run more freight through a terminal or line. Some examples of capacity improvements include:

- Adding more tracks (sidings, double tracking)
- Processing more trains on a given track (signaling improvements, speed increases, electronic braking)
- Expanding the capacity of a track (longer sidings)
- Increasing the capacity of each car (higher clearance, heavier-axle loads)

Operating improvements are important to getting the best possible utilization from the available line capacity. However, even with such improvements, there is often a need for additional mainline capacity, in the form of running tracks and/or passing sidings.

*Wisconsin Rail Plan 2030* does not include an in-depth capacity study, partly because no known capacity issues were identified by the railroads during development of the plan. This section, however, discusses the elements of capacity and provides benchmark data for investment decisions and future rail plans. A comprehensive picture of capacity and productivity would require the following data:

- Infrastructure (track, signals, structures, yards and grade crossings)

- Motive power (locomotives)
- Rolling stock (cars)
- Operating strategies
- Crews

Although these are discussed as individual topics, they are interrelated. The focus of this section will be on infrastructure and will serve as an inventory of the rail infrastructure in Wisconsin.

## *Infrastructure: double track, signals, weight limits*

Wisconsin's rail network consists of 3,600 miles of rail lines. Four hundred miles of that trackage is double tracked, with BNSF leading the way with most of its system double tracked. CP has over 100 miles double tracked; CN and UP also have some small segments double tracked.

Track signalization (Map 3-17) provides an idea of a railroad's capacity over a given route. While many branch lines do not require signals because they do not have a high volume of traffic, most Class I railroads use some form of automatic block signaling (ABS) to ensure that the track is safely clear of other trains and to improve capacity.

ABS works by breaking up a rail line into a number of blocks. Only one train is allowed to be in a block at any time and the system of signals lets the locomotive engineer know whether it is okay to proceed or not. The rails carry an electronic current that responds to whether a train is on the track and relays this information to a signal next to the track and in the cab. Block lengths are determined by planned train length and stopping distance. Stopping distances vary by terrain and train weight. Since trains have been getting longer and heavier, longer blocks are necessary. Having greater block lengths reduces the capacity of the track.

Another type of block signaling system is track warrant control (TWC). The conductor communicates with a dispatcher via a radio for verbal approval to enter a track segment or block. TWC can be used as a stand-alone dispatching and safety system in unsignaled territories, or can be supplemented with ABS to increase flexibility and traffic capacity.

The Automatic Train Stop (ATS) system has been used for passenger trains since the 1950s. ATS can be found over a short segment in Wisconsin. Chicago & North Western (now UP) installed ATS on its commuter routes out of Chicago. ATS is considered an intermittent system that triggers an alerter in the cab of the locomotive that the engineer must respond to within a set period of time before the brakes are automatically applied. The system has no ability to enforce speeds or signal indications.

**Map 3-17: Signaling systems in Wisconsin 2010**


**Source: Railroad timetables**

Centralized traffic-control (CTC) systems use a dispatcher located in a consolidated control center. Single-track with CTC is considered to have about 70 percent of the traffic-handling capability of automatic block signaling double track. Pulling up some of the second track, but leaving long "passing track" sections connected with high-speed turnouts reduces track investment, maintenance and taxes while improving the flexibility of handling traffic that must move at much different speeds in the same direction.

Positive train control (PTC) uses global positioning systems (GPS) along with continuous data communications to directly control speed and distance from other trains, which further improves capacity and fuel efficiency. PTC systems are not currently used in Wisconsin but routes that carry

passenger trains are now mandated to install this type of signaling system. Railroads are currently putting implementation plans together.

The corridors that use CTC can handle the most traffic. However a combination of signaling system and double trackage can equate to the capacity of CTC. Capacity can be inferred by applying the signaling system to the number of tracks in a given corridor. For example, BNSF primarily runs unit trains of coal on its double tracked system. According to Table 3-9[12], BNSF would have capacity constraints if it came close to running 80 trains per day.

Examining maximum allowable car weights is another way of looking at Wisconsin's rail network capacity, not only in terms of what commodities can be carried, but also the ability of shortlines to service local freight that needs a connection to the long-haul (Class I) market.

Map 3-18 shows the maximum allowable weights in Wisconsin which range from 263,000 to 286,000 pounds. The BNSF line in Minnesota can handle 315,000 pound cars. In Wisconsin, the rail industry will likely maintain the 286,000 pound standard for the near term, considering the cost of going to the 315,000 pound standard.

**Table 3-9: Average Capacity of Typical Rail-Freight Corridors (Trains per Day)**

| | | Trains per Day | |
|---|---|---|---|
| Number of Tracks | Type of Control | Practical Maximum If Multiple Train Types Use Corridor* | Practical Maximum If Single Train Type Uses Corridor** |
| 1 | N/S or TWC | 16 | 20 |
| 1 | ABS | 18 | 25 |
| 2 | N/S or TWC | 28 | 35 |
| 1 | CTC or TCS | 30 | 48 |
| 2 | ABS | 53 | 80 |
| 2 | CTC or TCS | 75 | 100 |
| 3 | CTC or TCS | 133 | 163 |
| 4 | CTC or TCS | 173 | 230 |
| 5 | CTC or TCS | 248 | 340 |
| 6 | CTC or TCS | 360 | 415 |

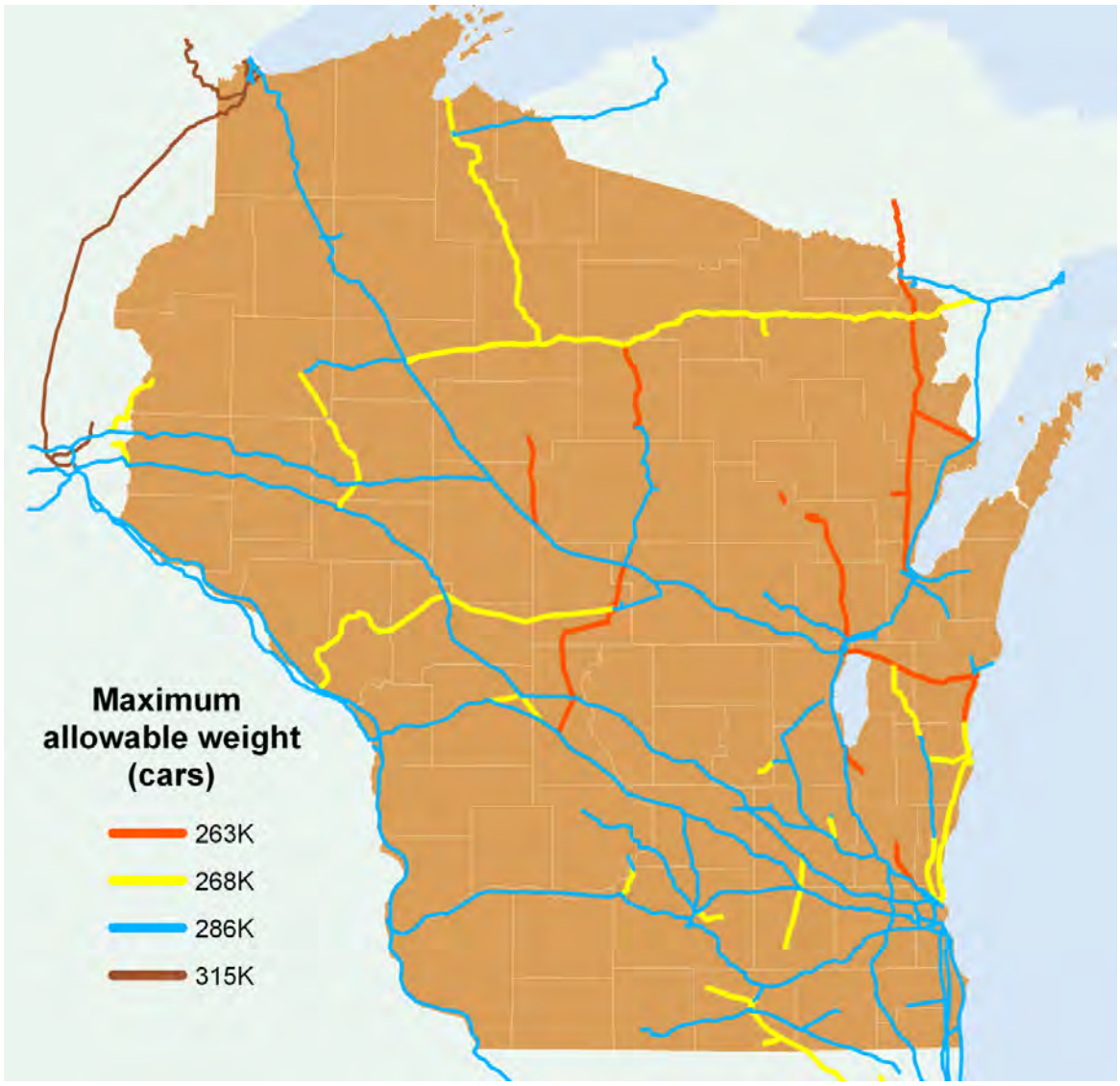
Key: N/S-TWC – No Signal/Track Warrant Control.
ABS – Automatic Block Signaling.
CTC-TCS – Centralized Traffic Control/Traffic Control System.

Notes: * For example, merchandise, intermodal, and passenger trains.
** For example, all intermodal trains.

The table presents average capacities for typical rail freight corridors. The actual capacities of the corridors were estimated using railroad-specific capacity tables. At the request of the railroads, these detailed capacity tables were not included in this report to protect confidential railroad business information.

[12] Class I railroad data aggregated by Cambridge Systematics, Inc. in the American Association of Railroads' report: National Rail Freight Infrastructure Capacity and Investment Study, 2007.

**Map 3-18: Maximum allowable weights in Wisconsin-2010**




**Sources: Railroad web sites; railroad timetables**

## *Rail terminals or yards*

Terminals and yards serve many functions for the railroads. They originate and terminate traffic by building outbound trains and breaking down inbound trains. They are used to classify inbound cars for assignment to outbound trains for through traffic. Yards can offer refueling, crew change, storage and maintenance functions. Given this key role in the rail network, a substantial amount of rail capacity is impacted by the size and efficiency of the terminals and yards. The capacity of a yard is often quoted as so many cars or trailers handled at a yard per day.

Major yards in Wisconsin are located in Milwaukee, Stevens Point, La Crosse, Janesville, Fond du Lac (Shops Yard), Superior and Portage. Smaller yards are located throughout the state (Map 3-19). There is no information at this time on the capacity of each yard.

**Map 3-19: Major and minor yards in Wisconsin – 2009**


**Source: Railroad track charts, NTAD 2009**

## *Grade crossings*

Grade crossings are both a safety issue and a capacity issue. From a capacity standpoint, lower speeds (although not always) through grade crossings contribute to train delays, especially near terminals. Switching activities as part of terminal operations sometimes result in backing trains across grade crossings, and even stopping trains on grade crossings. The number of grade crossings in a given corridor may pose problems if freight rail trains increase in

The prevention of train-vehicle, vehicle-train and train-pedestrian crashes is a priority. The key strategies are: signage and control of intersections, education of pedestrians and vehicle operators, and elimination of grade crossings with higher-volume highways.

frequency or in length; or if higher speed passenger trains are operating on the lines. Currently, there are no state or federal limits on the length of trains or requirements to notify agencies about unusually long train configurations. More information on the grade crossings is covered in Chapter 9: Rail Safety and Security.

### *Bridges and tunnels*

Many rail bridges in Wisconsin are original and date back to the late 1800s and early 1900s. They were built of varying materials including timber, concrete and stone. Like other information regarding railroads, condition data on bridges is proprietary.[13]

Bridges and tunnels can be capacity issues if they cannot support heavier cars or provide enough clearance to accommodate doublestack movements. On the state-owned rail system operated by WSOR, there are 139 timber bridges, 106 steel structures, 18 concrete bridges, seven stone bridges and seven highway bridges for a total of 277 bridges. Findings from a recent study concluded that the steel structures could sustain 286,000 pound car traffic. Timber bridges however, if exposed to 286,000 pound traffic, would have at most a life of five years.[14]

WSOR also operates over trackage leased from the Class I railroads, which includes an additional 87 bridges of which the majority are steel structures.

Wisconsin currently has no capacity issues with regard to tunnels or bridges. If, however, UP would run intermodal doublestack through Wisconsin there are a number of bridges on the Milwaukee and Adams subdivisions that would need modifications to support doublestack traffic. Map 3-20 shows the preponderance of structures over water as well as the locations of WSOR system bridges.

[13] The federal role in overseeing the safety of railroad bridges and tunnels is limited because FRA has determined that most railroads are sufficiently ensuring safe conditions. FRA issues bridge management guidelines, makes structural observations and may take enforcement actions to address structural problems.

[14] Impact of Railcar Weight Change on Bridges of the State of Wisconsin-Owned Railroad System, August 2006.

**Map 3-20: WSOR bridges and rail Infrastructure over water**


**Source: WSOR; WisDOT GIS processing hydrology and rail, 2010**

## *Class of track and maintenance*

The Federal Railroad Adminstration (FRA) track class offers clues on the condition of track and capacity. Each class has limits on the maximum speed that trains can run, although trains may operate at lower speeds. Railroads usually upgrade the weight of the rail and ties and ballast on a corridor basis. Speeds are frequently reduced in urban areas, yards, over hilly terrain or where track curves exist. For planning purposes, FRA class track helps to quickly visualize the condition of corridors that may be considered for future passenger/freight movements. To run passenger rail service, a rail line must be classified as a FRA Class 5 track. Map 3-21 shows the segments and their corresponding track class.[15]

Likewise this map helps understand the differences in service and maintenance among Class I and regional railroads. As evidenced in Map 3-18, almost all railroads can run 286,000 pound cars; the difference is in how fast the trains can run. Map 3-21 shows that the rail structure has been built to handle the heavier cars on corridors where trains can run at speeds of 60 miles per hour.

This inventory does not include information on maintenance activities which entails tie and ballast replacement. Maintenance needs to be scheduled around train movements otherwise capacity can be impacted. However, finding time to do maintenance in heavy-use corridors is also a problem.

Locomotives run more efficiently and are less likely to malfunction on well-maintained rail

**Table 3-10: FRA maximum allowable operating speeds (mph)**

| Track class | Freight trains | Passenger trains |
|---|---|---|
| Excepted track | 10 | N/A |
| Class I | 10 | 15 |
| Class 2 | 25 | 30 |
| Class 3 | 40 | 60 |
| Class 4 | 60 | 80 |
| Class 5 | 80 | 90 |
| All trains | | |
| Class 6 | 110 | |
| Class 7 | 125 | |
| Class 8 | 160 | |
| Class 9 | 200 | |


**Map 3-21: FRA Class Track**

**Source: Railroad timetables; 2009 National Transportation Atlas Database**

[15] Data shows maximum train speed per subdivision.

infrastructure. Tracks that are poorly maintained increase the risk of derailment even though trains are travelling at slower speeds. The process used to upgrade ties is mechanized while ballast replenishment may require more time.

**Figure 3-2: WSOR Tie Replacement**
***Photo courtesy of WSOR***

### *Motive power*

Knowing the number and type of locomotives helps to measure the amount of freight that can be moved. Shortages of either rail cars or locomotives reduce the capacity of the rail system. An excess of cars and locomotives is also costly because they tie up capital that could be directed elsewhere. However, technological advances have yet to be made to the coupling device that joins locomotives and cars putting motive power at a limit for the heaviest trains. For example, coal trains are now being operated with distributed power where a number of locomotives are placed throughout the train to provide better traction. They are controlled by the train's engineer.

## *Operating strategies*

Changes in operating strategies can improve productivity and capacity. One strategy known as "scheduled service" is helping railroads better align themselves with customers who need reliable service. In the past, with heavy labor costs and no additional revenue from an improved service business model, railroads minimized costs by waiting for a train to be at its full capacity before sending it out. However, this led to uncertainty in delivery times, which translated into unpredictable working hours, unknown system conditions during travel periods, and uncertain delivery windows for the customer.

Technological advances in communications as well as containerized shipping have helped the rail industry to be competitive in the marketplace for goods other than bulk goods. For higher-value intermodal traffic, which places a premium on reliable service, scheduled service and a high on-time percentage are absolute requirements to attract and keep business.

The Class I railroads now schedule intermodal service arrivals and departures fairly closely and are aggressive in trying to meet these schedules. Many of the railroads also schedule the departure times of bulk and carload traffic, but the arrival times for these types of services continue to present a scheduling challenge. Railroads will also limit the top speed of trains in order to make the average speed more uniform. This can have a positive impact on fuel consumption as well as on system capacity.

## *Crew size*

Crew size decisions came about as a result of collective bargaining. Wisconsin mandated a two person crew in the state, but was superseded by federal regulation which allows for one person crews. Federal law regulates the hours of service for railroad crews to 12 hour shifts. Railroads invest six months in

training new crew members and have had shortages of employees. There are a number of locations where, especially in yards, train operations are controlled remotely by a crew member on the ground rather than in the locomotive.

## Intermodal Activity: Truck and Barge

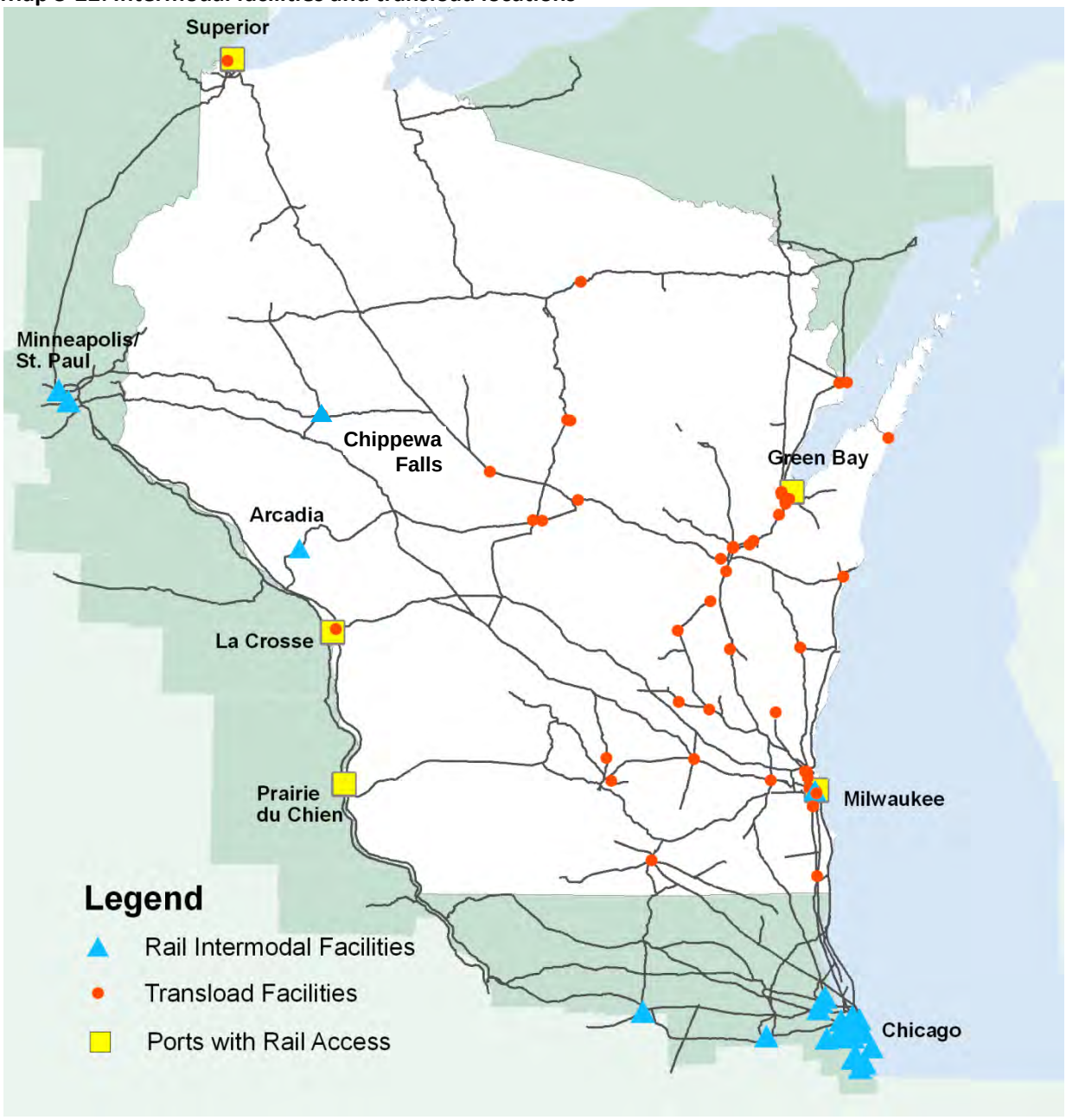
Moving goods over two or more modes is called intermodalism. Intermodal moves can be classified as direct or intermediate. A direct intermodal move can involve truck trailers or containers: respectively termed, trailer on flatcar (TOFC) or container on flatcar (COFC).[16] Typically, the trailer or international container remains closed or sealed. An intermediate transfer, also known as transloading, occurs when goods may be stored or handled before exchange to a different mode.

This section highlights where intermodal activity occurs and its implication on capacity statewide. The exchange between modes depends on many factors including the type of commodity, a commodity's final destination and the length of haul. Carriers usually have a minimum length of haul (700 miles) in order to make a move financially feasible. Given Wisconsin's proximity to Chicago and the Twin Cities, and the number of large intermodal facilities located in those cities, intermodal facilities in the state are not generally an efficient option for Class I railroads.

Map 3-22 shows the location of Wisconsin's intermodal facilities in relation to the major rail intermodal facilities in Illinois and Minnesota. Two rail intermodal facilities exist in Wisconsin: Chippewa Falls and Arcadia. CN operates both the Chippewa Falls facility and the facility in Arcadia at the Ashley Furniture plant. CN moves freight domestically and internationally, almost exclusively with COFC loading.

[16] Trailer on flatcar (TOFC) – a standard truck trailer on a chassis loaded onto a flat rail car and hauled to a facility, where it is unloaded from the rail flat car and hauled by truck to its final destination. Container on flatcar (COFC) – a standardized container loaded onto a flat car or stack car, where it is moved by rail to an intermodal facility and unloaded from the rail car, placed on a rubber-tired highway chassis, and hauled by truck to its final destination.

**Map 3-22: Intermodal facilities and transload locations**




**Sources: 2009 National Transportation Atlas Database; Railroads**

### *Transload facilities*

Transloading is another method of intermodal shipping that provides flexibility for those shippers that do not have rail access. Transload facilities may have a ramp, truck scale or equipment to move the contents from a truck to a rail car or from a barge to rail car or truck. Transload locations may also have warehouse space.

**Figure 3-3: Example of transloading**
**Photo courtesy of WSOR**

According to railroad web sites, there are more than 50 locations in Wisconsin where commodities can be transloaded. Not all transload facilities will load onto a railroad in Wisconsin. This is the case in the Fox Valley where goods are transloaded to a truck for rail access in Chicago. The preponderance of transload facilities implies that demand for rail service is not being met in the Fox Valley. Transloading activity occurs at the Port of Superior where iron ore arrives by barge, then stored for future move by rail.

### *Ports with rail access*

This section provides an inventory of the five ports in Wisconsin that have rail access and lists the *intermodal connectors*, those "orphan roads" that connect a port with a state highway on the National Highway System (NHS).[17] The condition of intermodal connectors are an issue of discussion in regard to intermodal connectivity as they sometimes deteriorate before improvements can be scheduled.

The Federal Highway Administration has a threshold for classifying roads that lead to a port area.[18]

Each port is mapped to show the location of road and rail. A table summarizes rail operators, lists the roads classified as NHS intermodal connectors as well as known alleviation

In 2010, the U.S. Maritime Administration (MARAD) formally designated 18 corridors along the West, East and Gulf Coasts, the Great Lakes and many of America's inland waterways. These corridors are routes where water transportation presents an opportunity to offer relief to landside corridors that suffer from traffic congestion, excessive air emissions or other environmental concerns and other challenges. The Great Lakes Corridor is slated to relieve I-90. Competitive funding has also been appropriated.

[17] The National Highway System includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. The NHS was developed by the U.S. Department of Transportation in cooperation with the states, local officials, and metropolitan planning organizations. Roads under the NHS designation can be improved with federal-aid funds. NHS includes only four percent of the nation's roads, but carries more than 40 percent of all highway traffic, 75 percent of heavy truck traffic, and 90 percent of tourist traffic.

[18] Criteria include: 1) Terminals that handle more than 50,000 TEUs (a volumetric measure of containerized cargo which stands for twenty-foot equivalent units) per year, or other units measured that would convert to more than 100 trucks per day in each direction. 2) Bulk commodity terminals that handle more than 500,000 tons per year by highway or 100 trucks per day in each direction on the principal connecting route. (If no individual terminal handles this amount of freight, but a cluster of terminals in close proximity to each other does, then the cluster of terminals could be considered in meeting the criteria. In such cases, the connecting route might terminate at a point where the traffic to several terminals begins to separate.)

strategies. Any constraints are discussed.

**Port of Green Bay**

**Map 3-23: Intermodal connectors at the Port of Green Bay**

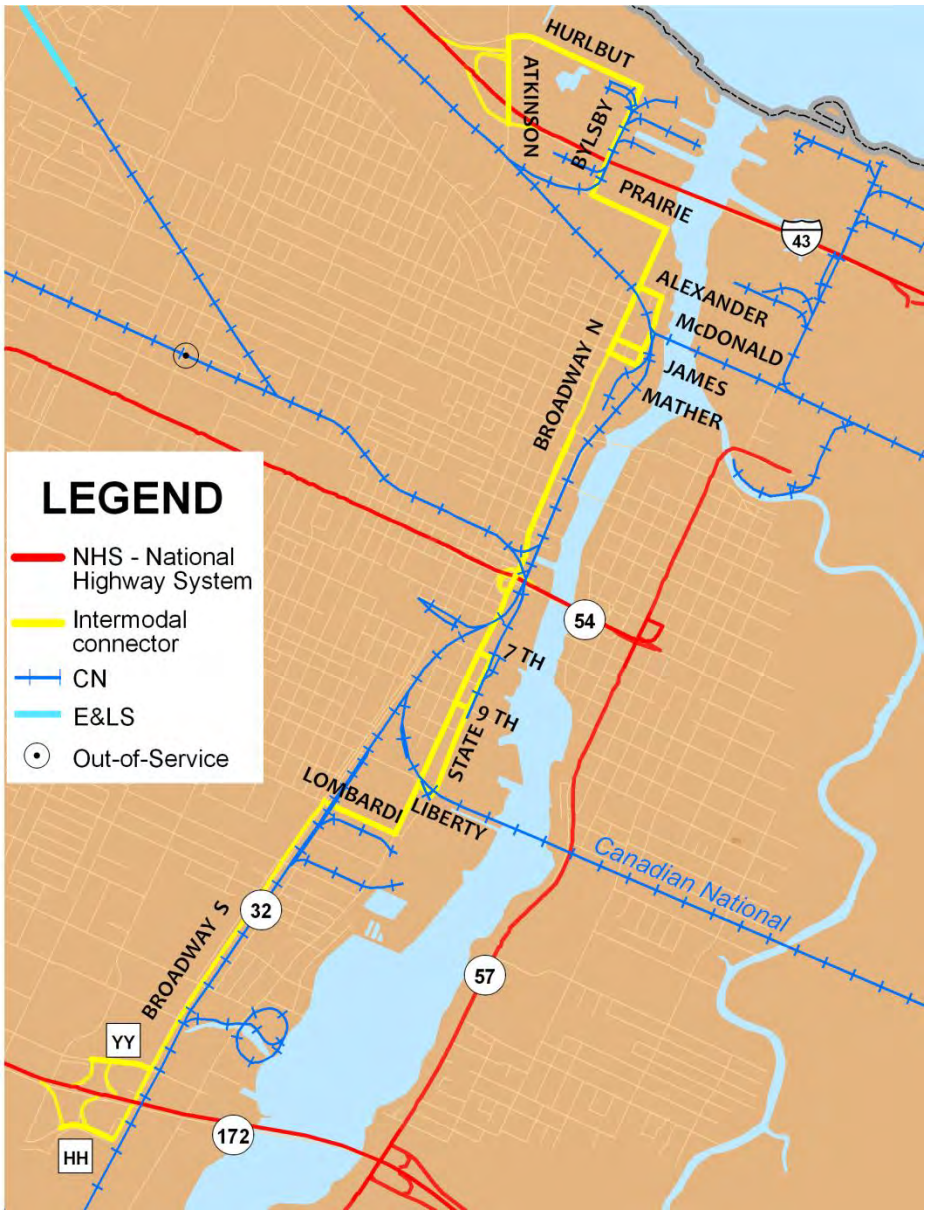



**Table 3-11: Port of Green Bay**

| Railroad operator | Water system |
|---|---|
| CN | Lake Michigan |
| **Comments/constraints** | |
| Roads are in fair condition with Atkinson interchange and Lombardi Ave. the best. | |
| **Intermodal connector roads** | |
| 7th St. | |
| 9th St. | |
| Alexander St. | |
| Atkinson Dr. | |
| Bylsby Ave. | |
| Broadway N | |
| Broadway S | |
| HH (segment) | |
| Hurlbut St. | |
| Jane St. | |
| Liberty | |
| Lombardi | |
| Mather St. | |
| McDonald | |
| Prairie Ave. | |
| State St. | |
| YY | |
| **Improvement plans** | |
| None known at this time. | |

**Port of La Crosse**

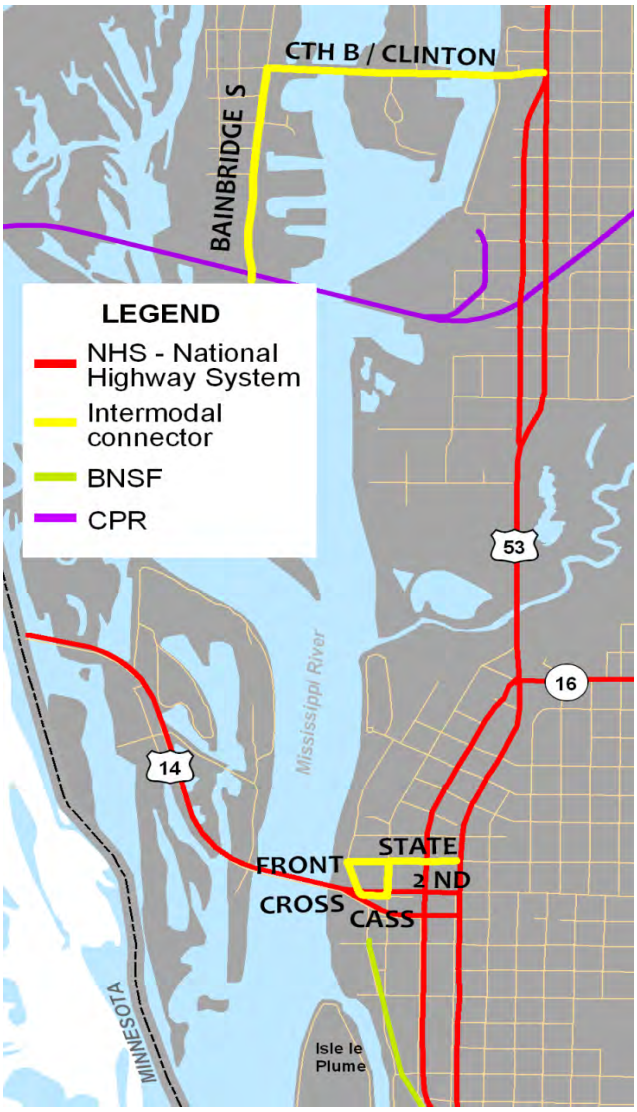
Although BNSF is in its proximity, the railroad does not service the Port of La Crosse.

**Figure 3-4: The Mississippi River Movable Bridge Span**

***Photo courtesy of John A. Weeks III.***

The Mississippi River movable bridge span connects La Crosse and La Crescent, Minnesota. In 1998 the U.S. Coast Guard determined the bridge constituted an unreasonable obstruction to navigation within the meaning of the Truman Hobbs Act. The proposed bridge alterations will facilitate commercial and recreational navigation on that section of the Mississippi River. The design of the proposed vertical lift span bridge has been completed and the current estimated cost is $70 million. Congress has appropriated $12.5 million toward the project. The bridge is the highest priority bridge on the Coast Guard's Truman-Hobbs projects list.

**Map 3-24: Intermodal connectors at the Port of La Crosse**




| Table 3-12: Port of La Crosse | |
|---|---|
| Railroad operators | Water system |
| CP | Mississippi River |
| Comments/constraints | |
| Niedbalski Bridge to Isle de Plume on Hood St. needs replacing.<br><br>The city of La Crosse will be updating its 1999 port plan. | |
| Intermodal connector roads | |
| 2nd St.<br>Bainbridge S<br>B/Clinton<br>Cass St.<br>Cross St.<br>Front St. | |
| Improvement plans | |
| None known at this time. | |

Other comments regarding the NHS routes (in red) include U.S. 14 north and southbound through downtown are in poor shape and should be repaired in the next three to five years. Highway 53 North and South and Clinton Street should have expansion joints repaired.

CP's tracks lead to the F.J. Robbers Terminal and another set to Hydrite Chemical. The tracks are in good condition.

**Port of Milwaukee**

One of the major issues for all ports is the transportation of oversize and overweight commodities e.g., wind turbine components and transformers. While the issue is not whether a port can handle the commodity, the freight mobility issue is whether the commodity can be moved through the city. This is the case for Milwaukee. The constraint locations are listed in Table 3-13.

Trackage in the Port of Milwaukee is publicly-owned and there are 27 railroad crossings on Jones Island. The Port of Milwaukee has direct access to the Interstate system via 5th Street. The intermodal connectors associated with the port offers access to Interstate 43 as well.

**Map 3-25: Intermodal connectors at the Port of Milwaukee**

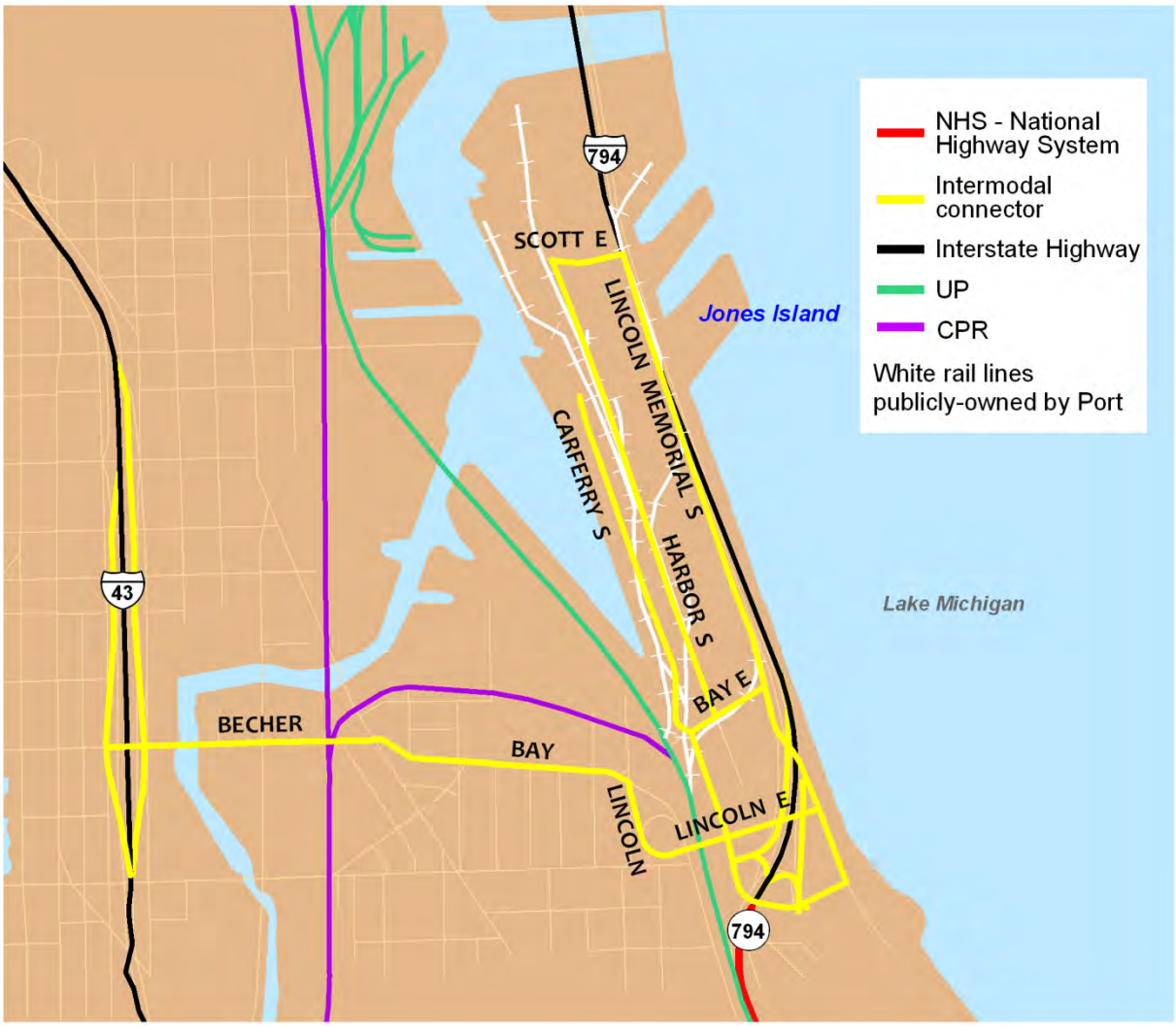


**Figure 3-5: Aerial of the Port of Milwaukee and moving a transformer**

***(Photos courtesy of the Port of Milwaukee).***

**Table 3-13: Port of Milwaukee**

| Railroad operators | Water system | Constraints/ comments | Intermodal connector roads | Improvement plans |
|---|---|---|---|---|
| CP, UP | Lake Michigan | Rail Bridges- low clearance<br><br>Two highway bridges cannot accommodate oversize/overweight traffic due to insufficient clearance.<br>• On I-794E<br>Under Street: N. 2nd Ave<br>Clearance: 15.72'<br>Cardinal direction north<br>• On: I-794E/I-43S<br>Under Street: W. St. Paul Ave./Tory Hill<br>Clearance: 15.06'<br>Cardinal direction E | Bay St. E<br>Bay St. S<br>Becher St.<br>Carferry Dr. S<br>Harbor Dr. S<br>Lincoln Ave. E<br>Lincoln Memorial Dr. S<br>Scott St. S | Harbor Drive, 2011<br><br>Carferry,2012<br><br>Lincoln Memorial, 2013 |

**Port of Prairie du Chien**

**Map 3-26: Intermodal connectors at the Port of Prairie du Chien**


| Table 3-14: Port of Prairie du Chien | | | | |
|---|---|---|---|---|
| **Railroad operator** | **Water system** | **Constraints/ comments** | **Intermodal connector roads** | **Improvement plans** |
| WSOR | Mississippi River | Villa Louis Road is in poor condition. | W. Blackhawk Ave<br>S. Main St.<br>Villa Louis Rd. | S. Main St. was part of the reconstruction process for the highway 18 bypass project completed in 2011.<br><br>The city has applied for funding to resurface Villa Louis Road. |

**Port of Duluth-Superior**

An issue for shipping in Lake Superior is the modernization of the Soo Locks system located in Sault Ste. Marie, MI connecting Lake Superior to Lake Huron. The project is on hold pending funding ($490M cost).

For purposes of this inventory, only facilities in Superior are listed. The intermodal connector routes are primarily used by grain trucks going to the grain elevators in the Port of Superior. CN also has access to the Port but not within the extent of the map shown.

**Map 3-27: Intermodal connectors in the Port of Superior**


| Table 3-15: Port of Superior | | | | |
|---|---|---|---|---|
| **Railroad operators** | **Water system** | **Constraints/ Comments** | **Intermodal connector roads** | **Improvement plans** |
| BNSF, CP, CN, UP | Lake Superior | Traffic flow could be improved if ramp is built to bypass Belknap and connect to Susquehanna. This has been studied but the costs exceeded the benefits. Roads are in good condition. | N 1st St.<br>3rd St. N<br>5th St. N<br>Belknap St.<br>Dock St.<br>Main St.<br>Susquehanna Ave.<br>Tower Ave.<br>Winter St. | None known at this time. |

## At Risk Rail lines: Abandonments, Out-of-Service, and Low Density Lines

Rail line abandonments and efforts to preserve rail right-of-way often go hand-in-hand in Wisconsin. WisDOT's policy is to preserve freight rail service where feasible. If preservation is not feasible, the department's policy is to work with the Wisconsin Department of Natural Resources (DNR) to preserve the rail corridor for future rail transportation use by using the 1983 National Trails System Act (NTSA). The NTSA gives interested parties the opportunity to negotiate voluntary agreements with railroads to use railroad corridors for trails in the interim.

### *Rail abandonments 1987-2010*

While abandonments still do occur, they have differed from earlier abandonments of the late 1970s and early 1980s (Chapter 5: Freight Rail) where entire corridors were eliminated. Over the last 23 years, 13 abandonment applications have been approved by the Surface Transportation Board (STB) in Wisconsin. Six of those lines were short stub-ended spurs of only a few miles in length; others occurred on Native American tribal lands. Table 3-16 summarizes abandonment activity since 1987.[19]

Since 1987, railroads in the state have submitted over 40 applications to the Surface Transportation Board to abandon more than 400 miles of rail lines. Over 70 percent of the miles have been preserved or are in negotiations to be preserved for future transportation use. Many of the lines are used as trails in the interim. Lines preserved under the NTSA are not abandoned. These lines retain their character as rail corridors and hence may be reactivated at any time in the future.

As of January 2010, there were 11.93 miles of rail that are still in negotiation for sale to the state to be preserved as a rails-to-trails segment. Negotiation efforts can sometimes take years. These lines are depicted in Map 3-28.

**Table 3-16: Rail abandonment activity 1987-2010**

| RR | Segment | Mileage | Result | Year | Status |
|---|---|---|---|---|---|
| *WC* | *Mellen-Bessemer* | *32.38* | *Abandonment* | *1987* | *Final* |
| *WC* | *Abbotsford – Athens* | *0.64* | *Abandonment* | *1997* | *Final* |
| *FVW* | *Rockwood-Denmark* | *14.00* | *Abandonment* | *1997* | *Final* |
| *WC* | *Wisconsin Rapids* | *0.75* | *Abandonment* | *1998* | *Final* |
| *FVW* | *Brown County* | *0.16* | *Abandonment* | *2000* | *Final* |
| *FRW* | *Luxemburg to Kewaunee* | *0.12* | *Abandonment* | *2000* | *Final* |
| *UP* | *Eau Claire* | *1.65* | *Abandonment* | *2004* | *Final* |
| *CN(WC)* | *Green Bay west toward Oneida* | *10.12* | *Abandonment* | *2004* | *Final* |
| *CN(WC)* | *Manawa to Scandinavia* | *10.70* | *Abandonment* | *2004* | *Final* |
| *CN(WC)* | *Shawano* | *12.50* | *Abandonment* | *2004* | *Final* |
| *CN(WC)* | *Ashland Ore dock* | *0.98* | *Abandonment* | *2006* | *Final* |

[19] Abandonment allows railroads to cease to operate service over a line. Once abandoned Wisconsin state law gives WisDOT the first right to acquire for present or future transportation any property used in operating a railroad. WisDOT can exercise its right of first acquisition, or, assign this right to any other state agency, any county or city, or any transit commission for acquisition for future transportation or recreational purpose. However, most filings in Wisconsin are actually "exemptions to the abandonment process" which requires that a railroad not have carried traffic over the said line segment for two years.

| | | | | | |
|---|---|---|---|---|---|
| *WC* | *Shawano and White Lake* | *11.40* | *Abandonment* | *2008* | *Final* |
| *CN (WC)* | *Manitowoc County* | *1.16* | *Abandonment* | *2010* | *Final* |
| *UP* | *Saukville-Kiel* | *37.00* | *Purchased by State* | *2005* | *Now Active* |
| *CN (WC)* | *Evansville to Madison* | *15.00* | *Rail Bank* | *1998* | *Final* |
| *UP* | *Hayward Industrial Lead* | *11.88* | *Rail Bank* | *1998* | *Final* |
| *State* | *Laona to Laona Jct.* | *7.05* | *Rail Bank* | *2001* | *Final* |
| *UP* | *Oconto Falls Industrial Lead* | *8.30* | *Rails-to-Trails* | *1997* | *Final* |
| *UP* | *Waukesha Industrial Lead* | *1.40* | *Rails-to-Trails* | *1997* | *Final* |
| *WC* | *Greenleaf-Green Bay* | *13.90* | *Rails-to-Trails* | *1998* | *Final* |
| *NBN* | *Wabeno to Laona* | *38.50* | *Rails-to-Trails* | *1998* | *Final* |
| *State* | *Burlington to Elkhorn* | *12.30* | *Rails-to-Trails* | *2000* | *Final* |
| *WSOR* | *Madison to Freeport* | *44.70* | *Rails-to-Trails* | *2000* | *Final* |
| *State* | *Laona Jct. to Tipler (State Line)* | *27.00* | *Rails-to-Trails* | *2001* | *Final* |
| *WC* | *White Lake to Menominee Line* | *7.00* | *Rails-to-Trails* | *2002* | *Final* |
| *UP* | *Clyman Branch* | *2.00* | *Rails-to-Trails* | *2003* | *Final* |
| *CN (WC)* | *Dresser to Amery* | *15.25* | *Rails-to-Trails* | *2003* | *Final* |
| *CN (WC)* | *Hilbert – Greenleaf* | *12.60* | *Rails-to-Trails* | *2003* | *Final* |
| *SOO* | *Kansasville- Burlington* | *7.50* | *Rails-to-Trails* | *2003* | *Final* |
| *CN (WC)* | *Luxemburg to Kewaunee* | *16.58* | *Rails-to-Trails* | *2003* | *Final* |
| *CN (WC)* | *Near Crandon - White Lake* | *26.00* | *Rails-to-Trails* | *2003* | *Final* |
| *CN (WC)* | *New London-Seymour* | *24.08* | *Rails-to-Trails* | *2003* | *Final* |
| *CN (WC)* | *West Bend – Eden* | *24.64* | *Rails-to-Trails* | *2003* | *Final* |
| *UP* | *Menomonie Industrial Lead* | *2.00* | *Rails-to-Trails* | *2006* | *Final* |
| *CP* | *West Allis Line* | *5.00* | *Rails-to-Trails* | *2006* | *Final* |
| *UP* | *Central Soya Line* | *4.40* | *Rails-to-Trails* | *2008* | *Final* |
| *CN (WC)* | *Ashland* | *0.48* | *Rails-to-Trails* | *2009* | *Final* |
| *WC* | *Crandon-end of Line* | *4.62* | *Rails-to-Trails* | *2009* | *Final* |
| *CN (WC)* | *Brown County* | *1.63* | *Rails-to-Trails* | | *Pending* |
| *UP* | *Capitol Drive Industrial Lead* | *3.08* | *Rails-to-Trails* | | *Pending* |
| *CN (WC)* | *Denmark, Brown County* | *0.25* | *Rails-to-Trails* | | *Pending* |
| *CN (WC)* | *Portion of Dresser -Amery* | *1.77* | *Rails-to-Trails* | | *Pending* |
| *CN (WC)* | *Shawano- Stockbridge-Munsee* | *3.40* | *Rails-to-Trails* | | *Pending* |
| *CN (WC)* | *Tail end of Hayward Spur* | *1.80* | *Rails-to-Trails* | | *Pending* |
| | **Total** | **477.67** | | | |

| | | | |
|---|---|---|---|
| **Miles Abandoned Lines** | **96.56** | **% Miles abandoned** | **20** |
| **Miles Preserved (rail bank & rails-to-trails)** | **329.11** | **% Miles preserved** | **69** |
| **Service Preserved** | **37** | **% Service preserved** | **8** |
| **Current miles pending negotiation** | **11.93** | **% Miles pending** | **2.5** |

## *Out-of-service*

In addition to previously abandoned and pending rails-to-trails negotiations, rail lines that are taken out-of-service are of concern to the State. These line segments represent economic development assets

whose potential is unfulfilled. The following table summarizes the rail lines out-of-service. Some of these lines have been out-of-service for many years. In Wisconsin there has not been a strong correlation between lines that are out-of-service and abandonment filings. Often rail lines are taken out-of-service after a natural disaster impacts the rail. The out-of-service lines are also shown in Map 3-28.

| Table 3-17: Out-of-service lines | | |
|---|---|---|
| **Railroad Operator** | **Segment** | **Mileage** |
| CN | Ladysmith to Prentice | 40.6 |
| CN | Rhinelander to Goodman | 60 |
| CN | Two Rivers to Manitowoc | 2.7 |
| CN | Marengo Junction to Michigan State Line | 31.2 |
| WSOR | Capitol Drive Industrial Lead, Milwaukee | 3 |
| CN | Almena to Poskin | 4.5 |
| UP | Sheboygan to Cleveland | 11.1 |
| WSOR | Kohler to Plymouth | 9.2 |
| **Total Miles** | | 162.3 |

### *Low density lines*

Another indication of lines that may be at risk for abandonment is to look at Class I rail lines that carry less than five million gross tons of freight. Map 3-28 shows all lines in Wisconsin with less than five million gross tons (in 2007) and contrasts this to lines out-of-service in 2010. Some of the low density lines identified in 2007 are now out-of-service. According to the FRA, there are 858 miles of low density lines in the state.

## Possible Future Corridors: Rails-to-Trails

Wisconsin has a strong commitment to creating a network of trails from former rail corridors. As mentioned in the previous section, lines preserved under the National Trails System Act are not abandoned. These lines retain their character as rail corridors with titles and easements and hence may be reactivated at any time in the future.

This is important from a number of perspectives:

- Rail capacity – if Wisconsin would need to improve rail capacity
- Safety – can create redundancy in the freight system
- Possibilities for passenger rail implementation

One corridor, Monroe to Mineral Point, has been recently studied for reactivation. The findings showed there is potential for sufficient traffic on portions of the line. Further study is needed. One of the possibilities is to reactivate the corridor as a rails-with-trails corridor. There are currently about 300 miles of rails with trails corridors in Wisconsin.

Map 3-28 also shows where current rails-to-trails lines are located. As of January 2010, Wisconsin has 312 miles of lines in rails-to-trails. The termini for the rails-to-trails corridors are summarized in Table 3-16.

**Map 3-28: Abandonments, out-of-service, rails-to-trails, low density lines**


**Source: FRA 2007, WisDOT**

# Chapter 4: Economic Development

## Table of Contents

# Chapter 4: Economic Development

## Introduction

Rail has a significant impact on Wisconsin's mobility and economic prosperity. Freight, intercity passenger and commuter rail benefit the economy by moving freight and passengers farther than automobiles and trucks, using the same amount of fuel while emitting fewer pollutants. Rail continues to be a mobility option that supports the state's transportation needs. With nearly half of Wisconsin's gross domestic product derived from three major industries – manufacturing, agriculture and tourism – important sectors of Wisconsin's economy depend on freight rail to deliver low-value, high-volume, heavy commodities. Among these are the manufacturing sector's heavy machinery, auto assembly, and pulp and paper products. In such freight-dependent industries, train cars serve as rolling warehouses, allowing manufacturers and producers to reduce inventory and warehousing costs while improving their competitive positions in the global marketplace. In national and international trade, freight rail transportation helps to link raw materials and finished products to markets throughout North America and overseas. The railroad industry also contributes to Wisconsin's economy through the purchase of supplies and goods to support local rail needs, as well as through payment of wages and benefits to thousands of employees. By 2030, rail tonnage is forecast to increase by 16 percent statewide and truck tonnage is forecast to increase by 14 percent statewide.

> WisDOT's vision for transportation and economic growth continues to be to partner with communities and industry to maintain and improve the state's transportation system so it is responsive to global and regional economic needs and changing conditions.

In addition to the economic benefits of freight rail, intercity passenger and commuter rail help to reduce passenger travel times and costs, lower congestion levels, and generate new jobs and additional potential household income. Other economic benefits include higher property values, as well as new retail, office, residential, and other transit-oriented development near the rail stations.

Intercity passenger rail ridership in Wisconsin has grown substantially during the past 10 years. Ridership on Amtrak's *Hiawatha Service*, which operates between Chicago and Milwaukee, rose from 426,652 in 2000 to 792,848 in 2010, an 86 percent increase. *Connections 2030* included locally-proposed fixed-guideway transit, which includes commuter rail, in Wisconsin's largest urban areas; providing an alternative to congested roadways, increasing transportation options and promoting economic development. See Chapter 7: Commuter Rail, for more information.

This chapter provides an overview of

- The overall state economy
- Wisconsin's economy by sector
- Economic significance of the railroad industry
- Industry sectors dependent on rail
- Freight commodity flow analysis
- Intermodal freight activity
- Economic significance of intercity passenger and commuter rail
- Rail assistance programs
- Role of rails-to-trails in Wisconsin's economy

## Overall State Economy

Wisconsin's economy is diverse, led by an array of industrial, financial, educational, and trade-based businesses in all parts of the state. While southeastern Wisconsin remains the most densely populated portion of the state, cities such as Appleton, Beloit, Eau Claire, Green Bay, Janesville, La Crosse, Superior and Wausau reflect the continuing importance of their historic industrial operations. This statewide dispersal of manufacturing sites continues to facilitate the growth in service-related and other professional sectors across the state.

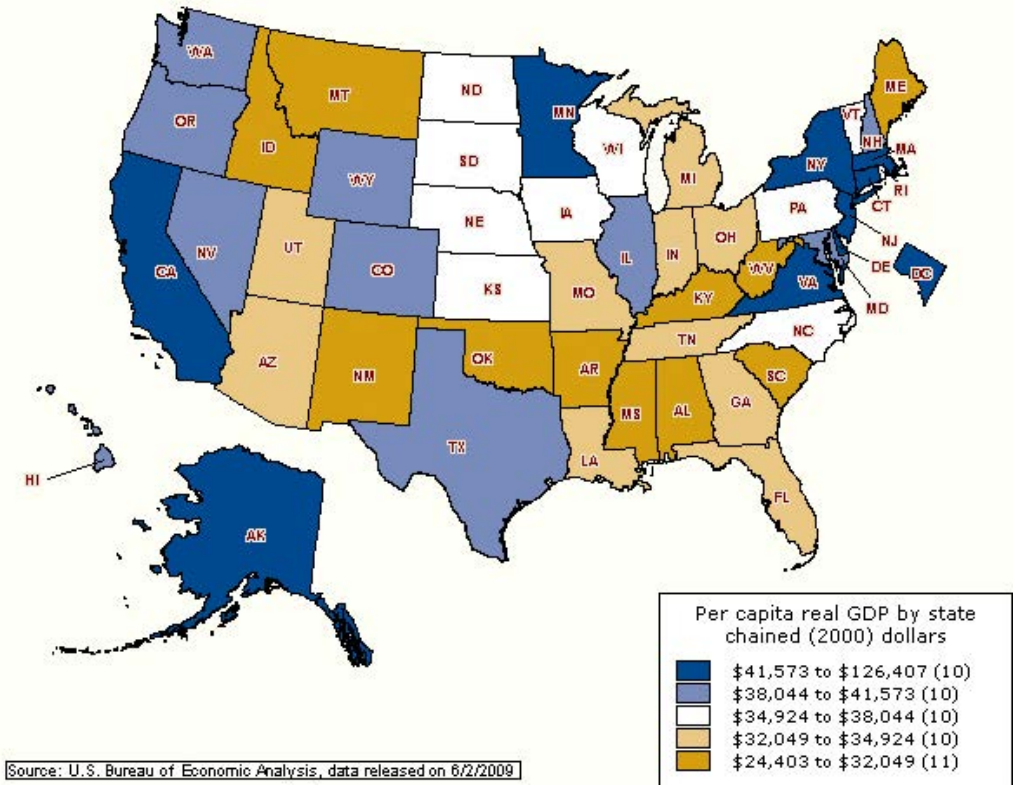
At the start of 2010, Wisconsin slowly began to recover from the worst national economic recession since the Great Depression. This recession ran from December 2007 through November 2009. As a result of the recession, 163,800 jobs, approximately five percent of the state's job base, were lost.[1] The manufacturing, trade, transportation and utilities, and professional and business service sectors bore the brunt of the job losses. Since the recession, "Wisconsin's economy has continued to grow at a moderate pace. The forecast for jobs and income calls for growth in the immediate future. [2]"

[1] http:/www.revenue.wi.gov/ra/econ/2009/wioutlk.pdf
[2] http://www.revenue.wi.gov/ra/econ/2013/summer/fullrpt.pdf

According to data from the United States Bureau of Economic Analysis, in 2008, the state's Gross Domestic Product (GDP) was $240.4 billion, or about 1.7 percent of the nation's total. Compared to other Midwestern states, during 2007-2008, Wisconsin's 0.7 percent growth rate was slightly higher than Illinois (0.3 percent), Michigan (-1.5 percent), Indiana (-0.6 percent), and Ohio (-0.7 percent). However, Wisconsin's growth rate trailed that of its western neighbors, Minnesota (2.0 percent) and Iowa (2.1 percent).[3]

Wisconsin's 2008 per capita real GDP (real GDP divided by the state population)[4] is also in the middle of its Midwestern neighbors, as seen in Map 4-1. Among the Great Lakes States, Wisconsin's per capita real GDP ($35,239) is nearly the same as that of the region ($35,280).[5] Wisconsin's per capita real GDP is higher than Michigan's ($32,601), Indiana's ($32,917), and Ohio's ($33,568), but was markedly less than Illinois' ($40,006). Wisconsin's western neighbors, Minnesota ($41,573) and Iowa ($36,773) also fared better.[6]

**Map 4-1: Per Capita Real Gross Domestic Product by State, 2008 (chained 2000 dollars)**




[3] Bureau of Economic Analysis (BEA), Regional Economic Accounts, accessed at: http://www.bea.gov/newsreleases/regional/gdp_state/2009/gsp0609.htm

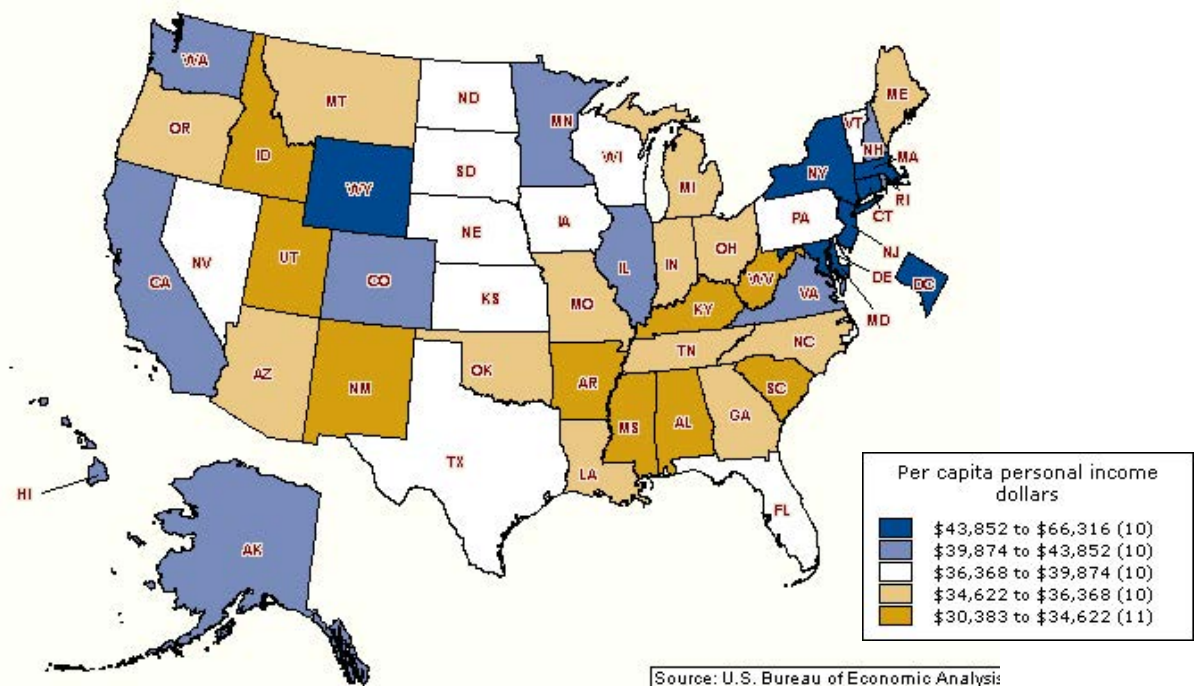
[4] Data in chained 2000 dollars.

[5] http://www.bea.gov/scb/pdf/2009/06%20June/0609_gdp_state.pdf

[6] http://www.bea.gov/scb/pdf/2010/07%20July/D%20Pages/0710dpg_i.pdf

Wisconsin's 2008 per capita income (real per capita income divided by the state population) of $37,770 was very close to the Great Lakes Region's average of $37,571. Illinois' per capita income of $42,953 led the region. Per capita income is shown in Map 4-2.

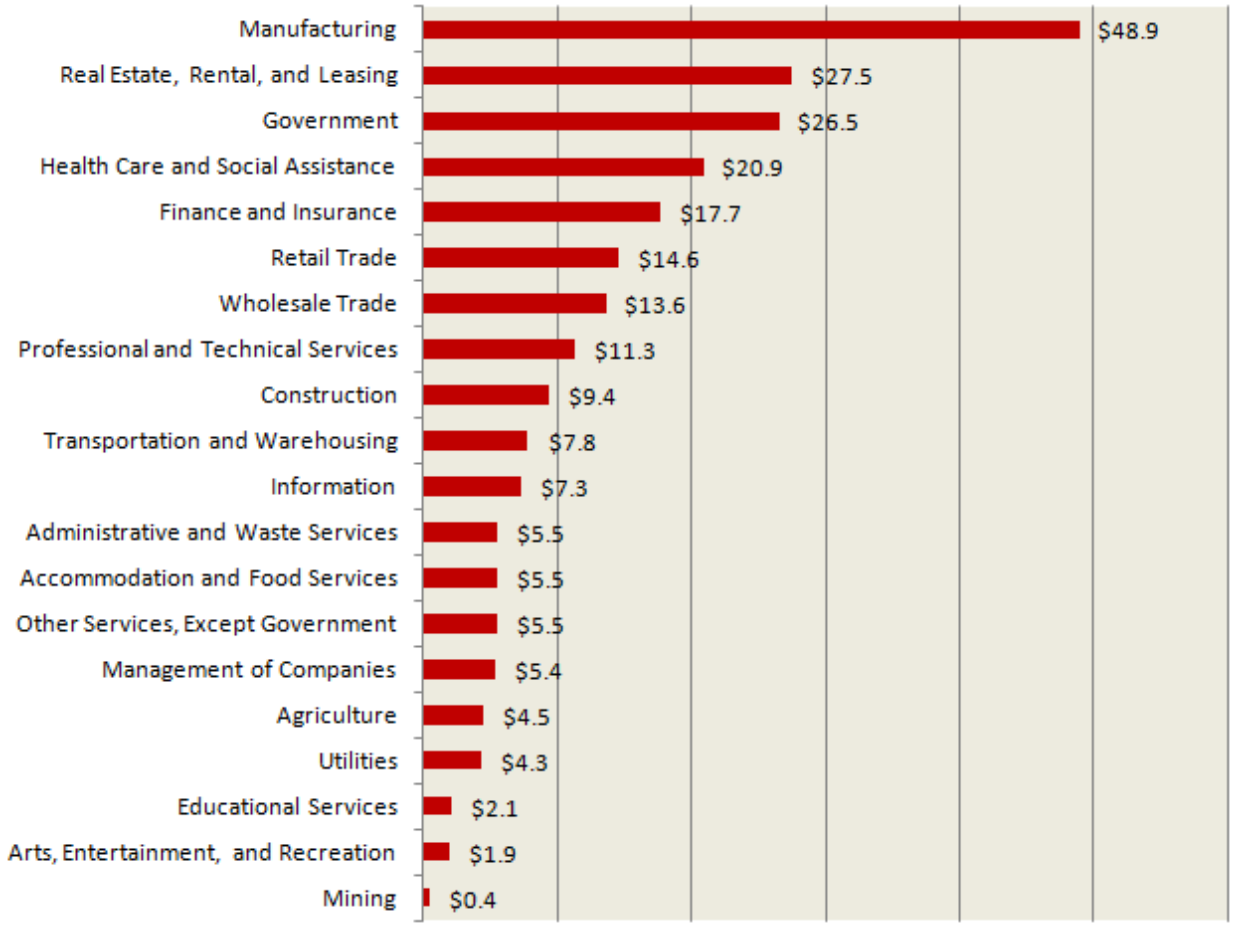
**Map 4-2: Per Capita Personal Income by State, 2008 (chained 2000 dollars)**



## Wisconsin Economy by Sector

The U.S. Department of Commerce, Bureau of Economic Analysis compiles data that includes GDP for specific and broad economic sectors. This provides a means to gauge the contribution of specific sectors to the state's overall economy; and to determine the level of growth (or decline) in each sector. Detailed GDP and employment by sector tables are provided in Appendix 4-A, Tables A-1 and A-2. Wisconsin's economy has several sectors that contribute large shares to the state's economy in GDP and employment. (See Figures 4-1 and 4-2.) Transportation-dependent sectors include durable manufacturing at over 12 percent, non-durable manufacturing at over eight percent, retail trade at six percent, wholesale trade at 5.7 percent, construction at 3.9 percent, and transportation and warehousing at 3.3 percent. Together, these sectors comprise almost 40 percent of Wisconsin's GDP and employment.

**Figure 4-1: Wisconsin Gross Domestic Product by Sector, 2008 Dollars (Billions)**
**Total GDP: $240.4 Billion**

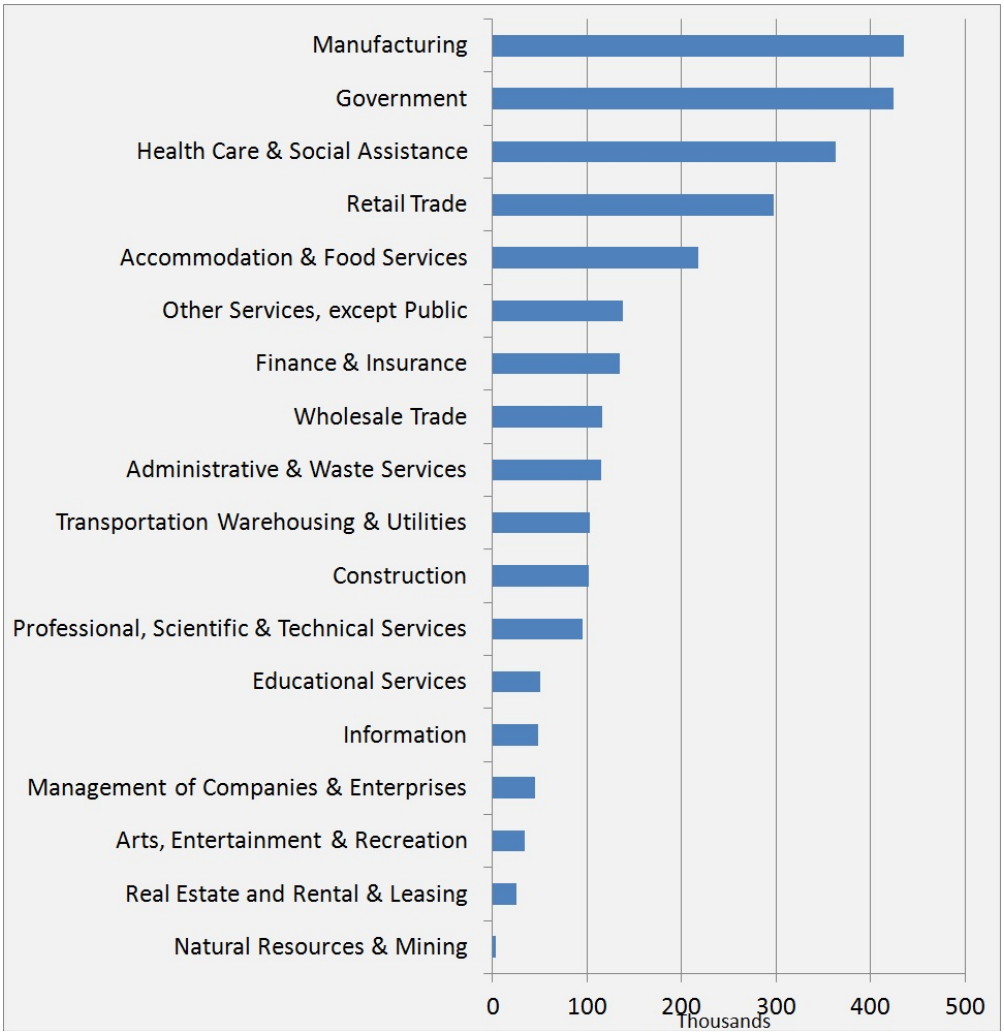



**Source: U.S. Bureau of Economic Analysis**

With almost 500,000 employees[7] and about $49 billion in contributions to the state's GDP, manufacturing (durable and non-durable) accounts for about 15.8 percent of employment and 20.3 percent of the state's economic output. Wisconsin's major manufacturing categories include fabricated metal products, machinery manufacturing, transportation equipment manufacturing, electrical equipment manufacturing, computer and electronic product manufacturing, food manufacturing, paper manufacturing, printing, plastic and rubber products manufacturing, and chemical manufacturing.

**Figure 4-2: Wisconsin Employment by Sector, 2009 Averages**

**Total Employment: 2,748,200**




**Source: Wisconsin Department of Workforce Development**

[7] Wisconsin Detailed Industry Employment Projections, 2006-2016, Office of Economic Advisors, Wisconsin Department of Workforce Development, May 2008.

These industries rely on truck, rail, air and water transportation to receive raw materials and ship finished products.

The finance and insurance and real estate sectors are the next largest contributor to the state's economy. Combined, they account for almost 19 percent ($45 billion) of the state's economic output, with nearly six percent of the employment.

Retail trade contributes about six percent ($14.6 billion) of the state's economic output and provides just over 10 percent of the employment. Its counterpart, wholesale trade, contributes about 5.7 percent ($13.6 billion) of the state's economic output and 4.2 percent of employment. Construction contributes 3.9 percent ($9.4 billion) in output and provides about 3.71 percent of Wisconsin's overall employment. The transportation, warehousing and utilities sector itself (which includes approximately 50,000 truck transportation employees) accounts for 5 percent ($12.1 billion) in economic output and 3.7 percent of state employment. Efficient transportation is important to all four of these sectors. Ensuring that freight rail remains a viable transportation mode for shippers in these industries is critical to the entire state economy.

Other service sector components also provide a substantial portion of the state's employment and GDP. These include health care and social assistance (8.7 percent of GDP), professional and technical services (4.7 percent of GDP), information (3.1 percent of GDP), other non-government services (2.3 percent), accommodations and food services (2.3 percent of GDP), administrative and waste services (2.3 percent of GDP), and management of companies and enterprises (2.2 percent of GDP). Combined, these components provide almost one third of the state's employment.

Two other important sectors in Wisconsin's economy are highly reliant on transportation. Agriculture contributes approximately $4.5 billion in GDP to the state's economy each year. It uses trucking, rail and waterborne transportation to ship and receive large volumes of grain and other products. Utilities, which rely on rail to supply large quantities of coal for power generation, contribute approximately $4.3 billion annually and provide almost 11,100 jobs.

## Economic Significance of the Railroad Industry

In 2006, Wisconsin's freight railroads directly contributed $392 million to the state economy through wages and retirement benefits to current and former railroad workers living in the state. Railroads also contribute millions of dollars to the economy annually through investments, purchases, and taxes. Table 4-1 shows the key rail-related statistics for Wisconsin.

**Table 4-1: Wisconsin Railroads-Vital Statistics**

| | |
|---|---|
| Number of Railroads | 11 |
| Rail Miles Operated (Less Trackage Rights) | 3,503 |
| Carloads of Freight | 2,848,131 |
| Tons of Freight | 172,461,080 |
| Employees | 3,213 |
| Rail Wages (per employee) | $73,200 |
| Rail Retirement Benefits | $153,276,000 |

**Source: Association of American Railroads, www.aar.org, 2007**

## State Industry Sectors Dependent upon Rail Service

Rail is heavily used to transport commodities for the following major industrial sectors:[8]

### *Agricultural products*

Agriculturally-based firms using rail or with the potential to use rail are producing and processing various grains with outbound and inbound movement. Many of the state's grain producers, particularly agricultural cooperatives, such as those served by Wisconsin & Southern rely on rail to transport their product to lake and river ports, as well as to end users within and outside of Wisconsin. Many of the state's breweries and food processors rely on rail for their inbound supply of various field crops, especially corn, wheat and barley.

### *Transportation equipment*

This industry category includes manufacturers of automobiles, trucks, motorcycles, trailers, bicycles, motors, seats, and other parts. These manufacturers use primary metals and depend heavily on rail for the transport of vehicles, parts and related transportation accessories. These firms account for some of Wisconsin's biggest manufacturing export categories, typically represent larger-than-average sized employers, and offer higher-than-average weekly wage levels. The closing of General Motors' plant in Janesville in 2008 has sharply reduced this category of rail shipments for this sector.

[8] www.aar.org

## *Mining products*

**Coal and petroleum products**

Coal fueled 42 percent of electricity production in Wisconsin in 2008. Most of Wisconsin's coal-fired power plants depend on rail for coal shipment. Motor carriers are not viable competitors in the coal hauling market. Since coal is a low value and high volume commodity, the cost of trucking large volumes of coal would increase the transportation cost and therefore increase utility rates. Low utility rates benefit both households and businesses in the state. Consequently, coal receivers, mostly electric utilities such as WE Energies and Wisconsin Public Service Corporation and some paper mills, must rely on the rail industry.

**Iron, steel, and metallic ores**[9]

Iron, steel and other metallic ores and products are transported by rail from northern Minnesota and Upper Michigan. These are the basic metals of any industrial society and are vital to the United States for national security and economic well-being.

**Nonmetallic minerals**

Nonmetallic minerals include sand, gravel, and stone. In this industry, certain industrial minerals that are neither metals nor fuels are processed into useful products such as sand extracted by Badger Mining, used in the metal casting process. More than 50 percent of the total value of these products is shipped to the highly cyclical construction industry. Crushed stone, for example, is one of the most accessible natural resources, a basic raw material used by construction, agriculture, and other industries in complex chemical and metallurgical processes. Despite the low value of its basic products, the crushed stone industry is a major contributor to and an indicator of the economic well-being of the nation.[10]

The frac sand mining expansion has resulted in rapid growth of freight movements from western Wisconsin. This expansion has led to the development of new transload facilities and the reactivation of out-of-service rail lines.

## *Pulp and paper/Lumber and wood*

Wisconsin has been the top pulp and paper producer in the U.S. for more than 50 years. Since the late 1860s, numerous paper mills have been founded in the Fox Valley, harnessing its transportation, water power, and sewage disposal capacity to establish it as a major paper production area.[11] Lumber is shipped from northern Wisconsin to the paper mills, turned into wood pulp, and converted into paper,

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[9] http://pubs.usgs.gov/of/2005/1254/2005-1254.pdf
U*.S. Geological Survey, Mineral Commodity Profiles—Iron and Steel*, By Michael D. Fenton
"Of the ferrous metals used to make a typical 2002 U.S. family vehicle, 45 % was recycled metal. The steel industry recovered and recycled about 12.8 metric tons of iron and steel scrap for recycling in 2002—enough steel to produce about 14 million new cars."

[10] http://minerals.usgs.gov/minerals/pubs/imii/0901/scgjan09.pdf

[11] http://www.foxriverwatch.com/history_fox_river_green_bay_2.html

tissue and toweling, and other specialty papers by such companies such as Neenah Paper, Procter & Gamble, and Wisconsin Tissue Corporation.

Wood is also used for home construction, as well as paper products for packaging and newsprint, and scrap paper for recycling. Wisconsin paper manufacturers also account for typically larger-than-average sized employers and higher-than-average weekly wage levels.

### *Chemicals*

In this sector, organic and inorganic raw materials are formulated and transformed into products used for consumer, institutional and industrial products. Examples of such products include, but are not limited to, ethanol (such as produced by Badger Ethanol in Monroe), water purification, agricultural uses (pesticides and fertilizers), food packaging, pharmaceuticals and medicines, cosmetics, paints, coatings and adhesives, and cleaning supplies. This subsector does not include mining operations or crude petroleum.[12] Research and development funding comprises a major component of this industry.

## Wisconsin Freight Commodity Flow Analysis

Second to freight truck transportation, in 2007, rail shipments accounted for a third of Wisconsin's freight movement by tonnage (179,146,000 tons) and 15 percent by value ($182.6 billion). A breakdown by originating, terminating, and overhead[13] freight movement (all modes) by value is provided.[14] The types and amounts of commodities in Wisconsin moving by rail are shown in Figure 4-3. Coal, at 45 million tons, was the top commodity shipped in the state. The Wisconsin Department of Transportation (WisDOT) acknowledges the increase in movement of frac sand and oil products by rail in Wisconsin since 2007 and its impact on the rail system. WisDOT will continue to study the impacts of these commodity flows and address them in updates to the Plan.

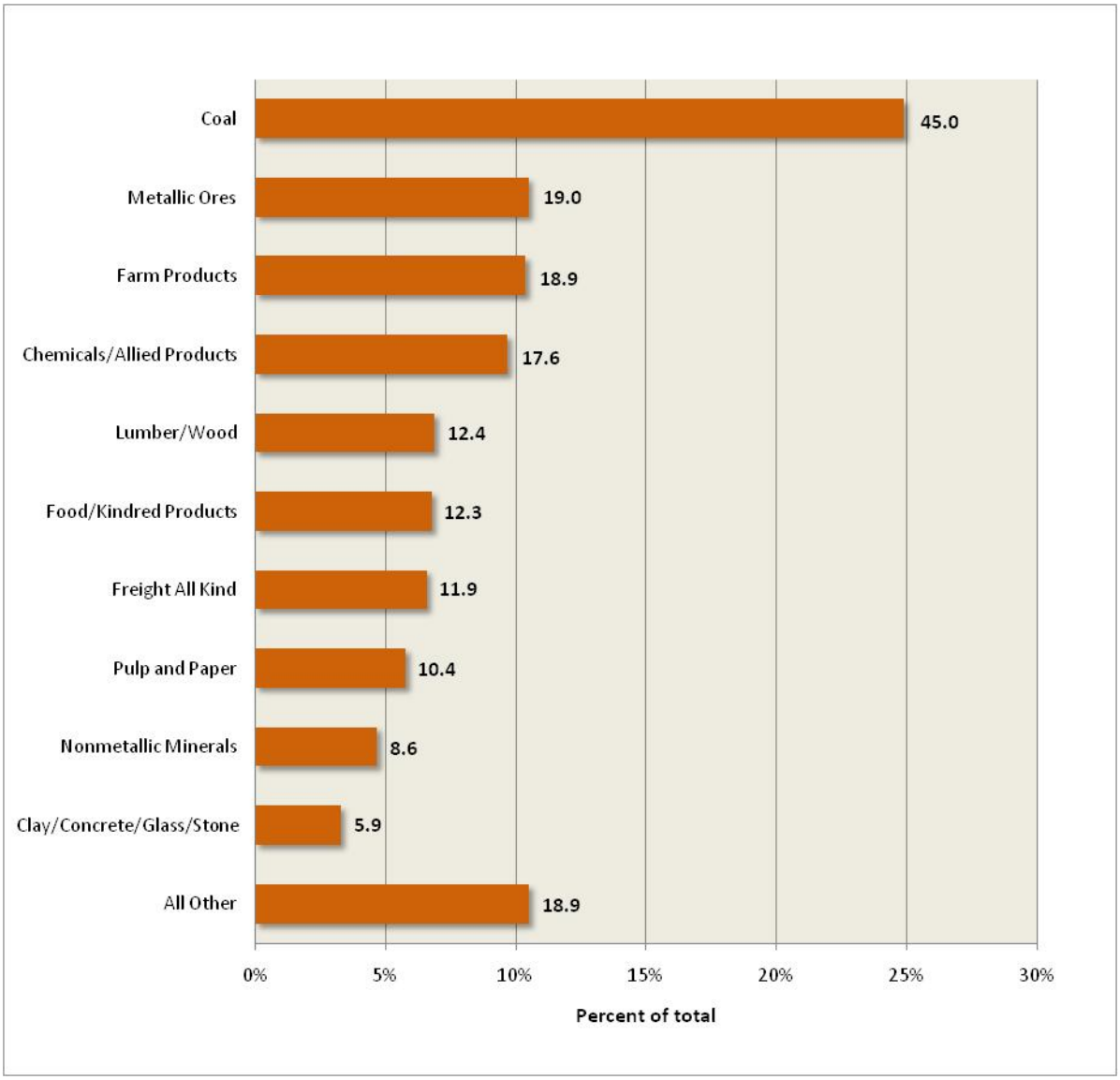
[12] http://www.census.gov/econ/census02/naics/sector31/325.htm

[13] Much of the overhead tonnage involves goods passing through the state on the Union Pacific between Chicago and the Twin Cities, and on the Canadian National between Chicago and Duluth/Superior. Of the 18 million tons of intermodal rail traffic, only 678,000 tons (3.8%) originate or terminate in Wisconsin.

[14]

| **Freight Movement – All Modes** | Value (Millions of $) |
|---|---|
| Originating Value | $434,537 |
| Terminating Value | $460,411 |
| Originating & Terminating (Internal) | $188,504 |
| Overhead Value | $477,907 |

**Figure 4-3: Wisconsin Commodities Moving by Rail, 2007 (Millions of tons) Total: 179.1 Million Tons**



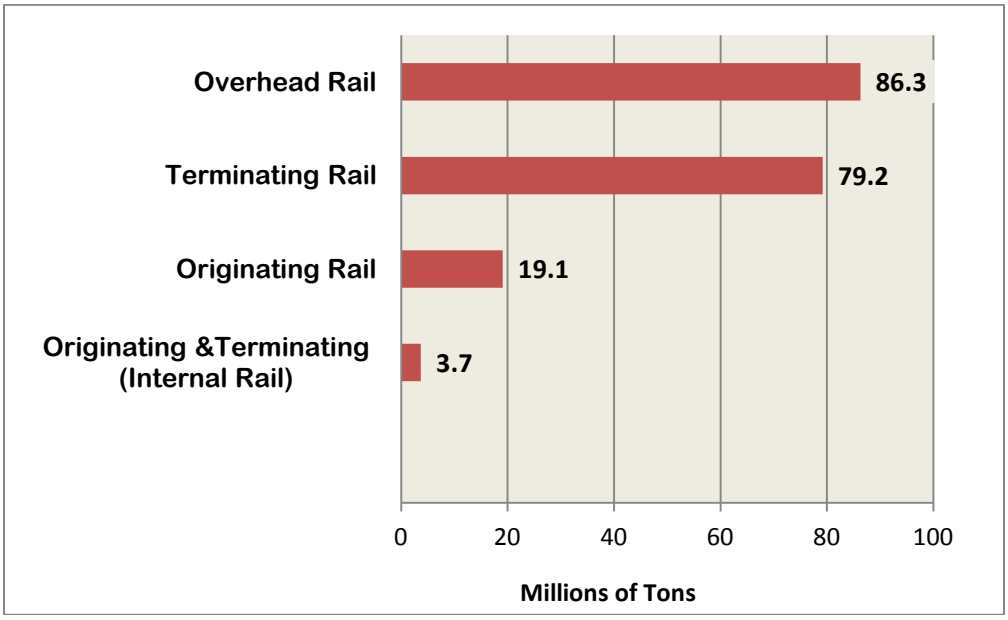

**Source: 2007 Global Insight TRANSEARCH data**

Rail freight in Wisconsin can be further segregated into four categories:

- Originates in Wisconsin and terminates outside Wisconsin
- Terminates in Wisconsin and originates outside Wisconsin
- Originates and terminates outside Wisconsin (Overhead)
- Originates and terminates in Wisconsin (Internal)

Figure 4-4 indicates the number of tons for originating, terminating, and overhead rail. Originating and terminating rail figures include those for internal rail. Terminating rail shows the tonnage for all terminating rail including that which originated in Wisconsin. The same is true for originating rail. Detailed tonnages and percentages for each category are provided in Figures 4-5 through 4-8.

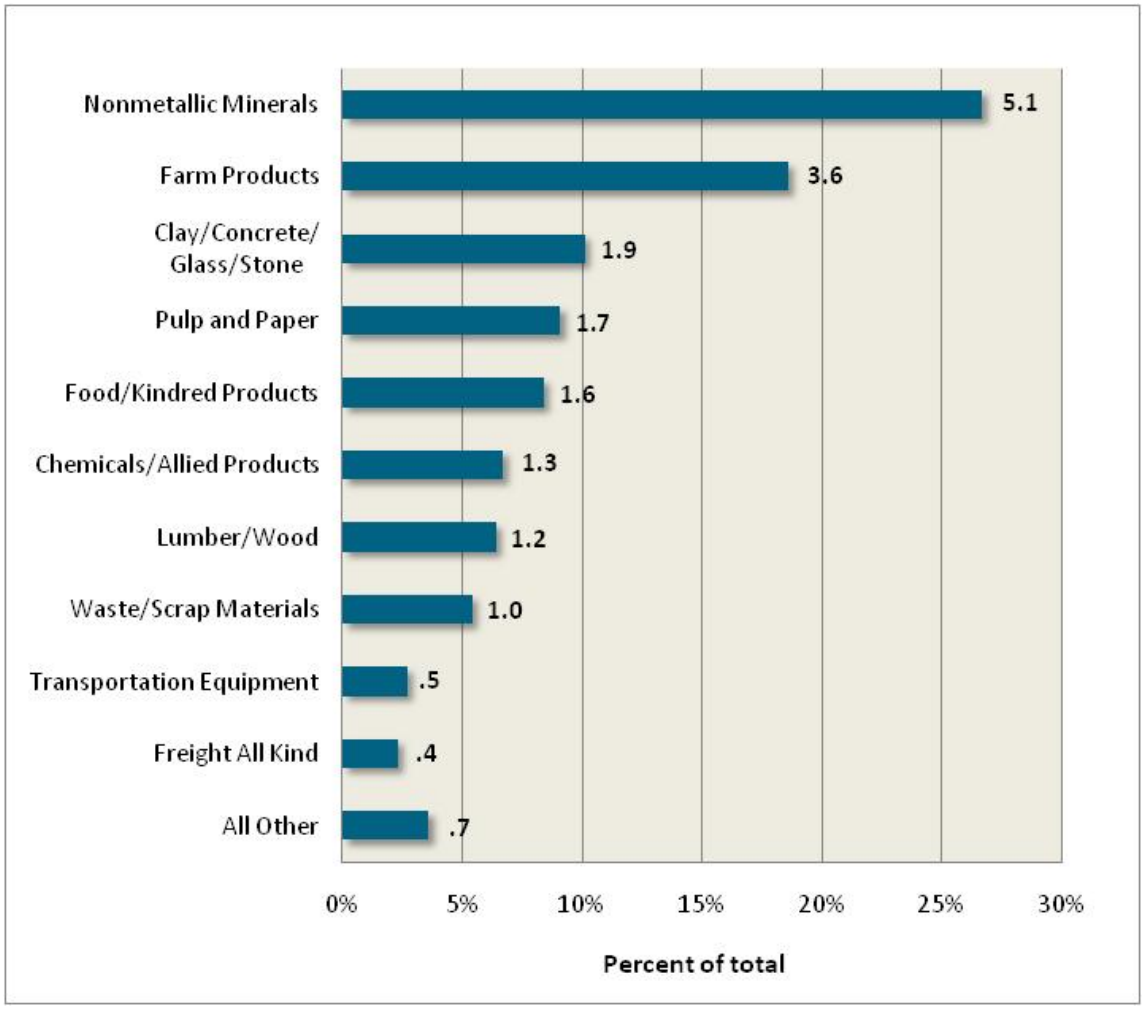
**Figure 4-4: 2007 Wisconsin Rail Tonnage (Millions)**




**Source: 2007 Global Insight TRANSEARCH data**[15]

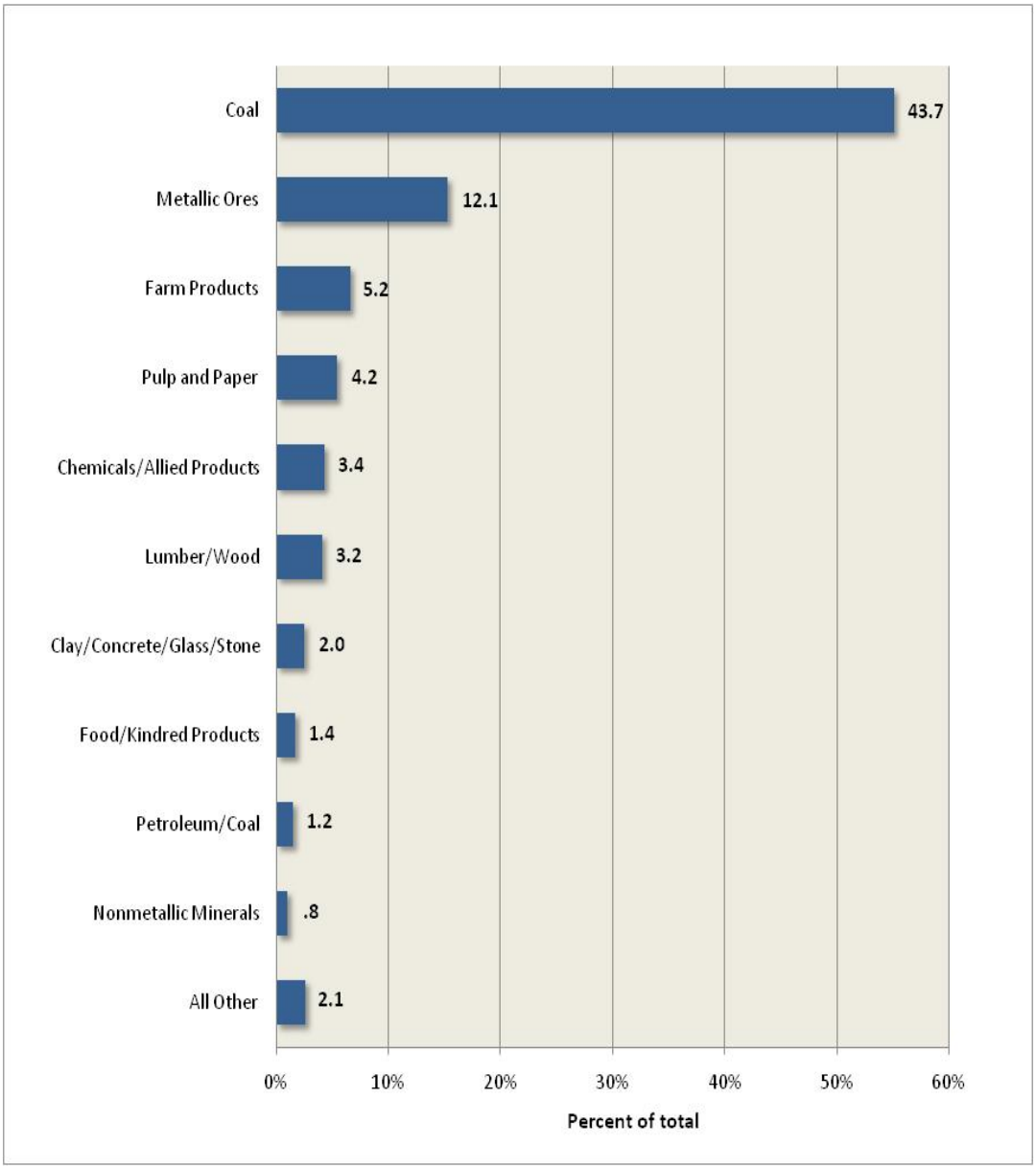
[15] **Note:** Internal rail movements that have both an origin and a destination within the state must be subtracted from the total to avoid "double counting." i.e., Total Tons = (Originating + Terminating + Overhead) – Internal. For this reason percentages add to slightly over 100%.

**Figure 4-5: Wisconsin Commodities Originating by Rail (Millions of tons) Total: 19.1 Million Tons**



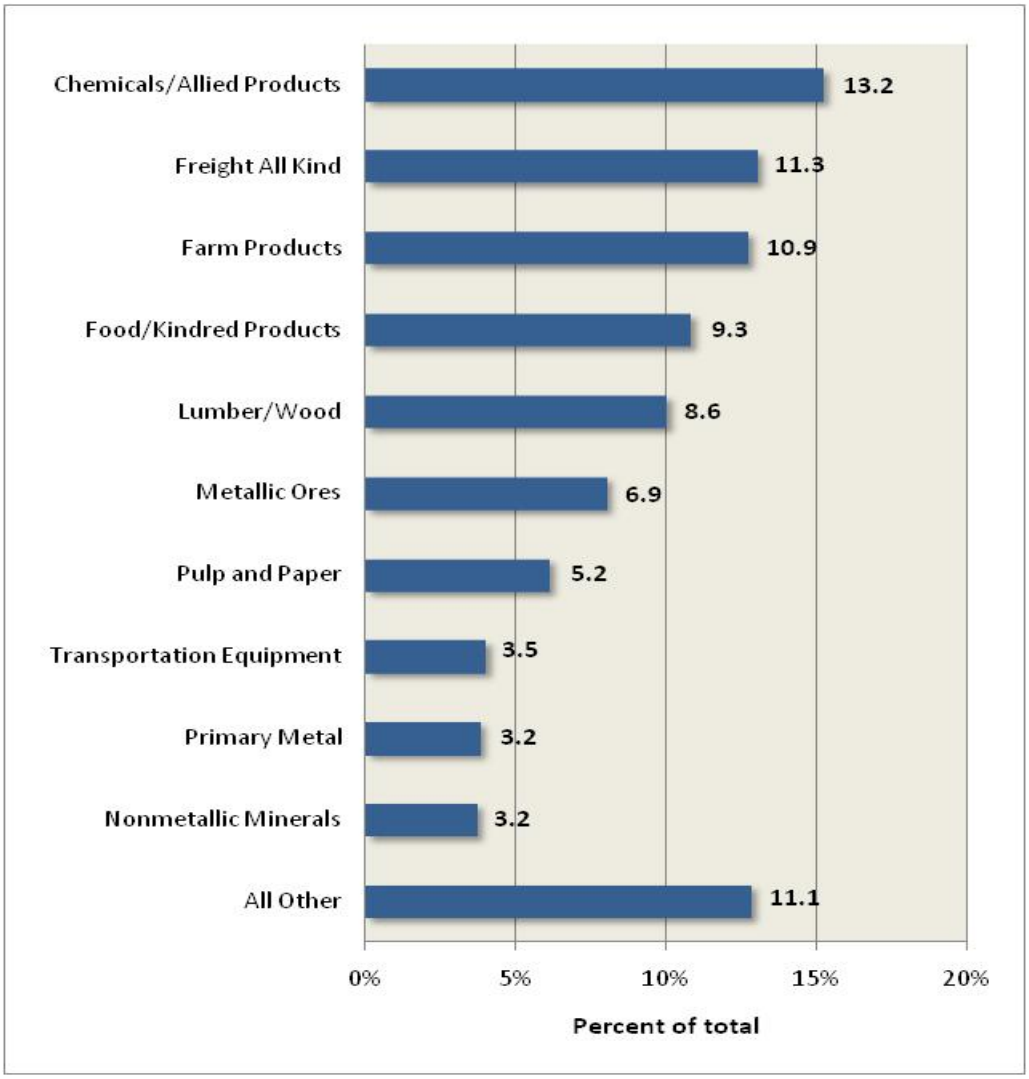

**Source: 2007 Global Insight TRANSEARCH data**

**Figure 4-6: Wisconsin Commodities Terminating by Rail (Millions of Tons) Total: 79.2 Million Tons**



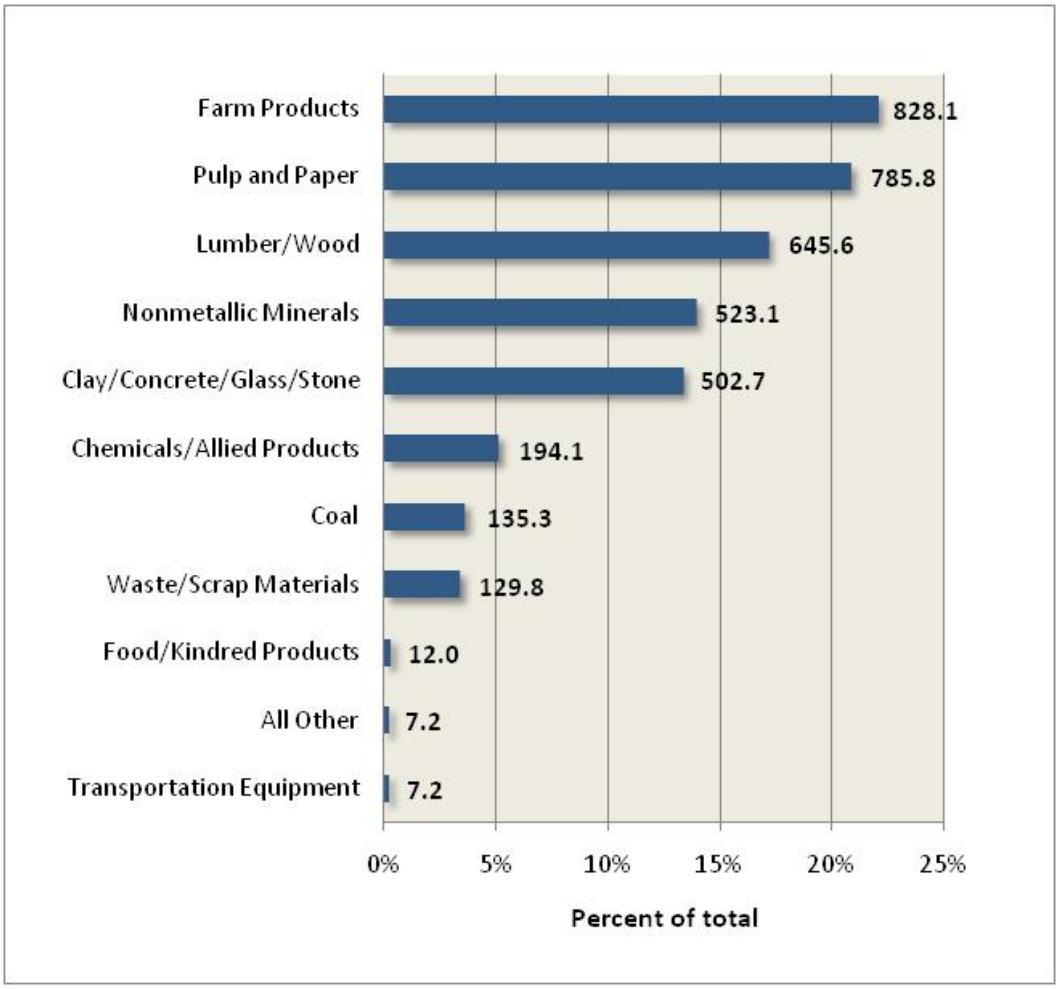

**Source: 2007 Global Insight TRANSEARCH data**

**Figure 4-7: Wisconsin Overhead Rail Commodities (Millions of Tons) Total: 86.3 Million Tons**




**Source: 2007 Global Insight TRANSEARCH data**

**Figure 4-8: Wisconsin Internal Rail Commodities (Thousands of Tons) Total: 3.7 Million Tons**

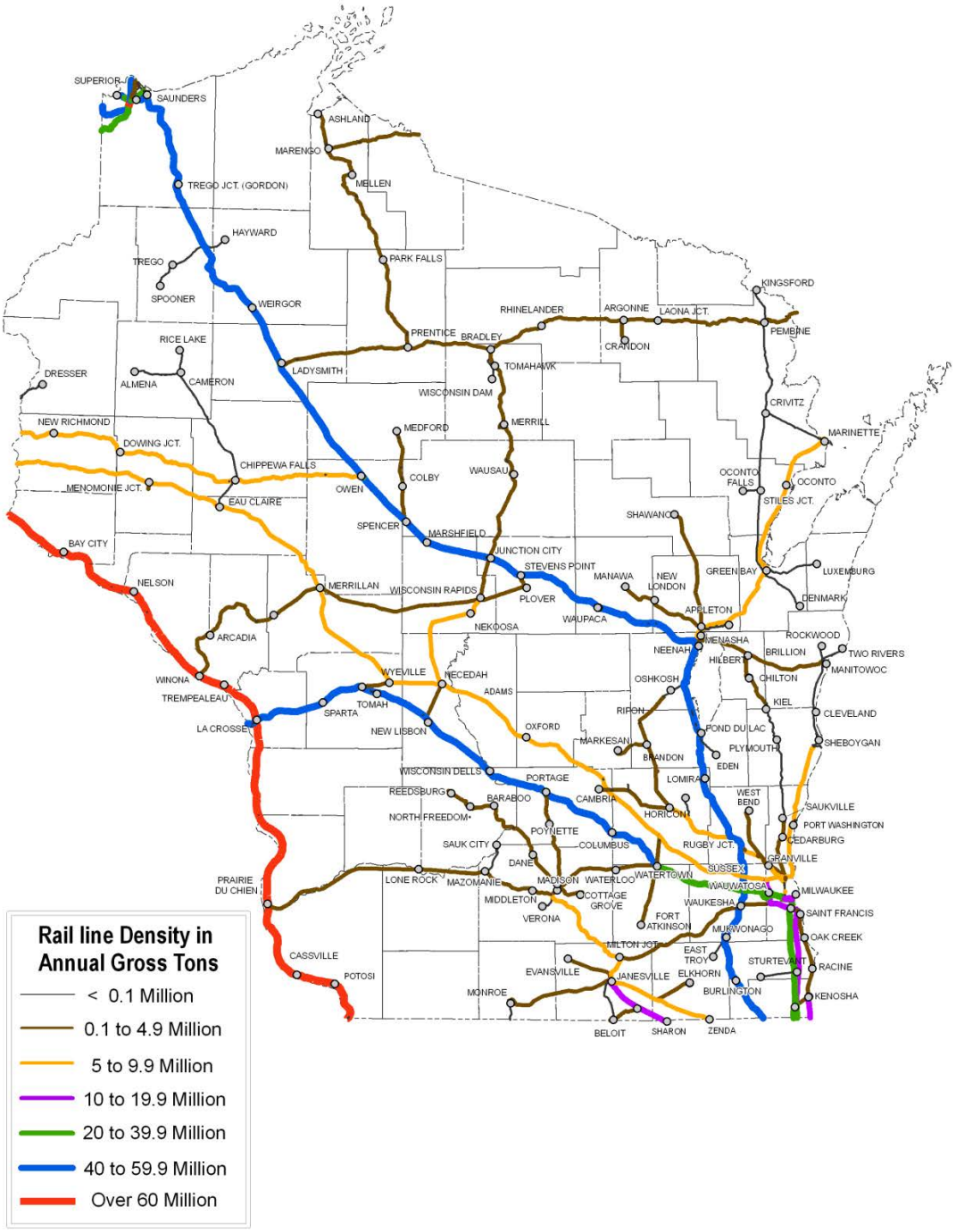



**Source: 2007 Global Insight TRANSEARCH data**

The top three destinations of rail shipments that originate in Wisconsin are Illinois, at 30 percent; Wisconsin, at 20 percent; and Texas, at nine percent of the total originating rail tonnage. (See Appendix 4-1, Table A-3.) The top three originations of commodity rail shipments that terminate in Wisconsin are Wyoming, at 38 percent; Minnesota, at 19 percent, and Montana, at 15 percent. (See Appendix 4-1, Table A-4.)

Map 4-3 depicts the rail density in Wisconsin, illustrating the tonnage of freight transported on the state's rail corridors.

**Map 4-3: Wisconsin Rail Density 2007, Annual Gross Tons**




**Source: Federal Railroad Administration**

Wisconsin's busiest rail line in 2007 was BNSF's route along the Wisconsin side of the Mississippi River. Trains on this route carry a variety of goods, including intermodal shipments from the ports in Seattle, Washington and Portland, Oregon to the Chicago area; and coal from Montana and Wyoming.

The mainlines of CN and CP also carry a large amount of traffic through Wisconsin. CN's mainline through northwest, central, and southeast Wisconsin is providing a growing intermodal service between Chicago with western ports in Vancouver and Prince Rupert, British Columbia. CP's mainline through western and southeast Wisconsin also connects Chicago with the port in Vancouver, British Columbia. For a more extensive discussion of freight routes and densities, please see the Chapter 3: System Inventory. Coal from western coal fields and iron ore from Minnesota's Iron Range make up the largest percentage rail tonnage terminating in Wisconsin.

## Intermodal Freight Activity

Intermodalism – the seamless movement of goods by several transportation modes on the same journey – is one of the fastest growing segments of the rail industry. Today's ever-evolving economy places greater demands on the "Just-In-Time" delivery of goods. Intermodal rail service, where rail and any other mode of transportation (air, road and/or water) are involved in a shipment, is suited to meet this demand. Intermodal shipping combines the low cost of long-haul rail service with the flexibility of local truck delivery. The main type of equipment used for intermodal shipping is eight foot-wide wide steel containers that are placed on rail cars, trucks, ships or in airplane cargo holds. Containerized transport reduces cargo handling and damages and improves security.

Freight commodity flow analysis shows that in 2007, intermodal shipments comprised approximately 10 percent of total Wisconsin rail tonnage. Table 4-2 shows the proportion of intermodal tonnage in Wisconsin. By value, intermodally-transported commodities account for less than one percent of the value of all commodities originating in Wisconsin.

**Just-In-Time Inventory (JIT) System** -A business model designed to reduce carrying costs to a minimum. A firm only orders what it expects to need for its immediate needs; it therefore keeps a low inventory. For example, if a retailer believes it will sell 1,000 widgets in a week, it orders precisely 1,000 widgets from its manufacturer. JIT systems require the retailer at the end of the supply chain to be able to accurately predict demand for its products. They also require each stage of the supply chain to know exactly how much time it takes to fill an order when it is made."

**Multimodal** - Affecting or involving more than one mode of transportation.

**Intermodal** - Relating to the connection between any two or more modes of transportation (rail, air, road, water). An intermodal transportation system allows travelers to conveniently complete a journey using more than one mode. In Wisconsin, intermodal facilities exist in Chippewa Falls and Arcadia. Both locations support truck-rail intermodal connections.

**Table 4-2: Wisconsin intermodal container movements**

| Rail Movement Type | Tons |
|---|---|
| Railcar | 162,854,399 |
| Intermodal container or TOFC | 18,037,080 |
| Total Rail Tonnage | 180,891,479 |

**Source: 2007 Global Insight TRANSEARCH data**

E-commerce (business and sales conducted over the Internet) is an emerging business practice in the intermodal freight business. Advances in communication and Internet-based retail operations have fine-tuned the supply chain. Suppliers, producers, shippers and businesses have been using innovative approaches and regularly adopt new technologies to communicate and collaborate on faster movement of products to their destinations. Disruptions in this system impact everyone along the supply chain, from the shippers, producers and manufacturers to the consumers. As a result, a transportation system that flows from mode to mode without disruptions or congestion increases profits for businesses and lowers product costs for consumers.

Additional chapters in the *Wisconsin Rail Plan 2030* also address intermodal transportation:

Chapter 3: System Inventory, provides an overview of Wisconsin's existing intermodal and multi-modal facilities.

Chapter 5: Freight Rail, discusses the importance of intermodal freight in Wisconsin's transportation network.

Chapter 8: Livable and Sustainable Communities, Provides information related to Wisconsin's multimodal and intermodal transportation facilities; the challenges to improving accessibility; and goals for enhancing economic growth, productivity and the quality of communities.

Wisconsin's intermodal connections are limited, leaving it to rely on neighboring Minnesota and Illinois facilities. *Connections 2030*, the state's long-range transportation plan, recognizes this challenge and is committed to improving the state's intermodal connections.

## Economic Significance of Intercity Passenger and Commuter Rail

The same freight rail benefits over automobile and air travel extend to intercity passenger and commuter rail. Intercity passenger rail plays an important role in supporting the economy and will play an increasing role into the future.

There are both user and non-user economic benefits of intercity passenger rail. User benefits are those that accrue to train passengers or companies using rail for business trips for their employees, such as shorter travel time, increased personal productivity, and reduced transportation cost. In addition, rail travel can provide improved service levels (frequency and travel time) compared with other existing

transportation services, which can reduce pressure for expenditures on other modes and create non-user benefits (benefits to members of the general public that are not using the train).

Non-user benefits include decreased congestion and improved performance on other modes, crash savings in other modes, increased tourism, joint development (development encouraged by the presence of the rail service), increased employment and economic activity resulting from the construction and ongoing operations and maintenance of the rail service, improved economic competitiveness, and property value increases to name a few.[16] In addition, similar to freight rail's fuel efficiency and emissions advantage over trucks, the same benefits over automobile and air travel extend to intercity passenger and commuter rail.

### *User benefits*

Economic benefits for intercity passenger and commuter rail users result from accessibility to a greater number of new job markets and additional potential household income, reduced travel times and costs, and lower congestion levels between communities. User and non-user benefits have been studied in depth for the Midwest Regional Rail System.

The Midwest Regional Rail System (MWRRS) will improve the level and quality of passenger rail service, offering:

- A 3,000-mile system, using existing rail rights-of-way shared with freight and commuter rail
- Safe, comfortable and reliable service to over 100 Midwestern cities, linking the region's major economic centers
- Access to approximately 80 percent of the region's 65 million residents
- State-of-the-art train equipment capable of operating at speeds of up to 110 mph
- More and better amenities, including first class seating for all, power outlets at each seat, wireless network access and food service
- Modern stations and intermodal facilities
- Dedicated feeder bus service connecting communities without direct rail service to the system

The enhanced regional transportation infrastructure and services could result in economic benefits and new Midwest jobs, while strengthening the region's manufacturing, service and tourism industries, and protecting the environment.

[16] *Vision for the Future: U.S. Intercity Passenger Rail Network Through 2050.* National Surface Transportation Policy and Revenue Study Commission, Passenger Rail Working Group. December 2007.

According to the 2006 Midwest Regional Rail Initiative Economic Analysis study, over the 40-year life of the project, MWRRS will generate a $3.5-$4.6 billion user benefit for Wisconsin; this represents the overall savings to users of the state's transportation network derived from the system. Sources that produce this benefit are:

- The reduction in travel times that users of MWRRS receive
- The reduction in travel times and costs that users of other transportation modes receive as a result of lower congestion levels
- Reductions in emissions as a result of travelers being diverted from air, bus, and auto to MWRRS

The benefit cost ratio of the Midwest Regional Rail System is estimated at 1.8, which means for every dollar invested, $1.80 gets returned in economic and community benefits.

### *Other economic benefits (non-user benefits)*

The 2006 Midwest Regional Rail Initiative Economic Analysis study estimates that Wisconsin communities would see $704 million in increased joint development potential and $173 million in extra household income with full build out of the Midwest Regional Rail System.[17] In general, intercity passenger rail and commuter rail also make regions more attractive to businesses.

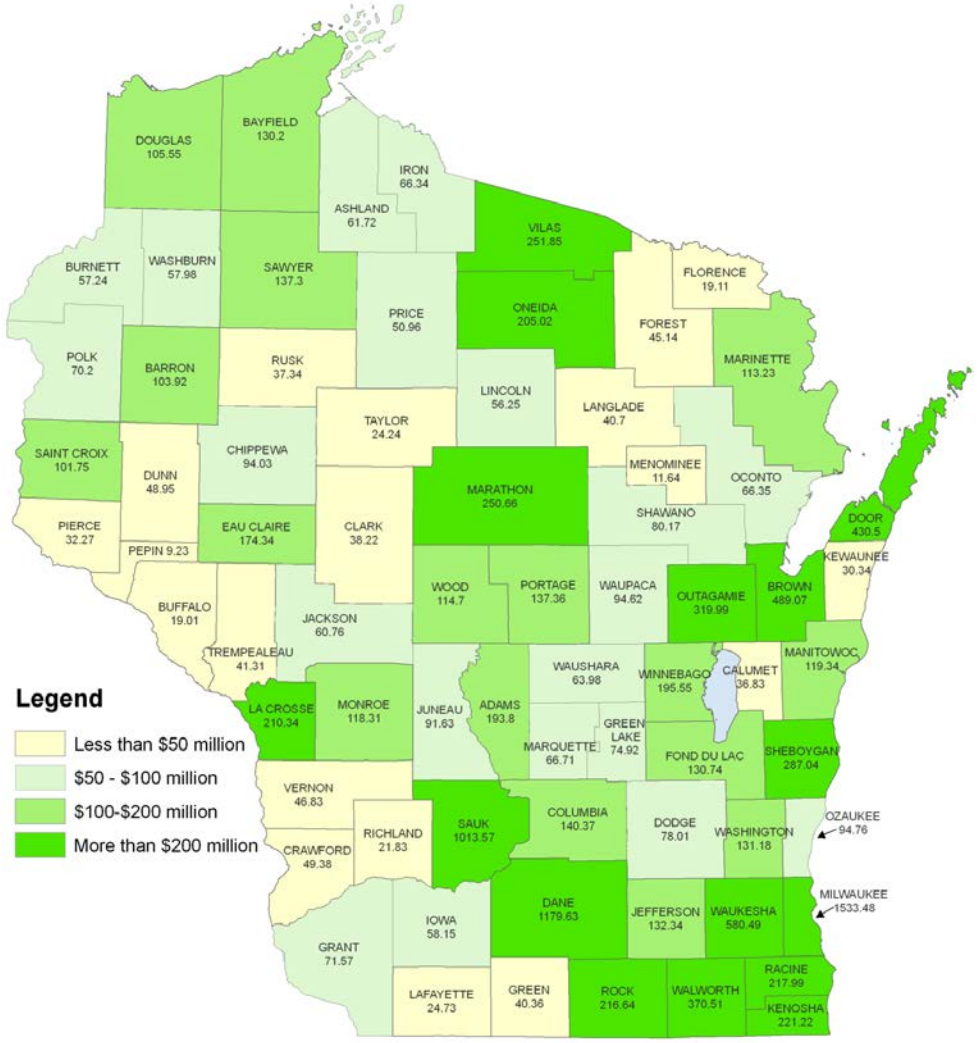
There are also other economic benefits, including rising property values and new retail, office, residential and other transit-oriented development near the stations. When such development around public transit transportation hubs is planned as high-density and mixed-use, it can greatly revitalize and enhance communities with rail stations.[18] Many examples of transit-oriented development particularly around commuter rail stations exist in the United States. Metra commuter rail stations in communities in northern Illinois provide an excellent example of this type of development potential. Many of these communities have newly constructed or renovated vibrant pedestrian-friendly business districts adjacent or close to the station, with new condo and apartment development. Developers are attracted to stations in part because of their permanence, and lenders are more willing to participate in mixed-use higher density development near these stations. In addition to new development, commuter rail and intercity passenger rail stations have contributed to the revival of old historic downtowns in smaller communities.

[17] http://www.dot.wisconsin.gov/projects/state/docs/mwrri-economic.pdf
[18] http://www.dot.wisconsin.gov/projects/state/docs/mwrri-wi-brochure.pdf

## *Tourism benefits*

Since tourism is a $12 billion industry (2009)[19] in Wisconsin, a transportation system that provides alternatives to automobile-use to reach tourism hot spots, popular attractions, and surrounding retail and recreational establishments is economically beneficial. Implementation of the Midwest Regional Rail System (which includes high-speed passenger rail service between Milwaukee and Madison) would enhance travel connections throughout the Midwest and the entire country. Map 4-4 shows a map of Wisconsin 2009 tourism (traveler) expenditures by county.

**Map 4-4: Wisconsin Tourism (traveler) Expenditures by County ($ Millions) – Year 2009**




**Source: Expenditure data from Wisconsin Department of Tourism**

[19] Wisconsin Department of Tourism

### *Economic competitiveness*

Fast, frequent, convenient and comfortable intercity and commuter transportation options can improve the economic competiveness of a region and help to attract new businesses and skilled professionals. On the macroeconomic level, both the U.S. and global economy have recently been examined in the framework of "mega-regions." A "mega-region" is defined as a network of rapidly growing, economically competitive metropolitan regions connected by commuting, linked economies, environmental systems and geography, infrastructure systems, settlement patterns, and shared culture and history. Mega-regions typically face increased highway congestion, overcrowded airports and seaports, loss of open space, and aging infrastructure. Intercity passenger rail has been identified as the mode that can best enable personal mobility and economic interaction across mega-regions for distances less than 500 miles. This improved access and mobility can contribute to the economic success of a mega-region within the global economy. Wisconsin lies within the Midwest "mega-region," which has been identified as stretching from Minneapolis/St. Paul to Buffalo, N.Y., and including major Midwestern cities such as Milwaukee, Chicago, St. Louis, Detroit, Indianapolis, Cleveland and Pittsburgh.

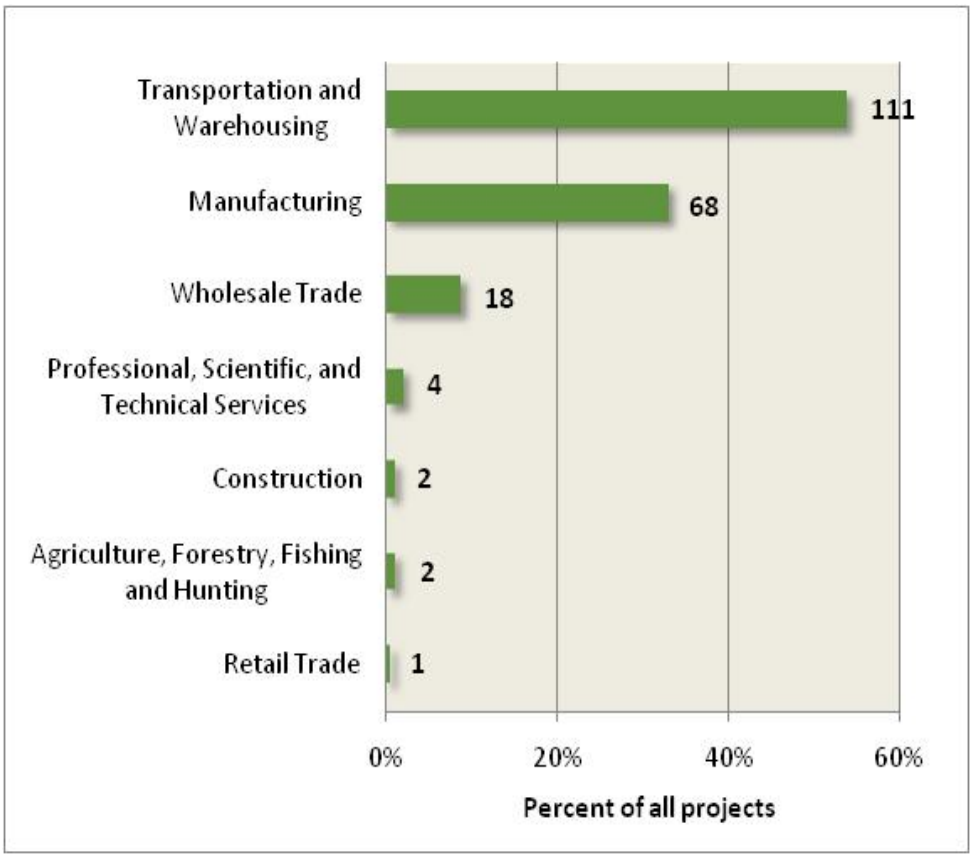
### *Direct and indirect job creation from passenger rail*

Investment in passenger rail can create jobs both directly from the construction and operation of passenger rail service and indirectly from spin-off businesses – for example business in new development near stations. The Midwest Regional Rail Initiative estimated the implementation of the full Midwest Regional Rail System would lead to 9,570 new permanent jobs in Wisconsin. In addition, design and construction of individual passenger rail projects would lead to immediate direct job growth.

## Rail Assistance Programs

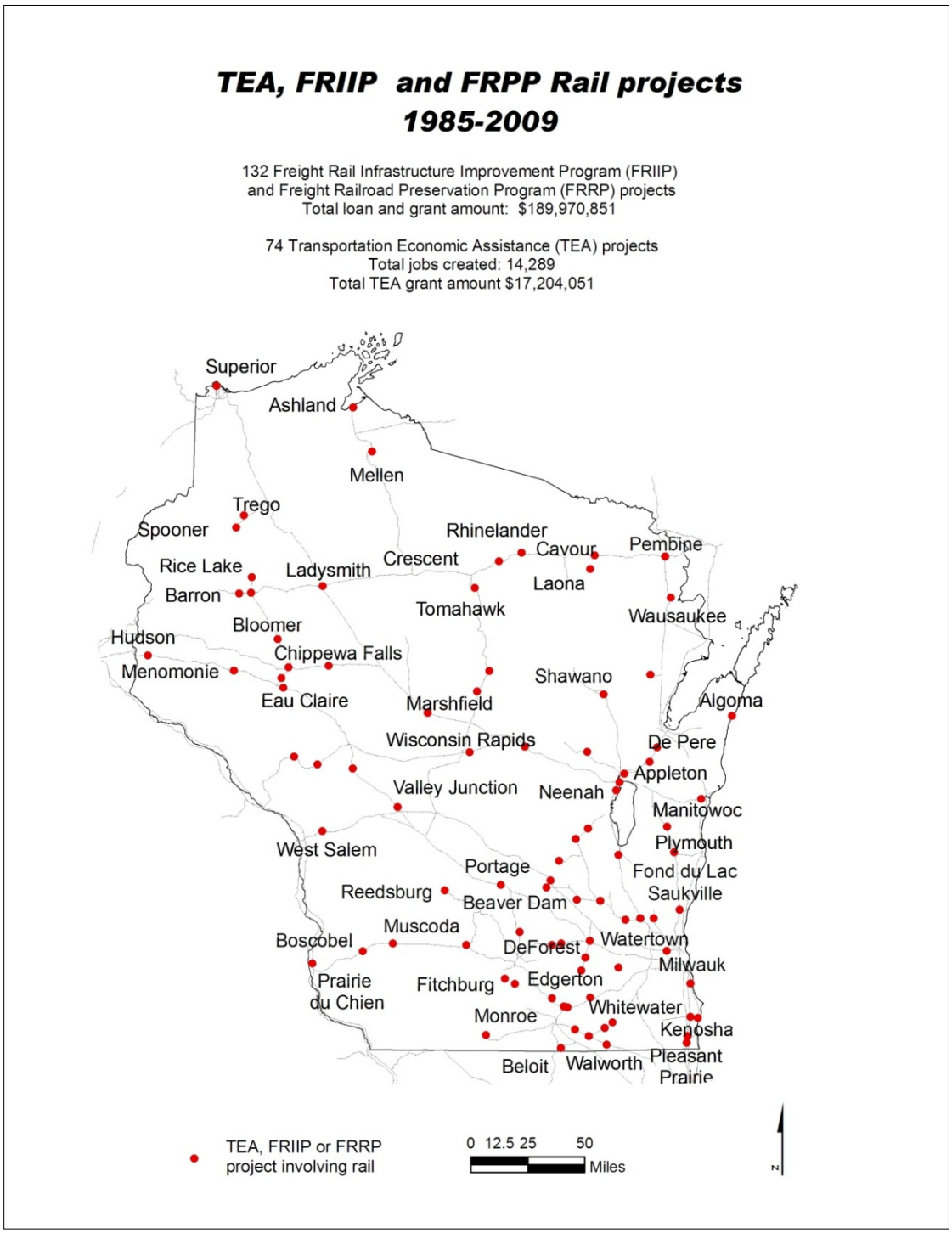
To support rail infrastructure investments that facilitate the economic development and competitiveness of shippers, railroads, and local governments, WisDOT administers three assistance programs for rail transportation. Two of them, Freight Infrastructure Improvement Program (FRIIP) and Freight Railroad Preservation Program (FRPP), are designated for rail projects undertaken by local units of government, industries and railroads. The Transportation Economic Assistance Program (TEA) is an all-mode grant program, providing grants to governing bodies and private businesses for road, rail, harbor and airport projects that help attract employers or retain firms in Wisconsin. While these programs have been modified in eligible financial assistance recipients and focus since the first program's (FRPP) inception in 1977, over 200 projects were completed within these three programs, granting or loaning more than $215 million in assistance. Figure 4-9 and Map 4-5 show the distribution of these projects by industry type and the locations of communities with TEA, FRIIP and FRPP projects.

**Figure 4-9: Wisconsin Grant Projects for Rail, 1985-2009**




**Source: WisDOT**

**Map 4-5: TEA, FRIIP and FRPP Rail Projects 1985-2009**




**Source: WisDOT**

## Role of Rails-to-Trails in Wisconsin's Economy

Historic changes in the railroad industry resulting in abandonment of rail lines have prompted public initiatives to preserve rail service to affected communities. In today's transportation system's realities of congestion, mobility constraints, and finite expansion potential, preserving the integrity of the right-of-way presents an important opportunity to a community. To achieve this, Wisconsin has been converting rails into trails since 1964 and currently has more trail miles on rail corridors than any other state.

With the enactment of the National Trails Act in 1988, Wisconsin continued its history of turning rails into trails under the new federal program. The act allows the preservation of rail corridors that would otherwise be abandoned for future rail use while being used on an interim basis for trail or other transportation purposes. These trails provide places for us to enjoy outdoor recreation, education, exploration, and much more.

A benefit of preserving these former rail rights-of-way as trails is the option of converting them back to active rail use in the future, if such a consideration were warranted. Wisconsin is aware of the economic benefits of the trails and has yet to convert any of them back to active rail lines. Future decisions about converting trails back to railways will weigh all potential economic benefits and tradeoffs between the trail and rail alternatives, with rail banking and land banking possible options to be considered.

# Chapter 5: Freight Rail

## Table of Contents

# Chapter 5: Freight Rail

## Introduction

A growing economy in Wisconsin requires a strong multimodal transportation system that permits the safe and efficient movement of goods across the state. With over 3,600 miles of rail lines in Wisconsin, a strong freight rail system is a key factor in supporting and growing the state's economy.

This chapter provides a brief history of freight rail in Wisconsin, describes the state's freight rail network, and identifies a series of freight rail-related issues with corresponding plan recommendations.

For a detailed discussion of the state's rail network see Chapter 3: System Inventory.

From 2007 to 2030, overall freight rail tonnage shipped in Wisconsin is forecast to grow 16 percent. This includes a slight decrease in originating and terminating tonnage, a five percent increase in in-state tonnage, and a 37 percent increase in overhead tonnage.

Source: Global Insight TRANSEARCH

## Wisconsin's Rail Freight Network

### *History of freight rail in Wisconsin*

The United States has a vast network of railroad tracks that move large quantities of products over long distances. Since the 1830s, this system has evolved into one of the most efficient freight rail systems in the world. The first rail service in Wisconsin was introduced in 1851. From the 1860s until the late 1920s, private railroad companies built an extensive passenger and freight service network throughout Wisconsin and connected the state with the rest of the country. By the late 1920s, every county in the state had at least one depot. Wisconsin's railroad network peaked about 1920, with approximately 7,600 miles of rail corridors.

At one time, hundreds of railroad companies operated in the United States. Over time, this number declined due to railroad consolidations and bankruptcies. The emergence of a modern national highway system led to a steady decline in rail's share of freight movements and passenger traffic. This decline accelerated after World War II with the construction of the Interstate Highway System and lasted into the 1970s. In addition to the impacts of highway expansion, a heavy and inflexible system of industry regulations limited the freight railroads' ability to compete with a booming trucking industry.

The Staggers Rail Act of 1980 substantially reduced the economic regulation of the rail industry, allowing carriers to focus on their most profitable commodities and routes. But it also led to major service network cutbacks. Since the passage of the Staggers Rail Act, there has been a significant increase in freight rail productivity, resulting in lower shipping costs for rail users and increased use of the remaining rail network. However, this increase in rail freight has been primarily focused on a few key commodity markets and shipping lanes, such as coal from the Powder River Basin in Wyoming and long-

distance transportation of import/export containers. Hauling freight by truck over shorter distances (less than 1,000 miles) has continued to grow with few interruptions since the early 1900s.

The Staggers Rail Act also allowed for easier abandonment of rail lines and led to a number of changes among carriers as larger railroads "spun off" their unproductive lines to newly created short-line and regional railroads. By 1975, almost 1,300 miles of track in Wisconsin (22 percent of the state's rail network) was threatened with abandonment. Most of this mileage consisted of Milwaukee Road and Chicago & North Western branch lines. Wisconsin ranked first in the nation in rail mileage proposed for abandonment and third in the nation in rail mileage at risk for abandonment.

**Milwaukee Road**

When the Milwaukee Road filed for bankruptcy in 1977, the railroad's network:

- Constituted one-fourth of the total rail miles in Wisconsin and one-half of the rail mileage in southern Wisconsin
- Served Wisconsin's eight largest cities and 16 of the 20 largest cities in the state
- Provided the only rail service to 184 Wisconsin communities

## *The Wisconsin Department of Transportation's response to changes in statewide freight rail service*

In 1977, the Chicago, Milwaukee, St. Paul and Pacific Railroad—commonly known as the Milwaukee Road—filed for bankruptcy and announced it would abandon a large part of its system in Wisconsin. This raised concerns about the impacts to the state's economy. The state chose to act. That same year the state legislature created the Rail Corridor Preservation Program, a state-funded assistance program. The program's goal was to help communities and shippers preserve freight rail service through development of locally-based freight rail operators. The program:

- Allowed the Wisconsin Department of Transportation (WisDOT) WisDOT to exercise its "first right of acquisition" for purchase of abandoned rail rights of way
- Allowed WisDOT to direct funds to local governments for rail infrastructure improvements and operating subsidies
- Provided the state the ability to preserve unused rail corridors for future use

**Rail Transit Commissions**

Rail Transit Commissions (RTCs) were formed as a mechanism to purchase rail lines and manage rail service. They generally provide matching funds for the purchase and rehabilitation of rail corridors. They also contract with a private operator to provide the freight rail service. See Chapter 3: System Inventory, for more information on Wisconsin's RTCs.

By 1980, the Wisconsin Department of Transportation (WisDOT) had worked with local Rail Transit Commissions (RTCs) to purchase nearly 500 miles of track that were subsequently operated by newly created short-line carriers under contract to the RTCs. Those lines that were not purchased were abandoned, some of which were converted to trails. Purchasing abandoned rail lines posed a substantial financial challenge. Nearly all of the properties targeted for rescue had suffered a long period of deferred maintenance, requiring significant investment just to keep trains operating on the track. Funding for track renewal came from a combination of local, state and private sources, as well as the Federal Local Rail Service Assistance Program (renamed the Local Rail Freight Assistance Program in 1981).

As noted previously, the passage of the Staggers Rail Act in 1980 reduced the regulatory burden on railroads and was expected to give railroads the flexibility to make operational and infrastructure changes that would improve their financial standing. By itself, this may have occurred. However, in 1980, Congress also passed the Motor Carrier Act of 1980, which reduced regulations on the trucking industry, making it easier for new trucking firms to enter the shipping market. Together, these two acts changed the face of the freight railroad industry. Major railroads were able to raise some shipping rates, while lowering others based on market demand. Railroads also began increasing their intermodal shipments, a trend that continues today. However, the acts also resulted in the railroads reducing or abandoning service on light-density lines, resulting in a wave of abandonments.

By the end of 1986, freight rail service had been discontinued on over 2,000 miles of rail line in Wisconsin. However, WisDOT and the RTCs were able to acquire over 200 additional miles of rail lines, bringing total public rail line acquisitions to over 817 miles at that time. Private freight rail operators provided service on about 568 of these miles under contract to the RTCs.

Once again, Wisconsin acted quickly. In 1992, the state's constitution was amended, allowing the use of state funding for rail improvements. This allowed WisDOT greater flexibility in setting project priorities. It also allowed the department to provide grants directly to freight rail carriers (although WisDOT typically continues to provide funding through the RTCs). As a result of this constitutional change, WisDOT replaced the original rail assistance program with the current Freight Rail Preservation Program (FRPP). This program provides grants for rail improvements and rail line acquisitions. WisDOT also created the Freight Railroad Infrastructure Improvement Program (FRIIP), a self-sustaining revolving loan program. See 10: Funding Wisconsin's Rail System Investments, for more information on both programs. Since 1977, the state, along with the rail transit commissions, have acquired approximately 824 miles of track. Currently, the state owns about 530 miles of track and provides funds to improve this system.

The Transportation Economic Assistance (TEA) Program and the Harbor Assistance Program (HAP) also can provide funding for rail-related improvements. See Chapter 10: Funding Wisconsin's Rail System Investments, for more information.

**Freight rail classifications**

Railroad classifications are defined on an annual basis by the Surface Transportation Board and are based on a railroad's annual operating revenue. As of 2010 the classifications were:

Class I railroads – Generate more than $398.7 million in annual revenue.

Regional carriers (includes Class II and Class III railroads) – Generate between $31.9 and $398.7 million in annual revenue.

Short-line carriers – Generate less than $31.9 million in annual revenue.

## *Wisconsin's current freight rail network*

Wisconsin's freight rail network consists of about 3,600 miles of rail lines. This represents approximately two percent of the nation's rail network. The state's freight rail network is operated by:

- Four Class I railroads – Canadian National Railway, Canadian Pacific Railway, Union Pacific Railroad and Burlington Northern Santa Fe Railway

- Seven short-line and regional carriers (includes Class II and Class III railroads) – Wisconsin & Southern Railroad, Escanaba and Lake Superior Railroad, Tomahawk Railway, Progressive Rail, Municipality of East Troy Railroad, Dakota, Minnesota & Eastern, and Wisconsin Great Northern Railroad

For more information on these railroads, see Chapter 3: System Inventory.

### *Commodities moved*

Wisconsin's railroads move 33 percent of Wisconsin's total freight by weight, about 180 million tons annually. Rail freight movement in Wisconsin is characterized as the amount of freight that:

- Originates or terminates within the state (with corresponding destinations or origins outside of the state) (terminating)
- Moves entirely within the state (intrastate)
- Passes through from an out-of-state origin to an out-of-state destination (overhead)

In 2007, rail movements (by weight) statewide were 46 percent overhead, 42 percent terminating, 10 percent originating and two percent intrastate.

Commodities are generally defined as those items shipped by weight, volume or value. Table 5-1 summarizes the top commodity by each of these characteristics. For more information, see Chapter 4: Economic Development. WisDOT acknowledges the increase in movement of frac sand and oil products by rail in Wisconsin since 2007. WisDOT will continue to study the impacts of these commodity flows and address them in updates to the Plan

**Table 5-1: Top commodities shipped by rail in Wisconsin in 2007 (in-bound, out-bound, intrastate and overhead traffic)**

| Characteristic | Top commodities | Key facts |
|---|---|---|
| Weight | Coal | • Approximately 45 million tons per year<br>• Almost 25 percent of all Wisconsin freight rail tonnage<br>• Roughly 55 percent all rail tonnage destined for Wisconsin<br>• Over 90 percent of coal deliveries terminating in Wisconsin are used to produce electricity |
| | Metallic ores | • Approximately 19 million tons per year<br>• About 11 percent of all Wisconsin freight rail tonnage<br>• Roughly 15 percent of all rail tonnage destined for Wisconsin<br>• Primarily iron ore from Minnesota |
| | Farm products | • About 19 million tons per year<br>• Approximately 10 percent of all Wisconsin freight rail tonnage<br>• The commodity most commonly carried by intrastate freight rail service |
| Volume (Number of Rail Units) | Freight of all kinds | • Results from the large number of containers from Asia passing through the state going to Chicago or west to the Pacific Northwest<br>• About 826,000 rail units per year<br>• Approximately 26 percent of all Wisconsin rail units |
| | Coal | • About 12 percent of all Wisconsin rail units |
| | Empty containers | • Typically Asia-bound empty containers headed from Chicago to the ports in the Pacific Northwest<br>• Approximately seven percent of all Wisconsin rail units |
| Value | Freight of all kinds | • Approximately $52 billion in shipments per year<br>• About 29 percent of all Wisconsin freight rail shipments by value<br>• Results from the large number of containers passing through the state going to Chicago or west to the Pacific Northwest |
| | Transportation equipment | • About $41 billion in shipments per year<br>• Approximately 23 percent of all Wisconsin freight rail shipments by value |
| | Chemicals or allied products | • About $23 billion in shipments per year<br>• Approximately 13 percent of all Wisconsin freight rail shipments by value |

Source: Global Insight TRANSEARCH

### *2030 freight shipments forecast*

Both rail and trucking freight shipments in Wisconsin are expected to grow through the year 2030. As can be seen in Tables 5-2 through 5-4:

- The weight of freight rail commodities traveling in Wisconsin is expected to grow by over 16 percent by 2030. This includes a:
    - 4 percent decrease in tons leaving Wisconsin
    - 4 percent decrease in tons entering Wisconsin
    - 5 percent increase in tons traveling entirely within Wisconsin (intrastate shipments)
    - 37 percent increase in tons traveling through Wisconsin (overhead shipments)

- The value of freight rail traveling in Wisconsin is expected to grow by 18 percent by 2030. This includes a:
    - 38 percent decrease in value of rail shipments leaving Wisconsin
    - 12 percent increase in value of rail shipments entering Wisconsin
    - 2 percent increase in the value of rail shipments traveling entirely within Wisconsin (intrastate shipments)
    - 24 percent increase in the value of rail shipments traveling through Wisconsin (overhead shipments)

- While freight rail tons originating in Wisconsin are forecast to decline by a small amount by 2030, the value of those shipments is forecast to decline by a larger amount. This may reflect fewer of Wisconsin's manufactured, higher-value goods traveling out of state by rail. By contrast, the forecasts show that Wisconsin may import a greater percentage of higher-value goods traveling by rail to Wisconsin.

- The percentage growth in freight tonnage carried by rail in Wisconsin is expected to outpace the percentage growth of freight tonnage carried by trucks. However, the percentage growth in total freight value carried by trucks is expected to outpace the percentage growth in total freight value carried by rail.

These forecasts were prepared prior to the recent rapid growth in the outbound movement of non-metallic minerals; more specifically, frac sand. These forecasts were also prepared prior to the announced closings, or conversions, of several coal-fired power plants. Future forecasts are likely to change.

**Table 5-2: Wisconsin freight shipments by weight, 2007 and 2030 (thousands of tons)**

| | Leaving WI | | | Entering WI | | | Within State | | | Overhead | | | All | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change |
| Rail | 15,234 | 14,580 | -4.3% | 75,415 | 72,635 | -3.7% | 3,771 | 3,971 | 5.3% | 86,067 | 118,073 | 37.2% | 180,487 | 209,934 | 16.3% |
| Truck | 92,467 | 99,387 | 7.5% | 52,990 | 67,702 | 27.8% | 118,392 | 112,779 | -4.7% | 76,462 | 106,568 | 39.4% | 340,350 | 386,519 | 13.6% |
| Water | 21,365 | NA | NA | 8,106 | NA | NA | 425 | NA | NA | 0 | NA | NA | 29,896 | NA | NA |
| Air | 199 | NA | NA | 76 | NA | NA | <1 | NA | NA | 0 | NA | NA | 275 | NA | NA |
| Unknown | 54 | NA | NA | 621 | NA | NA | 0 | NA | NA | 0 | NA | NA | 675 | NA | NA |
| Total | 129,319 | NA | NA | 137,208 | NA | NA | 122,519 | NA | NA | 161,799 | NA | NA | 5550,845 | NA | NA |

Source: Global Insight TRANSEARCH

**Table 5-3: Wisconsin freight shipments by value, 2007 and 2030 (thousands of $)**

| | Leaving WI | | | Entering WI | | | Within State | | | Overhead | | | All | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change |
| Rail | $12,751 | $7,867 | -38.3% | $20,843 | $23,356 | 12.1% | $1,867 | $1,905 | 2.0% | $146,887 | $180,531 | 22.9% | $182,348 | $214,262 | 17.5% |
| Truck | $226,014 | $263,031 | 16.4% | $248,884 | $380,169 | 52.7% | $184,272 | $229,436 | 24.5% | $329,504 | $513,445 | 55.8% | $988,726 | $1,386,298 | 40.2% |
| Water | $6,939 | NA | NA | $1,113 | NA | NA | $387 | NA | NA | $0 | NA | NA | $8,439 | NA | NA |
| Air | $763 | NA | NA | $1,218 | NA | NA | $2 | NA | NA | $0 | NA | NA | $1,983 | NA | NA |
| Unknown | $6 | NA | NA | $187 | NA | NA | $0 | NA | NA | $0 | NA | NA | $193 | NA | NA |
| Total | $246,473 | NA | NA | $272,245 | NA | NA | $186,497 | NA | NA | $475,900 | NA | NA | $1,181,689 | NA | NA |

Source: Global Insight TRANSEARCH

**Table 5-4: Wisconsin freight rail shipments by weight, units and value, 2007 and 2030**

| | Leaving WI | | | Entering WI | | | Within State | | | Overhead | | | All | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change | 2007 | 2030 | % Change |
| Carload Tons (000s) | 14,794 | 14,458 | -2.3% | 75,176 | 72,448 | -3.6% | 3,771 | 3,971 | 5.3% | 68,057 | 96,291 | 41.5% | 162,452 | 187,837 | 15.6% |
| Intermodal Tons (000s) | 439 | 122 | -72.2% | 238 | 187 | -21.4% | 0 | 0 | 0% | 17,349 | 21,782 | 25.6% | 18,035 | 22,097 | 22.5% |
| Total Rail Tons (000s) | 15,234 | 14,580 | -4.3% | 75,415 | 72,635 | -3.7% | 3,771 | 3,971 | 5.3% | 85,406 | 118,073 | 39.0% | 180,487 | 209,934 | 16.3% |
| | | | | | | | | | | | | | | | |
| Carload Units | 184,398 | 163,892 | -11.1% | 714,681 | 697,110 | -2.5% | 43,596 | 43,728 | 0.3% | 821,639 | 1,121,498 | 36.5% | 1,771,254 | 2,026,228 | 14.4% |
| Intermodal Units | 22,800 | 6,631 | -70.9% | 21,280 | 19,140 | -10.1% | 0 | 0 | 0% | 1,319,800 | 1,740,325 | 31.9% | 1,364,640 | 1,766,096 | 29.4% |
| Total Rail Units | 207,198 | 170,523 | -17.7% | 735,961 | 716,249 | -2.7% | 43,596 | 43,728 | 0.3% | 2,141,49 | 2,861,823 | 33.6% | 3,135,894 | 3,792,324 | 20.9% |
| | | | | | | | | | | | | | | | |
| Carload Value (millions $) | $10,860 | $7,362 | -32.2% | $19,850 | $22,614 | 13.9% | $1,837 | $1,905 | 2.0% | $77,422 | $94,040 | 21.5% | $110,416 | $125,921 | 14.0% |
| Intermodal Value (millions $) | $1,891 | $505 | -73.3% | $993 | $741 | -25.4% | $0 | $0 | 0% | $69,036 | $87,095 | 26.2% | $71,931 | $88,341 | 22.8% |
| Total Rail Value (millions $) | $12,751 | $7,867 | -38.3% | $20,843 | $23,356 | 12.1% | $1,837 | $1,905 | 2.0% | $146,458 | $181,135 | 23.7% | $182,348 | $214,262 | 17.5% |

Source: Global Insight TRANSEARCH

## *Wisconsin's intermodal facilities*

The efficiency of freight movement is enhanced by the presence of intermodal facilities. Intermodal facilities are locations where freight containers, trailers or bulk commodities are transferred between truck, rail, water and air modes. Each transportation mode plays a distinctive role in the efficient movement of goods from one location to another. Shippers typically use a combination of modes to maximize speed and service and to minimize cost.

In the past, railways served all sectors of the economy, moving food, industrial goods and passengers to and from communities large and small. Today, freight railways are more specialized and lack direct physical access to many of their targeted clients. Intermodal facilities help address that lack of direct physical access, enabling truck-served industries to gain the economies of scale and long-haul efficiencies of the rail mode through consolidation of shipments and access to rail cars at designated intermodal points.

Wisconsin's primary rail intermodal focus is on the transfer of bulk commodities between rail and truck or rail and water modes. Due to the special purpose of these facilities, most are privately-owned and dedicated to the use of a specific client or industrial group. Canadian National (CN) has one public intermodal facility at Chippewa Falls, and one private intermodal facility operated for Ashley Furniture in Arcadia, Wisconsin.

The U.S. Bureau of Transportation Statistics lists 119 freight intermodal facilities in Wisconsin, of which 95 include the freight rail mode. Wisconsin classifies these facilities as transload, because they do not typically handle containerized freight. See Chapter 3: System Inventory, for more information about Wisconsin's intermodal facilities.

## *Network service and capacity issues*

Constraints on railroad capacity take many forms. Capacity constraints may include:

- **Line capacity:** A rail route has a finite capacity in terms of the number of trains it can handle in a set period, such as a day. Factors affecting capacity include the track configuration, such as single- or double-track and signalization. For example, double track can handle more trains than single-track with passing sidings. Also, a single-track line controlled by a dispatcher in a remote location using wayside signals can handle more trains per day than one with no such system.

- **Yards:** Rail yards include general carload classification yards, intermodal yards handling trailers and containers on flatcars or double-stack cars, and small switching yards. Upper limits of capacity are often quoted as the number of cars, trailers or containers handled at a yard per day.

- **Fleets:** Rail fleets consist of cars and locomotives. If a railroad does not have enough cars and locomotives to haul its traffic, it can lease them from other railroads. Railroads monitor their car and locomotive fleets to assure a sufficient supply where and when they are needed. However, there are times when demand outstretches supply, and railroads and shippers must search for available equipment.

- **Tunnels and bridges:** Tunnels have vertical clearances that can restrict some types of traffic, such as double-stack cars and automobile tri-levels. Certain structures, such as bridges, might also have vertical clearance restrictions, as well as weight restrictions. Swing bridges over navigable waterways must remain open when not handling trains and may cause capacity constraints.

- **Track:** Heavier carloads require more robust track structures. Many railroads recently have been increasing maximum carloads to 286,000 pounds, and some larger railroads are increasing maximum carloads to 315,000 pounds. The increasing carload weights have caused many freight railroads to upgrade their track structures. Typically, upgrading track requires replacing the track. This is expensive and can present financial obstacles for short-line or small railroads with limited cash flow. While track does not necessarily need to be upgraded to handle heavier cars, it will eventually result in higher maintenance costs.

- **Work force:** A train cannot move without a train crew. Two-person crews are typical for freight trains and consist of a locomotive engineer and a conductor. Crews are highly trained in train operations and regulations. They are limited in the hours they can work. Hours of service rules prevent a crew member from working more than 12 hours per day. If a train crew reaches its 12 hour limit, the train must stop and wait for a new crew. While this rule addresses an important safety concern, it can negatively impact the efficiency of train shipments.

- **Shared use:** Passenger rail services that operate on freight rail lines, including both intercity passenger and commuter rail service, can diminish capacity for freight trains. Freight railroads regularly insist on capacity enhancements before allowing new passenger trains access to freight lines.

- **Interchanges:** Interchanges occur when one railroad delivers rail cars or even whole trains to another carrier. This happens every day in Chicago. When rail cars are interchanged, crews and locomotives must change as well. Depending on the type of traffic involved, several hours or even days may be required to complete the interchange. This can negatively impact the efficiency of freight rail.

- **Train-related crashes/incidents:** Vehicles and pedestrians are sometimes struck by trains when crossing railroad tracks. These crashes may occur for a variety of reasons, including motor vehicles getting stuck on the track, motorists disregarding warning devices, or pedestrians trespassing on railroad right-of-way. Whatever the cause, any train-related crash will require a train to stop.

- **Severe weather conditions:** Flooding can make tracks impassable, and high winds have been known to push trains off track. Severe winter storms can also slow train movements. These conditions exist in the Upper Midwest and can profoundly impact train movements and railroad operations.

- Other constraints: container shortages, shortage of regional intermodal terminals with double stack capability, and lack of clearances for double stack on some corridors.

In Wisconsin, no known capacity issues were identified by the railroads during development of the plan. However, Chicago continues to be a major regional rail bottleneck due to its status as the principal gateway for transcontinental traffic. In Chicago, rail cars are interchanged among different rail carriers. Additionally, some intermodal trailers and containers are trucked across the city from terminals served by western carriers to those operated by the eastern railways. As noted above, these transactions may take hours or even days to complete.

The Chicago Region Environmental and Transportation Efficiency Program (CREATE) is an attempt to solve the Chicago bottleneck. The program involves a partnership between the U.S. Department of Transportation, the State of Illinois, the city of Chicago, Metra (Chicago's commuter rail operator), Amtrak and the nation's freight railroads. The goal of the program is to improve freight rail movements in the Chicago region, reduce motorist congestion at grade crossings, improve passenger rail service, enhance public safety and promote economic development.

While no significant capacity issues were identified by the railroads during plan development, planned additions to intercity passenger rail service, as well as continued growth in freight rail service, may result in capacity concerns in the future. WisDOT's policy is to work with freight railroads to address these concerns as new intercity passenger rail service is implemented. This may require WisDOT and the freight railroads to cooperatively identify additional infrastructure needed to keep new intercity passenger rail service from negatively impacting freight rail service.

## Issues Related to Wisconsin's Freight Rail Network and Plan Recommendations

### *Managing passenger rail improvements on Wisconsin's rail network*

Growing interest in intercity passenger rail service and commuter rail service highlights the need for coordination with Wisconsin's freight rail service providers.

As discussed in Chapter 6: Intercity Passenger Rail, WisDOT recommends implementing the Wisconsin component of the Midwest Regional Rail System (MWRRS). This would result in expanded intercity passenger rail service in Wisconsin, including more frequent service between Chicago, Milwaukee and Minneapolis/St. Paul, and new service between Chicago, Milwaukee and Green Bay. The majority of the track on which the state's proposed intercity passenger rail routes will operate is owned or operated by freight railroads. The new intercity passenger services will use some capacity on these freight rail lines. The planned service improvements in the near-term include:

- Additional *Hiawatha Service* train frequencies between Chicago and Milwaukee
- A second daily round-trip train frequency between Chicago, Milwaukee, and Minneapolis/St. Paul, stopping at existing stations along the corridor, on the existing Amtrak *Empire Builder* route

As discussed in Chapter 7: Commuter Rail, locally proposed commuter rail systems in southeast Wisconsin and in Dane County would also use freight rail lines and would consume track capacity.

In order to provide capacity for new passenger services on these freight lines, track upgrades, such as passing sidings and sections of double-track, may be required. Typically, the analysis of required capacity improvements is done through an operations simulation, where impacts of potential new capacity and additional train services can be considered together as a means of defining required infrastructure investments.

All passenger rail development plans in the near-term involve sharing track and facilities with freight rail. This brings new challenges distinct from those associated with new demands for freight services:

- Passenger trains must operate according to schedule to a higher degree than freight trains. This implies a need for greater "buffer" capacity along a passenger rail route, even given a modest increase in the number of trains.
- New passenger trains operating at higher speeds relative to freight operations can require more track infrastructure (such as passing sidings, additional mainline tracks, etc.) than what an equivalent increase in slower speed freight trains would require. Some large freight railroads maintain that a rail corridor segment with a single Amtrak train moving along it would support three freight trains traveling along the same segment.
- Track engineering specifications for passenger operations often are tighter than those needed by the host freight railroad, both to support safe passenger operations at higher speeds and to provide a high standard of comfort for on-board passengers.
- Track maintenance must be shifted to avoid passenger service hours. Ideally, maintenance cycles should also be shortened to avoid the typical freight railway practice of major, highly-disruptive rebuilding programs every several years.

WisDOT completed a detailed operations simulation of the Chicago-Milwaukee-Madison corridor. The simulation showed that with the right infrastructure improvements, new passenger rail service can be implemented without harming current and future freight rail operations. Additional operations simulations will need to be conducted for planned future service to both Minneapolis/St. Paul and Green Bay.

If states select Amtrak to operate the new intercity passenger service, they will be able to rely on Amtrak's statutory rights of access to freight corridors under terms that do not "unduly burden" the ability of the host freight carriers to serve their clients. The Federal Railroad Administration is preparing guidance that will likely require formal analytical assessments of infrastructure and operations scenarios to be expected over the long term (i.e., 20 years), as opposed to simply defining needs for an initial tier of passenger operations. WisDOT's goal is to ensure that freight railroad service is not negatively impacted by the expansion of passenger rail service. In fact, WisDOT expects that the necessary improvements to accommodate passenger rail may enhance freight service.

WisDOT recognizes the important contributions freight rail carriers make to Wisconsin's economy and the need to avoid compromising their ability to serve freight clients. Under *Wisconsin Rail Plan 2030*, WisDOT will:

- Continue to work collaboratively with the appropriate stakeholders, including freight railroads, Amtrak and the Federal Railroad Administration, to define the appropriate upgrades to rail infrastructure in support of upgraded and expanded intercity passenger rail service
- Continue to build upon and expand WisDOT's technical expertise in the areas of railway engineering and operations to facilitate dialogue with host freight carriers and to better safeguard the growing public sector investment in rail corridors
- Lead efforts to develop cooperative agreements with stakeholders regarding upgraded and expanded intercity passenger rail service as required by the Federal Railroad Administration

### *Infrastructure needs for publicly-owned rail lines*

Just over 530 miles of active rail lines in Wisconsin are publicly-owned. Several rail line segments in the state are under public control but operated by other parties. The vast majority of these lines are operated by Wisconsin & Southern Railroad Company (WSOR). Wisconsin Great Northern operates on the remainder of the publicly-owned lines.

Wisconsin's short-line system must be able to accommodate heavier car loadings that are prevalent for Class I railroads. In particular, tracks and bridges need to be upgraded. To articulate needs on the publicly-owned system, WSOR prepared a 10 year capital plan. The plan estimated annual costs of tie and rail replacement at $16.3 million. Using a cost per mile basis and applying it to all of the public line segments would equate to capital costs of $19.7 million per year.

In 2006, WisDOT also analyzed 30 bridges used by WSOR to determine whether the bridges are capable of handling 286,000 pound carloads and what the resulting service life of those bridges would be. WisDOT took the estimated costs and extrapolated them to the rest of the publicly-owned system to determine potential costs for all publicly-owned bridges. These estimates suggested a total cost of $29.5 million, or an annual cost of $5.9 million over five years.

This analysis, along with the growing role for the state of Wisconsin in the continued support and enhancement of the state's rail network, resulted in a program increase in the 2009-2011 biennial budget process.

Recognizing the value of the state-owned railroad lines and their role in the state's transportation network, it is in the state's interest to ensure that the system is capable of providing the intended service. In order to accomplish the desired level of oversight, Wisconsin, in cooperation with its partners, should formalize its ability to assess the value of the assets by working to implement an asset management system for the state-owned rail lines. This system would be able to identify areas of the system that are in need of additional support and help ensure that the system performs to its desired level. In addition to addressing track and bridge upgrade needs, the state also is tasked with preserving, if appropriate, rail corridors proposed for abandonment for future use. If a corridor is being abandoned

and WisDOT and local governments are not able to preserve its current rail use, the department shifts to a rail corridor preservation approach. This ensures that rights of way are preserved for future transportation purposes. Rail banking or land banking offers one option for rail corridor preservation. Rail banking is an option when local partners have plans to restore the rail service in the near future. The preserved corridors can also be converted to recreational corridors known as rails-to-trails, which offer benefits to the surrounding communities and users.

Rail service in communities may be restored during the life of this plan. Restoration of rail service along these corridors may be based on economic feasibility, creating system redundancy or other factors. Given the nature of the preserved corridors as recreational trails with a very different use, restoration can be a contentious issue for users and the communities.

As part of *Wisconsin Rail Plan 2030*, WisDOT will:

- Continue to preserve, as appropriate, rail corridors for future use
- Work with railroads to ensure that appropriate rail service will be provided to all shippers statewide
- Acquire rail lines into public ownership, when appropriate, to preserve essential railroad service
- Conduct more detailed studies of publicly-owned rail line infrastructure needs
- Fund track upgrades for publicly-owned rail lines to meet changing industry standards
- Investigate potential for moving to an asset management method of proactively maintaining and improving publicly-owned rail lines

### *Shipper access to the rail service network*

Adequate connections to the regional and national transportation system continue to be an overarching need of Wisconsin communities and shippers who rely on local freight rail service. Class I railroad efforts to improve efficiency have resulted in the railroads promoting unit trains that move large volumes of product from a single origin to a single destination, while reducing service to smaller shippers with individual carload shipments. By taking this approach, larger railroads have been able to offer pricing incentives to larger shippers with facilities capable of loading or unloading large product volumes in a short period of time.

Pursuing increased unit train business has proven to be a good business decision for the larger railroads. However, some smaller shippers have commodities and/or shipping points that are unsuited to unit train movement. A large carrier's decision on whether to service these shippers becomes a function of the relative profitability of a given mixed freight traffic flow versus the

**Unit Trains vs. Mixed Freight Trains**

A **unit train** transports one type of commodity from a single origin to a single destination. The train does not stop to drop off or pick us cargo along the way. For example, trains delivering coal to Wisconsin power plants typically are unit trains.

A **mixed freight train** makes multiple stops during its trip to pick up and drop off different types of cargo at various businesses. For example, Wisconsin & Southern Railroad (WSOR) typically serves multiple businesses in southern Wisconsin with mixed freight trains. Some of WSOR's mixed freight trains interchange with Class I railroads in Chicago.

"opportunity cost" of deploying crews and locomotives to handle the offered business. Some smaller shippers located on congested, long-haul main line corridors may watch in frustration as a carrier cuts back service to their facilities even as the volume of trains passing their front doors continues to grow. New potential clients may be required to fund, in addition to a switch and spur into their facility, industrial "frontage track" and high speed turnouts that mitigate the impact of local switching activity on main line capacity.

Complicating matters is Wisconsin's proximity to the Chicago gateway. Rail freight traffic originating in Wisconsin and moving to the eastern U.S. will most likely need to be turned over to a different railroad operator in Chicago after a relatively short haul to one of the Chicago connectors.

The frac sand mining expansion has resulted in rapid growth of freight movements from western Wisconsin. This expansion has led to the development of new transload facilities and the reactivation of out-of-service rail lines.

Short-line rail carriers, unlike the Class I railroads, focus on short haul and carload traffic. These short-line carriers can fill the service gap created by the Class I railroads. Strategies to preserve such freight for the rail mode often hinge on creating and expanding short-line operations. In some circumstances, the large carriers will even encourage prospective new rail clients to locate on a short-line carrier where the client is more likely to benefit from intense local service and the more flexible operations model of the smaller carrier. In Wisconsin, the value of short-line operations is clearly demonstrated by the success of WSOR even as mixed freight traffic from Wisconsin shippers served by the larger carriers continues to decline.

While short-line carriers may be able to accommodate smaller shipments, the carriers may face challenges interchanging with other railroads and reaching distant destinations.

Under *Wisconsin Rail Plan 2030*, WisDOT will:

- Continue to support freight rail shippers and short-line carriers in preserving service to light-density rail lines
- Support freight shipper investments that permit new or continued local service in high-traffic areas; in some cases relocation support for a rail shipper to move to a branch line or short-line served point may prove to be a more cost-effective option for continued rail service
- Continue to provide planning support, as requested, to metropolitan planning organizations and regional planning commissions throughout the state in considering transportation needs that support developing rail-friendly industrial development sites
- Support efforts to improve connections between Wisconsin's short-line railroads and other carriers

### *Future of Wisconsin's branch line network*

As discussed in Chapter 3: System Inventory, nearly a quarter of Wisconsin's active rail system (about 858 miles according to the FRA) consists of low density rail lines. These are rail lines that carry less than

five million gross tons of freight shipments per year. An additional 237 miles of rail line are currently out-of-service (the track is in place, but no trains are operating on it). Map 5-1 highlights these low density and out-of-service rail corridors. Canadian National (CN), Canadian Pacific Railway (CP), Union Pacific Railroad (UP), and Wisconsin & Southern Railroad (WSOR) currently operate the majority of the state's light density lines.

Wisconsin's rail system has lost a considerable portion of its rail mileage to abandonment over the past several decades. Current public ownership of rail lines, concentrated in southern Wisconsin, consists primarily of lines abandoned by the Milwaukee Road and Chicago & North Western in the 1980s. There is some concern that compared to higher volume mainlines, the economic viability of the state's current light density rail lines is more susceptible to changing market conditions (e.g. losing a customer's business or increasing rail maintenance costs). As a result, some of Wisconsin's light density lines could be at risk for abandonment in the future.

Northern Wisconsin is one region where the state's branch line network has undergone considerable changes over the past 25 years. The Soo Line Railroad, long the dominant player in rail transportation for Wisconsin's forest products industry, marked a major change in direction with its purchase of assets from the bankrupt Milwaukee Road in 1985 and the subsequent spin-off, in 1987, of nearly 2,000 miles of Wisconsin and northern Michigan track to a new carrier, Wisconsin Central Ltd. (WCL). According to comments received from shippers, WCL brought a local marketing and service focus to northern Wisconsin's short-line network, recapturing volumes long lost to motor carriers. Operations and customer service were centralized in Stevens Point. In 1992, WCL investors purchased the former Green Bay and Western and Fox River Valley lines, blanketing the remaining geography of northern and east central Wisconsin. Carload volumes and intermodal traffic volumes continued to grow over WCL's lines into the 1990s.

In 2001, CN purchased WCL. CN had relied on portions of WCL's network for access to Chicago from western Canada since the early days of the railroad. By purchasing WCL, CN now enjoyed full and direct control of its operations to and from the Chicago gateway for all of its North American service.

CN continues to operate most of the branch line network purchased from WCL, but car loadings on the branch line network continue to decline. Under CN, the Wisconsin rail branch line traffic represents a relatively minor part of the railroad's overall service franchise. Approximately 75 percent of CN's track in Wisconsin consists of branch lines. The other 25 percent makes up the Superior-Stevens Point-Fond du Lac-Chicago mainline that carries the bulk of CN's traffic in Wisconsin. However, CN has stated that it is committed to serving its customers along its northern Wisconsin branch lines.

**Map 5-1: Low density and out-of-service rail lines in Wisconsin**

As described earlier in the chapter, public sector involvement in Wisconsin's rail freight industry has long been fueled by the abandonment of rail lines and potential loss of service to communities and industries. In order to promote Wisconsin businesses' continued access to freight rail on the state's light density rail lines, WisDOT will:

- Continue efforts to preserve rail freight service when the service is judged to be essential, cost-effective and financially viable, based on transportation efficiency cost-benefit analysis
- Develop outreach to, and foster relationships with, all Wisconsin railroad operators to keep abreast of market demands and railroad interests
- Facilitate relationships to reduce the number of abandonments and strengthen the market for rail
- Monitor railroad activity and create partnerships among businesses and railroads to increase the use of rail
- Work with the Department of Commerce to explore possible state policies to encourage business development within a supporting transportation policy framework

### *Chicago's effect on Wisconsin's freight service*

Chicago is the nation's busiest and most complex rail transportation hub. Over 1,200 trains per day travel to, from and through the Chicago region, including commuter trains, intercity Amtrak trains and freight trains. None of the major U.S.-based rail systems serves both the Pacific and Atlantic coasts. As a result, all east-west traffic must interchange at one of the rail "gateways" such as Chicago, St. Louis, Memphis and New Orleans. Chicago is the largest such interchange point, and the need for traffic to change hands only adds complexity to the movement of over 35,000 freight rail shipments per day.

Fractured ownership of rail facilities and lack of coordination among the carriers led to some catastrophic service breakdowns in the 1980s and 1990s. Freight cars would frequently take longer to cross the Chicago terminal area than they had spent on the entire journey to Chicago from Seattle or Los Angeles. In 1999, the industry agreed to create the Chicago Transportation Coordination Office, a centralized location where dispatchers and planners for each of the rail organizations could jointly plan train movements, establish protocols and map out detailed contingency plans to cope with weather emergencies or other unplanned events. While this office improved Chicago operations, it became clear that something more dramatic and costly would be needed to permanently address the perennial service disruptions in the terminals.

In 2003, the major freight carriers, Metra, the city of Chicago and the Illinois Department of Transportation put together a $1.5 billion capital improvement plan to eliminate bottlenecks and improve train velocity through the city. This new plan, called the Chicago Region Environmental and Transportation Efficiency Program (CREATE), includes:

- Upgrades to five rail corridors and creation of passenger-dominant routes to speed movement of Amtrak trains into the Union Depot from the east and south
- 25 new rail-highway grade separations to mitigate motor vehicle delays

- Six rail-rail grade separations to dramatically reduce conflicts between passenger and freight operations while simplifying freight rail activity

Most of the program's funding will come from state and federal sources, with rail carriers contributing 10 percent to 15 percent of the total cost. As of March 2010, 10 of 71 major projects had been completed, with another 30 in various phases of planning and design. In February 2010, the program received a $100 million U.S. Department of Transportation TIGER (Transportation Investment Generating Economic Recovery) stimulus grant.

Wisconsin's proximity to the Chicago rail gateway gives the state a major stake in the program's success. Traffic moving east from Wisconsin does not have the option to move via "alternative gateways" such as St. Louis or Memphis when connecting to the eastern roads. Congestion in the Chicago terminal area can "back up" rail operations and negatively impact rail service in southeastern Wisconsin. Finally, Wisconsin's role in the Midwest Regional Rail Initiative can only reach full potential with the assurance of reliable, speedy intercity passenger rail service into the heart of Chicago.

As part of *Wisconsin Rail Plan 2030*, WisDOT will:

- Monitor the CREATE Program's progress and partner with Illinois in supporting new federal funding to move the improvements forward
- Explore opportunities to increase freight rail penetration of Chicago-directed traffic flows through intermodal offerings and expanded direct carload service to Chicago interchanges by Wisconsin's short-line partners

## *Rail/highway intermodal facilities and the public sector's role*

A growing emphasis on greenhouse gas emissions, energy efficiency and sustainable transport has led many states to explore possible strategies to shift highway truck traffic to the rail mode. In response, the nation's large railways have expanded their offerings for movement of domestic intermodal freight, including large, multi-lane service contracts with some of the nation's largest trucking firms. For example, Wisconsin-based Schneider National is one of the country's largest users of rail intermodal services.

The railways' engagement with domestic intermodal traffic is heavily targeted to corridors that exceed 1,000 miles, with traffic moving in containers rather than standard over-the-road trailers. Containers may be double-stacked, maximizing payload per train. Operation of the cranes and other elements of the rail/highway interface at the intermodal ramps are very expensive. As a result, the long-haul cost-efficiencies of rail movement must be substantial to produce an economically feasible service package to the targeted clients.

This domestic intermodal business model has two important implications for Wisconsin and other states:

- Shorter-haul highway traffic (less than 1,000 miles) is "off the radar" for those promoting rail intermodal handling

- Minimum volume scales are high for establishing service at a new point – most rail carriers insist on a minimum of 100,000 “lifts” per year as a condition of adding a new service point

In addition to these two obstacles, Wisconsin also suffers major impacts from freight shippers moving goods over its highway system to access large railroad intermodal facilities in Chicago. West bound intermodal freight traffic from Minnesota and the Dakotas often travels east by truck on I-94 and I-90 through Wisconsin before it is transferred in Chicago to west-bound trains. Truck volume on these interstate routes is high – around 10,000 vehicles per day – and is expected to grow faster than passenger vehicle traffic over the next 20 years.

Initiatives to provide rail intermodal alternatives for some of this traffic may require development of a new business model and/or engagement by short-line carriers with a more natural focus on shorter-haul opportunities. Given the multi-state nature of the traffic and associated highway impacts, a collaborative approach with adjoining states would likely be needed. New models of capital sharing, rail rolling stock and service design may be required to be effective in this market. A key objective would be to provide better access to the rail mode for Wisconsin shippers and receivers as a byproduct of the overhead traffic diversion to rail.

As part of the *Wisconsin Rail Plan 2030*, WisDOT will:

- Investigate new policies and new financing strategies for projects that improve freight service
- Seek innovative ways to maintain an all-mode freight network to improve efficiencies among the modes and facilitate movement of goods

### *Import/export containers and Wisconsin rail service*

Wisconsin’s location just north of the nation’s largest freight hub in Chicago means that the state sees a large volume of rail-hauled containerized import/export freight moving through the state. However, container volume handled at Wisconsin facilities is quite modest. A specialized and privately-operated intermodal facility near Arcadia in west central Wisconsin handles inbound and outbound product for locally-based Ashley Furniture. The facility is served by Canadian National and is a rare example of a modest-volume rail facility receiving regular service for double-stack container movement. Ashley Distribution operates a fleet of trucks to provide transport for those wishing to make use of backhaul container availability within a 150-mile radius of the Arcadia site.

Large railways strongly favor dedicated trainload movement of container traffic and seldom promote locations that are not capable of loading an entire train for movement to a single port. Several facilities of this scale are located in the Chicago region, and two are located in the Twin Cities (operated by Burlington Northern Santa Fe and CP). This means that Wisconsin shippers seeking access to long-haul intermodal service for import/export containers generally must move their commodities by truck across state lines to deliver boxes for delivery by freight rail to major U.S. port facilities.

The Arcadia and Milwaukee terminals do offer limited alternatives to this scenario, provided steamship line boxes are available and are scheduled to move to Asian or European markets. Access to

import/export backhaul capacity is a challenge for small volume or irregular export stakeholders due to the cost of repositioning the boxes and the need to coordinate movement with export clients, railways and steamship lines alike.

Two important structural changes in the flow of export goods may impact Wisconsin rail traffic: the expansion of the Panama Canal and growing volumes of import traffic handled by Canadian National via the Port of Prince Rupert. Before 2006, the majority of Asian traffic entering North American markets was imported through the West Coast ports and then moved inland via double-stack intermodal trains to the Midwest and Eastern U.S. markets. The San Pedro Bay ports of Los Angeles and Long Beach dominated this trade, in part because of a large local consuming market that complemented volumes targeted at inland markets.

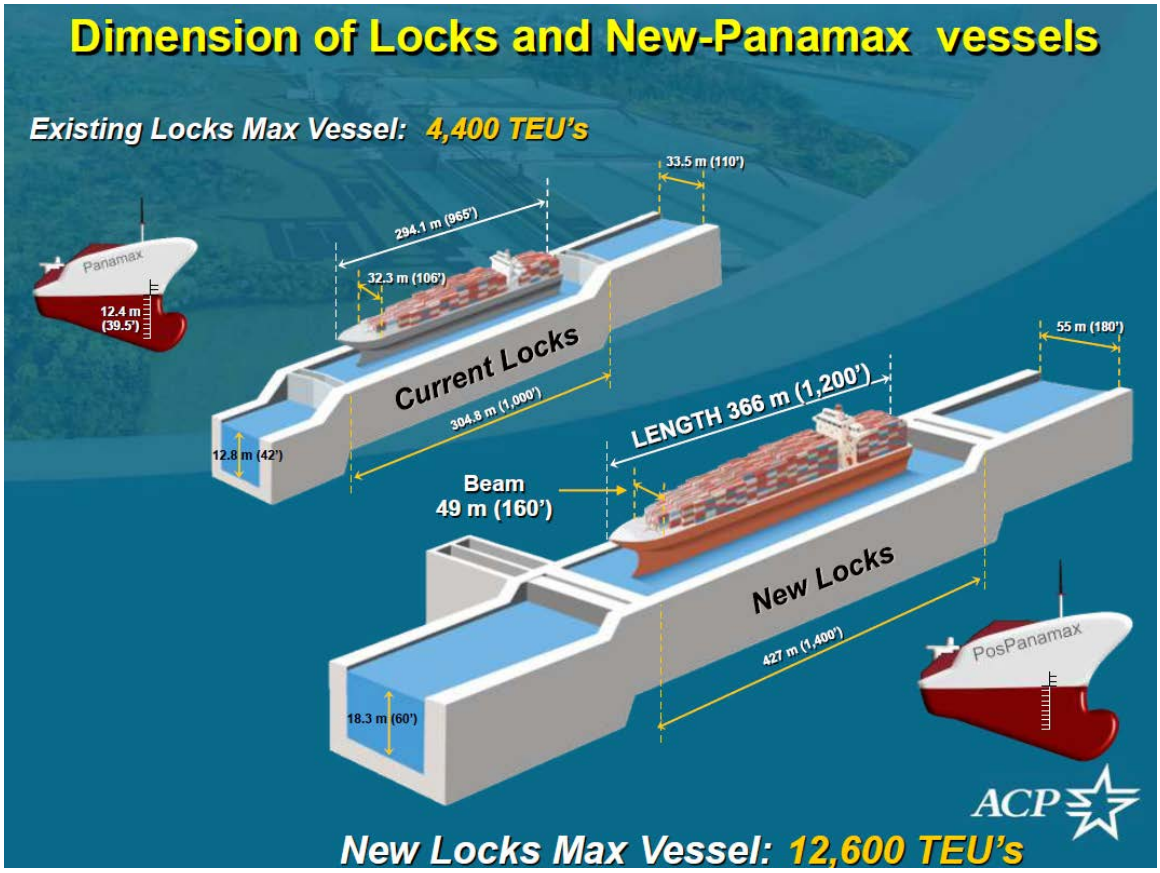
However, labor disruptions in 2004-2005 and ongoing congestion at the ports of Los Angeles and Long Beach prompted shippers and consignees to search for alternatives for their international trade flows. Shippers adopted strategies to diversify the risk of importing the majority of freight through the San Pedro Bay Ports. One effect of this strategy is a greatly increased demand for use of the Panama Canal for Asian imports.

### *Panama Canal expansion*

In October 2006, the citizens of Panama overwhelmingly approved a seven year, $5.2 billion plan to expand the Panama Canal. The historic canal had not kept pace with continuing increases in the size of marine vessels. Each day, 40 vessels can move in each direction through the canal and locks (14,000 vessels per year).

Container ships that can move through the Panama Canal are classified as “Panamax” vessels. Their size limitations are 965 feet in length, 106 feet in width, and a draft limitation of 40 feet. As shown in Map 5-2, Panamax container ships carry approximately 4,500 to 5,000 twenty-foot-equivalent units, while “Post Panamax” ships can move up to 12,600 twenty-foot-equivalent units.

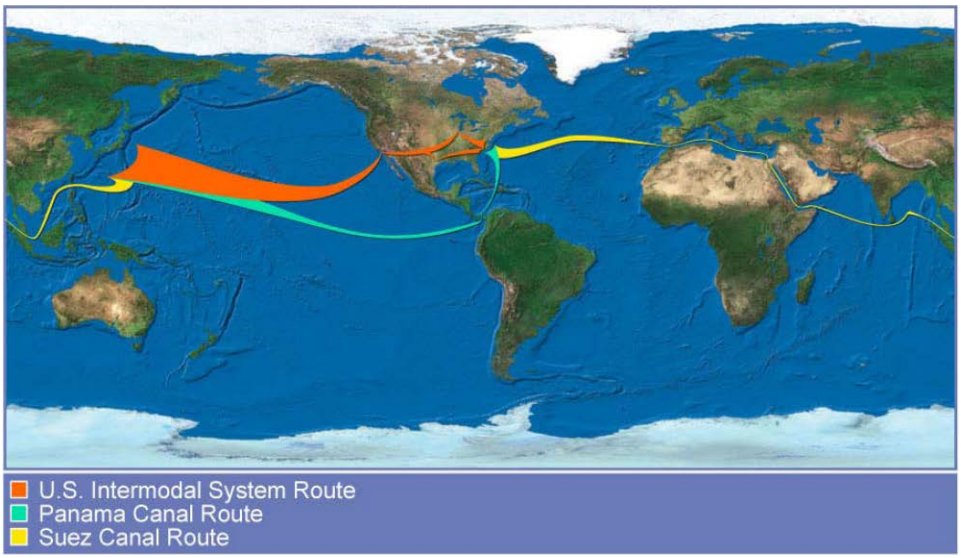
**Map 5-2: A Post-Panamax Vessel Compared to a Panamax Vessel**




Source: Panama Canal Authority

The increase in the length, width and depth of the locks will enable today's largest container ships to use the canal, more than doubling throughput capacity. While the number of transits will not increase, the doubling of permitted vessel size will further improve the competitive position of U.S. Gulf and East Coast ports in handling Asian trade (see Map 5-3). An expanded Panama Canal, therefore, might result in slower growth or a decrease in intermodal rail traffic through Wisconsin. The expansion project should be completed by late 2014 or 2015.

**Map 5-3: Competitive shipping routes between Asia and the U.S. East Coast markets**




Source: Panama Canal Authority

## *Port of Prince Rupert*

In 2007, Canadian National Railway (CN) introduced a new and somewhat unique intermodal service via the Port of Prince Rupert on the coast of British Columbia. As shown in Map 5-4, the port's location allows cargo ships from northern Asian locations to unload two days earlier than the next closest location on the Pacific Coast, speeding vessel cycle times and productivity. Containers are then moved via expedited double-stack trains over the railway's network to Harvey, Illinois (just south of Chicago) and Memphis, Tennessee. The inbound service was designed with an emphasis on speed to expedite consumer freight from China to Prince Rupert in 11 days on COSCO and Hanjin container ships. Boxes are moved from Prince Rupert to Chicago in just four days, for a total of 15 days transit from China to the heart of America's consuming market. Like the expanded Panama Canal, the new CN intermodal service via Prince Rupert provides shippers with another means of transporting goods between Asia and the U.S. Unlike the potential impact of the expanded Panama Canal, CN's new intermodal route via Prince Rupert could result in an increase in rail traffic through Wisconsin. Wisconsin shippers may be able to take advantage of the new, faster CN service by trucking goods to and from the CN intermodal facility in Chicago.

The service continues to grow and appears to have a competitive advantage in the Pacific trade lane. Volumes increased from 180,000 twenty-foot-equivalent units in 2008 to 260,000 twenty-foot-equivalent units in 2009, despite the recession. The port's start-up phase was designed to handle 500,000 twenty-foot-equivalent units annually, with a Phase II expansion capacity of 2,000,000 twenty-foot-equivalent units per year. At the 2,000,000 twenty-foot-equivalent units level, as many as 20 container trains a day could be traversing CN's main route across Wisconsin. This would represent an approximate doubling of traffic.

**Map 5-4: Comparison of shipping routes between Shanghai and North American ports**


Source: Canadian National

Whereas all inbound international containers are loaded with freight, only about 30 percent of the containers returning to Prince Rupert have returning loads. CN has aggressively sought backhaul traffic for this lane, including paper, forest products, dry grains, chemicals, processed food and aluminum. This unused westbound capacity could provide a source of competitive advantage for Wisconsin's export shippers, provided a suitable facility and service model is developed with CN and the involved steamship lines.

The proximity of large intermodal terminals in Chicago and the Twin Cities, however, means that the majority of Wisconsin's import/export rail intermodal traffic will continue to move over the state's highway system before transferring to the rail mode in adjoining states.

The recent economic recession resulted in decreased freight rail volumes. As the country's economy begins to grow again, it is reasonable to assume that freight volumes will also recover. However, railroads and shippers debate the extent of the recovery. Some argue that the impact of the Panama Canal (discussed in this chapter), the effect of the reevaluation of Chinese currency (making Chinese goods more expensive), and even a shift in manufacturing to South Asia from China (and thus a routing to the U.S. via the Suez Canal and East Coast ports), may result in freight rail volumes not returning to their pre-recession highs. Even with an improved Panama Canal, Wisconsin may see continued growth in transcontinental traffic to and from West Coast ports, simply because this will be the preferred routing

for higher value traffic demanding faster transit times. Most of this traffic will go to and from Chicago, which has the potential to remain a bottleneck because of its role in U.S. rail transportation.

As noted in *Connections 2030*, WisDOT will collect and analyze data and work to understand the freight markets in Wisconsin, and freight's regional, national and international role in the global economy. In addition, WisDOT will:

- Continue to monitor changes in international trade flows and work with communities that are impacted by dramatic changes in train frequencies
- Encourage dialogue with major rail carriers and Wisconsin business interests to leverage container backhaul capacity for improved Wisconsin export access to foreign markets

### *Powder River Basin coal traffic*

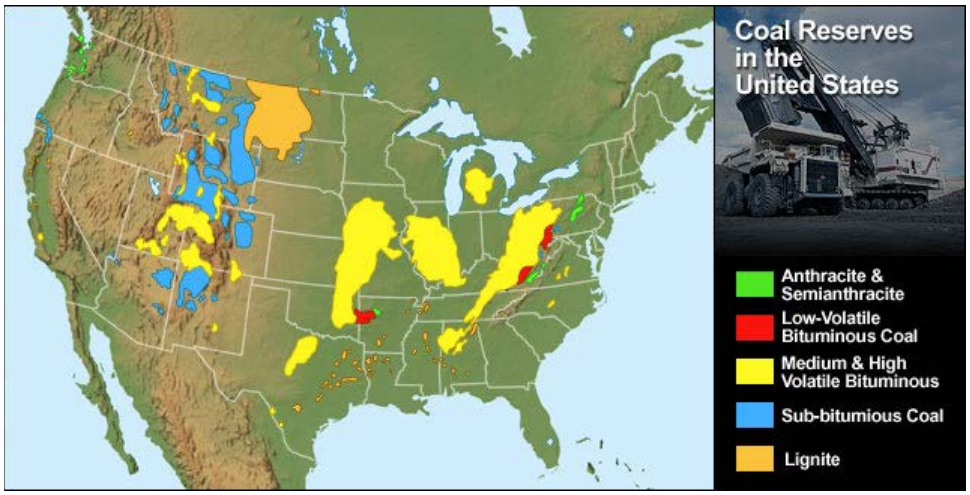
The United States, along with the rest of the developed world, is just beginning to grapple with the changes in energy use and production that will support a reduction in greenhouse gas emissions. There has been continual growth in traffic from the Powder River Basin coal fields in Wyoming and Montana (see Map 5-5) over the past 30 years. The basin now supplies around 40 percent of the nation's one billion tons-per-year of total coal use. It is responsible for the electricity that lights one-fifth of the nation's homes and businesses.

**Powder River Basin**
Wyoming's Powder River Basin is the nation's largest source of coal for electric power generation. It provides the coal that is used to produce electricity for one of every five homes and businesses in the U.S. In 2009, the basin produced approximately 420 million tons of coal.

Source: U.S. Department of the Interior

Wisconsin's experience with Powder River Basin coal mirrors that of much of the country. Western coal now is the largest inbound rail commodity for the state, encompassing both trans-loaded volumes moved over the Port of Superior to power plants bordering the Great Lakes and tonnage delivered to Wisconsin's power utilities (see Figure 5.1). The impact from future steps to further limit greenhouse gas emissions is unclear. It will depend heavily on the potential for new coal power plant technologies such as carbon dioxide sequestration and coal gasification and on the development of new energy sources such as solar, wind and geothermal.

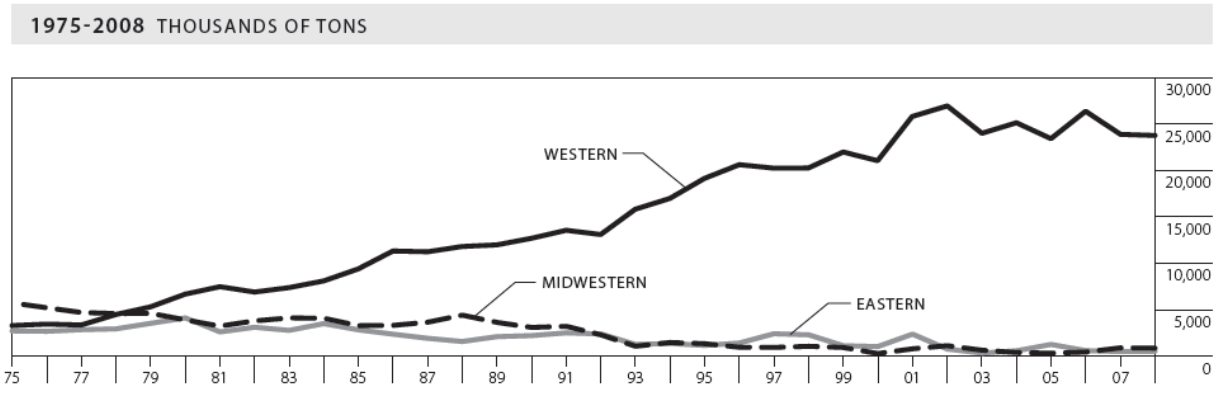
**Map 5-5: United States Coal Reserves**




**Source: American Coal Foundation**

Loss of coal traffic is seen as having a dramatic financial impact on the large western railroads, particularly Union Pacific Railroad and Burlington Northern Santa Fe Railway. Conversely, the main line capacity freed up by such a change would position these railroads to more aggressively pursue domestic intermodal markets that are seen today as too short haul or marginal in profitability. Railways' relative fuel efficiency is seen as a powerful tool in capturing truck volumes as energy prices continue to rise for the long term.

**Figure 5-1: Coal deliveries to Wisconsin power plants, by region of origin**




Source: Wisconsin Energy Statistics 2009

As part of *Wisconsin Rail Plan 2030*, WisDOT will continue to monitor coal consumption trends and any potential changes to coal consumption forecasts than may result from environmental legislation.

## *Changes in railroad regulation*

U.S. railroads operate in a legal and regulatory environment that is quite distinct from that for most other business enterprises. As the first "modern" geographically far-flung industrial enterprises in the late 1800s, railroads have long been the target of public scrutiny. Labor relations in the railroad industry

are governed under the Railway Labor Act, which triggers federal review and possible public intervention whenever major labor disputes threaten disruptions to either freight or passenger service.

Railways enjoy powers of eminent domain to acquire rights of way and extend their operations, an exceptional grant of power to privately-held organizations. Facilities needed by the carriers to support their operations are similarly held by the courts to be largely exempt from local zoning and regulatory controls.

As discussed below, two federal agencies share responsibilities for federal oversight of the nation's rail system: the Federal Railroad Administration (FRA) and the Surface Transportation Board (STB).

### *Federal government and Wisconsin rail*

The FRA is the principal agency in the U.S. Department of Transportation that is concerned with railroads. Until recently, it received modest funding for its activities. The FRA includes three principal offices:

- Office of Policy and Communications: Performs in-house analyses and research concerning the railroad industry as requested by the FRA administrator and other FRA and U.S. DOT officials. It does not make grants and only occasionally awards contracts to analyze issues of interest.
- Office of Railroad Development: Its responsibilities include:
    - Act as the conduit for Amtrak's annual appropriations and overseeing Amtrak's activities as directed by Congress and applicable legislation
    - Manage grant and loan programs, such as the Railroad Rehabilitation and Investment Financing and the Rail Line Relocation grant programs (aimed at removing busy rail lines from city centers)
    - Manage responsibilities relating to National Environmental Policy Act compliance in railroad construction projects
    - Manage research and development programs, the bulk of which are concerned with safety research to support Office of Railroad Safety activities
    - Administer funds and grant programs established by the Passenger Rail Investment and Improvement Act (PRIIA)

- Office of Railroad Safety: Responsible for developing and enforcing railroad safety statutes, regulations and standards; maintaining comprehensive railroad accident reporting systems and databases; and conducting safety-related analyses and investigations. Also responsible for Congressionally-mandated upgrades in railroad safety systems, including Positive Train Control.

### *Surface Transportation Board*

Economic and structural oversight of the railroad industry is carried out through the Surface Transportation Board (STB), an Executive Branch agency that was created in the Interstate Commerce Commission Termination Act of 1995. The STB took over the vestigial railroad oversight functions that were not abolished with the disbanding of the Interstate Commerce Commission. As discussed earlier in

this chapter, the Staggers Rail Act of 1980 relieved freight carriers from most, though not all, federal regulation of rail rates and services and simplified the regulatory process associated with railroad mergers, line sales and abandonments. Pricing and service decisions of the carriers had been heavily regulated until this time; remaining economic regulation of the carriers was vested in the STB. Until recently, freight rate appeals to the STB were costly, frustrating and seldom settled in favor of shipper applicants.

A shift in philosophy through composition of the board hints at a more sympathetic forum for aggrieved rail customers in the months and years to come. Filing fees have been reduced and processes to handle smaller claims have been expedited, making the board's review and oversight functions accessible to more of the freight shipping community. To ensure that the state responds to national policy and is well positioned to leverage future funding decisions, WisDOT will:

- Review federal funding guidelines for rail improvements to leverage potential funding opportunities for Wisconsin's freight handling and intercity passenger rail systems
- Ensure that PRIIA specified qualification standards are maintained for funding of rail projects and programs; these include FRA approved and updated statewide plans, WisDOT rail organization and environmental review of specific project applications
- Monitor changes in economic regulation of the rail industry and work with the state's short-line rail partners, as appropriate, to broaden shipper access to freight rail services in the state

### *WisDOT's future role in freight rail*

As shown throughout this chapter, the needs of Wisconsin's freight rail users and the impact of freight rail on Wisconsin's communities will continue to evolve in the years ahead. *Connections 2030* identified several policies and actions to help shape WisDOT's future role, including to:

- Establish a freight focus in WisDOT to better understand freight needs across the state and to integrate freight transportation polices into department planning and investment decision-making processes
- Assume the role of facilitator and advocate for freight between public and private interests
- Collect and analyze data to support freight planning
- Conduct an all-mode freight study
- Work with railroads to ensure that appropriate rail service is provided to all shippers statewide
- Preserve corridors for future rail use
- Acquire lines into public ownership to preserve essential railroad service
- Fund track and bridge upgrades for publicly-owned rail corridors
- Continue to preserve corridors for future transportation use
- Provide loan assistance to Wisconsin businesses and communities

These policies and actions are reaffirmed in *Wisconsin Rail Plan 2030*.

# Chapter 6: Intercity Passenger Rail

## Table of Contents

# Chapter 6: Intercity Passenger Rail

## Introduction

Intercity passenger rail service carries riders on trips that are typically 100 miles or longer; has stations (stops) spaced every 20 miles or more; and commonly operates at top speeds of 79 to 90 miles per hour (speeds of 110 miles per hour and above are generally referred to as high-speed rail). The National Railroad Passenger Corporation, known as Amtrak, is the primary operator of intercity passenger rail services in the United States. Intercity passenger rail typically shares track with freight rail operators and operates on track owned by freight or commuter railroads, which are referred to as "host railroads." There are some exceptions on the East Coast and in Michigan where Amtrak owns the tracks.

**Intercity Passenger Rail, Commuter Rail and Light Rail**

Intercity train routes are generally longer in distance than commuter train routes, which focus on travel between suburban areas and downtown urban work centers at peak commute times. Intercity station stops may be located 20 miles or more part, while commuter rail stops are located on average every five to seven miles. The majority of riders on commuter train routes are typically commuting to and from work. Commuter rail is a type of fixed-guideway transit and is considered regional transit.

Light rail is a type of fixed-guideway transit and is not intercity passenger rail. Light rail operates within metropolitan areas, stops frequently and is part of local or regional transit systems.

The Wisconsin Department of Transportation (WisDOT) envisions an intercity passenger rail system that links the Midwest region's major economic centers. The system would provide connections within Wisconsin, and to cities throughout the Midwest; integrate with other modes; and provide a sustainable transportation alternative to enhance mobility and help grow the state's economy. The Wisconsin Rail Plan 2030 builds off of the vision defined in Connections 2030 and provides additional background information and analysis, along with actions to achieve the vision.

To date, Wisconsin has made multiple investments in intercity passenger rail. These rail investments can yield public benefits, which are summarized in Appendix 6-A.

This chapter includes:

- An overview of existing intercity passenger rail in Wisconsin
- Federal, regional and state roles in planning and implementing intercity passenger rail service
- Wisconsin's role in planning and implementing intercity passenger rail service
- Issues impacting intercity passenger rail
- Intercity passenger rail recommendations

The **Amtrak** system is a network of long distance and corridor trains. Nationally, these trains serve 504 stations in 46 states on more than 21,000 route miles. During the last decade, Amtrak experienced substantial ridership growth due, in part, to improved reliability, increased service frequencies, state support, highway and aviation congestion and higher vehicle fuel costs.

# Overview of Existing Intercity Passenger Rail in Wisconsin

## *History of intercity passenger rail in Wisconsin*

Wisconsin has a long history of involvement in and support for passenger rail service. Before the creation of Amtrak in 1970, private railroads provided an extensive network of passenger rail service across the state, including express service and branch lines.

As automobile use increased, fewer people traveled by train. Through the 1950s and 1960s the amount and quality of passenger rail service declined dramatically in Wisconsin and nationwide. In response to these declines, in 1970 Congress created the National Railroad Passenger Corporation (Amtrak) to operate the nation's intercity passenger rail services. Its purpose was to relieve the freight railroads of the financial losses they incurred from fulfilling the federal requirement to provide passenger rail service. Amtrak was set up as a quasi-private corporation that receives assistance from the federal government. While Amtrak stabilized the passenger rail system, the creation of a national system also resulted in the discontinuance of passenger rail service on many routes, including several in Wisconsin. A detailed chronology of Amtrak service in Wisconsin can be seen in Appendix 6-B.

Throughout the 1970s, Amtrak service in Wisconsin was generally stable. Amtrak provided three to five daily round trips between Chicago and Milwaukee, and one to two daily round trips between Chicago, Milwaukee, Minneapolis/St. Paul and the Pacific Northwest. Starting in 1975, Amtrak also provided service between Minneapolis, Superior and Duluth.

In the early 1980s, federal budget cuts decreased Amtrak service in Wisconsin. By 1985, Wisconsin's Amtrak service was reduced to three daily round trips between Chicago and Milwaukee, and one daily round trip between Chicago, Minneapolis/St. Paul and the Pacific Northwest.

In 1989, Wisconsin and Illinois jointly funded a two-year demonstration project that added two daily round trips to Amtrak's Chicago-Milwaukee service, to evaluate the potential of state-supported intercity passenger rail service. The demonstration proved successful. The two states have jointly funded Amtrak's *Hiawatha Service* ever since. Over the years, Wisconsin and Illinois have made incremental improvements to the service, such as adding frequencies, building new stations and improving track infrastructure. These improvements have resulted in substantial growth in ridership. Over the ten-year period of 2000-2010, Amtrak *Hiawatha Service* ridership has increased by 85.8% percent; an increase from 426,652 riders in 2000 to 792,848 riders in 2010.

Amtrak currently operates two routes in Wisconsin; the *Hiawatha Service,* a corridor service, and the *Empire Builder,* a long-distance train between Chicago and Seattle (Map 6-1). These routes are integrated with Amtrak's nationwide system at Chicago's Union Station. Chicago serves as the hub of Amtrak's nationwide long-distance network and the hub of its Midwest corridor services (short distance and generally higher frequencies).

In addition to intercity passenger rail service, Amtrak also provides connecting intercity bus service, known as Amtrak Thruway (Map 6-1). This bus service extends Amtrak service to parts of the state not served by Amtrak trains. These intercity bus routes serve Amtrak stations where seamless connections can be made to train services. Interlining agreements between private bus companies and Amtrak allow passengers to purchase a single ticket through Amtrak for both the train and bus portions of their trip.

**Map 6-1: Wisconsin Amtrak intercity passenger rail and Thruway bus service.**


## *Existing passenger rail service performance*

WisDOT continually monitors the performance of Amtrak's *Hiawatha Service* and *Empire Builder*. This provides the department with data for evaluating and improving the existing service. Common performance indicators include ridership, on-time performance and financial performance.

On-time performance is the percentage of trains that arrive at their final destination at the scheduled arrival time. Trains are considered on-time if they arrive within an allowed tolerance, which is 15 minutes for corridor trains such as the Amtrak *Hiawatha Service*, and 30 minutes for long-distance trains such as the *Empire Builder*.

**Amtrak *Hiawatha Service* facts**

- Service frequency: Seven daily round-trips (six on Sundays)
- Travel time: 1 hour, 29 minutes
- Ticket cost: $24 one-way (base fare)
- Stops/stations: Chicago Union Station; Glenview, IL; Sturtevant, WI; Milwaukee Airport Rail Station; Milwaukee Intermodal Station

Amtrak continuously tracks causes of delay for its routes. A 2008 United States Department of Transportation (USDOT) Office of the Inspector General report identifies causes of delay consistent to those identified by Amtrak. One category identified by Amtrak for causes of delay is delays caused by host railroads. This includes problems with the dispatching of trains by the host railroad; speed restrictions and slow orders, which can occur if there is track maintenance going on; train interference (delays caused by freight or commuter train movements); problems with track and signals; etc. Another delay category is Amtrak-caused delays, which can include "passenger-related delays" (delays related to assisting passengers such as holding a connecting train for passengers arriving on a late train), equipment breakdowns, etc. In addition to delay causes in these categories, insufficient track capacity

and external factors beyond the host railroads' control are identified by the 2008 U.S. DOT report as causes of delay.

Delays can increase the operating costs of passenger rail (labor and fuel costs) and negatively impact ticket revenues. The Amtrak *Hiawatha Service* enjoys relatively good on-time performance in large part due to the sound dispatching and maintenance practices of the host railroads: Canadian Pacific Railway, Metra and Amtrak.

One measure of financial performance is the cost recovery ratio, commonly referred to as farebox recovery ratio in the context of public transit. The cost recovery ratio is the percentage of operating costs covered by revenues such as ticket and food service revenues.

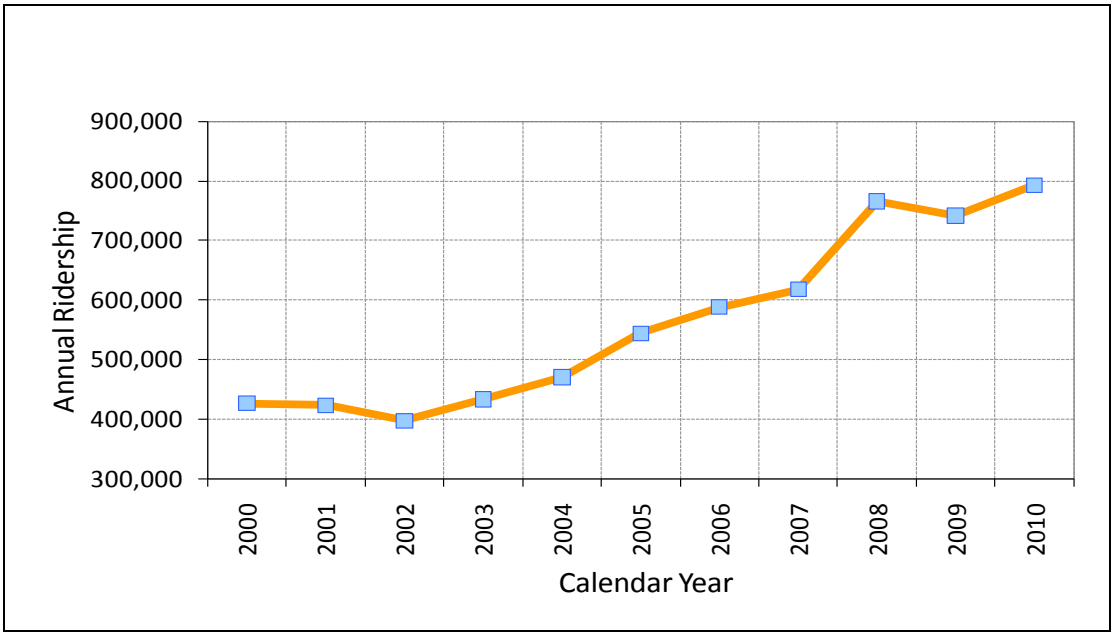
## *Amtrak Hiawatha Service: Chicago-Milwaukee*

WisDOT and the Illinois Department of Transportation provide funding assistance for the *Hiawatha Service* operations. The following sections detail the *Hiawatha Service* ridership, on-time performance and farebox recovery.

**Ridership**

During the ten-year period from 2000 to 2010, *Hiawatha Service* ridership increased 86 percent (Figure 6-1). A slight decrease in ridership from 2008 to 2009 coincides with the economic recession and a decline in ridership across the Amtrak system nationwide. Ridership in 2010 was 792,848, the highest calendar year ridership on record. In recent years, many trains have been filled to capacity, a situation that required the addition of extra cars. Despite the increase in capacity, some trains continue to be standing room only as of 2010.

**Figure 6-1 Amtrak *Hiawatha Service* annual ridership to and from Wisconsin stations, 2000 – 2010**



Additional detail regarding ridership and factors such as increased train frequencies and gas prices can be found in Appendix 6-C.

**On-time performance**

The *Hiawatha Service* has one of the best on-time performance rates of any Amtrak service. However, WisDOT continually seeks to improve the on-time performance of the Amtrak *Hiawatha Service*, with a goal of 95 percent on-time. Between 2001 and 2010, on-time performance ranged from 87 percent to 95 percent. Amtrak defines on-time as arriving within 15 minutes of the scheduled arrival time for corridor services.

In June of 2010, Amtrak identified the primary causes of delay for the *Hiawatha Service* as:

- Train interference: 43.2 percent
  - 66.1 percent occurred on Metra
  - 29.2 percent occurred on CP Rail
  - 4.7 percent occurred on Amtrak-owned property
- Track and signals: 25 percent
  - 84.8 percent occurred on Metra
  - 14.7 percent occurred on CP Rail
  - less than half a percent occurred on Amtrak
- Operational: 9 percent
  - 53.7 percent occurred on Amtrak
  - 38.5 percent occurred on CP Rail
  - 7.8 percent occurred on Metra

***Hiawatha Service* on-board survey results**

In 2011, WisDOT and the Illinois Department of Transportation conducted on-board surveys to collect data that could be used to provide more information when planning service improvements, improve marketing, and support general WisDOT and Illinois planning activities. Over 2,000 surveys were collected. Some of the key findings were:

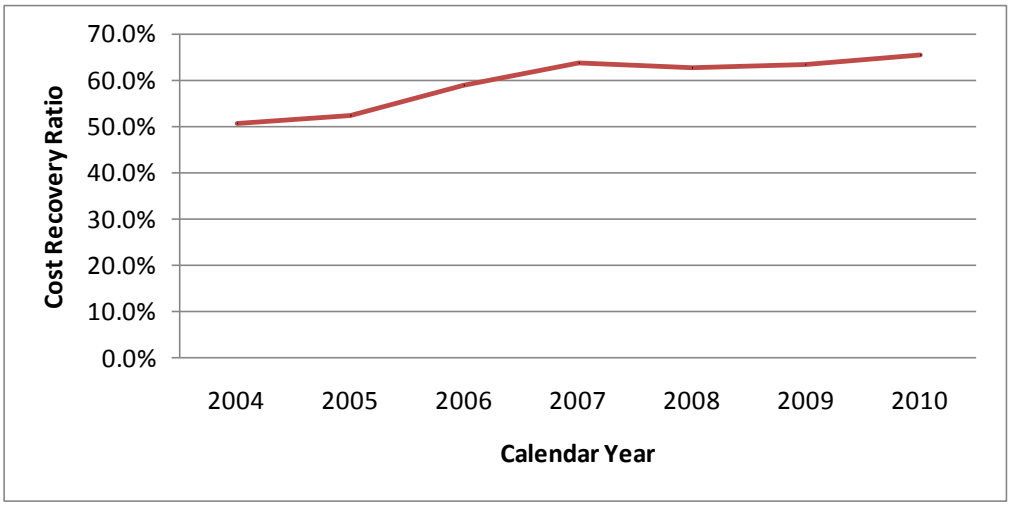
- 81 percent of respondents indicated that avoiding traffic was an important factor in deciding to use the *Hiawatha Service*
- 20 percent of weekday trips were for daily commuting
- 46 percent of weekend trips were for visiting family and friends
- 91 percent of riders had one or more vehicles at home (average vehicles/household = 1.9)
- Nearly 70 percent of respondents indicated they would drive if *Hiawatha Service* were not available
- Most weekday and weekend riders made less than one trip a month

Operational delays included delays related to late arrival of departing train, movement of train for servicing and crew-related delays.

**Cost recovery ratio**

The cost recovery ratio is the percent of operating costs covered by revenues. Increased ridership has resulted in a greater percentage of operating costs being covered by ticket revenues (Figure 6-2). WisDOT and Amtrak continue to work to improve the cost recovery ratio.

**Figure 6-2: Amtrak *Hiawatha Service* cost recovery ratio 2004 - 2010**



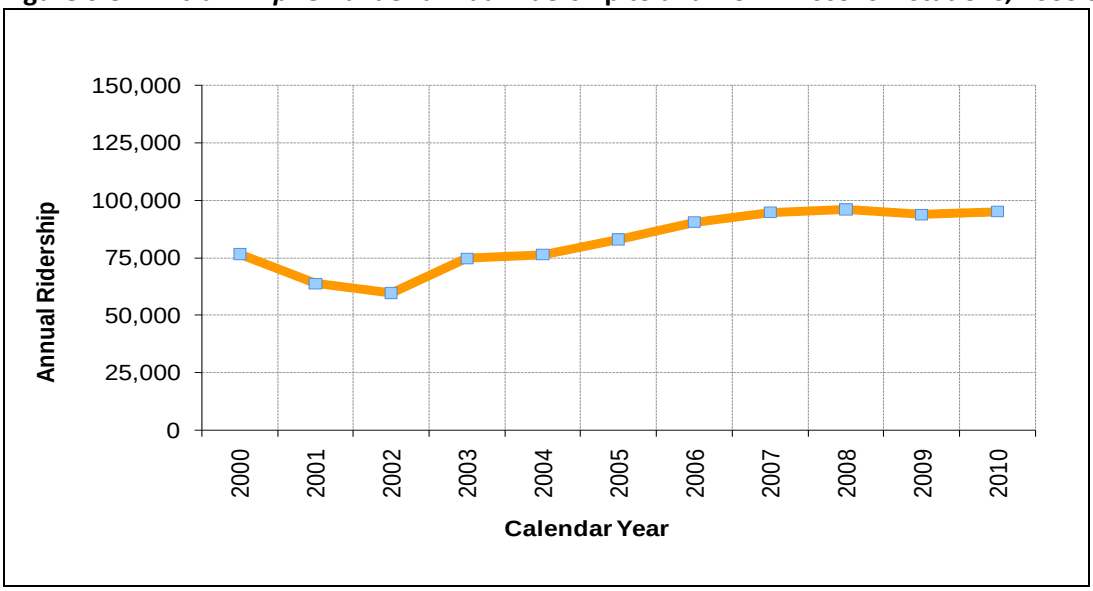

***Empire Builder*: Chicago-Seattle/Portland**

The *Empire Builder* is Amtrak's most popular long-distance train. It provides one daily round-trip between Chicago, Milwaukee, Minneapolis/St. Paul and Seattle/Portland. Amtrak provides the *Empire Builder* service as part of its national network, without any financial support from any state.

**Ridership**

Since 2002, the *Empire Builder* has experienced growing ridership (Figure 6-3). In 2010, *Empire Builder* ridership to and from Wisconsin stations was more than 95,000. This represents a 16 percent increase during the five-year period from 2005 to 2010. In 2010, *Empire Builder* ridership was 1.3 percent above 2009.

**Figure 6-3: Amtrak *Empire Builder* annual ridership to and from Wisconsin stations, 2000 to 2010**



Over 70% of *Empire Builder* passengers boarding or alighting at Wisconsin stations in 2010 had an origin or destination within the Chicago to Minneapolis/St. Paul segment of the *Empire Builder* route. This indicates that even with the train's low frequency (single round-trip per day) and longer travel time (compared to flying or driving in good weather and traffic conditions); Wisconsin travelers are using the *Empire Builder* more for regional transportation needs than long-distance travel needs.

The *Empire Builder* is a valued component of Wisconsin's transportation system, providing regional transportation in the Chicago-Minneapolis/St. Paul corridor. The train faces challenges with on-time performance on its eastbound runs due to the distance and number of host railroads each train must traverse between Seattle/Portland and Minneapolis/St. Paul. The *Empire Builder* is somewhat limited in its ability to meet the demand for convenient regional corridor service between Chicago, Milwaukee and Minneapolis/St. Paul due to its limited schedule and longer travel times.

**On-time performance**

For long-distance trains such as the *Empire Builder*, on-time is defined as arriving within 30 minutes of scheduled arrival time. The *Empire Builder* has one of the better on-time performance rates (percent of trains arriving on-time) of Amtrak's long-distance trains. Between May 2009 and May 2010, its on-time performance was 81.3 percent, higher than the 2009 average Amtrak long-distance train on-time performance of 75.5 percent.[1] Generally, long-distance trains have lower on-time performance rates than most short-distance corridor routes such as the *Hiawatha Service.* The distance and multiple host railroads that the long-distance trains must traverse create more potential for delays.

## *Amtrak Thruway bus routes*

Amtrak Thruway bus services are scheduled intercity bus services that connect Amtrak stations with other communities across the state that are not directly served by passenger trains. Amtrak designates these routes as Thruway routes once interlining agreements are established. Interlining agreements:

- Allow riders to connect from bus to rail or vice versa to complete a trip
- Provide through-ticketing (one ticket for an entire trip that involves both the rail and the bus connection to the final destination) when purchased through Amtrak
- Allow coordinated scheduling between bus and train arrivals and departures
- Ensure that the bus schedule is included on Amtrak's system schedules
- Provide on-line ticketing and trip planners

[1] Amtrak.com. Routes - Historical On-time Performance.

In 2010, Amtrak had four Thruway bus routes in Wisconsin (Map 6-1). These routes provide connections with the *Hiawatha Service* and the *Empire Builder* as well as all Amtrak trains serving Chicago. Residents in northwestern Wisconsin have access to an Amtrak Thruway service between Duluth and Minneapolis/St. Paul. While no portion of the route is operated in Wisconsin, the state's residents can access the service in Duluth.

Amtrak's Thruway service represents an intermodal connection that supports the success of both the bus route and the rail service. These intermodal connections are critical in extending the mobility benefits of intercity passenger rail to Wisconsin residents who do not live near Amtrak stations.

### *Wisconsin passenger rail stations*

Eight passenger rail stations are located in Wisconsin (Map 6-1). These stations vary in the type of facilities and services provided, and in their physical condition. Three of these are new station facilities: Milwaukee Intermodal Station, Milwaukee Airport Rail Station and the Sturtevant station. The Milwaukee Airport Rail Station is one of only four rail stations at airports in the nation.

As part of the development of the *Wisconsin Rail Plan 2030*, WisDOT completed a station inventory that documents station ridership, available intermodal connections, parking and physical condition of the station, and accessibility (Appendix 6-D). The station inventory highlights needs and challenges at the current passenger rail stations, and will help guide station improvements and investment in the future. Table 6-1 presents a summary of the findings of the inventory.

**Table 6-1: Passenger rail station summary profile**

| Station | 2010 station on/offs | Ticketing: Agent and/or Quik-Trak machine | Parking (number of spaces) | Intercity Bus in community** | Public Transit in Community** | Accessible (ADA compliance )*** | Owner |
|---|---|---|---|---|---|---|---|
| Chicago, IL | 803,512* | Agent and Quick-Trak | 1,000 | Yes | Bus/ rail | Yes | Amtrak |
| Glenview, IL | 66,700* | Agent and Quick-Trak | Shared parking with Metra | No | Bus/ rail | Yes | Metra |
| Sturtevant, WI | 70,601 | Quik-Trak | 169 | No | Bus | Yes | Village of Sturtevant |
| Milwaukee, WI – Airport | 157,152 | Quik-Trak | 278 | Yes | Bus | Yes | Wisconsin/ CP Rail / Milwaukee County |
| Milwaukee, WI | 596,906* | Agent and Quick-Trak | 281 | Yes | Bus | No | Wisconsin/ CP Rail |
| Columbus, WI | 17,659 | Agent | 30 | Yes | No | No | CP Rail |
| Portage, WI | 7,322 | None | Shared parking with CP | Yes | Shared-Ride Taxi | No | CP Rail |
| Wisconsin Dells, WI | 13,981 | None | 25 | Yes | No. Private taxi available | No | Wisconsin Dells / CP Rail |
| Tomah, WI | 11,035 | None | 15 | Yes | Shared-Ride Taxi | No | CP Rail |
| La Crosse, WI | 30,395 | Agent | 100 | Yes | Bus | No | La Crosse Depot LLC / CP Rail |
| Winona, MN | 24,159 | Agent | 20 | Yes | Bus | No | CP Rail |
| Red Wing, MN | 10,813 | None | 25 | Yes | Bus | No | Red Wing Property Conservation Fund / CP Rail |
| Minneapolis / St. Paul, MN (Midway Station) | 123,371 | Agent and Quik-Trak | 200 | Yes | Bus/ rail | No | Amtrak |

* Total *Hiawatha Service* and *Empire Builder* ridership

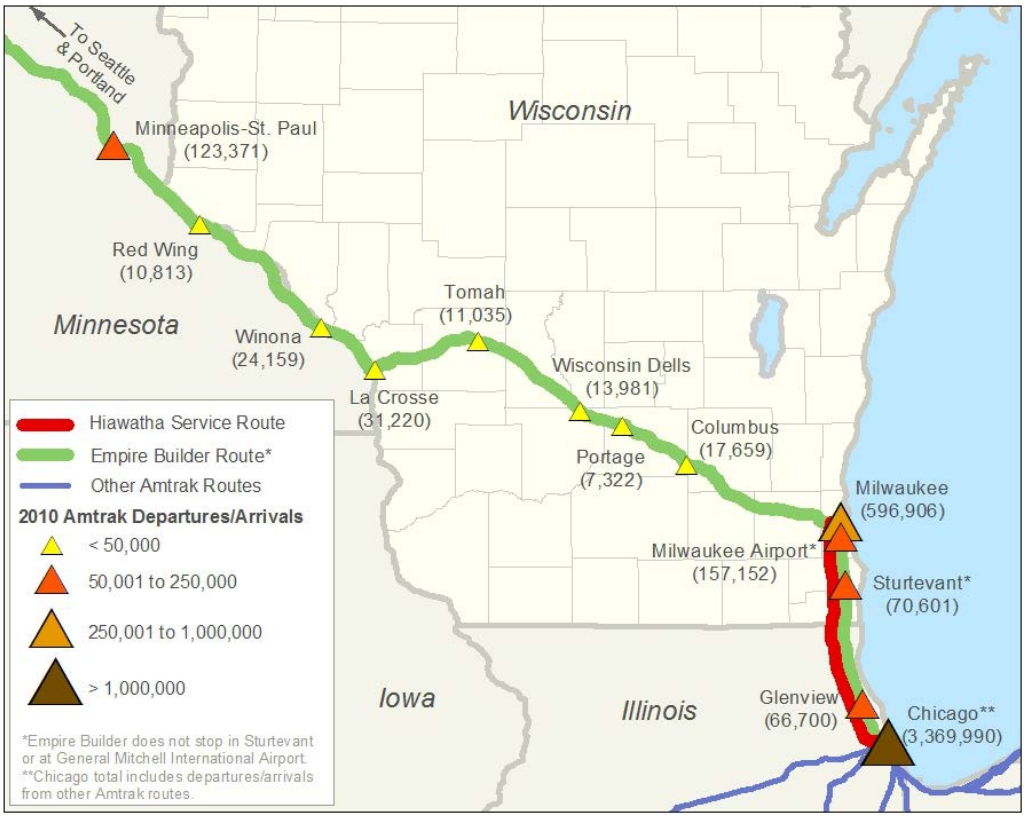
**Mode exists in the community, but does not necessarily serve the station directly (see Appendix 6-D for more detail)

*** ADA-compliant platforms (meets standards for construction of new platforms) and building as of 2010

Station ridership can also be seen in Map 6-2. The Milwaukee Intermodal Station has high ridership relative to other stations in the Amtrak system. After Chicago, Milwaukee is the second-busiest station in the Midwest, and the nineteenth-busiest station nationwide.[2]

[2] www.Amtrak.com. Inside Amtrak. Amtrak Information and Facts. National Fact Sheet.

**Map 6-2: Wisconsin passenger rail station ridership and passenger rail**




## Roles in Planning and Implementation of Intercity Passenger Rail Service

### *Federal role*

For many years, the federal government's role related to intercity passenger rail was primarily safety and oversight, and funding of Amtrak. In its safety and oversight role, the Federal Railroad Administration (FRA) issues and enforces regulations regarding infrastructure and equipment, and oversees compliance and conducts inspections. This includes setting passenger rail equipment safety standards. The FRA implements U.S. DOT environmental policies and enforces environmental laws and regulations related to railroads. The FRA also enforces civil rights and accessibility regulations, including ADA compliance (coach cars and stations). This work also includes oversight of implementation of federal regulation and policy by intercity passenger rail funding grantees.

Beginning in 2008 and carrying forward to 2010, the federal government placed a high priority on the improvement of the country's intercity rail passenger service network as an important future mode of passenger transportation and a source of economic stimulus. This high priority has resulted in several actions:

- Increased funding for states through the passage of the Passenger Rail Investment and Improvement Act and the American Recovery and Reinvestment Act
- Development of a vision for passenger rail and creation of a national rail plan
- Development of a process for implementing intercity passenger rail corridors with federal funds

**Increased funding for states**

Since the creation of Amtrak in 1970, the federal government has provided funding to support Amtrak's passenger rail service. The FRA administers grants to Amtrak for both operations and capital improvements.

Two pieces of legislation – the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) and the American Recovery and Reinvestment Act of 2009 (ARRA) – demonstrated the federal government's support of intercity passenger rail. PRIIA authorized three new federal intercity passenger rail capital programs: Intercity Passenger Rail Service Corridor Capital Assistance, High Speed Rail Corridor Development, and Congestion Relief. ARRA provided $8 billion for intercity passenger rail funding through the PRIIA-authorized programs. For more information on federal funding sources for intercity passenger rail, refer to Chapter 10: Funding Wisconsin's Rail System Investments.

**Developing a vision for passenger rail and creating a national rail plan**

As part of implementing the Passenger Rail Investment and Improvement Act and the American Recovery and Reinvestment Act, the FRA developed the *Vision for High-Speed Rail in America: High-Speed Rail Strategic Plan*. The plan proposed "an efficient, high-speed passenger rail network of 100- to 600-mile intercity corridors that connect communities across America" (Map 6-3).

**Map 6-3: Federal Railroad Administration's vision for high-speed rail in America**


To help achieve the vision, the FRA is conducting national rail planning activities. This includes:

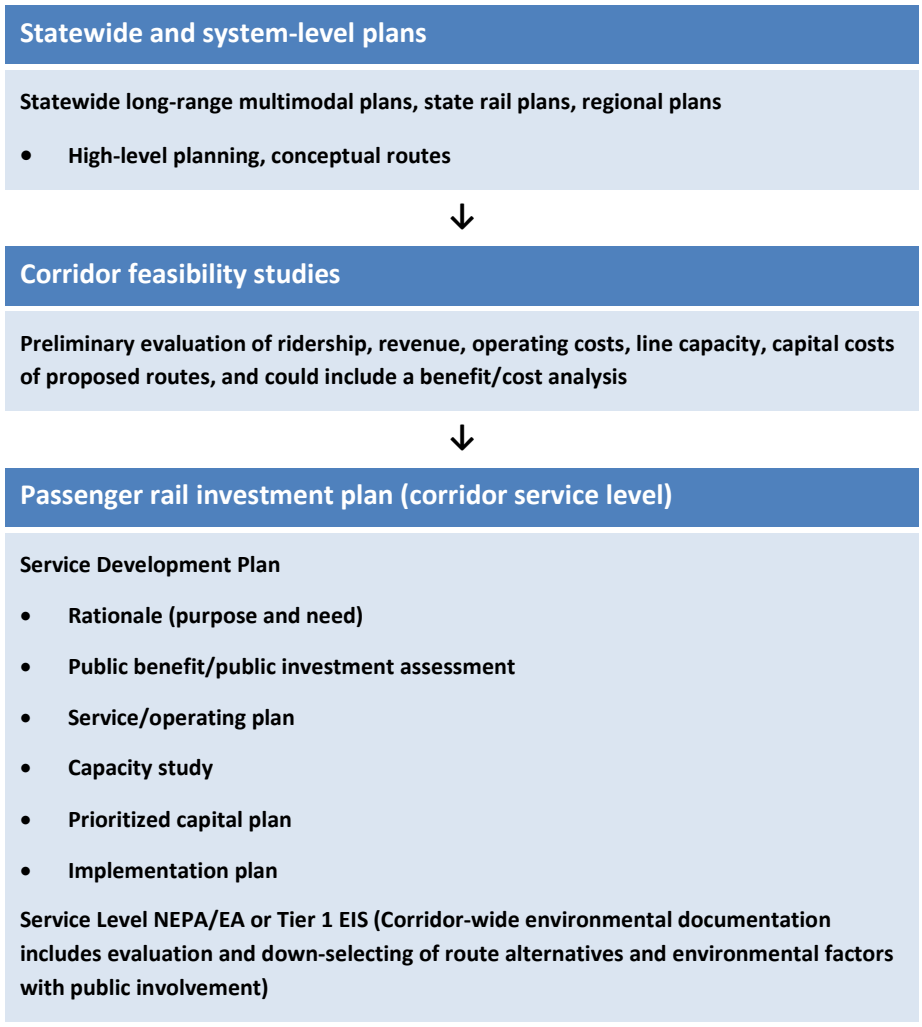
- Addressing freight, passenger and commuter rail issues
- Incorporating all state rail plans
- Guiding intercity passenger rail investment decisions

**Developing a process for implementing intercity passenger rail corridors with federal funding**

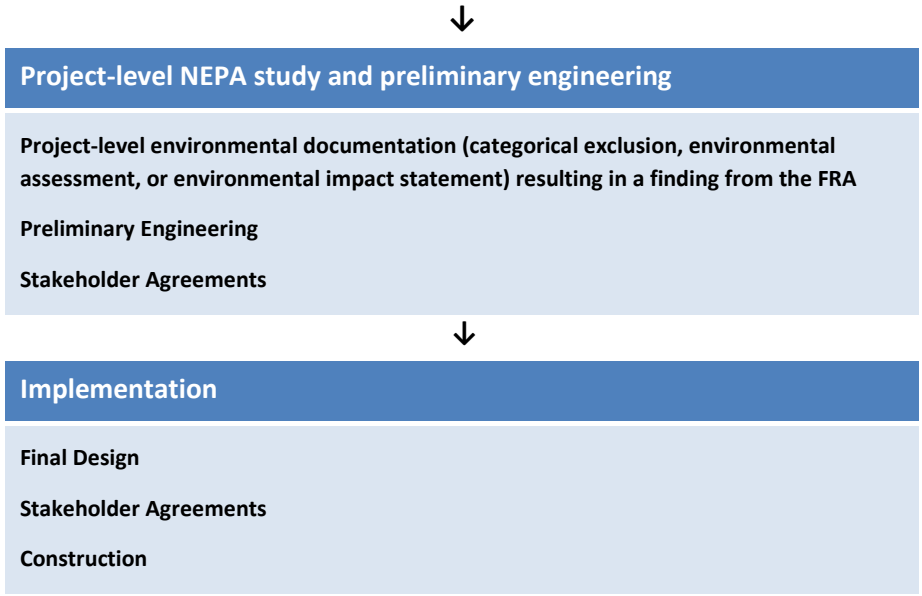
Implementing new passenger rail corridors involves a detailed multi-step process. The federal government is developing and refining this process for states for the implementation of intercity passenger rail service using PRIIA-authorized federal funding. Figure 6-4 outlines a typical planning process for new passenger rail service, from conceptualization to implementation. As the process is still

evolving and being further defined by the FRA, Figure 6-4 is intended to illustrate what the process is anticipated to include as of this writing. Some of the steps may be combined.

**Figure 6-4: Anticipated planning and implementation process for intercity passenger rail projects receiving federal funds[3]**




[3] As of this writing, the planning process is still evolving and being further refined by FRA. The process illustrated is based on the latest FRA guidance and WisDOT experience in intercity passenger rail planning and implementation.




The implementation process is influenced by the fact that many of the proposed new intercity passenger rail routes nationwide will operate on freight corridors. Implementing new routes on freight corridors requires negotiation with Amtrak and the host freight railroads throughout the process. In addition, adding passenger trains to a freight corridor, even if the track is in excellent condition, could require capital investment to increase track capacity. A capacity analysis and negotiations with the host railroad determines what infrastructure improvements are needed.

## *Regional role*

Wisconsin has participated in three regional groups that facilitate and plan for improved intercity passenger rail service:

- Midwest Regional Rail Initiative
- Midwest High Speed Rail Steering Group
- Midwest Interstate Passenger Rail Coalition

**The Midwest Regional Rail Initiative**

Established in 1996, the Midwest Regional Rail Initiative (MWRRI) is a cooperative, multi-agency, multi-state effort. The states of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin, in partnership with the Federal Railroad Administration and Amtrak, evaluated the potential for improved intercity passenger rail in the Midwest. To date, the effort has resulted in a business plan that defines the way the Midwest passenger rail system should be implemented. Working together, the states proposed a regional intercity passenger rail system – the Midwest Regional Rail System (MWRRS) (Map 6-4). The phased implementation of the Wisconsin routes on this system can be seen in “Intercity Passenger Rail Recommendations” on page 6-34.

**Map 6-4: Proposed Midwest Regional Rail System (from 2004 Midwest Regional Rail Initiative Business Plan Executive Report). Note: Actual route alignments and stations will be determined during environmental and engineering studies which will include coordination with local units of government and public involvement opportunities.**


The system will:

- Improve existing rail corridors to accommodate both expanded passenger rail service and freight trains
- Use Chicago as the network hub
- Use modern train equipment to provide improved reliability, speed and passenger comfort
- Provide frequent and reliable intercity passenger rail service
- Operate at speeds of up to 110 miles per hour
- Include new or remodeled stations
- Use a coordinated intercity/feeder bus service to connect to additional communities
- Link, wherever possible, with air, transit, taxi service, bicycle and pedestrian, and private auto modes

Assuming federal and state funding is secured, the proposed 3,000-mile system is planned to be implemented in phases.

The Midwest Regional Rail Initiative activities include coordinated planning and technical work to advance the Midwest Regional Rail System to implementation. Numerous studies related to the proposed passenger rail system have been completed. Some of these include ridership estimates, capital cost estimates, an economic impact study and benefit-cost analysis, study of equipment issues including interoperable train types that can operate on all corridors, development of preliminary environmental scopes and purpose and need a service development plan. The Midwest Regional Rail Initiative states continue to work together to develop capital and operating cost-sharing strategies.

**Midwest High-Speed Rail Steering Group**

The states of Wisconsin, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri and Ohio, and the mayor of Chicago formed the Midwest High-Speed Rail Steering Group in 2009 to coordinate the region's intercity passenger rail interests. The group's priorities were to:

- Promote regional coordination in individual applications for federal funding opportunities
- Communicate the Midwest strategy to the federal government
- Support economic development within the region

The Midwest Regional Rail Initiative provided technical support to the Midwest High-Speed Rail Steering Group and had a representative on this group.

**Midwest Interstate Passenger Rail Commission**

Established in 2000 by state leaders to advocate for improvements to intercity rail service, the key goals of the Midwest Interstate Passenger Rail Commission are to promote, coordinate and support improvements to Midwest regional passenger rail service. The commission:

- Promotes improvements and long-range planning
- Coordinates interaction between state officials, other local and federal public officials, and the private sector
- Supports current service implementation and planning efforts being conducted through Midwest state departments of transportation

Current commission members include Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio and Wisconsin. Membership requires enactment of the compact language into law by each state.

## *Wisconsin's role in planning and implementing intercity passenger rail*

Since 1989, Wisconsin has played an active role in supporting improvements to intercity passenger rail service. The following sections describe WisDOT's role in planning, coordination, operating assistance, infrastructure improvements, and implementation.

**Planning**

WisDOT plays a key role in planning intercity passenger rail service in the state. WisDOT began studying intercity passenger rail service in the 1970s, and has undertaken a number of related studies and

planning efforts since 1990. Previous studies and reports for intercity passenger rail over the past 20 years have led to the current planned routes and services. Table 6-2 documents the more recent studies.

**Table 6-2: Listing of Wisconsin-related passenger rail studies**

| Year | Studies |
|---|---|
| 1991 | • Tri-State High Speed Rail Study |
| 1992 | • The Amtrak Service Demonstration Project Year Two Report |
| 1993 | • Report to the Governor Concerning Restoration of Rail Passenger Service to Green Bay and Madison |
| 1994 | • Translinks 21 (Wisconsin's first statewide 20-year multimodal plan) |
| 1997 | • Chicago-Milwaukee Rail Corridor Study |
| 1998 | • Midwest Regional Rail Initiative Phase 1 and 2 Studies |
| 2000 | • Tri-State II Study |
| 2001 | • The Governor's Blue Ribbon Task Force on Passenger Rail Service<br>• Chicago-Milwaukee-Green Bay Corridor study and Milwaukee-Green Bay Passenger Rail Alternatives Analysis<br>• Midwest Regional Rail Initiative Phase 3 Study |
| 2002 | • Eau Claire & Janesville Corridors Feasibility Study and Intercity Rail Modal Diversion Study<br>• Madison-Milwaukee Passenger Rail Corridor Study: Environmental Assessment/Preliminary Engineering Study |
| 2004 | • Midwest Regional Rail Initiative Phases 4 and 5 Study (updated Midwest Regional Rail Initiative Business Plan)<br>• Wisconsin Rail Issues and Opportunities Report |
| 2008 | • Midwest Regional Rail Initiative Phase 6 Study (Economic Impact Analysis, Preliminary Environmental Impact Statement Scope of Work and Cost Estimate) |
| 2009 | • *Connections 2030* (Wisconsin's current statewide 20-year multimodal plan) |
| 2010 | • *Minnesota Comprehensive Statewide Freight and Passenger Rail Plan* (recommends several passenger rail corridors that include Wisconsin (Milwaukee-Minneapolis/St. Paul, Duluth/Superior-Minneapolis/St. Paul, and Eau Claire-Minneapolis/St. Paul) |
| 2010 | • Midwest Regional Rail Initiative Phase 7 Study (Updated Capital Costs, data gathering for future route alternatives analysis as part of a Passenger Rail Investment Plan, website development, analysis of equipment options, PTC issues, etc.)<br>• Madison-Milwaukee Environmental Assessment Re-evaluation and Final Engineering Studies |

These studies included the following analyses:

- Performance assessments of existing Amtrak service
- Travel market and feasibility studies (including ridership and revenue forecasts, operating cost estimates and capital cost estimates)
- Route alternative studies
- Examination of technology options and speeds

- Analysis of economic benefits
- Development of detailed business plans (including detailed analysis of proposed operations, ridership forecasts, revenue forecasts, operating costs, capital costs, equipment, implementation plans, financing and governance)
- Environmental studies
- Preliminary engineering studies

*Connections 2030*, Wisconsin's statewide long-range multi-modal plan adopted in 2009, built off many of the studies listed above and developed policy recommendations for intercity passenger rail as part of a multi-modal transportation system for the state.

Table 6-3 identifies the passenger rail projects or studies in progress in Wisconsin and in neighboring states where the corridor passes through Wisconsin.

**Table 6-3: Projects/studies ongoing**

| Project or Study | Lead agency | Estimated completion |
|---|---|---|
| Chicago-Milwaukee improvements - final design and construction of crossovers and a platform extension at Milwaukee Airport Rail Station | Wisconsin DOT | 2013 |
| Chicago-Milwaukee Service Level NEPA study – environmental study to increase train frequencies between Milwaukee and Chicago | Wisconsin DOT | 2014 |
| Chicago-Minneapolis/St. Paul Second Empire Builder Frequency Feasibility Study and Capacity Simulation | Minnesota DOT | 2013 |
| Milwaukee-Twin Cities Service Level NEPA/ Tier 1 environmental study | Minnesota DOT | 2014 |
| Northern Lights Express Preliminary Engineering/NEPA study – study to advance high-speed rail service between Minneapolis/St. Paul and Duluth | Minnesota DOT / Northern Lights Express Alliance | 2014 |

**Coordination**

WisDOT's intercity passenger rail planning activities require the department to coordinate with many different stakeholders. Examples include working with:

- Communities regarding environmental analyses, design and station issues
- Host freight railroads regarding existing passenger service issues, potential improvements and other activities
- Amtrak regarding existing service issues, planning future service improvements and other issues
- Metra regarding track-sharing issues for the *Hiawatha Service*
- Neighboring states for consistent and connected passenger rail service

In addition Wisconsin undertakes joint planning activities with seven other Midwest states and Amtrak as part of the Midwest Regional Rail Initiative, described in the previous section.

**Operating assistance**
Since 1989, WisDOT and the Illinois Department of Transportation have provided funding assistance to cover operating costs of the *Hiawatha Service*. WisDOT also funds a program to market the *Hiawatha Service* in addition to the marketing provided by Amtrak. Neither WisDOT nor the Illinois Department of Transportation operates the service. Instead, the departments contract with Amtrak.

**Station improvements**
Wisconsin played an important role in developing and funding the recently-remodeled Milwaukee Intermodal Station and the Milwaukee Airport Rail Station.

Wisconsin owns the Milwaukee Intermodal Station and has implemented plans to create an improved multimodal facility. The Milwaukee Intermodal Station was built using a public-private partnership with the state of Wisconsin, the city of Milwaukee and a private developer. In 2010, WisDOT began final design of a new train shed and platforms.

The Milwaukee Airport Rail Station was developed by the state in partnership with Milwaukee County. The project took advantage of an opportunity to create an intermodal connection between air and rail on an existing rail service. The Milwaukee Airport Rail Station is one of only four airport rail stations in the nation. While the station building is owned by the state, the platform and track are located on land owned by Canadian Pacific Railway, with the parking lot on land owned by Milwaukee County.

The Milwaukee Intermodal Station and the Milwaukee Airport Rail Station buildings are the only stations owned by the State of Wisconsin.

WisDOT also provided funding assistance for a new station in Sturtevant. Developed by the village of Sturtevant, the station opened in 2006.

**Corridor improvements**
In recent years, WisDOT worked with many stakeholders to make numerous infrastructure improvements to Wisconsin's intercity passenger rail service. These improvements helped improve travel time and reliability of existing service, and allowed for increased frequencies. Wisconsin has also taken actions along future intercity passenger rail corridors to advance new service projects toward implementation. These activities include:

- Adding one daily round-trip on the *Hiawatha Service,* resulting in a total of seven daily round-trips (2003)
- Constructing a new station at Milwaukee's General Mitchell International Airport (2005)
- Providing assistance to allow the village of Sturtevant to construct a new station to replace the community's previous facility (2006)
- Renovating the downtown Milwaukee station (2007)
- Making grade crossing improvements (ongoing)

- Implementing track improvements between Chicago and Milwaukee, including the installation by Canadian Pacific Railway of 17 miles of welded rail between Milwaukee and Kenosha to improve reliability and speed for the *Hiawatha Service* (2009)
- Adding cars to increase capacity of the Chicago-Milwaukee *Hiawatha* Service (2007 and 2009)

**Implementing new passenger rail service**

Wisconsin's role in implementing new passenger rail service includes planning, environmental work, applying for federal capital and planning grants, operating and capital funding and construction of state-owned infrastructure, as well as the purchase of passenger rail equipment. Examples of activities to specifically advance implementation of new service include:

- Purchasing the Watertown-Madison line (2003)
- Completing an Environmental Assessment and receiving Federal Railroad Administration approval for the Milwaukee-Madison intercity passenger rail segment of the Chicago-Milwaukee-Madison rail corridor (2004)
- Making grade crossing improvements (ongoing)
- Studying the capacity of the Chicago-Milwaukee-Madison route (2008-2010)
- Environmental study for the Chicago-Milwaukee corridor (ongoing)
- Improving the Milwaukee Intermodal Station train shed and platforms (ongoing)

Wisconsin successfully applied for several American Recovery and Reinvestment Act grants for intercity passenger rail projects. The grants include $14 million for infrastructure improvements within the Chicago-Milwaukee corridor to improve reliability of existing and future services. The projects include new crossovers on the CP Rail C&M Subdivision at Truesdell and an extension of the platform at the Milwaukee Airport Rail Station. Minnesota was awarded a grant for the Milwaukee-Minneapolis/St. Paul environmental study (Service Level NEPA) to extend service from Milwaukee to Minneapolis/St. Paul.

## Issues Impacting Intercity Passenger Rail

Pressures on Wisconsin's transportation system are expected to intensify over the next 20 years as the state faces growing highway and air traffic congestion, an aging population, rising fuel prices, and an increasing policy focus on climate change as it relates to transportation. This section identifies a series of issues related to intercity passenger rail:

- Increasing public demand for additional intercity passenger rail service
- Limitations of existing intercity passenger rail service in meeting transportation needs
- Safety on shared-use corridors
- Multi-state coordination in planning and implementing intercity passenger rail services
- Intercity passenger rail and commuter rail integration and coordination
- Freight rail accommodations and coordination
- Intercity passenger rail equipment needs
- Concerns regarding intercity passenger rail stations

- Intermodal connectivity
- Operational speed of new intercity passenger rail services
- Governance of regional intercity passenger rail systems
- Preservation of rail lines for potential future rail use

### *Increasing public demand for additional intercity passenger rail service*

Like many states, Wisconsin would benefit from having additional intercity travel options for the travelling public; an issue that has come to the forefront in recent years with a growing elderly population, increasing gas prices, and increasing road and air congestion. During the *Connections 2030* process, WisDOT received many comments from the public and stakeholders, most in support of additional passenger rail service. Of the approximately 1,200 comments received for *Connections 2030*, roughly 800 were passenger rail-related, the majority of which were in support of additional intercity passenger rail service.

The demand for intercity passenger rail is high along the planned Midwest Regional Rail System corridors, but also in other parts of the state. During the public outreach process for *Connections 2030*, interest was expressed for passenger rail service in the following areas or corridors:

- West Central Wisconsin (Eau Claire, Menomonie, Hudson)
- La Crosse area
- Green Bay/Appleton to Twin Cities via Stevens Point, Marshfield and Eau Claire
- Rhinelander and Wausau
- Rock County (Janesville, Beloit)
- Conventional service between Milwaukee and Green Bay
- Additional frequency between Chicago and Minneapolis/St. Paul via La Crosse (*Empire Builder* route)

During the outreach efforts for the *Wisconsin Rail Plan 2030*, the majority of comments continue to support the state's plans for intercity passenger rail and the identification of additional routes statewide, including those listed above. The *Wisconsin Rail Plan 2030* online questionnaire found that 66 percent of the survey respondents supported the current level or higher level of investment in intercity passenger rail.[4] For additional detail on survey results and public input, refer to Chapter 2.

As mentioned previously, implementing new intercity passenger rail service is a multi-step and detailed process. Figure 6-4 on pages 6-14 and 6-15 illustrates a typical planning process for implementing new intercity passenger rail service. Adding intercity passenger rail service on shared-use corridors requires negotiations and agreements with the host freight railroads and Amtrak. Even in situations where the track is in excellent condition, infrastructure investment may be needed to increase track capacity to accommodate the passenger service.

[4] *Wisconsin Rail Plan 2030* Online Questionnaire Summary

In determining whether to pursue future routes, some general high-level criteria may include:

- Population served and ridership potential
- Connections to major cities/destinations
- Connectivity to other existing rail routes
- Intermodal connections facilitated
- Economic impact
- Infrastructure needs to implement corridor
- Considering whether route would use shared-use (freight and passenger) on existing freight tracks
- New greenfield development
- Abandoned rights-of-way, or rails-to-trails conversion
- Track condition and capacity for shared-use corridors on existing freight lines

Additional corridor-specific factors would be considered in a corridor feasibility analysis and the route alternatives analysis.

Finally, there may be some instances where it is more cost effective to serve a community by implementing dedicated feeder bus service to connect to a nearby rail station rather than providing direct intercity passenger rail service. Feeder bus service offers an effective way of expanding passenger rail service to other parts of the state. It has been used successfully in other states such as California.

### *Limitations of existing intercity passenger rail service in meeting transportation needs*

Amtrak ridership in Wisconsin has grown over the last decade. Even with the recent addition of two cars, the *Hiawatha Service* still experiences overcrowding on some trains. Likewise, the *Empire Builder* faces several limitations:

- Does not provide enough frequencies for a robust and viable transportation alternative for a wide range of travelers
- Experiences delays due to the length of the route
- Is not time-competitive with auto travel
- Limits the opportunity for advance reservations between Wisconsin destinations in order to retain space for longer distance travel

Other populous regions of the state such as Green Bay, the Fox Cities, Eau Claire, Madison and West Central Wisconsin do not have direct access to intercity passenger rail service. However, these areas are served by Amtrak Thruway bus service and other intercity bus services.

The Minnesota Department of Transportation is studying a potential route from Milwaukee to Minneapolis/St. Paul. The Green Bay/Fox Cities area is identified for intercity passenger rail service under the Midwest Regional Rail System.

By implementing components of the Midwest Regional Rail System as recommended in *Connections 2030* and *Wisconsin Rail Plan 2030*, WisDOT can address this issue. Access to improved intercity passenger rail services will be expanded further with implementation of new and improved intercity bus service and routes that connect to rail stations, as outlined in *Connections 2030*. In addition to these recommendations, WisDOT will increase public awareness of the benefits of using intercity passenger rail service, including opportunities to connect to rail service using intercity bus.

## *Safety on shared-use corridors*

Safety is a key concern and is a priority in all federal and state initiatives. Implementation of new intercity passenger rail services will need to be integrated with existing freight and commuter rail services. To ensure that safety standards are met, three key elements must be addressed:

- Positive Train Control (PTC)
- Rail-highway crossings
- Equipment standards

**Positive Train Control (PTC)**
The Rail Safety Improvement Act of 2008 requires the implementation of Positive Train Control (PTC) systems on every main line carrying intercity or commuter rail in regular service. PTC is a system designed to prevent collisions between trains, over-speed derailments, incursions into track work zones, and movements through misaligned switches. These systems must be installed by December 31, 2015. While the installation of PTC will increase passenger, commuter and freight rail safety, it presents a financial challenge. Some freight railroads and commuter rail agencies have expressed concern about this financial challenge in light of the short implementation timeline.

**Rail-highway crossings**
Rail-highway crossings are another important safety consideration. Emerging intercity passenger rail, with speeds up to 110 miles per hour, will require additional crossing safety treatments, such as median barriers or quad gates, to minimize the possibility of motorists driving around gates. Crossings on federally designated “high-speed rail” corridors will be evaluated for additional warning device needs to increase safety.

**Equipment standards**
Another rail safety consideration is equipment standards. To date, U.S. rail passenger equipment safety standards have been designed to keep passengers and crew safe in a mixed operating environment with conventional freight equipment, which is very heavy. Future high-speed rail systems may use lighter-weight equipment to achieve performance efficiencies through reduced fuel use and faster train speeds. Current standards result in equipment design that is solely tasked with protecting passengers and crew from death or injury. These heavy car designs, while protecting passengers and crew, create additional operating costs through increased fuel use and can reduce acceleration and deceleration speeds, increasing schedule time. Changes in the standards are being considered that will utilize crash energy management techniques to provide the needed safety while allowing lighter-weight equipment. The

safety improvements from the implementation of PTC may provide an opportunity to revise the safety approach for high-speed and conventional commuter and intercity passenger rail operating in shared corridors.

WisDOT will continue to monitor these issues and will work with the federal government, other states and freight and passenger rail operators to implement guidance or regulations as needed.

## *Multi-state coordination in planning and implementing new intercity passenger rail services*

As discussed throughout this chapter, Wisconsin is part of the Midwest Regional Rail Initiative, which is moving forward in implementing improved service on the Midwest Regional Rail System corridors. In addition, some states are moving forward with projects in other corridors not originally identified on the Midwest Regional Rail System. For example, Illinois and Iowa are exploring a new service between Chicago, Rockford and Dubuque (see Figure 6-5). Minnesota is exploring the resumption of service between Duluth and Minneapolis.

**Figure 6-5: Additional passenger rail corridors being studied by neighboring states**

**Minneapolis/St. Paul – Eau Claire - Minnesota Department of Transportation**
The Minnesota *State Rail Plan* identifies this route as conventional intercity passenger rail with speeds up to 79 miles per hour, and anticipates four daily round- trips. Further ridership studies will determine whether the route is considered intercity passenger rail or commuter rail.

**Minneapolis – Duluth (via Superior, WI) – Minnesota Department of Transportation**
Known as the *Northern Lights Express*, this planned route is identified in *Connections 2030* and the Minnesota *State Rail Plan*. The project will result in an intercity passenger rail service with speeds up to 110 miles per hour and four daily round-trips. Proposed stops are Minneapolis, Cambridge and Hinkley, Minnesota, Superior, Wisconsin and Duluth, Minnesota. The project has received federal and Minnesota state funding. An environmental assessment and preliminary engineering study began in 2010. WisDOT is currently a cooperating agency, providing technical assistance.

**Chicago-Rockford-Dubuque – Illinois Department of Transportation**
Illinois is studying and advancing to implementation a route between Chicago and Dubuque that offers one daily round-trip and stops in Chicago, Rockford, Freeport and Galena, Illinois and Dubuque, Iowa. Since the route does not have a stop or use any tracks in Wisconsin, WisDOT will not have direct involvement. However, the proposed stops are in close proximity to Wisconsin communities. For example, Beloit is approximately 19 miles from Rockford, Illinois; Platteville is approximately 22 miles from Dubuque, Iowa and 25 miles from Galena, Illinois; and Monroe is approximately 23 miles from Freeport, Illinois. In 2010, Illinois allocated state funding for construction and equipment. Illinois DOT expects new service to begin in 2015.

Intercity passenger rail corridors in the Midwest use Chicago as the system hub. The additional corridors proposed by the region's states build off this design. Successful implementation on other Midwest corridors and the introduction of new corridors will positively impact ridership of Wisconsin services

given the network efficiencies realized through the Chicago hub and the resulting connections available. This "hub effect" increases access to more destinations in the Midwest for Wisconsin passengers.

As planning and project implementation move forward, continued multi-state planning and coordination is needed to realize the full benefits of the Midwest Regional Rail System. In addition to the *Connections 2030* recommendations for implementing the Wisconsin component of the Midwest Regional Rail System, WisDOT will also:

- Continue planning work with the Midwest Regional Rail Initiative to advance a coordinated Midwest Regional Rail System
- Continue and enhance coordination with Midwest Regional Rail Initiative states
- Continue to assist neighboring states' intercity passenger rail studies and projects

## *Intercity passenger rail and commuter rail integration and coordination*

As new passenger rail service is implemented, it will need to be integrated with existing Amtrak operations, as well as existing and planned commuter rail services. For example, the proposed Chicago-Milwaukee-Minneapolis/St. Paul service will require integration with existing Amtrak *Empire Builder* service and Metra commuter rail service. It may also require integration with new commuter rail services such as those proposed in Madison Area Transportation Planning Board plans and Southeastern Wisconsin Regional Planning Commission plans, and proposed intercity passenger rail and/or commuter services in the Minneapolis/St. Paul region. Coordination with *the Northern Lights Express* (Minneapolis-Duluth) and the existing *Northstar* commuter rail service (Minneapolis-Big Lake) will also be required.

The current *Hiawatha Service* route shares track between Rondout and Union Station in Chicago with Metra's Milwaukee District North line. Expansion of *Hiawatha Service* levels between Milwaukee and Chicago will need to be integrated with Metra's Milwaukee District North line commuter service.

The term "integration" includes working with other operators to address track sharing and schedule issues, as well as ensuring coordinated schedules and common ticketing procedures. One aspect of integration is the provision of sufficient capacity on shared lines. A line capacity assessment will require an operations simulation involving all future traffic, including freight and passenger, to determine whether capacity exists or if additional infrastructure is needed to accommodate the traffic. A simulation could also help resolve capacity issues at terminals (the ability to accommodate the additional trains at the stations). Another aspect of integration is coordinating schedules among the various intercity passenger rail services and commuter rail services (with potentially different operators). This will be important to facilitate easy connections. A coordinated ticketing system between different operators and/or types of services is another component of convenient intermodal connections. This includes ticketing system and schedule coordination with intercity bus and other public transit modes.

## *Freight rail accommodations and coordination*

As with commuter rail, intercity passenger rail systems must be coordinated with freight rail operations. The majority of track on which Wisconsin's proposed intercity passenger rail routes will operate is owned or operated by freight railroads. These include Canadian Pacific Railway, Union Pacific Railroad, Canadian National Railway and Wisconsin and Southern Railroad.

Future freight and passenger growth must be accommodated with minimal delays through appropriate track capacity improvements. Both the state and freight railroads work together to complete capacity analyses and ensure that freight railroad service is not negatively impacted by the expansion of passenger rail service. The state, or other sponsoring agency of the new passenger service, pays a share of the capacity improvements related to increased passenger service. This could include items such as sections of double track, new passenger sidings, and signal system improvements. A freight railroad may be willing to contribute for capacity improvements to the extent that the improvements provide opportunities for increased revenues, or reduced operating costs, or both. In most cases, the necessary improvements to accommodate passenger rail are expected to enhance freight service.

> Amtrak mostly operates over freight railroads using its own equipment. The Rail Passenger Service Act of 1970 gives Amtrak statutory authority to operate intercity passenger service on privately-owned railroad lines in the United States, subject to negotiation for required capacity improvements with line owners. The act states that Amtrak trains should be given priority over freight trains.

Ultimately, implementing new passenger rail services will require agreements between service sponsors, the hosting freight railroads and the passenger rail operator. The provision for new capacity enhancements will be part of the agreements.

The *Wisconsin Rail Plan 2030* identifies several actions WisDOT will take:

- Continue to partner with freight railroads when planning and implementing intercity passenger rail service
- Continue to work with freight railroads on capacity analyses and cost sharing
- Ensure agreements are established between the sponsoring agency for any new passenger service and freight railroads

## *Intercity passenger rail equipment needs*

Amtrak faces an equipment shortage nationwide. As more states add passenger rail service, Amtrak does not have enough functional equipment to accommodate the service growth. In addition, some of Amtrak's fleet is aging, deteriorating and outdated, which decreases the quality of service, causes delays, and increases operating and maintenance costs. To respond to these issues, Amtrak developed a new fleet plan in 2009, and created the Next Generation Equipment Committee to develop

specifications for new equipment. Equipment needs for improved state-supported corridor services are being addressed by the Next Generation Equipment Committee.

Amtrak released the *Amtrak Fleet Plan,* which describes the agency's plan to replace its current fleet over the next 14 years. The plan aims to increase the availability of railcars for existing services, reduce the age of the fleet, and increase capacity on equipment for existing services. To date, funding has not been secured to implement the entire plan. However, Amtrak signed a contract in 2010 to purchase replacement equipment for its long-distance trains (which was one recommendation of the plan) with its own funds.

Section 305 of the Passenger Rail Investment and Improvement Act required Amtrak to create the Next Generation Equipment Committee composed of representatives of Amtrak, FRA, freight railroads, states, equipment manufacturers and other passenger operators to design and develop specifications for a standardized interoperable pool of next generation passenger cars and locomotives for state/regional corridors. The specifications will be used by Amtrak and the states implementing new service. The standardized corridor equipment would share design elements to lower design, acquisition and maintenance costs. A standardized equipment design would also facilitate larger orders with lower unit costs, benefiting both the states and Amtrak.

Wisconsin participates on the Section 305 committee described above and is working with the Midwest Regional Rail Initiative states on equipment recommendations.

New equipment, whether purchased by Amtrak or Wisconsin, provides several benefits, including:

- Reduced maintenance costs through more reliable and easier-to-maintain systems
- Reduced fuel consumption and better performance due to lighter-weight equipment
- Improved reliability from fewer breakdowns
- Increased passenger amenities such as wireless Internet access and improved comfort

As part of the rail plan, WisDOT will continue to work with Amtrak and the Midwest Regional Rail Initiative states to identify equipment needs.

### *Existing intercity passenger rail stations needs*

Train stations are critical components of Wisconsin's intercity passenger rail system. Stations should:

- Act as gateways to both communities and the intercity passenger rail system
- Bring multiple modes of transportation together, allowing passengers to make seamless connections between trains, planes, intercity buses, local transit, bicycle and pedestrian facilities, and taxi service
- Act as a catalyst for community economic development

While the Chicago-Milwaukee corridor served by the *Hiawatha Service* has a number of new, modern stations that meet American with Disabilities Act standards, stations elsewhere in Wisconsin do not provide the same level of facilities. The existing station inventory (Appendix 6-D) revealed that some

stations lack amenities, while others do not meet some American with Disabilities Act standards, and still others may present safety and security concerns. Specifically, many stations were lacking one or more of the following:

- Platforms meeting Americans with Disabilities Act standards (including platform height and width)
- Sufficient platform length to accommodate the length of existing trains[5]
- Public address systems
- Passenger information systems (including electronic information screens with real-time information)
- Comfortable, heated and air-conditioned waiting rooms and modern restrooms
- Up-to-date signage
- Ticketing facilities
- Connections and/or coordination with existing intercity bus service
- Adequate parking facilities, including bicycle parking
- Lighting
- Fencing
- Overhead or underground access to platforms

The station inventory also revealed that for some stations, ownership and management can be complex, with the tracks, platforms, station building and/or parking lot all owned by different entities. In addition, the station may be operated and maintained by yet another entity.

Addressing these station shortcomings is critical to ensuring all potential users can access stations safely, comfortably and conveniently, making passenger rail travel attractive to more individuals and positively impacting the travel experience of current riders. As stated under the *Intercity Passenger Rail Recommendations* section, WisDOT will propose ongoing funding for the state's Rail Station Capital Assistance Program. The program will be used to:

- Upgrade existing stations
- Build new stations
- Ensure that all stations are accessible to people with disabilities
- Encourage connections with other transportation modes such as airplanes, intercity bus, and local transit and taxi service

### *Intermodal connectivity*

Existing Wisconsin stations vary in the amount and coordination of connections with other modes of transportation at the station. New or expanded passenger rail service and new stations, along with planned improvements in other modes such as intercity bus and transit, provide the opportunity to increase and improve intermodal connections.

[5] At some stations, the train is required to make two or more stops to load and unload passengers because platforms are too short. In some cases, crossing gates are down during the duration of these multiple stops causing increased wait times for vehicles.

Most of Wisconsin's existing Amtrak stations generally have excellent road access. Some stations lack sufficient parking spaces to meet growing demand. In addition, some stations would benefit from improved pedestrian access and bicycle access, including bicycle parking facilities.

Connectivity to local transit varies by station. While the majority of station communities have some form of public transit, Wisconsin Dells and Columbus stations are not served by local public transit (although Wisconsin Dells has private taxi service available). In some cases, intermodal connections could be improved if more transit served a station. For example, as of 2010, one Milwaukee County Transit System bus route directly serves the Milwaukee Intermodal Station. Planning efforts are underway for a streetcar and new bus routes to serve the station, which will improve the local transit connection.

Intercity bus connections also vary across the state. Columbus and Portage have intercity bus service at their Amtrak stations. The Milwaukee Intermodal Station is served by Amtrak and is a hub for intercity bus services. In some cases, intercity bus service may serve the community but not have stops at the rail station. For instance, while La Crosse, Tomah and Wisconsin Dells have intercity bus service, the buses do not stop near the Amtrak station. With Wisconsin's new intercity bus program and implementation of recommended *Connections 2030* bus routes, there is potential for new intercity bus services to serve stations, and to improve coordination between existing routes and Amtrak services.

Connections to the region's major international and hub airports (Chicago O'Hare International Airport, Milwaukee General Mitchell International Airport and Minneapolis-St. Paul International Airport) are also important to improving intermodal connections, maximizing passenger rail ridership, reducing air congestion, and mitigating highway congestion. The Milwaukee airport already enjoys a strong intermodal connection with Amtrak *Hiawatha Service* at the Milwaukee Airport Rail Station. A shuttle bus meets every train and takes passengers to/from the airport terminal.

Consistent with the policy set forth in *Connections 2030*, WisDOT can encourage and facilitate improved connections among various private and public entities through existing initiatives, the intercity passenger rail program, and the new state intercity bus program. New intercity passenger rail stations should be located and designed to accommodate public transit, bicycle, pedestrian, intercity bus, taxi, and the private auto. Implementing and planning connections at stations also requires leadership and action at the local level, and cooperation with private transportation companies. WisDOT will work with communities to facilitate connections to other modes at stations, and provide access and links between the community and surrounding area and the stations.

To achieve WisDOT's vision of an "integrated multimodal transportation system," as well as encourage more individuals to use alternate forms of transportation, the transportation system needs to provide convenient and seamless connections. Ensuring these intermodal connections is critical to the success of intercity passenger rail service, the efficiency of Wisconsin's multimodal transportation system, and the support of livable communities. For more information on this issue and how WisDOT will address it, see Chapter 8: Livable and Sustainable Communities.

### *Operational speed of new intercity passenger rail services*

The proposed Midwest Regional Rail System includes operating speeds of up to 110 miles per hour. Comments received during the *Connections 2030* public review periods, as well as during the initial drafting of *Wisconsin Rail Plan 2030*, indicated that individuals had differing opinions regarding the speed at which service should be provided. To expedite the implementation of new intercity passenger rail service, some felt speeds of 110 miles per hour were not necessary, at least not initially. Others felt speeds should be at least 150 miles per hour.

Existing intercity passenger rail service in Wisconsin operates at speeds of up to 79 miles per hour. The Federal Railroad Administration defines the three categories of high-speed rail as follows:

- **High-speed rail – express**: Frequent, express service between major population centers 200 to 600 miles apart, with few intermediate stops. Top speeds of at least 150 miles per hour on completely grade-separated, dedicated rights of way (with the possible exception of some shared track in terminal areas). Intended to expand transportation capacity otherwise constrained by air and highway capacity issues.
- **High-speed rail – regional**: Relatively frequent service between major and moderate population centers 100 to 500 miles apart, with some intermediate stops. Top speeds of 110 to 150 miles per hour, grade-separated, with some dedicated and some shared track (using positive train control technology). Intended to expand a transportation system's capacity by shifting some of the traffic off of the congested highways and, to some extent, aiding with air capacity constraints by offering a cost-effective and time-effective alternative.
- **Emerging high-speed rail**: Developing corridors of 100 to 500 miles, with strong potential for future high-speed rail regional and/or express service. Top speeds of 90 to 110 miles per hour on primarily shared track (eventually using positive train control technology), with advanced grade crossing protection or separation. Intended to develop the passenger rail market, and provide some relief to other modes.

**Expressions of Interest for express high-speed rail**

Section 502 of the Passenger Rail Investment and Improvement Act of 2008 directed the Federal Railroad Administration to solicit Expressions of Interest for public-private projects to finance, design, construct, operate and maintain an improved high-speed rail system in one of 11 federally-designated corridors.

Several proposals were submitted, including a proposal for the Midwest that calls for passenger trains operating at speeds up to 220 mph to connect Chicago with Minneapolis/St. Paul, St. Louis, Cincinnati, Cleveland and Detroit. These trains would integrate with the Midwest Regional Rail System, which would act as a "feeder system" into the proposed network.

As of this date, the FRA has not advanced any proposals. Congress may or may not take actions to advance any of the proposals.

The proposed 110-miles–per-hour high-speed rail service for the Midwest Regional Rail System represents an "incremental approach" to high-speed rail in the Midwest. As a first step, speeds of up to

110 miles per hour will be implemented on existing freight corridors. Higher speed service could be implemented on some corridors in the future, with the initial 110-miles-per-hour service acting as a feeder service.

Studies conducted by Wisconsin and the Midwest Regional Rail Initiative have lead to the determination that the 110-miles-per-hour maximum speed provides the desired balance between the public investment, ridership and revenue potential, as well as public benefits for intercity passenger rail in the proposed corridor. In addition, average speed has a greater impact on travel times than maximum speeds. The average speed is the distance divided by the travel time and is a function of station stops, areas where slower speeds are required, etc. For example, while the Amtrak *Acela* service on the East Coast has a high maximum speed of 150 miles per hour, the average speed is 70 miles per hour. The proposed Midwest Regional Rail System express trains have a maximum speed of 110 miles per hour and an estimated average speed of 78 miles per hour.

The amount of public investment varies greatly between speed categories. For example, European high-speed rail with speeds of 180 miles per hour and above can cost between $30 million and $50 million per mile. The Midwest Regional Rail Initiative's 110-miles-per-hour service is estimated to cost between $4 million and $6 million per mile.

Recently, there has been some renewed interest in developing Express High-Speed Rail (with top speeds of at least 150 miles per hour) in the Midwest. This interest has focused on a recent federal request for Expressions of Interest in the public-private development of Express High-Speed Rail service (see text box), as well as a recent action by Illinois creating the Illinois and Midwest High-Speed Rail Commission. The commission is charged with developing strategies to design, build and maintain Express High-Speed Rail service, with top speeds of 220 miles per hour, between Chicago and St. Louis and between Chicago and neighboring states.

Under *Wisconsin Rail Plan 2030*, WisDOT recognizes that in the future, higher speeds may be initiated in the Midwest on new grade-separated rights-of-way, and that the Midwest Regional Rail System could serve as a regional feeder service to these higher-speed services. However, WisDOT will continue with the implementation of 79 mile-per-hour to 110–mile-per hour regional intercity passenger rail service in Wisconsin.

## *Governance of a regional intercity passenger rail system*

To fully realize the vision of the Midwest Regional Rail System, local, county, state and federal agencies must work together. Likewise, states will need to work with several public entities and freight railroads that own the tracks and rights-of-way. Taken together, this creates a potentially complex governance structure for implementing and operating new service.

The Midwest Regional Rail Initiative is developing a governance plan to address these issues. The Midwest states are committed to continuing and expanding upon the current relationship and joint

work that have allowed planning and federal funding to flow to the network. They are also committed to seeking the best structure under which to operate a unified system.

WisDOT will continue to work with the Midwest Regional Rail Initiative states on future governance of the Midwest Regional Rail System.

### *Preservation of rail lines for potential future rail use*

*Corridors 2030* recognized that because of their contiguous nature and the difficulty in replacing them, transportation corridors are some of the most valuable assets in the state. Rail lines or rail rights-of-way at risk for abandonment should be identified and preserved so that future rail transportation options are maintained. The growing economy, increasing highway congestion and potentially increasing fuel prices could shift traffic – both passenger and freight – from highways to rail.

Preserved rail lines are available for potential implementation of commuter and intercity passenger rail. They are also available to increase the capacity of the rail freight network. In some cases, re-opening a preserved rail line as a through freight route could be more efficient than adding tracks to an existing through route as a way to increase capacity. This may be especially true if the current through route is also used by intercity passenger service planning an expansion in the number of trip frequencies.

Recent efforts at the local or regional level in Wisconsin have identified freight rail lines that should be preserved for future use. For example, the South Central Wisconsin Commuter Transportation Study identified various rail lines in and around Rock County for preservation for future passenger or freight use to meet potential future needs in that area.

Wisconsin has preserved rail lines for the future by applying the methods outlined in the federal rails-to-trails program, state purchase of rail lines for continued use, or rail banks when continued use is not feasible. For more information on rail line preservation and how WisDOT addresses this issue, refer to Chapter 5, *Freight Rail*.

## Intercity Passenger Rail Recommendations

The recommendations discussed in *Wisconsin Rail Plan 2030* incorporate recommendations from *Connections 2030* and further enhance and refine relevant actions specific to rail. Map 6-5 shows *Wisconsin Rail Plan 2030* planned intercity passenger rail system for 2030. While the endpoints of the corridors shown in the map have been established, specific route alignments and intermediate station stops will be determined through route alternatives analyses as part of environmental and preliminary engineering studies. Route alignments shown are base routes identified in previous planning efforts.

**Map 6-5: Wisconsin 2030 Potential Intercity Passenger Rail System**


*The selected route alternative in the Minnesota DOT Milwaukee-Twin Cities Tier 1 Environmental Impact Statement does not preclude Madison or Eau Claire route alignments in the future.

This section documents the specific passenger rail recommendations of *Wisconsin Rail Plan 2030* and actions to achieve the recommendations. The recommendations, subject to legislative direction, are:

- Continue to support and enhance existing passenger rail service
- Continue planning work and coordination with member states of the Midwest Regional Rail Initiative
- Implement the Wisconsin component of the Midwest Regional Rail System
- Facilitate intermodal connections and promote livable communities

- Fund a State Rail Station Capital Assistance Program
- Continue to assist and/or coordinate with neighboring states on intercity passenger rail studies and projects that impact Wisconsin
- Consider opportunities to expand intercity passenger rail service to other regions of Wisconsin

### *Continue to support and enhance existing passenger rail service*

Wisconsin's existing Amtrak service will act as the foundation upon which future Midwest Regional Rail System service will be built in the state. Many infrastructure improvements to Wisconsin's intercity passenger rail service being made today, such as grade crossing improvements and station renovations, will also serve MWRRS service in the future. Moreover, current efforts to increase Amtrak service, such as increasing *Hiawatha Service* train frequencies, will help build a ridership base and provide additional insight into how the MWRRS ultimately should be designed and operated. WisDOT will continue to support and enhance existing intercity passenger rail service by:

- Providing continued financial support for Amtrak's Chicago-Milwaukee *Hiawatha Service*
- Continuing to fund a marketing program using print, radio and other media to promote the *Hiawatha Service*
- Upgrading rail stations, purchasing and upgrading track, and improving roadway-railway grade crossings
- Completing required environmental work and service planning to increase *Hiawatha Service* train frequencies (Chicago-Milwaukee)
- Continuing to facilitate improvement of train equipment, service reliability, efficiency and intermodal connectivity
- Supporting intercity feeder bus service linking with Amtrak at the rail stations
- Continuing to monitor performance of the *Hiawatha Service*, including conducting passenger surveys

### *Continue planning work and coordination with member states of the Midwest Regional Rail Initiative*

Wisconsin will continue to work with the eight Midwest Regional Rail Initiative states and Amtrak to advance implementation of the Midwest Regional Rail System through cooperative planning work. Wisconsin has been conducting planning work with the Midwest Regional Rail Initiative for 14 years and has completed seven study phases. This work was instrumental to MWRRI states in receiving federal funding for intercity passenger rail corridors in 2010.

Future phases of work may include, but are not limited to:

- Updates to the economic analysis, environmental studies and route alternatives analysis
- An engineering, operations, and safety assessment for shared corridors
- Updates to operating cost estimates and the financial plan

- New ridership estimates (with the potential addition of other planned passenger rail corridors in the Midwest)
- A Chicago Union Station needs assessment (train operations requirements and passenger facilities)
- Updates to the implementation plan
- Identification of equipment needs and support for equipment procurement
- A governance plan for the new service

Completing this work as part of the Midwest Regional Rail Initiative will help advance plans to implement and improve Midwest applications for federal funding for intercity passenger rail projects through continued strong regional cooperation and joint efforts. This regional cooperation is critical to the successful implementation of all Midwest Regional Rail System passenger services.

## *Implement the Wisconsin component of the Midwest Regional Rail System*

Building on incremental improvements to Wisconsin's existing Amtrak *Hiawatha Service* and rail infrastructure, WisDOT will improve the state's intercity passenger rail service by working to implement the Midwest Regional Rail System. As part of this long-term implementation, WisDOT will evaluate options to serve Eau Claire and West Central Wisconsin, connecting the region with the Midwest Regional Rail System. Wisconsin's future intercity passenger rail system will require a strong partnership of federal, state and local governments, as well as Amtrak, freight railroads and other private sector interests. To implement Wisconsin's vision of improved intercity passenger rail service, WisDOT will:

- Work with the Office of the Commissioner of Railroads to discourage new at-grade crossings on rail corridors
- Work toward implementation of the Midwest Regional Rail System through roadway-railway crossing improvements, track upgrades, and other infrastructure projects and engineering work
- Support dedicated federal funding to cover 80 to 100 percent of the total capital costs needed to implement Wisconsin's portion of the MWRRS, including infrastructure upgrades and new trains
- Implement improved intercity passenger rail service identified in the Midwest Regional Rail Initiative plan in Wisconsin, shown in Maps 6-6 and 6-7 and described below

The following routes and projects identified in the short-term plan and the long-range plan require NEPA environmental studies, preliminary engineering studies, and service development plans before they are finalized and can advance to final design and construction. Actual route alignments and service details will not be determined until completion of the required environmental studies and service development plans.

**Short-term plan (2010-2015)**

Map 6-6 shows the short-term implementation plan of the *Wisconsin Rail Plan 2030*. In the short-term plan, existing Chicago-Milwaukee intercity passenger rail service is planned to be expanded from seven daily round-trips to 10 daily round-trips between Chicago and Milwaukee, and have travel time reduced

potentially through an increase in maximum speed from 79 miles per hour to 90 miles per hour. Estimated travel time (based on preliminary estimates) between Chicago and Milwaukee ranges from one hour and 18 minutes to one hour and 29 minutes (the current travel time), depending on whether the maximum speed is 79 miles per hour or 90 miles per hour, and whether the train is express or makes all stops. Final travel times will vary as final design and engineering of necessary infrastructure improvements is completed.

**Map 6-6: Short-term plan**


An additional daily round-trip frequency on the existing Amtrak *Empire Builder* route between Chicago and Minneapolis/St. Paul is planned for implementation in the short-term. This train would serve existing Wisconsin Amtrak stations and travel at conventional speeds of up to 79 miles per hour. Combined with the existing Amtrak *Empire Builder*, this additional frequency would result in two daily round-trips connecting Wisconsin communities with Minneapolis/St. Paul to the west, and Milwaukee and Chicago to the east. Estimated travel time of the additional frequency based on preliminary estimates is seven hours and 30 minutes between Chicago and Minneapolis/St. Paul. Minnesota DOT is also studying an extension of the additional frequency to St. Cloud, Minnesota.

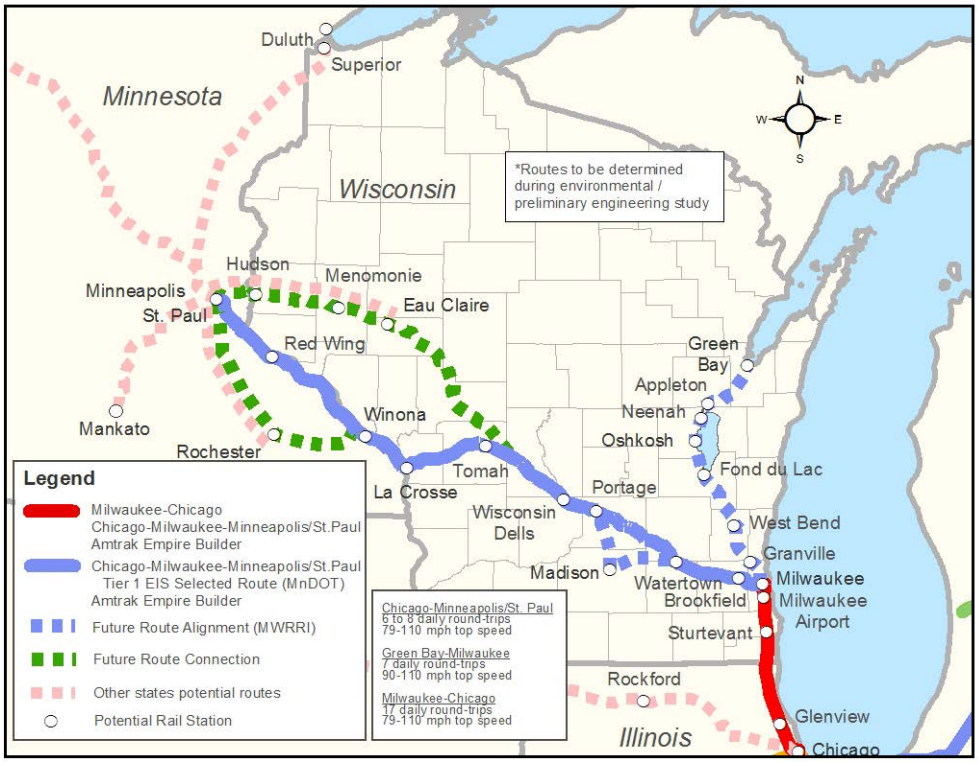
**Long-range plan (2030 Plan Horizon)**

Chicago-Milwaukee-Minneapolis/St. Paul Intercity Passenger Rail Corridor

In the long-range plan, enhanced intercity passenger rail service is planned to be extended west to Minneapolis/St. Paul, resulting in a Chicago-Milwaukee-Minneapolis/St. Paul service. The long-range plan calls for 10 round-trips between Chicago, Milwaukee and Madison with six extending to

Minneapolis/St. Paul. Estimated travel time (based on preliminary 2004 MWRRI estimates) between Milwaukee and Minneapolis/St. Paul is approximately four hours and 40 minutes. The long-range plan is shown in Map 6-7.

**Map 6-7: Long-range plan**




*The selected route alternative in the Minnesota DOT Milwaukee-Twin Cities Tier 1 Environmental Impact Statement does not preclude Madison or Eau Claire route alignments in the future.

Minnesota is completing a Tier 1 Environmental Impact Statement (EIS) for the Milwaukee to Minneapolis/St. Paul corridor segment. Map 6-7 shows the selected route alternative in the EIS, which is the current Amtrak *Empire Builder* alignment.

The MWRRI plan and *Connections 2030* have a similar alignment to the Minnesota Tier 1 EIS, but that passes through Madison. This alignment through Madison is identified as a future route alignment for the Chicago-Minneapolis/St. Paul corridor. The Milwaukee–to-Madison segment of the Chicago-Minneapolis-St. Paul corridor has an independent Environmental Assessment with a Finding of No Significant Impact from the FRA, enabling service on the Madison-Milwaukee-Chicago segment to potentially occur prior to or separately from the overall corridor. The 2004 *Wisconsin Rail Issues and Opportunities Report* identified a potential alignment through Eau Claire as a future connection to the corridor. The report used information from an MWRRI analysis. Based on this report and stakeholder and public input during the *Connections 2030* and *Wisconsin Rail Plan 2030* planning processes, the route is in both plans. Figure 6-5 discusses ways in which intercity passenger rail could serve Eau Claire.

**Figure 6-5: Potential rail service to Eau Claire**

Eau Claire and West Central Wisconsin could be served in multiple ways. One possibility is that the region could be connected to the selected route of the Minnesota-lead Milwaukee-Minneapolis/St. Paul Tier 1 EIS, with through service between Chicago, Milwaukee and Minneapolis-St. Paul. Alternatively, or in addition, it could be served with trains exclusively between Eau Claire and the Twin Cities. As part of the long range plan, studies will be undertaken to explore these options in the long-term plan timeframe.

Chicago-Milwaukee-Green Bay Intercity Passenger Rail Corridor

Also in the long-range time horizon, improved intercity passenger rail service is planned to be extended from Chicago to Milwaukee to Green Bay. The cities served and route alignment will be determined pending the results of the environmental study. Consistent with the third phase of MWRRI plan implementation, train speeds between Chicago and Milwaukee are planned to be increased to up to 110 miles per hour and train frequencies increased to 17 round-trips, as shown in Map 6-7. Seven of these trains will be extended from Milwaukee to Green Bay. Estimated travel time (based on preliminary 2004 MWRRI estimates) between Chicago and Milwaukee is approximately one hour, and between Milwaukee and Green Bay is approximately two hours.

**Figure 6-6: Forecast ridership for short-term and long-term intercity passenger rail routes[1]**

**Short-term plan**

Chicago-Milwaukee *Hiawatha Service* Improvements (10 daily round-trips, shorter travel time) – Operational Alternatives

- Chicago-Milwaukee maximum speed 79 mph: 1,021,300* (for 2017, assumed first year of service)
- Chicago-Milwaukee maximum speed 90 mph: 1,084,500* (for 2017, assumed first year of service)

Chicago-Milwaukee-La Crosse-Minneapolis/St. Paul Second *Empire Builder* Frequency (one additional daily round-trip) – Route Alternatives[2]

- Chicago-St. Paul: 155,000 riders during the first year of service
- Chicago-Minneapolis (with stop at St. Paul) 177,000 riders during the first year of service
- Chicago-St. Cloud (stops at St. Paul and Fridley): 180,000 riders during the first year of service
- Chicago-St. Cloud (stops at St. Paul and Minneapolis): 185,000 riders during the first year of service

**Long-range plan**[3]

Extend service to Minneapolis/St. Paul

- Approximately 1,860,000 annual riders in the first year of service (ten daily round-trips between Chicago, Milwaukee and Madison with six of those extending to Minneapolis/St. Paul)

Chicago-Milwaukee-Green Bay

- Approximately 3,357,000 annual riders in first year of service (17 daily round-trips between Chicago and Milwaukee, with 10 of those trips continuing to Minneapolis/St. Paul and seven continuing to Green Bay)

***NOTE***:

1) Annual rider numbers are for the entire corridor and include riders to/from all stations.
2) Second *Empire Builder* frequency ridership numbers are preliminary estimates and do not include ridership that is forecasted to be on the Amtrak *Empire Builder* long-distance trains. Estimates will be refined as the study progresses.
3) Estimates for the Long-term Plan were undertaken as part of the *Midwest Regional Rail System Study* (2004 MWRRI Project Notebook Update) and are from a different source and use different methodology than the Chicago-Milwaukee-Madison ridership estimates developed in 2009, which estimated the Chicago-Milwaukee-Madison segment ridership (10 round-trips between Chicago and Milwaukee with 6 extending to Madison) at 1,401,600 in the first year of service). New ridership estimates for the Chicago-Minneapolis/St, Paul corridor are being developed as part of the MnDOT Tier 1 EIS study.

**Table 6-4: Implementation activities underway for Midwest Regional Rail System corridors through Wisconsin**

| Action | Status | Notes |
|---|---|---|
| Chicago-Milwaukee increased frequencies | • Increase Amtrak *Hiawatha Service* from seven daily round-trips to ten daily round-trips between Chicago and Milwaukee and a reduction in travel times.<br>• Maximum speeds being studied are 79 miles per hour and 90 miles per hour.<br>• Environmental Assessment, Service Development Plan, and a Finding of No Significant Impact are expected in 2013. | Wisconsin DOT, Illinois DOT, and the Federal Railroad Administration, in partnership with Amtrak, are conducting the NEPA study and Service. Development Plan to be eligible for federal funds for infrastructure and train equipment when federal funds become available. |
| Extension of service to Minneapolis / St. Paul | • Minnesota received funding in 2010 to complete a Tier 1/Service Level NEPA study Next step: Complete the NEPA and Preliminary Engineering study, expected in 2014. | The Minnesota Department of Transportation is developing the Environmental Impact Statement. |

As WisDOT implements the Midwest Regional Rail System, WisDOT will:

- Continue to partner with freight railroads when planning and implementing passenger rail service
- Continue to work with freight railroads on capacity analyses and cost sharing
- Ensure agreements are established between the sponsoring agency for any new passenger service and freight railroads
- Continue to work with Midwest states and Amtrak to identify equipment needs, and continue to purchase equipment as needed

## *Facilitate intermodal connections and promote livable communities*

Existing and planned intercity passenger rail in Wisconsin is part of an integrated multimodal network, as outlined in *Connections 2030;* it is not being implemented as a single line or route. To encourage a well-connected multimodal transportation system in Wisconsin and promote livable communities, the intercity passenger rail system will link with intercity/feeder bus service, air service at General Mitchell International Airport, local and regional transit and taxi services, and bicycle connectivity points.

The State Intercity Bus Program (state statute 85.26) provides an opportunity and potential funding source to implement some of the intercity/feeder bus routes in Wisconsin identified in both *Connections 2030* and MWRRI plans. The program provides state funding to match federal funding to implement new intercity bus routes in Wisconsin and maintain and enhance the existing network of intercity bus routes.

One of the stated purposes of the program is to facilitate meaningful intermodal connections including intercity bus and intercity passenger rail. In implementing the program, connections to intercity passenger rail stations will be a factor in selecting which routes to fund. In addition, WisDOT will encourage the operators of state-supported intercity passenger rail services and intercity bus services that use the same station to enter into interlining agreements with each other (i.e., Amtrak Thruway services as described earlier in the chapter). This will allow one ticket for a trip that includes a connection between bus and rail and coordinated scheduling.

WisDOT will work with communities to facilitate connections and coordination between modes. This includes designing and locating stations to accommodate transit and intercity buses, facilitation of interlining agreements between the rail operator and intercity bus operators, coordinating with communities and transit agencies to increase service to stations, providing adequate bike facilities at all stations, and providing bike accommodations on trains.

In conjunction with planning coordination and strong local comprehensive plans, intercity passenger rail and improved intermodal connections can help to create livable communities. WisDOT will provide technical assistance to and coordinate with counties, municipalities, and Metropolitan Planning Organizations (MPOs) on local plans. More information on livable communities can be found in Chapter 8, Livable and Sustainable Communities.

### *Fund the Rail Station Capital Assistance Program*

Train stations are critical components of Wisconsin's intercity passenger rail system. The stations:

- Act as gateways to both communities and the intercity passenger rail system
- Bring multiple modes of transportation together, allowing passengers to make seamless travel connections between trains, airplanes, intercity buses, local transit, bicycle and pedestrian facilities, and taxi service
- Act as catalysts for community economic development

The station inventory completed for this plan highlights the needs that many Wisconsin stations have, including inadequate parking, ADA non-compliant platforms, poor signage or lighting, limited services, limited waiting facilities, etc. To maximize the benefits that train stations provide to Wisconsin communities and to address current station needs, WisDOT will evaluate funding alternatives for the Rail Station Capital Assistance Program. Working with local governments and the private sector, the program may be used to:

- Upgrade existing stations
- Build new stations
- Ensure that all stations are accessible to people with disabilities
- Encourage connections with other transportation modes such as airplanes, intercity bus, and local transit and taxi service

### *Continue to assist with neighboring states' intercity passenger rail studies and projects that impact Wisconsin*

Wisconsin's neighboring states and partners are also moving forward with studies and implementation of intercity passenger rail corridors. WisDOT will assist with future studies as requested from other states, as needed. For example, WisDOT is currently involved in supporting an effort by the State of Minnesota and local governments pursuing intercity passenger rail service between Duluth/Superior and Minneapolis/St. Paul. There are other projects in neighboring states that do not enter Wisconsin and will not have Wisconsin involvement, but are close to the border and could provide a transportation alternative to some Wisconsin residents. A listing of current studies by other states potentially offering intercity passenger rail travel opportunities for Wisconsin residents appears in Figure 6-5.

### *Consider opportunities to expand intercity passenger rail service to other regions of Wisconsin*

Wisconsin's priority in passenger rail implementation is to implement the Wisconsin component of the Midwest Regional Rail System as described previously.

In addition to the Midwest Regional Rail System planned routes, Wisconsin has studied additional routes in the recent past. In 2002, WisDOT studied route options serving Eau Claire (Chicago-Twin Cities via Eau Claire, and an Eau Claire-Minneapolis service) and Janesville (Chicago-Madison via Janesville) that would be in addition to the MWRRS routes. The preliminary study found that these routes would be viable in terms of ridership potential. As noted earlier, the Minnesota Department of Transportation identified rail service between Eau Claire and Minneapolis/St. Paul in the *Minnesota Comprehensive Statewide Freight and Passenger Rail Plan*.

WisDOT will study the potential for expanding the state's intercity passenger rail system as part of future updates to *Wisconsin Rail Plan 2030*. WisDOT will apply knowledge and experience gained from earlier implementation phases of the Midwest Regional Rail System in assessing future expansion of the state's intercity passenger rail system. Once some of the planned MWRRS routes are implemented and can be assessed, WisDOT can better assess the feasibility of adding service to other parts of the state. These studies could examine expanded service to regions such as North Central Wisconsin, Central Wisconsin and South Central Wisconsin.

When planned service to the Twin Cities and Green Bay is in operation, there will be a new "base case." Having those services in place and performing successfully could make other routes more feasible due to connectivity to the system.

In determining conceptual routes to study further in the future, the following broad criteria will be considered:

- Population served and ridership potential
- Connections to major cities/destinations

- Connectivity to other existing passenger rail routes
- Intermodal connections facilitated
- Economic impact
- Environmental factors
- Whether a route would be a greenfield development versus on a shared freight corridor vs. on abandoned right-of-way vs. a rails-to-trails conversion

Additional corridor-specific factors would be considered in a corridor feasibility analysis and the route alternatives analysis.

# Appendix 6-A: Public Benefits of Passenger Rail

## Benefits of Intercity Passenger Rail

Public investment in intercity passenger rail results in numerous significant benefits to the public. To achieve the full benefits of passenger rail, passenger rail services must be well integrated with the state's multimodal transportation system. This includes close coordination and integration with intercity feeder buses, local transit service, new commuter rail services, highways, and airports.

There are both user and non-user benefits of intercity passenger rail. User benefits are those that accrue to train passengers, such as shorter travel time and increased personal productivity, improved comfort and reduced transportation cost. In addition, rail travel can provide improved service levels (frequency and travel time) compared with other existing transportation services, which can reduce pressure for expenditures on other modes and create non-user benefits (benefits to members of the general public who are not using the train). Non-user benefits include decreased congestion on other modes, accident savings in other modes, economic benefits, and environmental benefits.[1]

Potential benefits (both user and non-user) of intercity passenger rail in Wisconsin are listed below.

### *Mobility benefits*

- Improves mobility in the state and region by providing a new intercity passenger option
- Provides an alternative to congested roads, generating travel time savings especially when connecting with major urban centers
- Provides in many cases a new travel option that can help business or leisure travelers avoid highway and airport delays
- Provides a travel option for those who cannot or choose not to drive or fly, increasing their mobility; this is especially true for Wisconsin's growing elderly population who find driving increasingly problematic
- Provides an alternative that is capable of operating in inclement weather when roads are closed and airline flights are delayed or cancelled
- Offers a safe travel option that can be cost- and time-competitive with driving and flying, especially for trips between 100 and 600 miles
- Provides mobility and economic development to smaller communities with little or no access to any other public transportation

[1] *Vision for the Future: U.S. Intercity Passenger Rail Network Through 2050.* National Surface Transportation Policy and Revenue Study Commission, Passenger Rail Working Group. December 2007.

## *Economic benefits*

- Reduces businesses' transportation costs
- Allows business travelers to work productively while *en route* to their destination
- Facilitates an increase in tourism travel
- Increases employment and economic activity through the construction and ongoing operations and maintenance of the expanded intercity rail system
- Improves Wisconsin's economic competitiveness and supports the growth of high-tech and service sector jobs by helping to attract new businesses and skilled young professionals

In addition, according to a 2006 economic benefit study of the Midwest Regional Rail System, implementation of the Midwest Regional Rail System provides the following economic benefits to Wisconsin:

  - $1.80 in benefits for every $1 invested in the system
  - 9,600 new, permanent jobs created
  - $173 million in additional household income
  - $704 million in property value increases as a result of new development near stations

## *Environmental and livability benefits*

- Promotes livable communities by expanding transportation options and encouraging economic development in communities, especially near stations. These factors are important to communities in meeting their planning and smart growth goals:
  - Development near stations provides an opportunity to accommodate multiple modes of transportation, and to design areas to be pedestrian and bicycle friendly
  - Along with strong planning and community initiative, passenger rail stations can encourage a mix of housing choices and new mixed-use commercial development where destinations (offices, stores, etc.) are within walking distance of homes
  - Stations in downtown areas can act as catalysts for downtown revitalization efforts
- Provides an opportunity to change land use and travel patterns that help improve air and water quality and community aesthetics in conjunction with local land use efforts and comprehensive planning
- Provides a transportation option that is environmentally friendly and has fewer carbon dioxide emissions per passenger-mile than private auto or airlines.
- Improves energy-efficiency of personal travel
- Contributes to efforts to improve air quality and reduce greenhouse gas emissions through diversion of some auto and air traffic
- Helps reduce negative impacts to individuals and the economy of disruptions in energy supply or fuel price increases

### *Safety and security benefits*

- Provides a safer travel option. Highway crashes cause human hardship and have severe economic consequences for states and the country. Intercity passenger rail, along with buses and airlines, have much lower death rates than automobiles per passenger-mile traveled
- Provides an alternative option for emergency response and evacuation

# Appendix 6-B: Chronology of Amtrak Service in Wisconsin

**May 1971:** As part of its inaugural system, Amtrak operates five daily round trips in the Chicago-Milwaukee corridor over the Milwaukee Road main line. Four of these round trips are trains running exclusively between Chicago's Union Station and Milwaukee's Station, with an intermediate stop in Glenview, IL. The fifth round trip is the Chicago-Milwaukee segment of Amtrak's long-distance train to the West Coast via St. Paul, northern North Dakota (e.g. Minot), northern Montana (e.g. Glacier National Park) and Spokane.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | Unnamed | 4 daily | Glenview |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |

**June 1971:** Amtrak maintains five daily round trips in the Chicago-Milwaukee corridor and adds tri-weekly service from Chicago to Seattle via St. Paul, southern North Dakota (e.g. Bismark), southern Montana (e.g. Bozeman and Missoula) and Spokane.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | Unnamed | 4 daily | Glenview |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | Tri-weekly | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |

**November 1971:** Daily round trip service in the Chicago-Milwaukee corridor is increased from five to seven as Amtrak adds service from Milwaukee to St. Louis via Chicago. Two Chicago-Milwaukee trains now stop at Sturtevant, WI. The *Empire Builder* now only stops in La Crosse between Milwaukee and Minneapolis. The *North Coast Hiawatha's* tri-weekly round trip to the West Coast is maintained, with daily service provided between Chicago and Minneapolis.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | Unnamed | 3 daily | Glenview, Sturtevant (2 trains) |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, La Crosse, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily between Chicago and Minneapolis; tri-weekly west of Minneapolis | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Milwaukee-Chicago-St. Louis** | *Abraham Lincoln*; *Prairie State* | 2 daily | Glenview |

**October 1972:** Amtrak's three daily Chicago-Milwaukee trains get a name, the *Hiawatha Service*. Three *Hiawatha Service* trains and the *Prairie State* now stop at Sturtevant. The *Empire Builder* adds stops at Columbus and Winona.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 3 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily between Chicago and Minneapolis; tri-weekly west of Minneapolis | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Milwaukee-Chicago-St. Louis** | *Abraham Lincoln*; *Prairie State* | 2 daily | Glenview, Sturtevant (*Prairie State*) |

**October 1973:** The two daily round trips from Milwaukee to St. Louis are discontinued, but seven daily round trips are retained by increasing the frequency of the Chicago-Milwaukee service from three to five daily round trips. Four *Hiawatha Service* trains stop at Sturtevant.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 5 daily | Glenview, Sturtevant (4 trains) |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily between Chicago and Minneapolis; tri-weekly west of Minneapolis | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |

**February 1974:** Amtrak begins operating *The Blackhawk*, providing passenger train access to southern Wisconsin residents. *The Blackhawk* provides one daily round trip between Chicago, Rockford and Dubuque.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 5 daily | Glenview, Sturtevant (4 trains) |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily between Chicago and Minneapolis; tri-weekly west of Minneapolis | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |

**May 1975:** Amtrak begins operating *The Arrowhead*, with daily service between Minneapolis and Superior. Daily service in the Chicago-Milwaukee corridor drops to six round trips. The *Hiawatha Service* is reduced to four daily round trips (all four stop at Sturtevant) and the *North Coast Hiawatha* service is increased from tri-weekly to daily service.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Minneapolis-Superior** | *The Arrowhead* | 1 daily | None |

**November 1975:** Two Milwaukee-Chicago trains, including one with new through service to Detroit, now use new Turboliner train equipment. The *North Coast Hiawatha* reverts to tri-weekly service west of Minneapolis. *The Arrowhead* adds stops in Cambridge (MN) and Sandstone (MN).

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service; Turboliner* | 3 daily (4 on Sundays) | Glenview, Sturtevant |
| **Milwaukee-Chicago-Detroit** | *Turboliner* | 1 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Minneapolis-Superior** | *The Arrowhead* | 1 daily | Sandstone (MN), Cambridge (MN) |

**April 1976:** Amtrak discontinues *The Arrowhead*.

**June 1976:** Amtrak brings back *The Arrowhead*. The *Hiawatha Service* name disappears, as all local service between Milwaukee and Chicago uses Turboliner equipment.

**February 1977:** By February 1977, Milwaukee-Chicago-Detroit run-through service is eliminated. *The Arrowhead* now operates all the way to Duluth.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Turboliner* | 4 daily (5 on Sundays) | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Seattle** | *North Coast Hiawatha* | 1 daily between Chicago and Minneapolis; tri-weekly west of Minneapolis | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Minneapolis-Duluth** | *The Arrowhead* | 1 daily | Superior (WI), Sandstone (MN), Cambridge (MN) |

**October 1977:** The *North Coast Hiawatha* reverts from daily back to tri-weekly and the *Empire Builder* changes from daily to quad-weekly. Operating on alternate days, these two trains effectively provide daily overnight service between Chicago and Minneapolis. A new train, *The Twin Cities Hiawatha*, provides an additional daily round-trip between Chicago and Minneapolis.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Turboliner* | 3 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder;*<br><br>*North Coast Hiawatha* | Quad-weekly; tri-weekly | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Minneapolis** | *The Twin Cities Hiawatha* | Daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Minneapolis-Duluth** | *The Arrowhead* | 1 daily | Superior (WI), Sandstone (MN), Cambridge (MN) |

**January 1978:** A Chicago-Milwaukee round trip is added, increasing the number of daily round trips in the corridor to six.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Turboliner* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder;*<br><br>*North Coast Hiawatha* | Quad-weekly; tri-weekly | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis |
| **Chicago-Minneapolis** | *The Twin Cities Hiawatha* | Daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Minneapolis-Duluth** | *The Arrowhead* | 1 daily | Superior (WI), Sandstone (MN), Cambridge (MN) |

**March 1978:** Amtrak begins using the new Midway Station in St. Paul. All passenger service ends at the Great Northern Station in Minneapolis.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Turboliner* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder;*<br><br>*North Coast Hiawatha* | Quad-weekly; tri-weekly | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis/St. Paul |
| **Chicago-Minneapolis/St. Paul** | *The Twin Cities Hiawatha* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Minneapolis/St. Paul-Duluth** | *The Arrowhead* | 1 daily | Superior (WI), Sandstone (MN), Cambridge (MN) |

**April 1978:** Amtrak initiates new service from Chicago to Duluth, *The North Star*, via Milwaukee and St. Paul, under contract with the State of Minnesota. The Chicago-Minneapolis/St. Paul portion of *The North Star* operates as an overnight service. The *North Coast Hiawatha* and the *Empire Builder* continue to operate on alternate days. The Chicago-Milwaukee corridor now has a total of seven round trips per day.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Turboliner* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder;*<br><br>*North Coast Hiawatha* | Quad-weekly; Tri-weekly | Glenview, Milwaukee, Columbus, La Crosse, Winona, Minneapolis/St. Paul |
| **Chicago-Minneapolis/St. Paul** | *The Twin Cities Hiawatha* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Chicago-Dubuque** | *The Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Chicago-Minneapolis/St. Paul-Duluth** | *The North Star* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis, Cambridge, Sandstone, Superior |

**October 1979:** The *Twin Cities Hiawatha* and the tri-weekly *North Coast Hiawatha* are discontinued. The *Empire Builder* adds stops in Portage, Wisconsin Dells, Tomah and Red Wing, but is reduced to tri-weekly service.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Turboliner* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder* | Tri-weekly | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Chicago-Dubuque** | *Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Chicago-Minneapolis/St. Paul-Duluth** | *The North Star* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul, Cambridge, Sandstone, Superior |

**October 1980:** Each Turboliner train is given an individual name. The Chicago-Milwaukee route is now served by *The LaSalle Turbo*, *The Marquette Turbo*, *The Nicollet Turbo* and *The Radisson Turbo*.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *The LaSalle Turbo, The Marquette Turbo, The Nicollet Turbo, The Radisson Turbo* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle** | *Empire Builder* | Tri-weekly | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Chicago-Dubuque** | *Blackhawk* | 1 daily | Rockford, Freeport, Warren, Galena, East Dubuque |
| **Chicago-Minneapolis/St. Paul-Duluth** | *The North Star* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul, Cambridge, Sandstone, Superior |

**October 1981:** Major Amtrak budget cuts affect Wisconsin service. The service operating solely between Chicago and Milwaukee is reduced from four to two daily round trips (alternating *LaSalle*, *Marquette*, *Nicollet* and *Radisson* schedules effectively provide two daily round trips), and the Turboliner equipment is replaced by Amfleet equipment. The long-distance *North Star* service is shortened to Minneapolis/St. Paul-Duluth as the overnight Chicago-Minneapolis/St. Paul portion of *The North Star* is discontinued. No transfer opportunity exists between *The North Star* and the *Empire Builder*. The *Empire Builder* service is increased to one round trip each day of the week between Chicago and Minneapolis/St. Paul, with tri-weekly service continuing west of the Twin Cities. The *Empire Builder* begins serving Portland in addition to Seattle, with the train splitting in Spokane. *The Blackhawk* is discontinued.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *The LaSalle, The Marquette, The Nicollet, The Radisson* | 2 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | Daily between Chicago and Minneapolis/St. Paul; tri-weekly west of Minneapolis/St. Paul | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Minneapolis/St. Paul-Duluth** | *The North Star* | 1 daily | Cambridge, Sandstone, Superior |

**December '81:** Amtrak increases *Empire Builder* service west of Minneapolis/St. Paul to daily service.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *The LaSalle, The Marquette, The Nicollet, The Radisson* | 2 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Minneapolis/St. Paul-Duluth** | *The North Star* | 1 daily | Cambridge, Sandstone, Superior |

**October 1982:** Metra -- a publicly-owned, regional commuter rail carrier formed under the auspices of the Regional Transportation Authority of Northern Illinois -- acquires operating rights over one-third of the Chicago-Milwaukee corridor from Rondout, Illinois to Chicago Union Station. Metra takes over the operation of the commuter trains previously operated by the Milwaukee Road.

**October 1984:** Amtrak adds one daily round trip, *The Badger*, to the service operating solely between Chicago and Milwaukee. On Saturday the north-bound *Radisson* operates as a late night Chicago to Milwaukee train with a different name, *The Encore*, in an attempt to attract leisure (e.g. theater) travelers.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *The LaSalle, The Marquette, The Nicollet, The Badger, The Encore* | 3 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Minneapolis/St. Paul-Duluth** | *The North Star* | 1 daily | Cambridge, Sandstone, Superior |

**February 1985:** The Soo Line Railroad acquires the bankrupt Milwaukee Road and becomes the owner of the track over which Amtrak operates between Chicago and Milwaukee.

**April 1985:** The Saturday late-night *Encore* is discontinued. *The North Star* service ends.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *The LaSalle, The Marquette, The Nicollet, The Badger* | 3 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**August 1987:** Metra purchases the track between Rondout, IL and Chicago Union Station from the Soo Line Railroad. The Soo Line Railroad continues to operate freight trains in this segment of the corridor. Amtrak also retains the right to operate over this track.

**October 1989:** Amtrak, under a two-year demonstration project co-sponsored and co-funded by the Wisconsin and Illinois DOTs, adds two daily round trips to the Chicago-Milwaukee service. The Chicago-Milwaukee service is renamed the *Hiawatha Service.* Travel time between Chicago and Milwaukee is 92 to 95 minutes.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 5 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

| ***Hiawatha Service*** **Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 10/29/89 | 6/30/90 | $262,416 | $196,812 | $65,604 |
| 6/30/90 | 6/30/91 | $144,757 | $108,568 | $36,189 |

**November 1990:** First Wisconsin Department of Transportation (WisDOT) record of state-supported *Hiawatha Service* fare structure. Base Milwaukee-Chicago fares are:

Milwaukee-Chicago one-way: $15

Milwaukee-Chicago round-trip: $22

Ten-ride ticket: $145

**December 1990: *Hiawatha Service* ridership for CY 1990, the first full year of operation as a state-supported service, is 312,742.**

**June 1991:** Wisconsin and Illinois continue to contract with Amtrak for the *Hiawatha Service*.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 6/30/91 | 6/30/92 | $306,316 | $229,737 | $76,579 |

**October 1991:** Two additional daily round trips are added to the *Hiawatha Service* under the new contracts between Amtrak and the Wisconsin and Illinois DOTs. The number of daily round trips underwritten by the two states now totals four. Amtrak continues to operate three round trips without state assistance bringing the total number of *Hiawatha Service* round trips to seven.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

*Hiawatha Service* one-way and round-trip fares increase, but ten-ride ticket prices are reduced. Base Milwaukee-Chicago fares are now:

Milwaukee-Chicago one-way: $16

Milwaukee-Chicago round-trip: $24

Ten-ride ticket: $120

**December 1991: *Hiawatha Service* ridership for CY 1991 is 312,404.**

**June 1992:** New *Hiawatha Service* contract begins

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 6/30/92 | 7/1/93 | $784,084 | $588,063 | $196,021 |

**September 1992:** *Hiawatha Service* round-trip fares increase. Base Milwaukee-Chicago fares are now:

Milwaukee-Chicago one-way: $16

Milwaukee-Chicago round-trip: $27

Ten-ride ticket: $120

**December 1992: *Hiawatha Service* ridership for CY 1992 is 373,305.**

**July 1993:** New *Hiawatha Service* contract begins

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/93 | 6/30/94 | $592,750 | $444,063 | $148,687 |

**December 1993: *Hiawatha Service* ridership for CY 1993 is 422,181.**

**May 1994:** *Hiawatha Service* one-way ticket prices increase, but round-trip and ten-ride ticket prices are reduced. Base Milwaukee-Chicago fares are now:

Milwaukee-Chicago one-way: $17

Milwaukee-Chicago round-trip: $20

Ten-ride ticket: $100

**July 1994:** New *Hiawatha Service* contract begins

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/94 | 6/30/95 | NA* | $556,563 | NA* |

* Amtrak had a separate contract with the State of Illinois

**July 1994:** The United Transportation Union (UTU) initiates a strike against the Soo Line Railroad that is honored by other labor unions. The *Hiawatha* is reduced to four daily round trips and at slower speeds, adding 40 minutes to the usual 92-minute trip time. About 70 percent of riders are retained. Amtrak also re-routes the *Empire Builder* from the Soo Line's main line from Chicago-St. Paul via Milwaukee to the Burlington Northern Railroad's main line from Chicago to St. Paul. This temporary re-routing does not go through Milwaukee.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 4 daily at reduced speed | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Via BNSF mainline |

**September 1994:** Amtrak resumes normal service on the Soo Line Railroad when a labor settlement is imposed. Ridership on the *Hiawatha Service* quickly returns to pre-strike levels.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**December 1994:** As part of a system-wide restructuring and cost cutting plan, Amtrak announces it will cut back service nationwide by 20 percent. Included in the proposed cutback is the complete elimination of the *Hiawatha Service* to be effective April 1, 1995 unless the states of Wisconsin and Illinois agree to pay more of the costs. The long-distance *Empire Builder* service will also be restructured on February 1, 1995.

**December 1994: *Hiawatha Service* ridership for CY 1994 is 457,680.**

**February 1995:** Amtrak restructures the *Empire Builder* service. One round trip daily is maintained between Chicago and St. Paul via Milwaukee. The *Empire Builder* service from St. Paul to the West Coast is reduced to one round trip on four days of each week.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily between Chicago and Minneapolis/St. Paul, Quad-weekly west of Minneapolis/St. Paul | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**February 1995:** Wisconsin and Illinois reach an agreement with Amtrak to retain the *Hiawatha Service*, but at a reduced number of round trips and with a 50 percent increase in fares. The fare increase is to be instituted in mid-March and service is to be reduced on April 2. The agreement will maintain service through June 30, 1995.

**March 1995:** Amtrak increases the *Hiawatha Service's* fare structure by about 50 percent. This is the first significant fare increase since state support began in 1989. The effective date of the fare increase is March 12. A new monthly pass is now offered. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $25 |
| Milwaukee-Chicago round-trip: | $38 |
| Ten-ride ticket: | $150 |
| Monthly pass: | $530 |

**April 1995:** *Hiawatha Service* is reduced from seven round trips daily to four round trips daily on April 2. The total number of daily round trips in the Chicago-Milwaukee corridor is now five.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 4 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily between Chicago and Minneapolis/St. Paul; quad-weekly west of Minneapolis/St. Paul | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**June 1995:** Wisconsin reaches an agreement with Amtrak to add two round-trips in the Chicago-Milwaukee corridor on July 16 and maintain the *Hiawatha Service* at six daily roundtrips through September 30, 1996. Amtrak also pledges new initiatives to better market the service.

**July 1995:** New *Hiawatha Service* contract begins

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/95 | 9/30/96 | NA* | $3,501,538 | NA* |

* Amtrak had a separate contract with the State of Illinois

**July 1995:** *Hiawatha Service* is increased from four to six roundtrips daily on July 16 under terms of the agreement announced on June 26 by Governor Thompson and Amtrak.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily between Chicago and Minneapolis/St. Paul; quad-weekly west of Minneapolis/St. Paul | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**December 1995: *Hiawatha Service* ridership for CY 1995 is 333,044.**

**February 1996:** Illinois Governor Edgar announces a plan to continue state-supported Amtrak services in four Illinois corridors including Chicago-Milwaukee. The plan calls for adjusting train frequencies and increasing fares by 10 percent effective July 1. Under the plan, the *Hiawatha Service* would be reduced to five daily roundtrips.

**February 1996:** Wisconsin Governor Thompson and Amtrak announce a way to save $316,000 annually in costs for the *Hiawatha Service* without reducing the number of daily round-trips.

**October 1996:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 10/1/96 | 6/30/97 | $2,692,000 | $2,192,000 | $500,000 |

**December 1996: *Hiawatha Service* ridership for CY 1996 is 327,616.**

**May 1997:** Amtrak returns the Empire Builder to daily service west of Minneapolis/St. Paul.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**June 1997:** Amtrak operates the Danish-built, IC-3 (Flexliner) passenger train between Chicago and Milwaukee in revenue service as part of a demonstration tour of the Diesel Multiple Unit train that has been operating in Europe since 1990. The demonstration is repeated in September. WisDOT underwrites a portion of the costs associated with both demonstrations.

**July 1997:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/97 | 6/30/98 | $3,950,000 | $2,962,500 | $987,500 |
| Capital Cost* | | | $637,500 | |

* For conversion of F40 locomotives into Non Powered Control Units (NPCU) and for maintenance facility in Milwaukee allowing use of two train sets.

**August 1997:** The price of the *Hiawatha Service* monthly pass is reduced. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $25 |
| Milwaukee-Chicago round-trip: | $38 |
| Ten-ride ticket: | $150 |
| Monthly pass: | $480 |

**September 1997:** Amtrak again operates the Danish-built, IC-3 (Flexliner) passenger train between Chicago and Milwaukee in revenue service. The IC-3 demonstration between Chicago and Milwaukee begins on September 22 and ends on October 5. WisDOT underwrites a portion of the costs associated with the demonstration.

**November 1997:** *Hiawatha Service* one-way fares are reduced. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $19 |
| Milwaukee-Chicago round-trip: | $38 |
| Ten-ride ticket: | $150 |
| Monthly pass: | $480 |

**December 1997: *Hiawatha Service* ridership for CY 1997 is 369,050.**

**February 1998:** WisDOT, Amtrak, and the Canadian Pacific Railway reach an agreement to extend certain *Hiawatha Service* trains from Milwaukee to Watertown for 90 days as part of an effort to mitigate traffic congestion caused by the resurfacing of the I-94 East-West freeway in Milwaukee and Waukesha counties. The service extension is also intended to measure the level of support for continued passenger service throughout the state.

**April 1998:** Amtrak extends *Hiawatha Service* from Milwaukee to Watertown with 4 daily round trips between Milwaukee and Watertown on Monday through Saturday with stops in Wauwatosa, Elm Grove/Brookfield, Pewaukee, and Oconomowoc. Service is proved as mitigation for the repaving of I-94. The $1.44 million extension of service is scheduled to last 90 days. Amtrak operates three daily round trips to Watertown on Sundays.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee-Watertown** | *Hiawatha Service* | 6 daily between Chicago and Milwaukee, with 4 (3 on Sundays) continuing to Watertown | Glenview, Sturtevant, Milwaukee, Wauwatosa, Elm Grove/Brookfield, Pewaukee, Oconomowoc |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**July 1998:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/98 | 6/30/99 | $4,550,000 | $3,412,500 | $1,137,500 |

**July 1998:** Amtrak ends the extension of the *Hiawatha Service* to Watertown on July 11 after 90 days.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**December 1998: *Hiawatha Service* ridership for CY 1998 is 412,894.**

**July 1999:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/99 | 6/30/00 | $4,950,000 | $3,712,500 | $1,237,500 |

**December 1999: *Hiawatha Service* ridership for CY 1999 is 417,297.**

**February 2000:** Amtrak announces that it will initiate combined passenger and Mail & Express services between Chicago and Janesville and between Chicago and Fond du Lac (via Milwaukee) as part of its *Network Growth Strategy*. The new services are designed to provide access to Amtrak's national system for both passengers and time-sensitive Mail & Express shipments.

**March 2000:** *Hiawatha Service* fares are increased. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $20 |
| Milwaukee-Chicago round-trip: | $40 |
| Ten-ride ticket: | $158 |
| Monthly pass: | $505 |

**April 2000:** On April 15 Amtrak begins new daily passenger and Mail & Express service, the *Lake Country Limited*, between Chicago and Janesville over rights-of-way operated by Metra, the Wisconsin & Southern Railroad, and the I&M Rail Link. The new service consists of a daily early morning departure from Janesville to Chicago and a late evening return to Janesville. The start-up service includes an intermediate stop at Glenview, IL.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Chicago-Janesville** | *Lake Country Limited* | 1 daily | Glenview |

**May 2000:** Chicago-Milwaukee travel time reduced to 89 minutes due to track improvements.

**June 2000:** The DOTs of Wisconsin and Illinois renew their agreements with Amtrak, continuing the *Hiawatha Service's* six daily round-trips between Milwaukee and Chicago through 2003. On June 15 Amtrak adds a second intermediate stop at Zenda, WI to the *Lake Country Limited*. This stop serves the Lake Geneva area.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Chicago-Janesville** | *Lake Country Limited* | 1 daily | Glenview, Zenda (Lake Geneva) |

**July 2000:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/00 | 6/30/01 | $5,116,139 | $3,837,105 | $1,279,034 |

**September 2000:** Amtrak continues to work with the Wisconsin Central Limited railroad and the City of Fond du Lac to initiate passenger rail and Mail & Express service between Fond du Lac and Chicago in late 2000. The service is an extension of Amtrak's existing *Hiawatha Service*. As part of the new service, one of the *Hiawatha* trains travels between Fond du Lac, Milwaukee, Sturtevant, WI, Glenview, IL and Chicago once a day in each direction. The train departs Fond du Lac early in the morning and return late at night.

**December 2000: *Hiawatha Service* ridership for CY 2000 is 426,652.**

**March 2001:** The *Lake Country Limited* service is reduced to weekends only.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |
| **Chicago-Janesville** | *Lake Country Limited* | 1 daily on Saturday and Sunday | Glenview, Zenda (Lake Geneva) |

**March 2001:** The price of the *Hiawatha Service* ten-ride ticket and monthly pass are reduced. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $20 |
| Milwaukee-Chicago round-trip: | $40 |
| Ten-ride ticket: | $150 |
| Monthly pass: | $280 |

**June 2001:** WisDOT completes an Environmental Assessment of proposed rail improvements between Milwaukee, Watertown and Madison that would allow Chicago-Milwaukee service to extend to Madison (at speeds up to 110-mph between Milwaukee and Madison). The Environmental Assessment is submitted to the Federal Railroad Administration for review.

**July 2001:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/01 | 6/30/02 | $5,146,462 | $3,859,847 | $1,286,615 |

**September 2001***:* Amtrak discontinues the *Lake Country Limited*. The proposed Chicago-Milwaukee-Fond du Lac passenger and Mail & Express service never materializes.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 6 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**November 2001:** The price of the *Hiawatha Service* monthly pass is increased. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $20 |
| Milwaukee-Chicago round-trip: | $40 |
| Ten-ride ticket: | $150 |
| Monthly pass: | $325 |

**December 2001: *Hiawatha Service* ridership for CY 2001 is 423,495.**

**July 2002:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/02 | 6/30/02 | $5,300,856 | $3,975,642 | $1,325,214 |

**October 2002:** An additional frequency is added between Milwaukee and Chicago. One train stays in Chicago each night for maintenance and one remains in Milwaukee each night.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**December 2002: *Hiawatha Service* ridership for CY 2002 is 397,518.**

**July 2003:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/03 | 6/30/04 | $6,749,000 | $5,061,750 | $1,687,250 |

**December 2003:** WisDOT purchases the 32-mile WSOR/CP rail corridor segment between Watertown and Madison for $7 million. Now part of the state-owned rail network operated by Wisconsin & Southern Railroad, this corridor segment is part of the proposed Chicago-Milwaukee-Madison passenger rail route.

**December 2003: *Hiawatha Service* ridership for CY 2003 is 433,215.**

**June 2004:** The Federal Railroad Administration issues a Finding of No Significant Impact (FONSI) for the Milwaukee-Madison Environmental Assessment.

**July 2004:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/04 | 7/31/05 | $7,642,219 | $6,207,437 | $1,434,782 |
| Capital Cost* | | | $3,782 | |

* Installation and operation of Quik-Trak ticketing machines at Milwaukee Airport Rail Station

**November 2004:** WisDOT sponsored *Hiawatha Service* advertising begins, targeting both Milwaukee and Chicago markets. The two-year advertising campaign includes diverse outlets such as radio ads, print ads, billboards, airport signs, gas pump toppers, email, Web banners and internet streaming on various partner Web sites, and Milwaukee Brewer promotions. The two-year budget is $500,000 and is funded through a combination of federal Congestion Management Air Quality (CMAQ) grant and Amtrak funds.

**December 2004: *Hiawatha Service* ridership for CY 2004 is 470,186.**

**January 18, 2005:** WisDOT opens a new $7 million station (including track improvements and a parking lot) serving General Mitchell International Airport in Milwaukee. An airport shuttle meets each *Hiawatha Service* train to transfer passengers to and from the airport terminal as needed.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant, Milwaukee Airport |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**August 2005:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 8/1/05 | 6/30/06 | $7,079,908 | $6,215,972 | $863,936 |

**October 31, 2005:** Amtrak initiates a Quiet Car [SM] on all *Hiawatha Service* trains. Amtrak began accepting checked baggage on all *Hiawatha Service* trains at Chicago and Milwaukee.

**December 2005: *Hiawatha Service* ridership for CY 2005 is 544,358.**

**July 2006:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/06 | 6/30/07 | $8,376,256* | $6,285,915 | $2,090,341 |

* Includes $14,892 for purchase and installation of Quick Trak ticketing machines at Milwaukee Airport Rail Station

**August 1, 2006:** The Chicago – Milwaukee base fare is increased by 5 percent. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $21 |
| Milwaukee-Chicago round-trip: | $42 |
| Ten-ride ticket: | $158 |
| Monthly pass: | $341 |

**August 14, 2006:** The Village of Sturtevant opens a new $3 million station. The new station is located one mile north of the former station.

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant (new station and location), Milwaukee Airport |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**Aug. 14, 2006:** A ceremony is held at the Milwaukee Depot for the commencement of the station renovation project.

**October 2006:** WisDOT-sponsored *Hiawatha Service* advertising continues. The two-year advertising campaign includes diverse outlets such as radio ads, print ads, billboards, airport signs, gas pump toppers, email, Web banners and internet streaming on various partner Web sites, and Milwaukee Brewer promotions. The two-year budget is $375,000 and is funded through a combination of federal CMAQ grant and Amtrak funds.

**December 2006: *Hiawatha Service* ridership for CY 2006 is 588,036.**

**June 29/30 2007**: *Hiawatha* trains provide midnight service for Summerfest.

**July 2007:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/07 | 6/30/08 | $8,460,384* | $6,345,288 | $2,115,096 |

*Includes cost of adding fifth coach car

**July 1, 2007**: A fifth coach car is added to all *Hiawatha Service* trains to accommodate growing ridership.

**July 6/7, 2007:** *Hiawatha* trains provide midnight service for Summerfest.

**November 25, 2007:** The $16 million renovated downtown Milwaukee station is rededicated and receives a new name—Milwaukee Intermodal Station (MIS).

| Amtrak Route | Train Name(s) | Train Frequency (Round Trips) | Intermediate Station Stops Serving Wisconsin |
|---|---|---|---|
| **Chicago-Milwaukee** | *Hiawatha Service* | 7 daily | Glenview, Sturtevant, Milwaukee Airport |
| **Chicago-Seattle/Portland** | *Empire Builder* | 1 daily | Glenview, Milwaukee, Columbus, Portage, Wisconsin Dells, Tomah, La Crosse, Winona, Red Wing, Minneapolis/St. Paul |

**December 2007: *Hiawatha Service* ridership for CY 2007 is 617,799.**

**June 2008:** *Hiawatha Service* trains provide midnight service for Summerfest.

**July 2008:** New *Hiawatha Service* contract begins

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/08 | 6/30/09 | $8,697,067* | $6,522,800 | $2,174,267 |

*Includes fixed fee component plus actual fuel costs

**July, 2008:** *Hiawatha Service* fares are increased. Base Milwaukee-Chicago fares are now:

| | |
|---|---|
| Milwaukee-Chicago one-way: | $22 |
| Milwaukee-Chicago round-trip: | $44 |
| Ten-ride ticket: | $165 |
| Monthly pass: | $358 |

**November 2008:** WisDOT sponsored *Hiawatha Service* advertising continues. The two-year advertising campaign includes diverse outlets such as radio ads, print ads, billboards, airport signs, gas pump toppers, email, Web banners and internet streaming on various partner Web sites, and Milwaukee Brewer promotions. The two-year budget is $300,000 and is funded through a combination of federal CMAQ grant and Amtrak funds.

**December 2008: *Hiawatha Service* ridership for CY 2008 is 766,167.**

**June 2009:** *Hiawatha* trains provide midnight service for Summerfest.

**July 2009:** New *Hiawatha Service* contract begins.

| ***Hiawatha Service* Contract Costs** | | | | |
|---|---|---|---|---|
| Begin | End | Total Cost | Wisconsin Share | Illinois Share |
| 7/1/09 | 6/30/10 | $6,665,461* | $4,999,096 | $1,666,365 |

*Includes addition of sixth coach car plus fuel @ $2.15/gal and fuel economy @ 2.15 gal/train mile

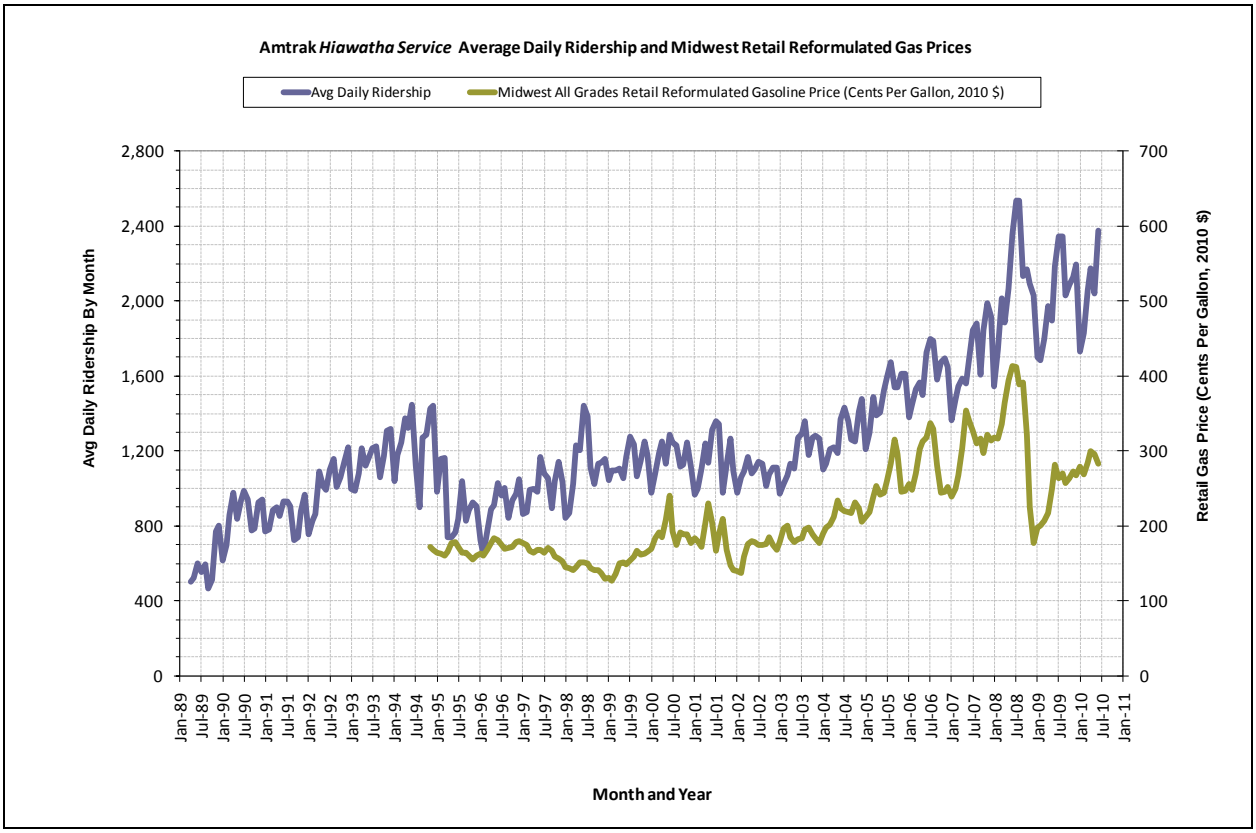
**August 1, 2009:** A sixth coach car is added to all *Hiawatha Service* trains to accommodate growing ridership.

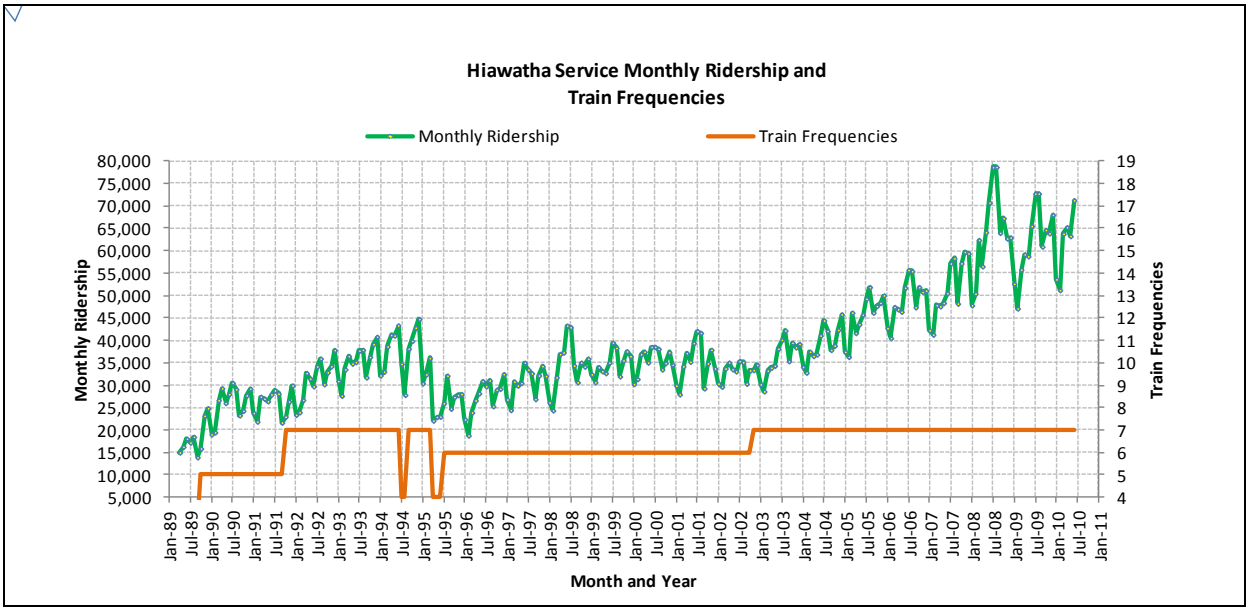
**December 2009: *Hiawatha Service* ridership for CY 2009 is 741,780.**

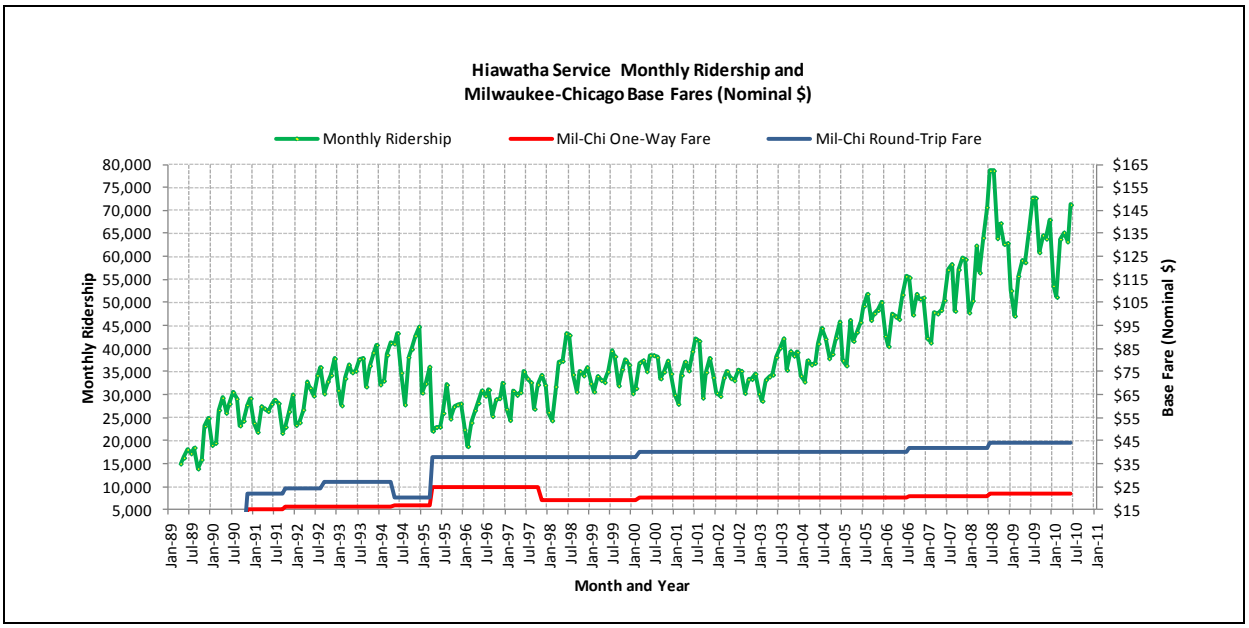
**December 2010: *Hiawatha Service* ridership for CY 2010 is 792,848.**

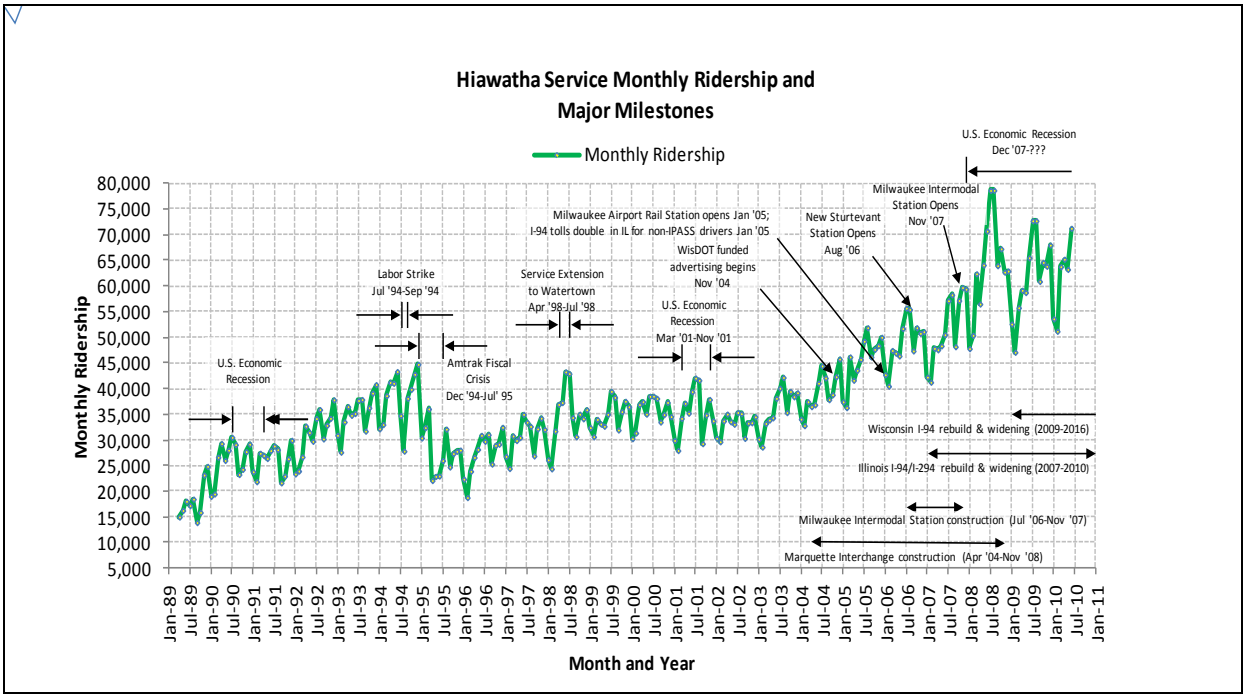
# Appendix 6-C: Amtrak Hiawatha Service Ridership Trends with Other Factors

*Appendix 6-C provides additional ridership information for the Amtrak* Hiawatha Service*, financially supported by the State of Wisconsin and the State of Illinois. The charts show ridership, with various factors for reference such as fuel prices, train frequencies, ticket prices, and service improvements and construction milestones. A description of the service can be found in Chapter 6: Intercity Passenger Rail.*


Amtrak *Hiawatha Service* Average Daily Ridership and Midwest Retail Reformulated Gas Prices
Avg Daily Ridership
Midwest All Grades Retail Reformulated Gasoline Price (Cents Per Gallon, 2010 $)
Avg Daily Ridership By Month
Retail Gas Price (Cents Per Gallon, 2010 $)
Month and Year


Hiawatha Service Monthly Ridership and Train Frequencies
Monthly Ridership
Train Frequencies
Monthly Ridership
Train Frequencies
Month and Year


Hiawatha Service Monthly Ridership and
Milwaukee-Chicago Base Fares (Nominal $)
Monthly Ridership
Mil-Chi One-Way Fare
Mil-Chi Round-Trip Fare
Monthly Ridership
Base Fare (Nominal $)
Month and Year


Hiawatha Service Monthly Ridership and
Major Milestones
Monthly Ridership
U.S. Economic Recession
Dec '07-???
Milwaukee Intermodal
Station Opens
Nov '07
Milwaukee Airport Rail Station opens Jan '05;
I-94 tolls double in IL for non-IPASS drivers Jan '05
New Sturtevant
Station Opens
Aug '06
WisDOT funded
advertising begins
Nov '04
Labor Strike
Jul '94-Sep '94
Service Extension
to Watertown
Apr '98-Jul '98
U.S. Economic
Recession
Mar '01-Nov '01
U.S. Economic
Recession
Amtrak Fiscal
Crisis
Dec '94-Jul' 95
Wisconsin I-94 rebuild & widening (2009-2016)
Illinois I-94/I-294 rebuild & widening (2007-2010)
Milwaukee Intermodal Station construction (Jul '06-Nov '07)
Marquette Interchange construction (Apr '04-Nov '08)
Monthly Ridership
Month and Year

# Appendix 6-D: Wisconsin Intercity Passenger Rail Station Inventory

The *Wisconsin Rail Plan 2030* Wisconsin Intercity Passenger Rail Station Inventory provides detailed information about each station in Wisconsin. Wisconsin's passenger rail stations vary in the services offered, condition, accessibility and Americans with Disabilities Act (ADA) compliance, as well as connectivity to communities and to other modes. The inventory was conducted to help identify needs and guide future investment decisions. It also provides information on stations close to the Wisconsin border in neighboring states, for informational purposes.

## Accessibility and ADA Compliance

Ensuring that train stations are fully accessible to those with disabilities is a priority and a federal requirement. The inventory considered attributes of accessibility for railroad stations and compliance with ADA standards. This includes:

- availability of accessible ADA compliant parking spaces
- accessible path to building and accessible building doors
- accessible restrooms
- ADA compliant platforms: platform surface condition, platform height (should be at least eight inches above the top of rail), platform edge treatments (should be bright-colored tactile strip on edge of platform)
- ADA compliant elevators (if applicable)
- ADA compliant static directional signage (size, height of sign, etc.)
- ADA compliant changeable message signs (i.e. train status, etc.)
- ADA compliant public address systems
- Availability of wheelchair lifts for boarding and alighting trains

Amtrak defines stations in three categories: barriers to accessibility, barrier free, and fully accessible. The Wisconsin Department of Transportation (WisDOT) used this as a guide, but conducted its own assessment of accessibility by describing specifically any barriers to accessibility or non-ADA compliant features that need to be remedied.

## Physical Condition of Station

The condition for each station was rated as poor, fair, good, very good, or excellent. Condition refers to the actual physical condition of the parking lot, station building exterior and interior, shelters or

canopies, and platforms. The condition was determined based on a brief visual inspection during the station site visits.

## Passenger Information

WisDOT recognizes that good passenger information is critical to all public transportation users. Passengers should have easy access to schedules and route information, and be alerted to schedule changes, delays, platform changes, re-routings, etc. Appropriate passenger information is especially important to provide accessibility to passengers with disabilities, and stations should be compliant with ADA standards for passenger information. Each station was evaluated for passenger information availability.

## Suggested improvements for stations

The inventory identifies suggested improvements that are recommended to better accommodate existing and/or new intercity passenger rail services at each Wisconsin station and to improve accessibility. While there is currently no state funding source for these projects, some projects could be funded under the state rail capital assistance program if that program is funded (a recommendation of the *Wisconsin Rail Plan 2030*) and/or by Amtrak, federal funds, a station owner, or a community. Primary responsibility for stations and ADA compliance lies with Amtrak and the station owners. Any projects at stations would involve Amtrak and be consistent with Amtrak Station Program and Planning Standards and Guidelines.

## Passenger on/offs at stations

The number of passengers using a station can be measured by station on/offs, or the number of passengers getting on or off a train at that station. Figures 1 and 2 below show passenger on/offs at Wisconsin stations with *Hiawatha Service* and Wisconsin stations served only by the *Empire Builder* over the five year period 2004 – 2009. Station on/offs at all Wisconsin stations, whether served by the Amtrak *Hiawatha Service*, the Amtrak *Empire Builder*, or both, generally trended upward as Amtrak ridership in Wisconsin and the nation increased. Ridership charts for each individual station are shown following the inventory tables.

**Figure 1: Wisconsin stations with *Hiawatha Service* – number of passenger on/offs**

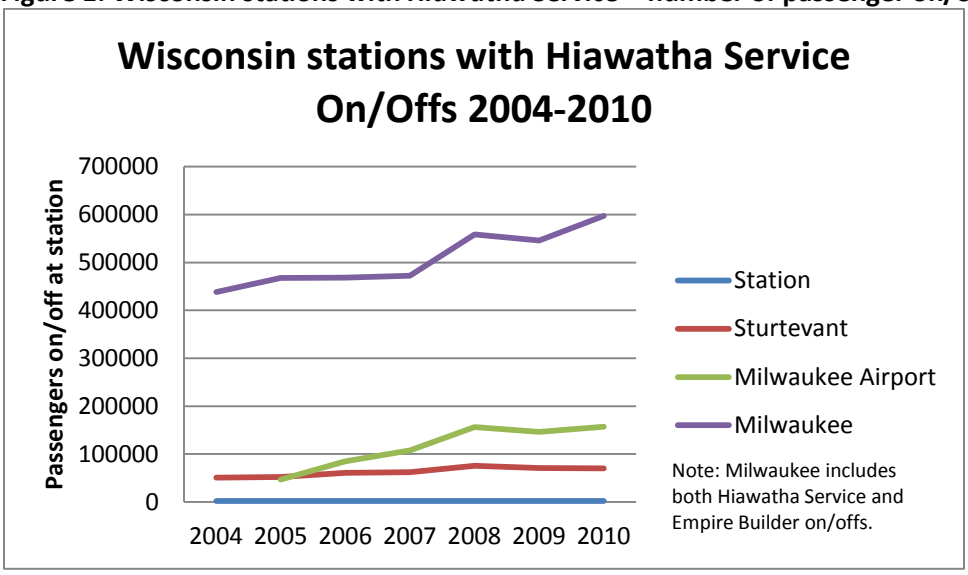
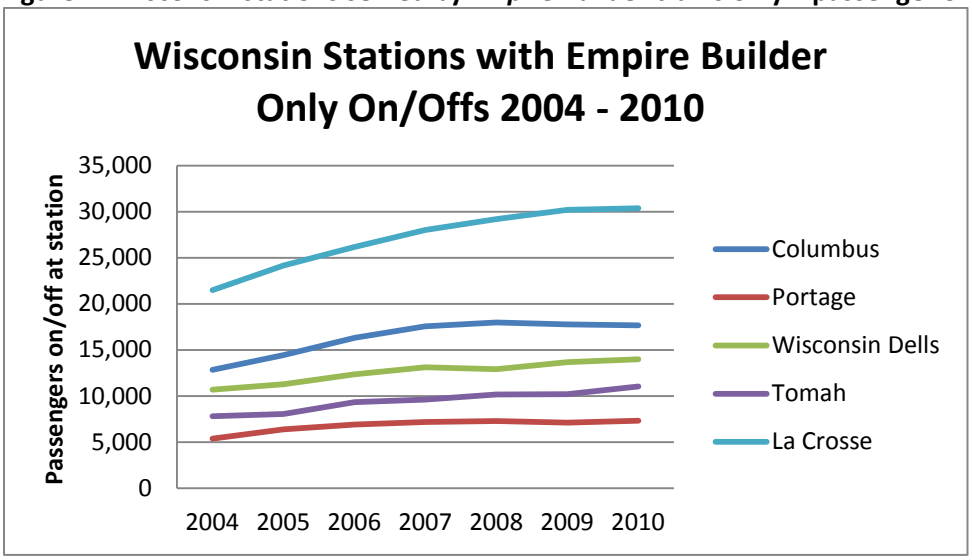


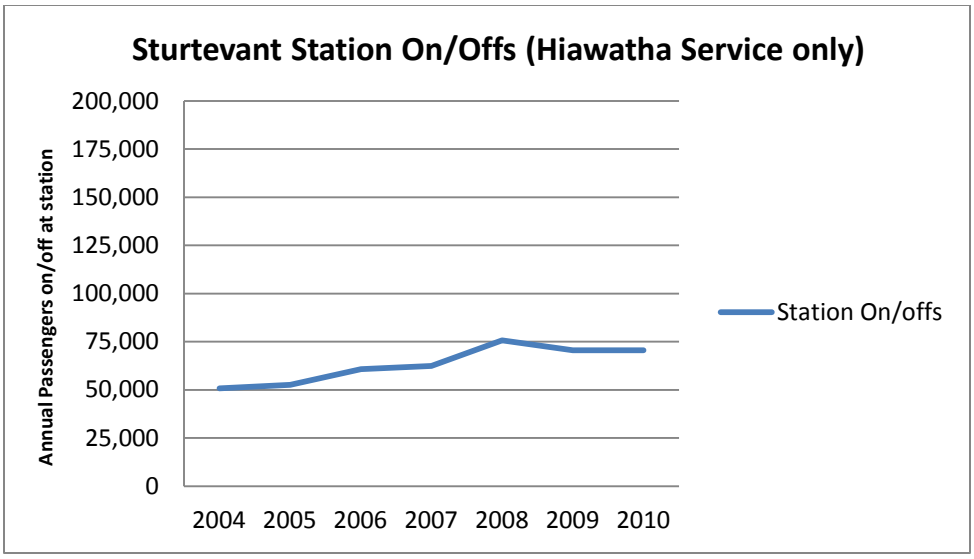

**Figure 2: Wisconsin stations served by *Empire Builder* trains only – passenger on/offs**




The following Wisconsin stations are profiled:

- Sturtevant
- Milwaukee Airport Rail Station
- Milwaukee Intermodal Station
- Columbus
- Portage
- Wisconsin Dells
- Tomah
- La Crosse

| Sturtevant, WI | | |
|---|---|---|
| **Owner:** | | Village of Sturtevant |
| **Operator/management:** | | Village of Sturtevant |
| **Passenger rail services:** | | *Hiawatha Service* |
| **Frequency:** | | 14 train stops daily (seven trains each direction), 12 on Sunday |
| **Ridership:** | | 70,601 (calendar year 2010) |
| **Average daily station on/offs (CALENDAR YEAR 2009):** | | 193 |
| **Parking spaces:** | | 169, including accessible parking spaces. 15 minute parking is free. Long-term parking is $3. |
| **Facilities, services, and passenger information:** | | • Enclosed heated waiting room with seating, restrooms, vending, and air conditioning<br>• Two shelters on two 400-foot platforms with benches<br>• Public announcement system operated by train conductors; no electronic passenger information screens are in the station<br>• Enclosed pedestrian bridge with elevators to access platforms. |
| **Attendant:** | | Caretaker |
| **Ticketing facility:** | | Amtrak Quik-Trak (electronic ticketing machine) |
| **Checked baggage:** | | No |
| **ADA compliance:** | | • ADA compliant accessible building (however, no automatic doors to building), platform access, and platforms at eight inches above the top of rail with tactile strip. Automatic doors to pedestrian bridge platform access.<br>• Trains require a wheelchair lift<br>• Public announcement system allows train conductors to remotely make announcements on station speakers. |
| **Condition (poor, fair, good, very good, excellent):** | | Excellent |
| **Year built:** | | 2006 |
| **Intermodal connections:** | Intercity bus connections: | None |
| | Transit connections: | Belle Urban Transit: Serves station seven days per week. Frequency every 30 minutes weekday, every 45-60 minutes weekend. |
| | Bike parking facility: | Bike racks outside station building |
| **Projects under way or completed (2010):** | | ARRA-funded information kiosk on platform. Completed. |
| **Improvements needed to accommodate existing and/or new services:** | | Real-time passenger information screen. Improved signage to and on platforms. Automatic accessible doors to station building. Currently only door to elevator is automatic. |



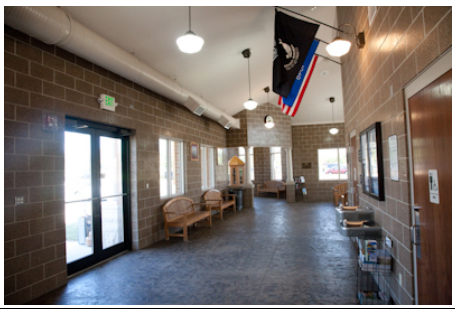

**Sturtevant Rail Station Photos:**

Sturtevant station: platforms with two platform canopies/shelters on each platform; safety fence between tracks.

Sturtevant station: side of station building showing sidewalk connections and bike rack.


Sturtevant station: pedestrian access to platforms and pedestrian bridge. Platform canopies/shelters.

Sturtevant station: View of parking lot, driveway, front of station building, enclosed pedestrian bridge access to platforms, and platform canopy.

Sturtevant station: Station interior including waiting areas, vending, and ticketing machine.



Sturtevant station: Platforms with shelters, wheelchair lift, tactile strip on edge, lighting, access bridge and towers.

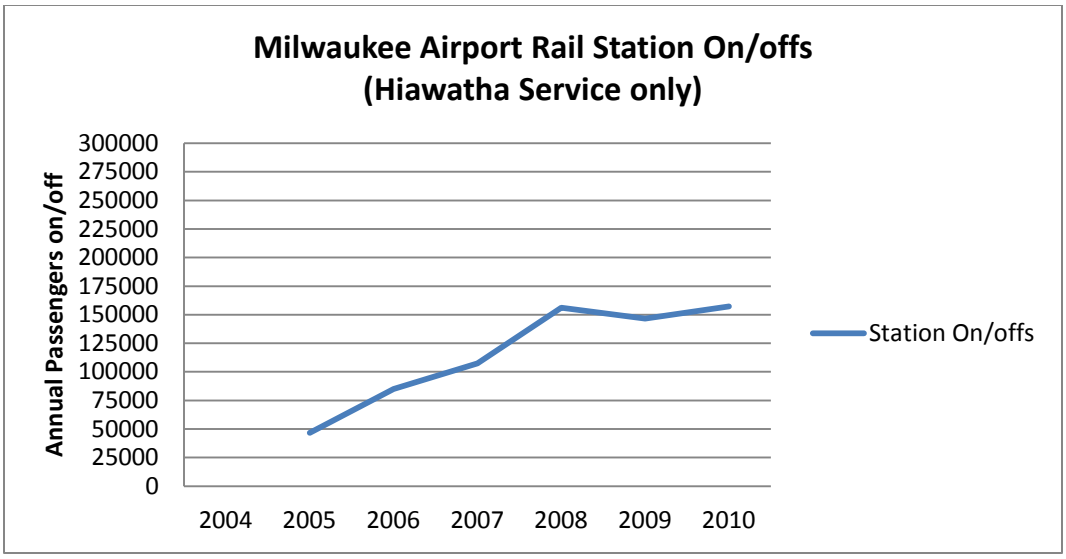

Sturtevant station: Accessible entrance to elevator and pedestrian bridge to platforms.


Parking


Station exterior with signage

Accessible parking stalls and accessible entrance

| Milwaukee Airport Rail Station | | |
|---|---|---|
| **Owner:** | | Building: State of Wisconsin<br>Platforms: State of Wisconsin (located on property owned by Canadian Pacific Railway)<br>Parking: Milwaukee County |
| **Operator/management:** | | Milwaukee County |
| **Passenger rail services:** | | *Hiawatha Service* |
| **Frequency:** | | 14 train stops daily (seven trains each direction), 12 on Sunday |
| **Annual ridership:** | | 157,152 (Calendar Year 2010) |
| **Average daily station on/offs :** | | 431 (Calendar Year 2010) |
| **Parking spaces:** | | 281, including accessible parking spaces |
| **Facilities, services, and passenger information:** | | • Enclosed heated waiting room with seating, restrooms, vending machines, and Amtrak Quick-trak ticketing machine.<br>• One 400-foot platform with canopy<br>• PA system operated by train conductors<br>• Passenger information screens in the station show static train schedule and dynamic real-time airport flight information (arrivals and departures status.) |
| **Attendant:** | | None |
| **Ticketing facility:** | | Amtrak Quik-Trak (electronic ticketing machine) |
| **Checked baggage:** | | No |
| **ADA compliance:** | | • ADA compliant building and platforms at eight inches above top of rail with tactile strip.<br>• Trains require a wheelchair lift.<br>• Public announcement system allows train conductors to remotely make announcements from trains on station speakers |
| **Condition (poor, fair, good, very good, excellent):** | | Excellent |
| **Year built:** | | 2005 |
| **Intermodal connections:** | Intercity bus connections: | Connections to Badger Coaches and Airport Express/Coach USA at airport terminal (reached via shuttle from station). |
| | Transit connections: | Connections to Milwaukee County Transit System transit service at airport terminal (reached via shuttle from station). |
| | Bike parking facility: | Bike rack |
| **Projects under way or completed (2010):** | | Extend platform to 800 feet (ARRA funded). Completed. |
| **Improvements needed to accommodate existing and/or new services:** | | Add real-time train arrival/departure information to existing electronic displays in the station. Proposed new services may require a second platform with overhead access. |


Milwaukee Airport Rail Station On/offs
(Hiawatha Service only)
Annual Passengers on/off
300000
275000
250000
225000
200000
175000
150000
125000
100000
75000
50000
25000
0
2004
2005
2006
2007
2008
2009
2010
Station On/offs

**Milwaukee Airport Rail Station Photos:**


Station interior: waiting area, ticketing machine, and real-time passenger information displays with arrival and departure status of trains and flights.

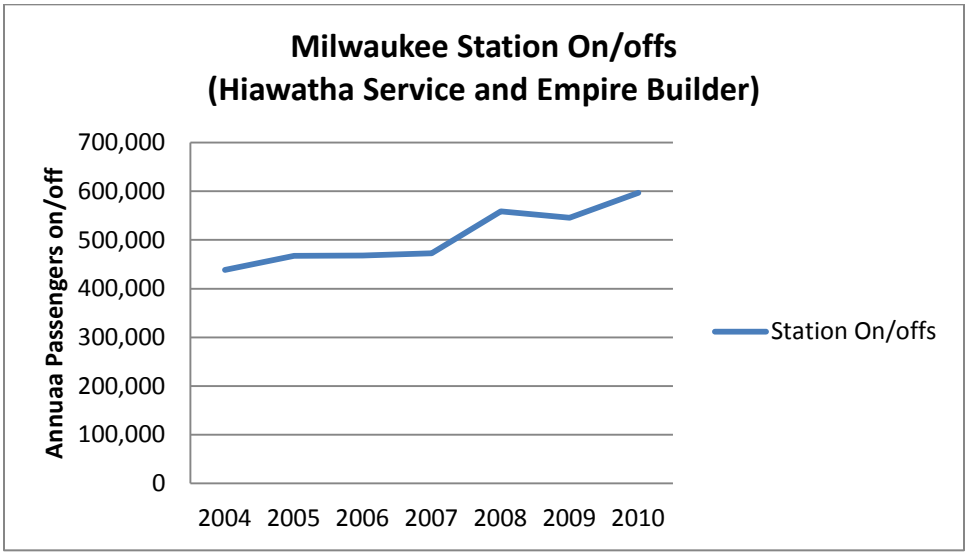

Station building, covered walkways, driveway, passenger pick-up and drop off area, and parking lot.

ADA-compliant platform with yellow tactile strip on edge, eight inches above top of rail, platform, lighting, and canopy. Small platform signs.

| Milwaukee Intermodal Station | | |
|---|---|---|
| **Owner:** | | Building: State of Wisconsin<br>Platforms: Canadian Pacific Railway<br>Parking: State of Wisconsin |
| **Operator/management:** | | Milwaukee Intermodal Partners |
| **Passenger rail services:** | | Amtrak *Hiawatha Service* and *Empire Builder* |
| **Frequency:** | | 16 train stops daily (eight trains each direction), 14 on Sunday |
| **Ridership:** | | 596,906 (Calendar Year 2010) |
| **Average daily station on/offs :** | | 1,635 (Calendar Year 2010) |
| **Parking spaces:** | | 278, including accessible parking spaces |
| **Facilities, services, and passenger information:** | | • Full service station with heated and air conditioned waiting areas, restrooms, passenger information and assistance, ticketing, checked baggage, café, vending machines, and taxi stand<br>• Electronic passenger information screen in the station shows daily train schedule, but does not show real-time train arrival/departure status<br>• Three platforms with underground access |
| **Attendant:** | | Fully staffed |
| **Ticketing facility:** | | Amtrak ticket agents, Amtrak Quik-Trak (electronic ticketing machine) |
| **Checked baggage:** | | Yes |
| **ADA compliance:** | | ADA compliant building but train shed has poor accessibility:<br>• Platforms are below top of rail and not ADA compliant.<br>• Access ramps to platforms are not ADA compliant. |
| **Condition (poor, fair, good, very good, excellent):** | | Terminal Building: Excellent.<br>Train Shed (including platforms): Poor. Pedestrian tunnel is leaking and has broken concrete, poor lighting, and poor signage. Platforms are in poor condition. |
| **Year built:** | | Terminal Building: 2007. Train Shed: 1965 |
| **Intermodal connections:** | Intercity bus connections: | • Greyhound: Chicago, Fond du Lac, Oshkosh, Appleton, Green Bay, Madison, Wisconsin Dells, Tomah, Eau Claire, Minneapolis/St. Paul<br>• Lamers: Fond du Lac, Oshkosh, Appleton, Stevens Point, Wausau. *Amtrak Thruway*<br>• Indian Trails: Sheboygan, Manitowoc, Green Bay, Marinette, Upper Peninsula of Michigan. *Amtrak Thruway*<br>• Wisconsin Coach Lines/Coach USA: Kenosha, Racine<br>• Jefferson Lines: Madison, La Crosse, Winona, MN, Rochester, MN, Minneapolis/St. Paul. Sheboygan, Manitowoc, Green Gay, Wausau, Eau Claire, *Amtrak Thruway*<br>Bus ticketing, information, and waiting area at station. |
| | Transit connections: | Milwaukee County Transit System (Only Route 57 serves station directly), seven days/ week, every 18 – 30 minutes, 5 am – 12:30 am. |
| | Bike parking facility: | Bike lockers and bike rack |
| **Projects under way or completed (2010):** | | • Reconstruct train concourse and platforms.<br>  o ADA compliant platforms raised to eight/ fifteen inches above top of rail with tactile strip.<br>  o Pedestrian bridge access to platforms with escalators and elevators will be ADA compliant.<br>  o New signage.<br>• ARRA funded station security and safety projects. |
| **Improvements needed to accommodate existing and/or new services:** | | • Display of real-time passenger information on screens (currently only static information displayed). |

Milwaukee Intermodal Station

- Completion of new train shed with new platforms and platform access, resulting in a fully accessible station.



**Milwaukee Intermodal Station Photos:**

Milwaukee Intermodal Station: building, bus bays for intercity buses, drop-off area, and pedestrian access.

Milwaukee Intermodal Station: interior bus waiting area.

Milwaukee Intermodal Station: interior Amtrak and bus waiting areas.

Bus bays

Terminal exterior with bus entrance/exit pedestrian street access, passenger pick-up/drop-off area.

Exit to platforms


Amtrak ticketing

Tracks and train shed

Train shed: platform (non-ADA compliant due to width near tunnel

Platform access ramp

Deteriorated girders and roof

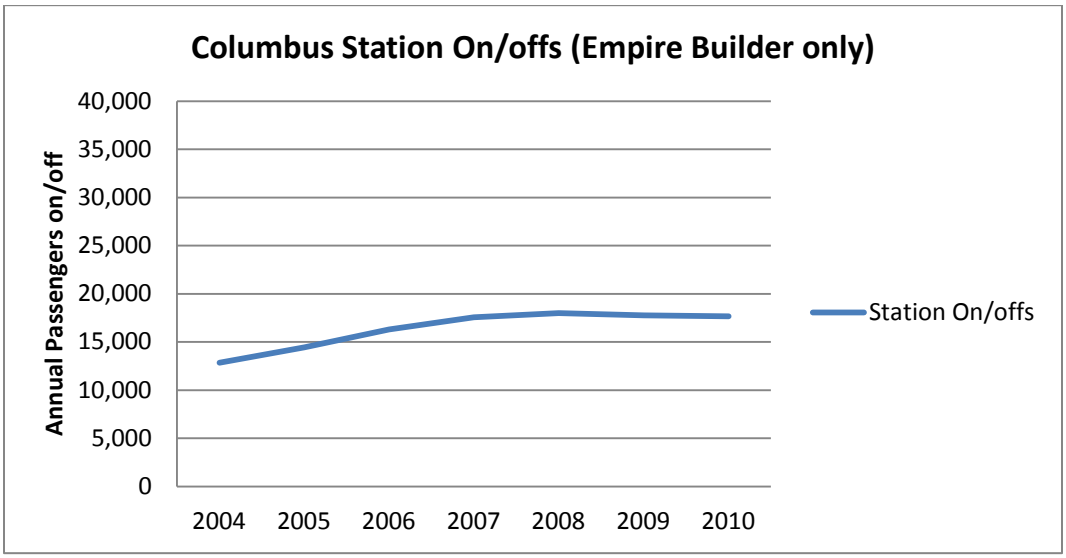
View of one of the below-top-of-rail platforms



Ramps between platforms and tunnels: non-ADA compliant. Broken concrete and poor condition of tunnel.

| Columbus, WI | | |
|---|---|---|
| **Owner:** | | Building: CMC Heartland Partners<br>Platforms: Canadian Pacific Railway |
| **Operator/management:** | | Amtrak |
| **Passenger rail services:** | | Amtrak *Empire Builder* |
| **Frequency:** | | Two train stops daily (one train each direction) |
| **Ridership:** | | 17,659 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 48 (Calendar Year 2010) |
| **Parking spaces:** | | Summer: 60 spaces<br>Winter: 35 spaces |
| **Facilities, services, and passenger information:** | | Enclosed heated waiting room with seating and restrooms and window AC unit. Two platforms below top of rail (not raised). No platform canopies. Passenger information posted and available, but no information screens in the station. No vending. |
| **Attendant:** | | Yes |
| **Ticketing facility:** | | Amtrak ticketing agent |
| **Checked baggage:** | | Yes |
| **ADA compliance:** | | Building and platform are not ADA compliant and have poor accessibility.<br>• There are steps to enter building, requires a portable ramp to be used for wheelchairs entering building<br>• Platforms are below top of rail (not raised)<br>• No accessible parking spaces. Wheelchair lift being installed (2010) |
| **Condition (poor, fair, good, very good, excellent):** | | Fair. Driveway and parking lot are not paved and in poor condition with no striping. Platforms uneven, below top of trail. Poor signage. Access to building and platforms poor. Minimal lighting. |
| **Year built:** | | 1906 |
| **Intermodal connections:** | Intercity bus connections: | Lamers Bus Lines (Madison-Green Bay route) |
| | Transit connections: | None |
| | Bike parking facility: | Bike rack outside building accommodates up to four bikes. Three free bikes are provided by the community at the station. |
| **Projects under way or completed (2010):** | | ARRA funded Amtrak Mobility First improvements[1]: wheelchair lift with enclosure and pad, sidewalk to platform, sidewalk and curb from parking to platform. Completed in 2010. |
| **Improvements needed to accommodate existing and/or new services:** | | • Completion of all the required accessibility projects so that the station is fully accessible. This includes the wheelchair lift currently under way, but also platform improvements (raised with tactile strips, lighting) and building improvements (accessible entry and door to building)<br>• Parking lot and driveway improvements including paving, striping, lighting, and accessible spaces<br>• Sidewalk connection from building to street<br>• New up-to-date Amtrak signage and information<br>• Canopy or shelter recommended on second platform (across from station building) |

[1] Amtrak Mobility First Program is an ARRA funded initiative to improve accessibility at Amtrak stations around the nation.



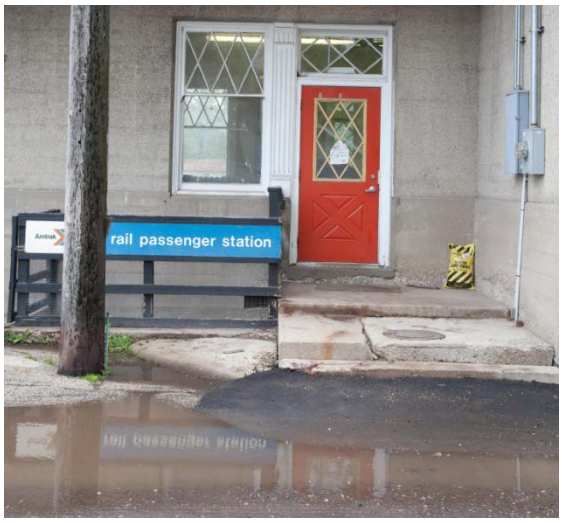

**Columbus Rail Station Photos:**

Columbus rail station: parking lot (gravel with drainage problem)

Columbus rail station: entry driveway to station and parking

Columbus rail station: platform next to building (below top of rail, no tactile strip on edge)

Columbus rail station: view of station from opposite platform (below top of rail, uneven surface, no tactile strip on edge)

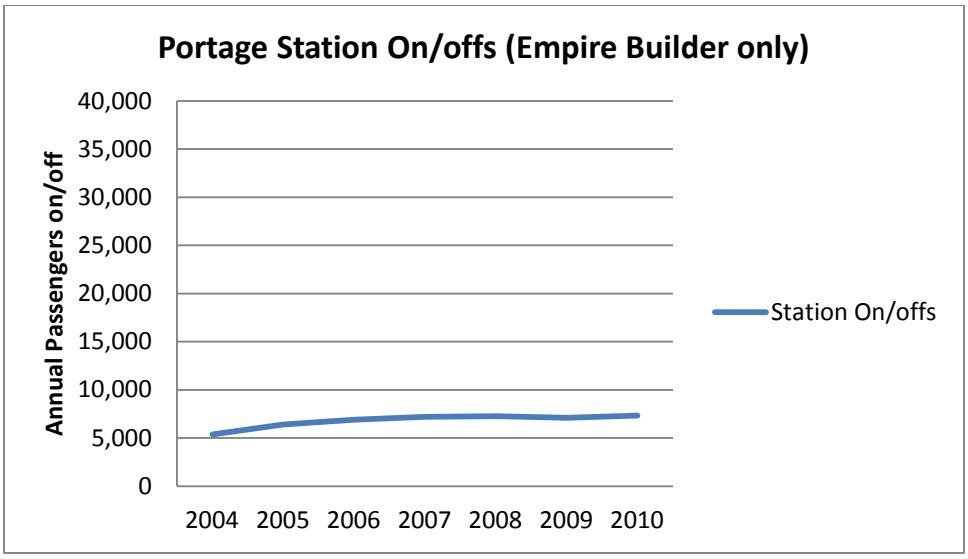



Columbus rail station: entrance to building from driveway and parking (note steps, non-accessible door (narrow, not automatic), and drainage problem).

Columbus rail station: north side platform (note lack of shelter)

Columbus rail station: waiting room and ticket window

| Portage | | |
|---|---|---|
| **Owner:** | | Canadian Pacific Railway |
| **Operator/management:** | | Amtrak |
| **Passenger rail services:** | | Amtrak *Empire Builder* |
| **Frequency:** | | Two train stops daily (one train each direction) |
| **Ridership:** | | 7,322 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 20 (Calendar Year 2010) |
| **Parking spaces:** | | Limited long-term parking available in the Canadian Pacific Railway (CP Rail) parking lot. CP Rail allows Amtrak long-term customers to use some spaces in the CP Rail Portage rail yard and offices parking lot if available. |
| **Facilities, services, and passenger information:** | | Enclosed shelter on platform (no heat or air conditioning), no restrooms. No public announcement system. No schedule information. One short platform of approximately 250 feet (no canopy). No vending. Limited seating in shelter. |
| **Attendant:** | | None |
| **Ticketing facility:** | | None |
| **Checked baggage:** | | No |
| **ADA compliance:** | | Enclosed shelter accessible. Platforms do not have tactile strip, and are below top of rail. Wheelchair lift is being installed in 2010. Two well-marked accessible parking spaces. Door to shelter not automatic. No public announcement system. |
| **Condition (poor, fair, good, very good, excellent):** | | Good. Platform and parking has new blacktop |
| **Year built:** | | 1990 |
| **Intermodal connections:** | Intercity bus connections: | Lamers Bus Lines (Madison-Wausau route). |
| | Transit connections: | Portage shared-ride taxi |
| | Bike parking facility: | None. |
| **Projects under way or completed (2010):** | | Amtrak Mobility First Project: Wheelchair lift, enclosure, and pad. $31,000 (ARRA funded). Completed in 2010. |
| **Improvements needed to accommodate existing and/or new services:** | | • New longer platform at eight inches above top of rail with tactile strip<br>• Improved information and signage<br>• Additional Amtrak parking<br>• Restrooms<br>• Heated and air conditioned waiting area.<br>• Public announcement system |

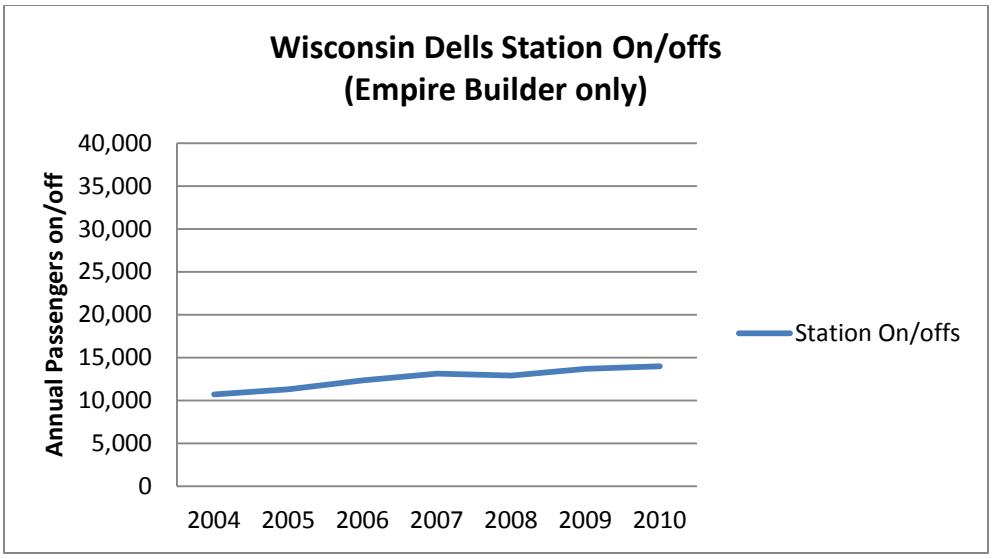



**Portage Station Photos**

Enclosed shelter with benches; accessible parking spaces

Platform: Below top of rail. Recently resurfaced.

| Wisconsin Dells | | |
|---|---|---|
| **Owner:** | | Building: City of Wisconsin Dells<br>Platforms: Canadian Pacific Railway |
| **Operator/management:** | | City of Wisconsin Dells |
| **Passenger rail services:** | | Amtrak *Empire Builder* |
| **Frequency:** | | Two train stops daily (one train each direction). |
| **Ridership:** | | 13,981 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 38 (Calendar Year 2010 |
| **Parking spaces:** | | Approximately 25 parking spaces adjacent to the station, municipal parking lots nearby. Nine one-hour slots available (paved), long-term spaces are gravel, unmarked. Drainage problems on the gravel area. |
| **Facilities, services, and passenger information:** | | • Enclosed waiting area with heating and AC and restrooms<br>• Passenger information from caretaker. A schedule and map is posted and brochures available<br>• One raised asphalt platform with benches (but no canopy/shelter)<br>• Rental car drop-off box and pay phone (no vending) |
| **Attendant:** | | Caretaker |
| **Ticketing facility:** | | None |
| **Checked baggage:** | | No |
| **ADA compliance:** | | • Raised platforms above top of rail but not at required eight inches<br>• Platform has tactile strip<br>• Trains require wheelchair lift<br>• Well-marked accessible parking spaces with curb ramp<br>• Small step to get into building. Door to building not automatic and narrow<br>• No public announcement system. |
| **Condition (poor, fair, good, very good, excellent):** | | Very good. Part of parking lot unpaved and not striped. Drainage problems in this area. |
| **Year built:** | | 1989 |
| **Intermodal connections:** | Intercity bus connections: | Greyhound serves Wisconsin Dells but stop is approximately 1 mile from the Amtrak station. |
| | Transit connections: | None (but private taxi available) |
| | Bike parking facility: | None |
| **Projects under way or completed (2010):** | | ARRA funded Mobility First improvements: New wheelchair lift with enclosure, pad. Completed in 2010. |
| **Improvements needed to accommodate existing and/or new services:** | | • New platform at eight inches above top of rail with tactile strip<br>• Accessibility improvements to building entrances (doors)<br>• Canopy or shelter recommended<br>• Paving of entire parking lot with striping<br>• Public announcement system installed<br>• For new services, passenger information screens |




**Wisconsin Dells Station Photos**

Station building exterior

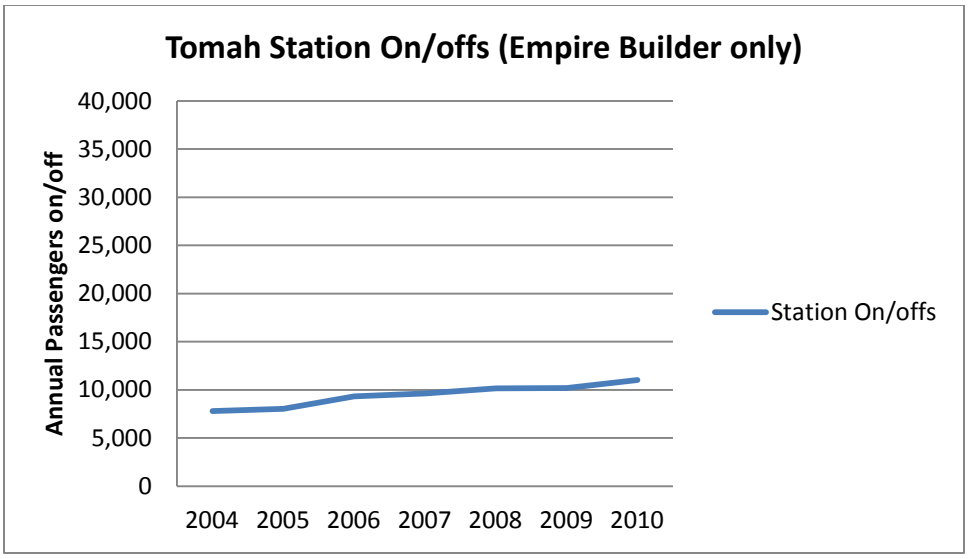
Station building and accessible parking stalls

Platform at top of rail with tactile strip

Gravel parking lot and platform

Gravel parking with drainage problems

| Tomah | | |
|---|---|---|
| **Owner:** | | Canadian Pacific Railway |
| **Operator/Management:** | | Canadian Pacific Railway |
| **Passenger rail services:** | | Amtrak *Empire Builder* |
| **Frequency year:** | | Two train stops daily (one train each direction) |
| **Ridership:** | | 11,035 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 30 (Calendar Year 2010) |
| **Parking spaces:** | | Approximately 15 parking spaces |
| **Facilities, services, and passenger information:** | | • Station building provides enclosed heated waiting area with restrooms but no air conditioning<br>• One platform with a shelter with bench<br>• Vending machine<br>• Caretaker provides train status information on dry-erase board in waiting room |
| **Attendant:** | | Caretaker |
| **Ticketing facility:** | | None |
| **Checked baggage:** | | No |
| **ADA compliance:** | | Station, pathways and platform have barriers limiting accessibility<br>• Platform has cracks and is below top of rail<br>• Station building not accessible (step required to enter waiting room)<br>• No accessible parking spaces |
| **Condition (poor, fair, good, very good, excellent):** | | Good. Platform in poor condition, except for new ADA mini-high platform. Parking lot has been paved and striped. Inadequate signage on property. Station building and parking lot has no Amtrak signage. Interior of waiting room and restrooms are clean with newer fixtures. |
| **Year built:** | | Station building built in early 1900s |
| **Intermodal connections:** | Intercity bus connections: | Greyhound serves Tomah but bus stop is about two miles from the Amtrak station |
| | Transit connections: | Tomah shared-ride taxi |
| | Bike parking facility: | None |
| **Projects under way or completed (2010):** | | ARRA funded Mobility First improvements:<br>• ADA parking spaces and wheelchair lift (completed)<br>• A new 550-foot eight inches above top of rail platform with tactile edge (project postponed). |
| **Improvements needed to accommodate existing and/or new services:** | | • New platform at eight inches above top of rail with tactile strip<br>• Accessible entrance to station building.<br>• Improved signage<br>• Improved exterior lighting |




Building, non-accessible entrance to waiting area, vending

Shelter on platform.

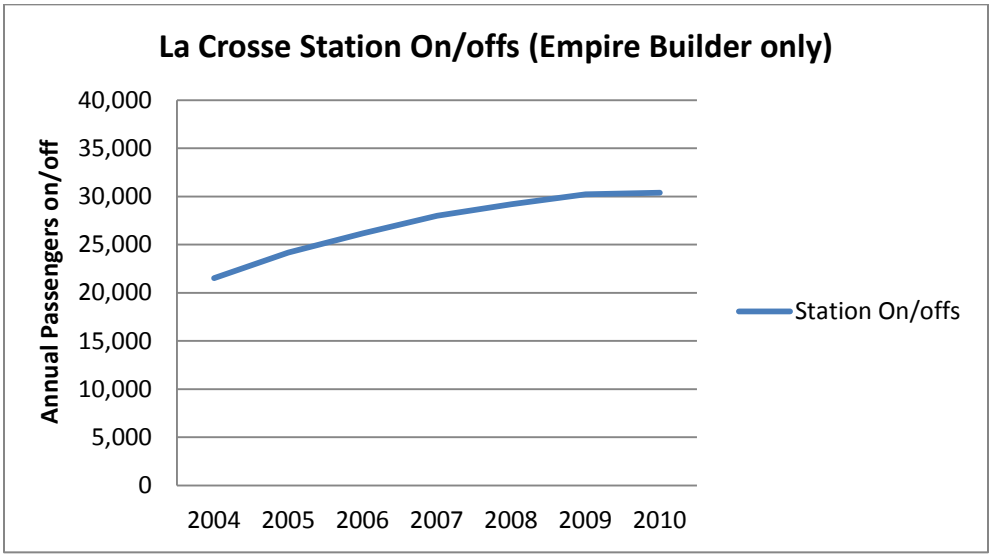

Front of building (from parking/drop off area)

View of building from platform. Note cracked pavement and drainage problem.

Interior of waiting room. Door not accessible.

Platform. No tactile edge, below top-of-rail, and cracked pavement

| La Crosse | | |
|---|---|---|
| **Owner:** | | Building and parking: La Crosse Depot LLC<br>Platforms: Canadian Pacific Railway |
| **Operator/management:** | | La Crosse Depot LLC, |
| **Passenger rail services:** | | Amtrak *Empire Builder* |
| **Frequency year:** | | Two train stops daily (one train each direction). |
| **Ridership:** | | 30,395 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 83 (Calendar Year 2010) |
| **Parking spaces:** | | Approximately 50 free parking spaces available to Amtrak passengers, 20 short-term and 30 long-term. Long-term requires a free permit. |
| **Facilities, services, and passenger information:** | | • Full service station; enclosed waiting area with heating and air conditioning, restrooms, passenger information, ticketing, and checked baggage<br>• One asphalt platform raised slightly above top of rail (2 – 4 inches) with tactile strip<br>• Canopy does not cover platform but is adjacent to station building |
| **Attendant:** | | Fully staffed |
| **Ticketing facility:** | | Amtrak ticket agent |
| **Checked baggage:** | | Yes |
| **ADA compliance:** | | Building accessible from parking lot and to platform. Platform is below eight inches above top of rail but is raised with tactile strip. Three accessible parking spaces but not striped well. No public announcement system. |
| **Condition (poor, fair, good, very good, excellent):** | | Very good. Parking lot in poor condition with cracked concrete and no striping and inadequate lighting. Building in very good to excellent condition. Outdated Amtrak sign on building. |
| **Year built:** | | 1927, renovated in 1998. *Note*: Station is on the National Register of Historic Places. |
| **Intermodal connections:** | Intercity bus connections: | Jefferson Lines serves La Crosse at the La Crosse Grand River Station downtown, approximately one mile from the Amtrak station. Jefferson Lines serves Winona, MN, Rochester, MN, Minneapolis/St. Paul, Sparta, Madison, and Milwaukee. |
| | Transit connections: | La Crosse MTU bus stop is a three block walk from the station. Another stop on a different route is located five blocks from station. Frequencies every 30 minutes. |
| | Bike parking facility: | None |
| **Projects under way or completed (2010):** | | ARRA funded Mobility First improvements: Wheelchair lift with enclosure, pad, and sidewalk to platform. $31,000 was completed in 2010. La Crosse plans to provide new pavement between the station building and platform, and Amtrak plans to construct a new platform. |
| **Improvements needed to accommodate existing and/or new services:** | | • New platforms at eight inches above top- of-rail with tactile strip.<br>• Parking lot resurfacing and striping<br>• Resurfacing areas between station building and platform (where ballast currently is located)<br>• Public announcement system<br>• New signage on building and on platforms and parking lot |




Front of building and parking

Platform side of building/canopy

Accessible entrance to building from platforms (on left)

Restored interior waiting room and ticket counter

Parking (note cracked concrete and no striping)

Area between platform and building. Note ballast and gravel areas, and cracked pavement.

Building and platform and canopy. Note large area between building and platform with ballast.


Platform with tactile edge and sign

# Amtrak *Hiawatha Service* and/or *Empire Builder* Stations in Illinois and Minnesota near Wisconsin Border

(For informational purposes only)

| Chicago Union Station | | |
|---|---|---|
| **Owner:** | | Chicago Union Station Company |
| **Operator/management:** | | Amtrak |
| **Passenger rail services (to Wisconsin):** | | Amtrak *Hiawatha Service*, *Empire Builder* |
| **Frequency:** | | 16 train stops daily (eight trains each direction), 14 on Sunday |
| **Ridership:** | | Not available |
| **Average Daily Station on/offs:** | | Not available |
| **Parking spaces:** | | 500 short-term, 500 long-term. Parking is also available at nearby private parking lots. |
| **Facilities, services, and passenger information:** | | Full service station with ticketing, checked baggage, Red Cap assistance, enclosed waiting room, restrooms, passenger information and assistance, food service, telephones, and taxi stand. |
| **Attendant:** | | Fully staffed station |
| **Ticketing facility:** | | Amtrak ticket agents, Amtrak Quik-Trak (electronic ticketing machine) |
| **Checked baggage:** | | Yes |
| **ADA compliance:** | | Access to stations, platforms and trains. Trains require a wheelchair lift. |
| **Condition (poor, fair, good, very good, excellent):** | | Good. Train shed has little natural light and poor ventilation system (exhaust from trains is noticeable in the underground train shed). |
| **Year built:** | | 1925. Extensive renovations in 1991. |
| **Intermodal connections:** | Intercity bus connections: | • Van Galder/Coach USA: Rockford, IL, S. Beloit, IL (Beloit, WI), Janesville, WI, and Madison, WI. *Amtrak Thruway*<br>• Greyhound Lines: Indianapolis, IN, Louisville, KY<br>• Megabus: Detroit, St. Louis, Minneapolis/St. Paul, Cleveland, Columbus, Cincinnati, Des Moines, Kansas City, Memphis, Madison, Milwaukee |
| | Transit connections: | • Metra commuter rail trains<br>• Chicago Transit Authority buses<br>• Chicago Transit Authority rapid transit three blocks away |
| | Bike parking facility: | Bike racks |
| **Projects completed or under way (2010):** | | ARRA (American Recovery and Reinvestment Act of 2009) funded projects for bridge and station security and life safety, and improvements to track and train maintenance facilities. |
| **Improvements needed to accommodate existing and/or new services:** | | Completion of "state of good repair" projects and all the required accessibility projects so that the station is fully accessible. Improvements to train shed. |

| Glenview, IL | | |
|---|---|---|
| **Owner:** | | Metra |
| **Operator/management:** | | Metra |
| **Passenger rail services (to Wisconsin):** | | Amtrak *Hiawatha Service*, *Empire Builder* |
| **Frequency:** | | 16 train stops daily (eight trains each direction), 14 on Sunday |
| **Ridership:** | | 66,700 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 183 (Calendar Year 2010) |
| **Parking spaces:** | | Free parking for Amtrak passengers is available in Metra commuter rail parking lots. Permit required from Amtrak agent. Four spaces allotted for long-term parking for Amtrak customers. Spaces (short-term and long-term) are quickly filled during the morning commute hours by Metra riders (Monday – Friday). |
| **Facilities, services, and passenger information:** | | Full service station; enclosed waiting area, restrooms, passenger information and assistance, ticketing, and taxis. |
| **Attendant:** | | Fully staffed station |
| **Ticketing facility:** | | Amtrak ticket agent, Amtrak Quik-Trak (electronic ticketing machine) |
| **Checked baggage** | | No |
| **ADA compliance:** | | Station building and platforms compliant. Trains require a wheelchair lift . |
| **Condition (poor, fair, good, very good, excellent):** | | Excellent |
| **Year built:** | | 1995 |
| **Intermodal connections:** | Intercity bus connections: | None |
| | Transit connections: | Pace bus service, Metra commuter rail |
| | Bike parking facility: | Covered bike racks |
| **Projects completed or under way (2010):** | | Resurface parking lots east of Lehigh |
| **Improvements needed to accommodate existing and/or new services:** | | Completion of all the required accessibility projects so that the station is fully accessible. |

| Winona, Minnesota | | |
|---|---|---|
| **Owner:** | | Canadian Pacific Railway |
| **Operator/management:** | | Amtrak |
| **Passenger rail services (to Wisconsin):** | | Amtrak *Empire Builder* |
| **Frequency:** | | Two train stops daily (one train each direction) |
| **Ridership:** | | 24,159 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 66 (Calendar Year 2010) |
| **Parking spaces:** | | Approximately 20 parking spaces |
| **Facilities, services, and passenger information:** | | Full service station; enclosed waiting area, restrooms, passenger information, ticketing, and checked baggage. |
| **Attendant:** | | Fully staffed |
| **Ticketing facility:** | | Amtrak ticket agent |
| **Checked baggage:** | | Yes |
| **ADA compliance:** | | Station, pathways and platform have some barriers limiting full accessibility. Trains require wheelchair lift. |
| **Condition (poor, fair, good, very good, excellent):** | | Good |
| **Year built:** | | 1888 |
| **Intermodal connections:** | Intercity bus connections: | Shuttle service by Specialty Tours between Winona station and Rochester, MN (reservations are required). |
| | Transit connections: | Winona Transit stop |
| | Bike parking facility: | None |
| **Projects completed or under way (2010):** | | ARRA funded Mobility First improvements |
| **Improvements needed to accommodate existing and/or services:** | | Completion of all the required accessibility projects so that the station is fully accessible. |

| Red Wing, Minnesota | | |
|---|---|---|
| **Owner:** | | Building: Red Wing Property Conservation<br>Platforms: Canadian Pacific Railway |
| **Operator/management:** | | Amtrak |
| **Passenger rail services (to Wisconsin):** | | Amtrak *Empire Builder* |
| **Frequency:** | | Two train stops daily (one train each direction) |
| **Ridership:** | | 10,813 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 30 (Calendar Year 2010) |
| **Parking spaces:** | | Approximately 25 parking spaces |
| **Facilities, services, and passenger information:** | | Heated enclosed waiting area and restrooms |
| **Attendant:** | | Caretaker |
| **Ticketing facility:** | | None |
| **Checked baggage:** | | No |
| **ADA compliance:** | | Platforms at top of rail, building accessible. Trains require wheelchair lift. |
| **Condition (poor, fair, good, very good, excellent):** | | Good |
| **Year built:** | | 1904 |
| **Intermodal connections:** | Intercity bus connections: | None |
| | Transit connections: | Red Wing RIDE Transit, Hiawathaland Transit |
| | Bike parking facility: | None |
| **Projects completed or under way (2010):** | | ARRA funded Mobility First improvements |
| **Improvements needed to accommodate existing and/or new services:** | | Completion of all the required accessibility projects so that the station is fully accessible. |

| St. Paul/ Minneapolis, Minnesota (Midway Station) | | |
|---|---|---|
| **Owner:** | | Amtrak |
| **Operator/management:** | | Amtrak |
| **Passenger rail services (to Wisconsin):** | | Amtrak *Empire Builder* |
| **Frequency:** | | Two train stops daily (one train each direction). |
| **Ridership:** | | 123,371 (Calendar Year 2010) |
| **Average daily station on/offs:** | | 338 (Calendar Year 2010) |
| **Parking spaces:** | | Approximately 200 free short-term and long-term parking spaces. A permit from the Amtrak agent is required for long-term parking. |
| **Facilities, services, and passenger information:** | | Full service station; enclosed waiting area, restrooms, passenger information and assistance, ticketing, checked baggage, vending machines, and taxis. |
| **Attendant:** | | Fully staffed. |
| **Ticketing facility:** | | Amtrak ticket agents, Amtrak Quik-Trak (electronic ticketing machine) |
| **Checked baggage:** | | Yes |
| **ADA compliance:** | | Building is accessible. Platforms at top of rail. Trains require wheelchair lift. |
| **Condition:** | | Good |
| **Year built:** | | 1978 |
| **Intermodal connections:** | Intercity bus connections: | Jefferson Lines buses to Duluth, Eau Claire, Wausau, Green Bay, and Milwaukee |
| | Transit connections: | Nearest Metro Transit bus stop located 0.28 miles from the station |
| | Bike parking facility: | None |
| **Projects completed or under way (2010):** | | Amtrak will move to St. Paul Union Depot in 2014. Midway station will close. |
| **Improvements needed to accommodate existing services:** | | Completion of all the required accessibility projects so that the station is fully accessible. |

**References:**

*Intercity Rail Stations Served by Amtrak, a Report on Accessibility and Compliance with the Americans with Disabilities Act of 1990*. Amtrak. February 1, 2009

*Amtrak System Timetable*; Winter, 2010

Walter Lander, Amtrak.

Site visits to Wisconsin Amtrak stations. July 28th, 2010 and August 30th, 2010. Photography by Kurt Miller.

Great American Stations Web site, May 2010

Google Earth Maps, May 2010

# Chapter 7: Commuter Rail

## Table of Contents

# Chapter 7: Commuter Rail

## Introduction

The 2001 Governor's Blue Ribbon Task Force on Passenger Rail defined commuter rail as:

> "Passenger rail service operating primarily on existing freight and/or intercity passenger railroad tracks on a separate right of way between and within metropolitan and suburban areas, connecting these areas with large business and/or urban centers, whether within or across the geographical boundaries of a state. Commuter rail usually operates during peak travel times with limited stops and in conjunction with other transit modes as part of a regional transit system. Equipment type and trip distance will vary based on the technology available and desired trip market."

The state's *Connections 2030* long-range multimodal transportation plan included locally-proposed fixed-guideway transit systems in Wisconsin's largest urban areas as a way of increasing transportation options and promoting economic development. As defined in *Connections 2030*, fixed-guideway transit systems include commuter rail, as well as light rail and bus rapid transit.

**Fixed-guideway transit**

- Operates on permanent, separate right of way for the exclusive use of transit vehicles, existing freight railroad tracks, or on-street rail
- Can be rail or bus rapid transit
- Attracts increases in transit ridership and improves transit service by reducing travel times and increasing frequencies
- Examples include commuter rail (diesel or electric trains), light rail (electric vehicles, including streetcars), and bus rapid transit (buses on exclusive right of way)

While commuter rail is considered public transit and is funded and regulated by the Federal Transit Authority, the Passenger Rail Investment and Improvement Act of 2008 specifically states that state rail plans must address commuter rail. Currently, commuter rail is a small part of Wisconsin's multimodal transportation system but it could become an increasingly important part of the transportation system, if proposed commuter rail systems advance. Commuter rail offers public benefits such as:

- Increased mobility and transportation choice
- Reduced air emissions and energy consumption from automobiles
- Increased economic activity around commuter rail stations within the corridor
- Improved connectivity to employment, recreation, education and other opportunities

These benefits help explain why several of the state's communities have studied commuter rail service.

This chapter reviews:

- Existing commuter rail service in Wisconsin
- The Wisconsin Department of Transportation's (WisDOT's) role in commuter rail
- Recent or ongoing commuter rail studies
- Issues and recommendations related to commuter rail

## Existing Commuter Rail Service in Wisconsin

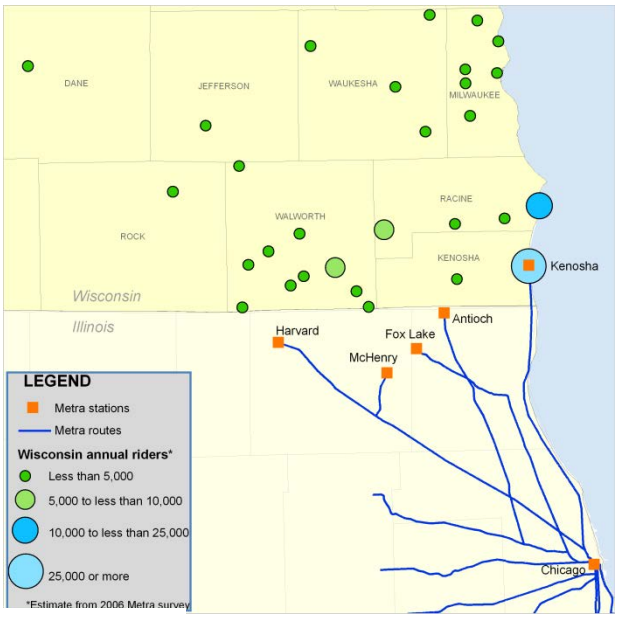
Currently, Metra is the only commuter rail provider operating in Wisconsin. Metra, officially the Northeast Illinois Regional Commuter Railroad Corporation, is a commuter rail system serving Chicago and its surrounding suburbs. The system serves over 100 communities with 239 stations on 11 lines.

Metra provides one stop in Wisconsin, with its Union Pacific North Line terminating in Kenosha. The line provides service between Kenosha and downtown Chicago, with nine weekday departures from Kenosha; five departures on Saturdays and three departures on Sundays. In addition to commuter rail, the Kenosha Metra station is served by local transit and regional commuter bus service. In 2010, average weekday ridership on the Union Pacific North Line was 36,400, while overall Metra average weekday ridership was 301,200. Annual Metra system passenger trips totaled 81,369,000.

A 2006 boarding and alighting survey showed the Kenosha station had over 400 boardings on weekdays. This was an increase of more than 25 percent from 2002. The 2006 survey showed that of those boarding:

- 61 percent drove alone to the station
- 16 percent were dropped off
- 11 percent carpooled
- 6 percent walked

**Map 7-1: Wisconsin Metra users by origin**




**Source: Metra**

The survey also revealed that two percent or fewer of those boarding Metra trains used transit, taxi, bike or other modes to access the station.

In addition to the Kenosha station, four other Metra commuter rail stations are located near the Wisconsin border:

- Antioch, Illinois – North Central service line
- Fox Lake, Illinois – Milwaukee District North line

- Harvard, Illinois – Union Pacific Northwest line
- McHenry, Illinois – Union Pacific Northwest line

As shown in Map 7-1, the 2006 Metra passenger survey revealed that many riders from southeastern Wisconsin used the Kenosha station, as well as Metra stations located in Antioch, Fox Lake, Harvard and McHenry, Illinois. The largest number of riders originated in Kenosha, followed by Racine, Pleasant Prairie and Lake Geneva.

## WisDOT's Role in Commuter Rail

Although the state provides financial and technical support, decisions about the nature, amount and location of transit services to be provided are generally the responsibility of local governments. In the past, WisDOT has provided technical assistance in commuter rail studies. As with other transit services, decisions on whether to study the need for commuter rail have been the result of local initiatives. WisDOT is also responsible for the federally-required safety review of fixed-guideway systems. *Connections 2030* recommended WisDOT continue to participate in commuter rail studies and provide support and technical expertise to advance and implement projects. Throughout the planning period, local governments will continue to be responsible for identifying potential commuter rail routes, completing any necessary studies and identifying potential funding sources.

The Federal Transit Administration's New Starts discretionary grant program is the primary financial resource for major transit projects. Awarded funds may be used for new and existing fixed-guideway systems, including commuter rail, light and heavy rail, bus transit, streetcars and ferries.

### *Recent commuter rail studies*

As Wisconsin communities have considered including commuter rail in their transportation systems, several commuter rail studies have been completed. This section provides a brief review of these studies.

**Kenosha-Racine-Milwaukee (KRM) commuter rail**

The Southeastern Wisconsin Regional Planning Commission completed a study in 1998 that concluded establishing commuter rail service between Kenosha and Milwaukee was technically and financially feasible based on forecast ridership, fares, capital and operating costs, and existing public subsidy programs. In 2005, the state legislature created a temporary regional transit authority in Kenosha, Milwaukee and Racine counties to provide project sponsorship and funding. The commission completed an alternatives analysis and draft environmental impact statement for the KRM commuter rail line. WisDOT provided financial assistance with these studies and served on the study committees.

Regional transit authorities are special purpose units of government that can administer and fund transit systems. Regional transit authorities are common throughout the United States.

As shown in Map 7-2, the recommended alternative provides commuter rail service between Milwaukee and Kenosha. Fourteen daily weekday round-trips

would serve nine stations along the route. The service would connect with Metra's Union Pacific North line in Kenosha, which provides connections to 25 communities in northern Illinois, terminating at the Chicago Union Station. The KRM service would share roughly 0.5 miles of rail line south of the Milwaukee Intermodal Station and into the station with existing and new intercity passenger rail service.

Based on the study's findings and continued community support, the 2009-2011 state budget created the Southeast Regional Transit Authority. The Southeast Regional Transit Authority had the authority to create, construct and manage the KRM commuter rail line. The authority also had the power to levy a vehicle rental fee of up to $18 per transaction in Kenosha, Milwaukee and Racine counties, as well as issue bonds. Subsequent legislation repealed the authority and it is no longer in existence. The KRM commuter rail project is not advancing as of the time of this writing.

**Other Southeastern Wisconsin Regional Planning Commission studies**

The Southeast Wisconsin Regional Planning Commission completed two other commuter rail feasibility studies in 2002; one for the Walworth-Fox Lake, Illinois corridor and one for the Burlington-Antioch, Illinois corridor (Map 7-2). Based on anticipated ridership and cost-effectiveness of the proposed services, both studies recommended that additional planning work not be pursued at the time. For the Walworth-Fox Lake corridor, the study recommended that further planning and engineering work be deferred until two conditions are met:

- Metra is actively planning to extend service from Fox Lake to Richmond
- The roles of the State of Wisconsin and local governments in regards to implementing and sharing the costs of commuter rail are clearly defined

The Burlington-Antioch study recommended no further work be done. However, the study acknowledged that other factors may warrant revisiting the issue in the future. These factors include:

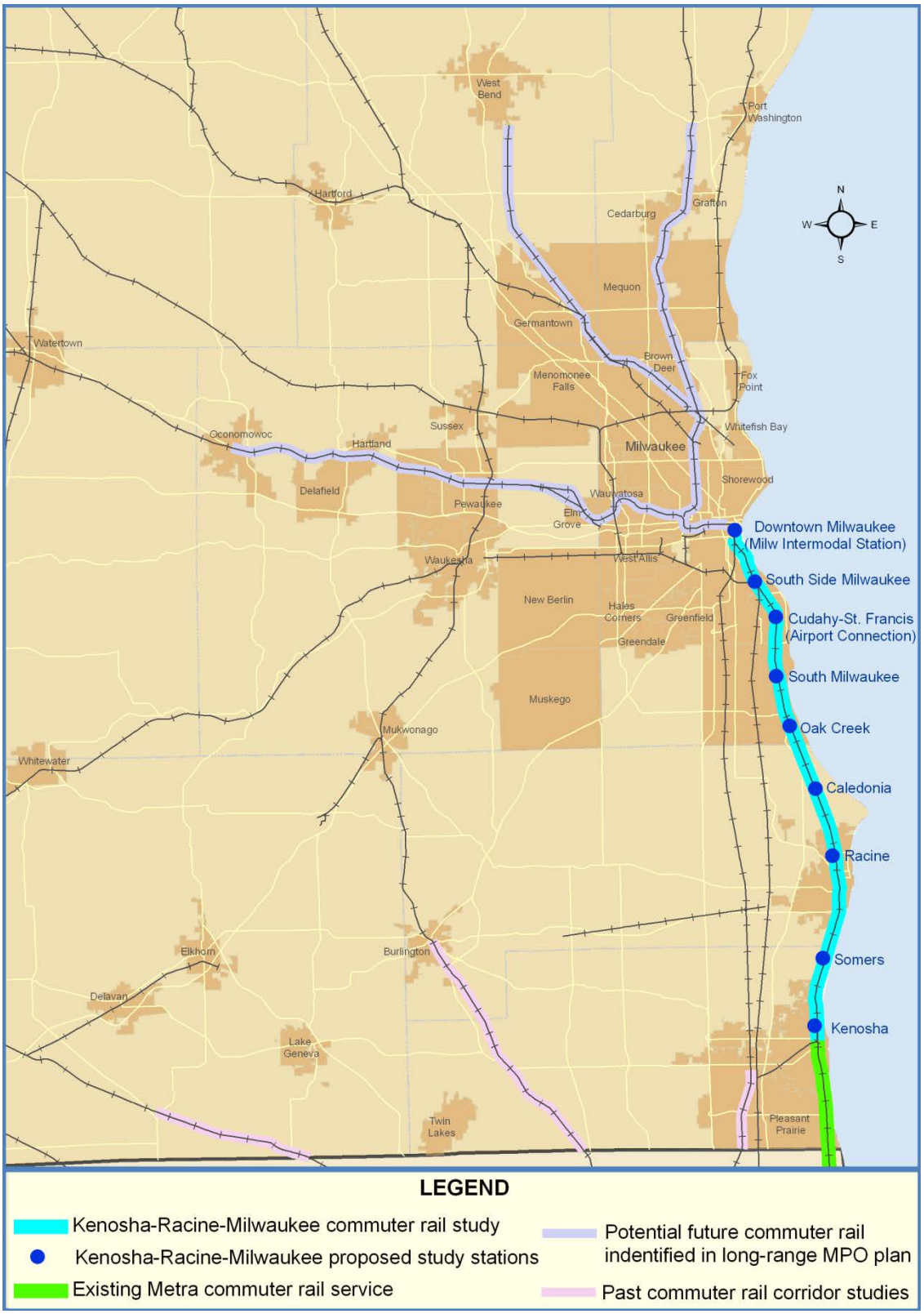
- Increasing traffic congestion
- Increasing fuel costs
- Changes in development and travel patterns, particularly an increase in the number of individuals living in western Kenosha and Racine counties and working in the Chicago central business district

WisDOT provided financial assistance for both of these studies and participated on the study committees.

The Southeast Wisconsin Regional Planning Commission *Year 2035 Regional Transportation Plan* also identified three additional commuter rail lines to be considered in corridor studies:

- Oconomowoc to Milwaukee
- West Bend to Milwaukee
- Saukville to Milwaukee

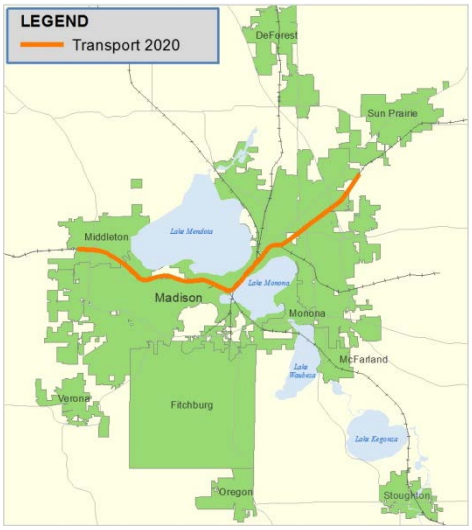
**Map 7-2: Commuter rail studies in southeastern Wisconsin**



The *Year 2035 Regional Transportation Plan* recommended that initial rapid transit service be provided along these corridors using buses. The plan envisions eventually transitioning the bus service to commuter rail service.

**Transport 2020**

**Map 7-3: Transport 2020 commuter rail alternative**




In 1997, *Vision 2020*, a regional master plan for Dane County, recognized the importance of improved transit service to accommodate forecasted regional growth and maintain mobility for county residents, workers and students. Based on that plan, the Transport 2020 study was initiated to study transportation alternatives for the greater Madison/Dane County area. Dane County, the City of Madison and WisDOT jointly funded the study. WisDOT also participated on the study committee. As part of Transport 2020 an alternatives analysis was completed in 2002. A commuter rail service between Middleton and Sun Prairie, through downtown Madison, was one of the study's recommendations (Map 7-3) and part of the "locally preferred alternative." The proposed Transport 2020 commuter rail service would share tracks and/or right of way with freight trains and any future intercity passenger rail trains.

In 2009 and 2010, Transport 2020 project sponsors were completing a draft environmental impact statement (DEIS), and submitting an application for federal funding under the Federal Transit Administration (FTA) New Starts program. The project application was withdrawn and the project is not advancing as of the time of this writing.

If the project advances in the future, the next steps would include submitting the draft environmental impact statement, the New Starts application, and the preliminary engineering, final design and construction plans. Transport 2020 was also considering a route from downtown Madison to the Dane County Regional Airport. In order to be awarded FTA New Starts funding, to complete final design and construct the commuter rail line, a local financial commitment for a share of the capital costs and operating costs for the service is required.

**South Central Wisconsin Commuter Transportation Study**

Completed in 2008, the South Central Wisconsin Commuter Transportation Study evaluated the need for, and feasibility of, new or enhanced regional transit service. The study focused on connecting Rock County with Dane County and Northern Illinois. The study committee recommended several tasks, including:

- Promoting vanpools to area residents

- Coordinating with WisDOT regarding the statewide RIDESHARE program and the location of future park and ride facilities
- Identifying five rail corridors for preservation of rail facilities and rights of way for continued freight rail service and potential future commuter rail service:
    - Janesville – Harvard, Illinois
    - Beloit – Clinton
    - Janesville – Rockford, Illinois
    - Madison – Milton – Janesville
    - Madison – Evansville – Janesville

WisDOT provided financial assistance for the study and participated on the study committee.

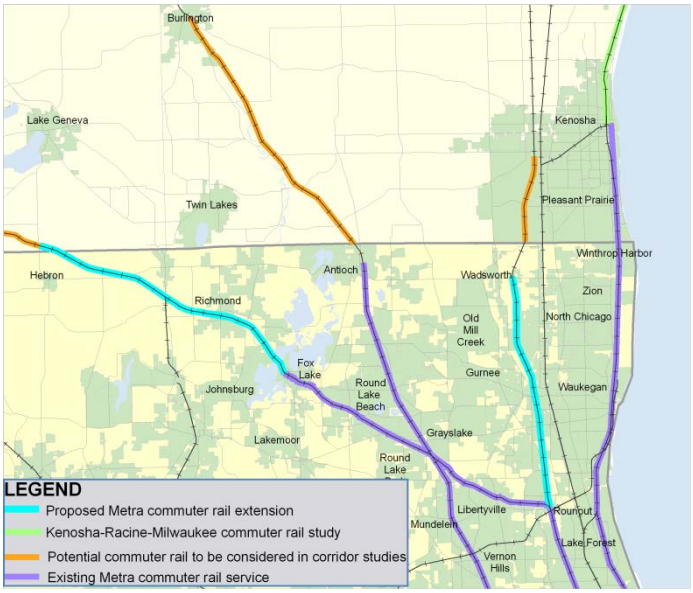
**Chicago Metropolitan Agency for Planning recommendations**

According to the 2000 U.S. Census, more than 41,000 Wisconsin residents work in Illinois. Many of these residents work in the greater Chicago area. For this reason, improvements to the Metra commuter rail system can benefit Wisconsin residents.

The Chicago Metropolitan Agency for Planning identified two potential extensions of service along Metra's Milwaukee District North line in its *2030 Regional Transportation Plan* (Map 7-4). The Milwaukee District North line currently provides service between downtown Chicago and Fox Lake, Illinois. The region's transportation plan proposes two possible extensions along the route:

**Map 7-4: Potential extensions of Metra service**

Source: Chicago Metropolitan Agency for Planning




- Extending service from Fox Lake, Illinois to Richmond, Illinois
- Extending service from Rondout, Illinois to Wadsworth, Illinois

While neither extension would terminate in Wisconsin, the new stations would be located closer to the Illinois/Wisconsin border than the existing stations, improving access to Wisconsin residents.

**Metropolitan Council recommendations**

Like Chicago, the proximity of the Minneapolis-St. Paul metropolitan area also affects Wisconsin. Based on the 2000 U.S. Census, more than 44,000 Wisconsin residents commute to Minnesota for work. Of these workers, almost 15,000 reside in St. Croix County. For this reason, improvements in the Minneapolis-St. Paul metropolitan area transportation system can benefit Wisconsin.

The Metropolitan Council, the metropolitan planning organization for the Minneapolis-St. Paul metropolitan area, identified a potential commuter rail corridor along I-94 between St. Paul and Roberts in its *2030 Transit Master Study*. While the study projected low annualized costs, it also projected low ridership along the corridor. The study also noted cost-sharing would have to be addressed with Wisconsin.

**Map 7-5: Potential commuter rail corridor between St. Paul and Roberts**


**Source: Metropolitan Council**

**I-94 corridor**

The 2009 *Minnesota Comprehensive Statewide Freight and Passenger Rail Plan* identified the I-94 corridor between Minneapolis-St. Paul and the Wisconsin border as a potential intercity passenger rail route. Similarly, the Metropolitan Interstate Council identified a portion of this same I-94 corridor for potential commuter rail service. These actions provided impetus for the creation of the Gateway Corridor Commission, a State of Minnesota joint powers board made up of the Minnesota local units of government located along the I-94 corridor between Minneapolis-St. Paul and the Wisconsin border. The Gateway Corridor Commission's goal was to study the viability of potential commuter rail, intercity passenger rail, light rail or more traditional transit modes to their communities. Federal and state earmarks were received to perform an environmental study regarding potential transit services along the I-94 corridor between St. Paul and Eau Claire.

With the study area of the Gateway Corridor Commission reaching into Wisconsin, Wisconsin representatives were added to the Minnesota Gateway Commission policy advisory and technical advisory committees.

The Gateway Corridor Commission completed an alternatives analysis study of the Interstate 94 corridor between St. Paul and Eau Claire to determine the best alternative mode of transit to serve the corridor.

The study included analysis of light rail, bus rapid transit and commuter rail options serving the east metro area of the Twin Cities and then along the Wisconsin I-94 Corridor to Eau Claire.

Results and recommendations from that effort pertaining to Wisconsin include the following:

- Light rail or commuter rail options beyond the I-494/I-694 corridor (approximately 12 miles west of the Wisconsin border) did not advance.
- Express Bus was identified as the most viable solution to current and near-future transit needs within the I-94 corridor in Wisconsin between Hudson and Eau Claire, as well as within Minnesota between Hudson and I-494/I-694 to the west.
- No infrastructure additions or alterations within Wisconsin are identified in the Gateway Commission report. However, the report notes that when the existing St. Croix River Crossing structures on I-94 at Hudson need to be reconstructed, the inclusion of dedicated lanes for transit accommodations will be a consideration.

## Issues

Existing and proposed commuter rail service faces many challenges. This section reviews four of these challenges:

- Coordination between different rail providers
- Intermodal connections
- Funding
- Governance

### *Coordination between different rail providers*

Existing and planned commuter rail services in Wisconsin do not and most likely will not operate on track dedicated solely to commuter rail operations. Instead, commuter rail services share, or will share, track with freight and intercity passenger rail service. Sharing track with other rail users requires a high level of schedule coordination to ensure efficiency and safety. Unlike Amtrak, commuter rail operations do not have a legal right of access to the general railroad system. For commuter rail operations to access freight-owned rail lines, the commuter rail operator must reach a voluntary agreement with the freight railroad. These agreements typically discuss liability issues, compensation for access and maintenance, and capacity. The Rail Safety Improvement Act of 2008 established a forum at the Surface Transportation Board to help mediate stalled negotiations between commuter rail operators and freight railroads.

*Connections 2030* encourages coordination between different service providers; however, WisDOT does not have a direct role. WisDOT encourages service providers to continue working together to find agreeable solutions for all parties. Coordination is critical to the overall success of a commuter rail system. To provide a strong transportation system, it must include connections to regular community transit service, as well as provide other community transportation alternatives.

## *Intermodal connections*

A well designed commuter rail service should be integrated with other transportation services. For example, the Kenosha Metra station is currently served by Kenosha Transit, taxi and regional commuter bus service. The station also provides sufficient parking for those who choose to drive. These services increase the number of transportation choices for individuals interested in using commuter rail service. Likewise, these services also increase an individual's mobility.

As new commuter rail service and stations are planned, communities and commuter rail operators should look for opportunities to create intermodal connections. *Connections 2030* notes WisDOT will:

- Improve coordination among transportation modes, including providing technical assistance in developing specific strategies for creating connections between modes and working with local governments to identify opportunities for new connections between modes
- Investigate funding opportunities and facilitate funding for intermodal facilities, including working with local communities and the private sector to identify opportunities for intermodal stations
- Increase the availability of alternative modes by implementing the policies identified in *Connections 2030*

These policies are continued and supported as part of *Wisconsin Rail Plan 2030*. For more information on these policies, see Chapter 8 of *Wisconsin Rail Plan 2030* or the "Facilitate intermodal passenger connections" policy in Chapter 8 of *Connections 2030*.

## *Funding*

Funding is a major obstacle facing Wisconsin municipalities interested in studying and implementing commuter rail projects. Funding is needed to complete alternative analysis studies and support capital and operating expenses.

**Federal funding**

Obtaining federal funding can be difficult. Many communities use Congressional earmarks to obtain federal funding to complete commuter rail studies. Additionally, to qualify for federal funding under the Federal Transit Administration's Section 5309 New Starts program, the project must have already completed an alternatives analysis. The New Starts program can provide up to 80 percent of capital funding, but typically only provides 50 percent of a system's total capital costs. New Starts funding can be used for preliminary engineering and final design. The federal New Starts program is highly competitive and requires considerable commitment by the local sponsor. In addition to the New Starts program, the Federal Transit Administration provides transit operating assistance under Section 5307. This funding assistance is available to all forms of public transit, including commuter rail.

**State funding**

Wisconsin has two programs that can provide funding to rail transit. Under Section 85.063, Wis. Stats., WisDOT has the authority to administer an urban rail transit system program to assist in the planning, design and engineering of urban rail transit systems for urban areas in the state. An urban rail transit system is defined as a system, either publicly or privately owned, that provides transportation by rail to the public on a regular and continuing basis. WisDOT also has the authority to administer a commuter rail transit system development grant program.[1] Neither program is currently funded on an ongoing basis. *Connections 2030* made several recommendations concerning funding that could be future steps if commuter rail systems advance, but would require legislative direction:

- Funding assistance for planning, environmental and engineering studies for fixed-guideway transit from a stable funding source such as the Multimodal Planning Appropriation
- Explore funding options to support a fixed-guideway transit capital and operating assistance program with a mix of federal, state, and local funds

**Local/regional funding**

To access available federal and state funding, local project sponsors are required to commit a share of the required resources. Transit governing bodies – such as regional transit authorities with revenue-raising authority – are commonly used across the country to administer and fund transit systems. These bodies typically have the authority to raise revenues to cover the local funding share of transit costs for all modes of public transit in a region. Of the regional transit authorities created under the 2009-2011 state budget, two had commuter rail-related interests:

- Southeast Regional Transit Authority – specific to the Kenosha-Racine-Milwaukee commuter rail project; area includes all of Kenosha, Milwaukee and Racine counties
- Dane County Regional Transit Authority – required for municipalities located within the Madison metropolitan planning area; optional for municipalities located outside the planning area; may be used to help fund the recommendations of Transport 2020

Subsequent state legislation repealed the 2009 legislation that enabled the creation of these authorities. These two bodies are no longer in existence as of this writing. For more information on related *Connections 2030* policies, refer to the "Support public, specialized and human services transit" and "Support the development of fixed-guideway transit services" policies in Chapter 8 of *Connections 2030*.

## *Governance*

Political boundaries can present an obstacle for transit services, including commuter rail service. In some areas, there is insufficient coordination among transit providers to serve locations that cross county or municipal borders. The commuter rail projects studied in Wisconsin cross many municipal boundaries. Successful commuter rail service not only hinges on sufficient ridership and operating costs, it also hinges on the cooperation of local governments.

[1] Section 85.064, Wis. Stats

Special purpose units of government for transit, such as regional transit authorities, can administer and fund transit systems on a region-wide basis. Regional transit authorities are common throughout the United States. Effective independent governing bodies:

- Address mobility needs on a regional basis
- Make various types of transit available in a particular region
- Recognize both rural and urban service areas
- Establish or expand dedicated local funding options and revenue-raising authority
- Coordinate or merge services with adjacent participating communities
- Encourage coordination among local governments and all regional transit services
- Encourage intermodal connections

For more information on these *Connections 2030* policies, refer to the "Support public, specialized and human services transit" and "Support the development of fixed-guideway transit services" policies in Chapter 8 of *Connections 2030*.

## Commuter Rail Recommendations

The following is a summary of *Wisconsin Rail Plan 2030* recommendations for commuter rail.

### *Encourage coordination between rail providers*

WisDOT will encourage coordination and integration between commuter rail service, other local transit agencies and intercity passenger rail services.

### *Facilitate intermodal connections with commuter rail*

As new commuter rail service and stations are planned, communities and commuter rail operators should look for opportunities to create intermodal connections. WisDOT will work to facilitate connections between all transit modes and intercity passenger rail, and provide technical assistance and funding for these efforts.

More details on facilitating intermodal connections recommendations can be found in Chapter 6: Intercity Passenger Rail, in Chapter 8: Livable and Sustainable Communities, and in *Connections 2030*.

### *Support and provide funding for planned commuter rail projects in Wisconsin's largest urban areas*

WisDOT will provide technical support and funding for planned commuter rail projects in Wisconsin's largest urban areas, with a priority of projects that are in the advanced stages of planning. Specifically, as a future step if commuter rail projects advance, and pending legislative direction, WisDOT will:

- Work with the Wisconsin Legislature to restore funding in the Multimodal Planning Appropriation. This would allow WisDOT to provide funding assistance for planning, environmental and engineering studies for fixed-guideway transit from a stable funding source.
- Work with the state legislature to explore funding options to support a fixed-guideway transit capital and operating assistance program. The funding would cover up to 50 percent of the total nonfederal share of capital costs, or up to 25 percent of the total costs, whichever is lower. The state would also examine options for operating assistance for fixed-guideway transit projects to help cover a portion of the operating costs not covered by fare box or federal funds.
- Work with the legislature and local governments to examine options for transit governance, local funding and revenue-raising authority to administer and fund transit systems locally or regionally.

### *Facilitate coordination between commuter rail, freight rail and intercity passenger rail services*

Commuter rail services generally operate on tracks owned by, or leased to, the freight railroads. Service may also operate on railroads where new or existing intercity passenger rail services may also be in operation. WisDOT will continue to encourage coordination between intercity passenger rail, freight rail, and commuter rail and will work with commuter rail project sponsors to define appropriate upgrades to ensure sufficient capacity for commuter rail without inhibiting freight or intercity passenger rail operations.

# Chapter 8: Livable and Sustainable Communities

## Table of Contents

# Chapter 8: Livable and Sustainable Communities

## Introduction

Wisconsin's economy and overall quality of life largely depend on the ability to safely and efficiently move people and goods statewide. Specifically, Wisconsin residents, industries and businesses rely on a high quality transportation system that offers multiple transportation options. Rail is an important component of this transportation system and can enhance the overall livability and sustainability of Wisconsin communities.

A community's health, livability and sustainability is directly related to and impacted by transportation planning and design. The nation's dependence on automobiles in metropolitan areas has resulted in more sedentary lives. As a result, the U.S. Surgeon General reports that over 60 percent of American adults are overweight or obese.

U.S. Department of Transportation Secretary Ray LaHood defined a livable community as "a community where you can take kids to school, go to work, see a doctor, go to the grocery store, have dinner and a movie, and play with your kids in a park, all without having to get into a car." In general, livability is defined as a combination of attributes that define how attractive a given place is to live. These attributes typically include clean air and water, safe streets, positive race relations, affordable homes, quality public schools, greenery and open space, un-congested roads and low taxes.

In addition to livability, sustainability is defined as supporting growth in a way that does not negatively impact the natural or social environment. Sustainable development supports policies that integrate environmental, economic and social values in decision making.

The Wisconsin Department of Transportation's (WisDOT's) continued commitment to maintaining and enhancing community livability and sustainability is demonstrated in *Connections 2030*, the state's long-range multimodal transportation plan. *Connections 2030* defined the state's transportation vision as:

> *"…an integrated multimodal transportation system that maximizes the safe and efficient movement of people and products throughout the state, enhancing economic productivity and the quality of Wisconsin's communities while minimizing impacts to the natural environment."*

While focused at the statewide level, *Connections 2030* includes several transportation policies that further define the department's commitment to the continued enhancement of the communities and the transportation system. These policies include:

- Ensuring system connectivity
- Planning and developing a multimodal system
- Continuing community sensitive solutions efforts to better integrate transportation projects into communities
- Balancing transportation needs with environmental considerations

Rail transportation offers a unique and complementary transportation option to help meet the state's multimodal transportation vision and policy goals. The department continues its emphasis on sustainability and livability with the development of *Wisconsin Rail Plan 2030*.

This chapter reviews the relationship rail transportation has with community livability and sustainability. Key components include:

- A review of specific transportation and land use regulations and policy initiatives at the federal, state, regional and local levels
- The role of rail relative to livability and sustainability
- A review of the issues or challenges facing government
- Specific rail plan recommendations

## Livability and Sustainability Policy Framework

The following section summarizes some key regulatory and policy initiatives that influence the integration of livability and sustainability into transportation decision-making.

### *Federal*

Federal legislation influences and directs transportation investment and policy by establishing federal funding levels for each state and defining how the funds may be spent. Historically, federal legislation has emphasized the planning and development of multimodal systems. With the passage of the Intermodal Surface Transportation Efficiency Act in 1991 and subsequent legislation, federal surface transportation policy shifted from an emphasis on system expansion to one of preservation and system efficiency.

Since 2008, federal legislation and funding have further shifted transportation investments to emphasize multimodal transportation that focuses on the enhancement and development of intercity passenger rail service and transit service. The next federal surface transportation legislation, the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users, expired September 30, 2009. It was replaced by Moving Ahead for Progress in the 21st Century (MAP-21) on July 6, 2012. A number of other federal funding programs led to alternative investments in the country's passenger and freight rail system. Among these are the Passenger Rail Investment and Improvement Act (PRIIA), passed in 2008, and the American Recovery and Reinvestment Act (ARRA) which both include an emphasis on funding high-speed and intercity passenger rail. For more discussion of funding, see Chapter 10: Funding Wisconsin's Rail System Investments.

In addition to funding programs supporting passenger rail, the Federal Transit Administration's New Starts/Small Starts program funds transit fixed-guideway systems including heavy rail, light rail, commuter rail, bus rapid transit and ferries.

In addition to the federal regulation and funding, the 2009 initiative between the U.S. Department of Transportation, the U.S. Department of Housing and Urban Development, and the U.S. Environmental

Protection Agency to form the Partnership for Sustainable Communities further defines transportation policy and investment. Under this partnership, the agencies have pledged to ensure that housing and transportation goals are met while simultaneously protecting the environment, promoting equitable development and helping to address the challenges of climate change.

## *State*

In response to federal direction as well as statewide initiatives, Wisconsin has also adopted regulations and policies that support multimodal transportation systems while enhancing community livability and sustainability.

WisDOT's policies and a majority of its investment decisions are guided by the statewide long-range multimodal transportation plan, *Connections 2030*, which was adopted in 2009. Developed as a policy plan, *Connections 2030* was structured to shift the department's focus from individual modes to consider transportation investment decisions within a comprehensive multimodal framework.

In addition to the 20 year multimodal plan, the state also adopted policy recommendations identified by the Governor's Task Force on Global Warming to reduce the state's greenhouse gas emissions. Another key initiative completed in the spring of 2008 by the Office of the Governor and the Office of Energy Independence was the publishing of *Clean Energy Wisconsin – A Plan for Energy Independence*. The plan's goals include generating 25 percent of the state's electricity and 25 percent of its transportation fuel from renewable fuels by 2025. The plan also sets a goal of capturing 10 percent of the market share for the production of renewable energy and bioproducts.

## *Regional*

Wisconsin's urban and regional planning is conducted by:

- Metropolitan planning organizations
- Regional planning commissions

The state's 14 federally recognized metropolitan planning organizations conduct planning for urban areas with populations of 50,000 or more. Each metropolitan planning organization must develop a multimodal, long-range transportation plan which addresses the mobility needs of people and businesses throughout its metropolitan area. Working closely with WisDOT and local stakeholders, the metropolitan planning organizations are tasked with decision-making for regional transportation issues. This helps ensure that transportation planning is comprehensive and coordinated at each level.

In addition to the state's metropolitan planning organizations, Wisconsin has eight regional planning commissions. All but six of the state's 72 counties - Columbia, Dodge, Door, Jefferson, Rock, and Sauk -

are served by a regional planning commission[1]. WisDOT works closely with the regional planning commissions to ensure a comprehensive, coordinated approach to local, regional and state issues affecting transportation planning.

## *Local*

Over the years, Wisconsin's communities have developed local planning documents that define policies related to creating multimodal transportation systems and improving the overall livability of their communities.

Initially passed in 1999, the state's comprehensive planning law demonstrates the state's continued dedication to addressing community livability and sustainability. Wisconsin's Comprehensive Planning Law (also known as the smart growth law) requires that all actions and decisions made by a community that relate to land use be consistent with a locally adopted comprehensive plan. These comprehensive plans must have a minimum 20 year plan horizon and address nine elements including transportation.

WisDOT, along with the state's metropolitan planning organizations and regional planning commissions, act as partners in the development of the transportation element. Guidance issued by the department recommends that communities ensure their plans are multimodal, address the needs of all system users, and consider the transportation and land use impacts of development decisions.

**Wisconsin's rail network includes:**
Freight rail - transports goods and links shippers and businesses to markets.

Intercity passenger rail - connects cities typically 100 miles or more apart and offers an attractive transportation alternative for intercity travel.

Commuter rail - as transit service and part of the fixed-guideway transit category, generally provides local passenger train service that connects urban areas over short to moderate distances with average speeds between 18 and 55 miles per hour.

With the expanded national and regional support for intercity passenger and commuter rail, many communities currently served by intercity rail or located adjacent to freight rail corridors outline policies and planning goals for the rail network within their communities.

[1] Wisconsin's regional planning commissions are formed by executive order of the Governor and provide intergovernmental planning and coordination for the physical, social and economic development of a region. A board, typically appointed by county boards and the Governor, directs commission activities.

## Issues and Plan Recommendations

Rail transportation plays a prominent role in the overall statewide multimodal network. By increasing its ability to safely and efficiently move people and goods within the state, rail transportation can help support local, state and federal initiatives aimed at creating more livable communities.

Passenger rail service, whether intercity service or commuter rail service, can create a sustainable transportation option for Wisconsin's residents, encourage compact, smart growth development, and help reduce the dependence on the automobile and reduce vehicle miles traveled.

The following chapters also discuss each rail mode and connectivity:

- Chapter 5, Freight Rail
- Chapter 6, Intercity Passenger Rail
- Chapter 7, Commuter Rail

Freight rail also plays a prominent role in the livability and sustainability of a community. The ability to efficiently transport goods to economic centers or markets is crucial to the overall success of a region's economy. Time wasted due to transportation inefficiency and congestion negatively impacts profitability and the ability to attract new business to the region.

This section provides an overview of the following rail related issues:

- Strengthening intermodal/multimodal connectivity
- Improving/sustaining mobility
- Addressing network sustainability and resilience
- Encouraging smart growth/land use planning
- Enhancing environmental benefits
- Encouraging economic development

For each of these issues, a series of plan recommendations is identified.

Redevelopment of the Milwaukee Intermodal Station was completed under a partnership between the department, city and private entity aimed at supporting the city and state's economic growth initiatives while providing key connections to intercity passenger bus, local transit, intercity passenger rail, taxi, bikes and pedestrians. As part of the Marquette Interchange reconstruction project, WisDOT funded improvements to local streets located under the interchange that not only mitigated the construction impacts, but also improved the connectivity and aesthetic qualities of the pedestrian walkways between the station and the downtown.

### *Strengthening intermodal/multimodal connectivity*

The development of a multimodal or intermodal transportation network is fundamental to the growth of a sustainable and resilient economy. Current projections indicate that demands will exceed the available system capacity (see Chapter 2: Development Process and Outreach). As a result, solutions that provide a safe, efficient and connected system must include other modes of transportation.

Intermodal and multimodal connectivity can facilitate livable communities by adding new mobility options, more opportunities for inter-community exchanges and development opportunities. They also provide a mechanism to achieve community planning goals. Enhancements to the rail system can play a critical role in strengthening multimodal connectivity. A planning process for rail enhancements must

include close coordination with communities and other agencies, transit authorities, and businesses responsible for the other modes to ensure they are seamless in nature. Wisconsin's rail system should include as many direct connections to other modes as feasible to increase its availability and attractiveness.

WisDOT recognizes that multimodal planning and integration of passenger rail service with freight rail, highways, transit, and airports are essential to the success of Wisconsin's rail service. Each mode requires specific accommodations when interconnecting with rail. These accommodations often relate to storage needs (parking), access (roadway improvements), scheduling (coordination with local transit agencies) and wayfinding.

Partnering to improve community livability:
WisDOT's partnership with the city of Milwaukee and neighborhood redevelopment interests focused on the Menomonee River Valley. Efforts were focused on the design and construction of three bicycle/pedestrian bridges, establishing a major segment of the Hank Aaron State Trail, river restoration and earthwork, and the West Extension of Canal Street. Within the team charter, the goal of the partnership and project was to create "a model for integrating sustainability and economic development; for green technologies, alternative transportation; for effective partnership and teamwork; for nurturing the long-term health and well-being of the community."

In response, WisDOT will:

- Coordinate with local governments in local comprehensive planning efforts
- Work with local communities to identify opportunities to link other modes with rail
- Align agency staff to fully leverage new federal partnerships and funding opportunities structured around multimodal principles
- Support the expansion of Wisconsin's short line carrier franchises, including possible partnerships that would position these railways to serve a broader role in the movement of intermodal and shorter-haul rail traffic
- Continue to work with freight railroads to ensure that appropriate rail service is provided to shippers
- Support increased investment in rail infrastructure in response to shipper needs and market demands
- Continue to implement marketing campaigns aimed at providing potential users with information on available rail services
- Encourage transit agencies to accommodate connections with new rail service
- Work with local governments to identify station area and access amenities, such as park and ride facilities, bike lanes, or pedestrian crossings
- Work with communities to encourage the use of wayfinding information and distinct branding to make stations and service easier to use and locate
- Create guidance regarding rail station development to aid communities when locating and building facilities so that consideration is given to the range of elements including Americans with Disabilities Act (ADA) compliance, providing adequate lighting and visibility, emergency response needs, and the location of other services and activities within or adjacent to stations, such as vendors and stores, government and commercial offices and police stations

## *Improved/sustained mobility*

Individual mobility is very important to an individual's quality of life, providing affordable access to jobs, health care, financial and social services, schools and leisure activities. Individual mobility can be defined as the ability to safely and effectively get from an origin to a destination. While mobility is an issue for everyone, it can represent a significant challenge to certain groups such as:

- Those with limited access to an automobile
- Lower income individuals
- Teenagers
- Those who cannot or choose not to drive

**According to the 2000 U.S. Census:**

- Eight percent of Wisconsin's households did not own an automobile.
- Three percent of households were age 65 and older. This demographic group may have issues driving especially long-distances and is expected to grow by 90 percent by 2030.

Mobility may also be a challenge for young people seeking driver licenses. In recent years, the percentage of public schools offering driver education programs has steadily declined across the state. The only option for some students is driving courses offered by private agencies, which are typically more expensive. If young people ages 16 and 17 cannot receive driver's education due to its lack of availability in public schools and the cost of commercial driver training schools, they will not be able to obtain a driver license until they are 18. These unlicensed young people may choose to drive unsafely without a license and insurance. Lack of a driver license may also limit their mobility to those transportation modes that are available to them such as public transit, bicycling and walking.

WisDOT recognizes the importance of individual mobility and has worked with the Center for Driver's License Recovery and Employability in Milwaukee to help increase the number of licensed low-income drivers in Milwaukee County. The Center is part of Wisconsin Community Services, which advocates for justice and community safety, providing innovative opportunities for individuals to overcome adversity. In addition to serving over 3,000 persons per year, the program works to improve public policy at the local and state levels, restore driver's education for low-income teens and increase awareness about the negative effects of high license withdrawal rates among the poor.

All of these groups benefit from expanded transportation choices and a more walkable urban environment. Expanding rail transportation and linking rail routes with intercity and local bus service through multimodal transportation centers is a key goal for Wisconsin. The potential benefits derived from encouraging these connections include fostering less auto-dependent development, expanding options for the transit-dependent in urban areas and improving transportation options in rural communities.

In response to these issues, WisDOT will:

- Implement the Wisconsin component of the Midwest Regional Rail System (subject to legislative direction and funding)
- Coordinate with local governments in local comprehensive planning efforts

- Work with local communities to identify opportunities to link other modes with rail
- Implement marketing campaigns to provide potential users with information on available services
- Coordinate with transit agencies to integrate new rail service
- Coordinate with government agencies to identify station areas and access amenities, such as park-and-ride facilities, bike lanes, or pedestrian crossings
- Work with communities to encourage the use of wayfinding information and distinct branding to make stations and service easier to use and locate
- Create guidance regarding rail station development to aid communities when locating and building facilities so that consideration is given to the range of elements including ADA compliance, providing adequate lighting and visibility, emergency response needs, and the location of other services and activities within or adjacent to stations, such as vendors and stores, government and commercial offices and police stations

### *Network sustainability and resilience*

The U.S. Environmental Protection Agency defines a sustainable transportation system as "one in which fuel consumption, vehicle emissions, safety, congestion, and social and economic access are at such levels that they can be sustained into the indefinite future without causing great or irreparable harm to future generations of people throughout the world."

Resilience is defined as the ability of the complete network to accommodate variable and unexpected conditions without failure. Factors affecting network resilience can include safety, availability of alternatives, independence from finite resources, or ability to meet economic, social, or environmental goals under a range of unpredictable future scenarios.

Taken together, sustainability and resilience offer a framework within which future transportation investments may be made. As part of *Connections 2030*, three related themes were identified:

- Preserve and maintain Wisconsin's transportation system
- Promote transportation efficiencies
- Preserve Wisconsin's quality of life

Each theme defined a set of policies aimed at managing and enhancing the state's transportation system so that it is both sustainable and resilient. In addition, *Connections 2030* defined the policy "Partner with consumers and businesses to increase transportation sustainability." With over 83 percent of all petroleum used in Wisconsin being consumed by the transportation sector, this policy further addressed the anticipated implications of increasing fuel costs and their impacts to individuals, businesses, families and communities.

Issues related to transportation and sustainability are often grouped in terms of economic, social or environmental impacts. Table 8-1 shows the potential transportation network impacts by category. See

Chapter 11: System-plan Environmental Evaluation and Chapter 12: Environmental Justice Analysis, for a discussion of actions identified to address and mitigate these potential impacts.

**Table 8-1: Transportation Impacts on Sustainability**

| Economic | Social | Environmental |
|---|---|---|
| Traffic congestion | Inequity of impacts | Air pollution |
| Mobility barriers | Mobility disadvantaged | Climate change |
| Crash damages | Human health impacts | Habitat loss |
| Transportation facility costs | Community cohesion | Water pollution |
| Consumer transportation costs | Community livability | Hydrologic impacts |
| Depletion of non-renewable resources | Aesthetics | Noise pollution |

**Source: Victoria Transport Policy Institute**

In terms of transportation options, rail is generally accepted as one of the most sustainable modes because of its ability to reduce potential negative impacts related to safety, air quality, climate change and cost. Enhancements to the rail network will make it more attractive and competitive with other travel options (including the truck or automobile) and will contribute toward the development of a more sustainable statewide transportation system.

In response to these issues, WisDOT will:

- Continue to implement community sensitive solutions to encourage transportation projects that minimize negative impacts while preserving local character
- Work with local governments and ports to identify solutions to address roadway issues for port areas
- Continue to upgrade and rehabilitate Wisconsin's publicly-owned rail lines and bridges
- Continue to preserve rail corridors for future transportation use
- Prioritize and preserve corridors for use by future rail service
- Support improvements in rail systems that lead to a more efficient and safe transportation system
- Support more direct connections between freight rail and ports to reduce the amount of truck travel required

## *Encouraging smart growth/land use planning*

Transportation and land use are linked. Land use patterns can support and encourage the use of one type of mode; while transportation systems can support and encourage the development of certain types of land use. Enhancements to the rail network can encourage land use decisions that support the availability of the rail mode and encourage appropriate development around station locations. This is often mixed-use development which combines residential, commercial and retail uses into a small area. Mixed used development often results in higher densities that are more transit, bicycle and pedestrian-friendly. This development pattern, known as transit-oriented development or smart growth, facilitates

travel patterns that can be more energy efficient than auto-oriented development and contribute to a more livable, sustainable community.

There are a number of factors that must be considered relative to rail transportation and smart growth/land use planning. These include:

- Incompatible land uses
- Traffic
- Safety
- Community impacts

**Incompatible land uses**

Since transportation and land use are closely linked, good planning and education can minimize the negative impact of incompatible land uses and promote both natural and built environmental benefits. However, many communities must address how to handle land uses that may have changed over the years as rail use declined. These changing land uses may not be compatible with increased rail activity. For example, the conversion of abandoned rail lines to trails likely resulted in economic development and residential development near trails. Some communities have redeveloped their downtowns to highlight the trails. In other areas, residential communities have been built adjacent to these former rail lines. Conversion of trails back to rail usage needs to address the negative impacts that may occur.

Likewise, previous freight rail or passenger rail activity may have been minimal. Train speeds may have been slow. As a result, even older residential neighborhoods may have been built near active rail lines, but the impacts were minimal. Increasing the frequency, length or speeds of these trains can negatively impact these neighborhoods.

As the state's rail network continues to grow and expand with increased frequencies of rail service and potentially more lines being brought into service, land use planning and analysis activities should support improved coordination between neighboring land uses, and be integrated into any relevant comprehensive or region-wide transportation strategy. The goals of such planning and analysis may include:

- Consideration of noise and other environmental impacts
- Evaluation for compatibility with freight facility operations, including any storage or intermodal yards
- Analyses of economic and employment impacts of freight facility operations on adjacent communities

**Traffic**

While increased freight rail activity can help replace some existing truck travel, the connection between the rail and truck networks typically occurs at ports or intermodal facilities. These facilities are usually located away from highways and interstates, which are designed to appropriately handle larger vehicles. This separation forces the local roadway system to function as the link between these facilities. Unlike highways, local streets typically have more congestion due to traffic signals, poor turning radii,

inadequate overhead clearances and narrow bridges. These factors make access to terminals difficult. As congestion increases, the efficiency and quality of service provided by truck and rail carriers is reduced.

Likewise, increased freight and passenger rail activity can result in increased congestion at at-grade crossings. As the number of trains or the length of trains increases, roadway congestion near crossings increases. This can negatively impact air quality and energy consumption.

**Safety**

Each year more than 30,000 deaths and two million injuries from highway collisions are reported by the National Highway Traffic Safety Administration. In addition to the overwhelming tragedy caused by death, there is also a cost associated with these losses. The cost of these collisions to the national economy is more than $200 billion – representing more than two percent of the U.S. gross domestic product. Much of this cost is borne by the public at large either through public expenditures (law enforcement, medical, disability payments, etc.) or insurance premiums.

Per passenger-mile traveled, rail transportation is safer than automobiles. As reported by the National Safety Council in 2000, the fatality rate for travel by automobile was 0.80 deaths per 100 million passenger miles compared to 0.03 for passenger rail. The expansion of rail service can provide a safer travel option. However, consideration must be given to safety around rail stations. Concentrated development can result in high volumes of traffic, including not only auto traffic but also bike and pedestrian traffic moving near the rail facility and increasing the potential for collisions.

Freight rail transportation is also safe. As reported by the Federal Railroad Administration, the multi-year trend is positive with all reportable incidents (derailments, fatalities, injuries, etc., on the national rail system) declining by almost 25 percent between 2006 and 2009.

Increased freight and passenger rail activity can increase congestion at at-grade crossings. This represents several safety concerns. As wait time increases, the likelihood of drivers, pedestrians or bicyclists attempting to “beat the train” increases. Likewise, emergency response services can also be negatively impacted, particularly if services are located on one side of the track and an incident occurs on the other side.

Finally, safety is a factor as it relates to shared use corridors between rail and non-motorized modes such as bikes and pedestrians. While the use of the actual rail corridor by a non-rail mode is considered trespassing, the potential conflict between these modes must be addressed during the design phases to ensure adequate safety devices are in place to reduce the risk of accidents.

**Community impacts**

Rail systems can foster focused growth around activity centers like rail stations, compared to the current auto/truck centric greenfield locations. This pedestrian-friendly development pattern reduces fuel use, air pollution and greenhouse gas emissions. It also reduces urban sprawl by satisfying housing and business needs in a more efficient manner. Improved rail service can also be a catalyst for the revitalization of older neighborhoods and housing stock. This revitalization can improve the quality of life by bringing not only improved transportation service but new retail and service providers to the

neighborhood. Reducing urban sprawl will reduce the pressure to develop farms and forest lands. Also, compared to adding additional highway lanes, expanding rail lines in rural areas will require little, if any, additional land.

While they may act as a catalyst for economic development, rail facilities that run through a developed area can in many cases act as a barrier. This impact can occur when tracks are not easily crossed from one side to the other because of safety concerns. Long, slow moving freight trains can split communities for excessive amounts of time, triggering long delays to motor vehicle traffic, including emergency services needing to cross the tracks.

Rail line improvements for intercity passenger service with attendant grade crossing closures and additional fencing will create barriers through neighborhoods compared to the existing rail lines with many crossings and little fencing. However, with the predicted 17 percent increase in freight rail traffic forecasted in the plan, these rail lines, if left unimproved, could become a safety concern. Improving the rail line for intercity or commuter rail can bring planning and improvement resources to address community concerns, offset the grade crossing closures, install fencing and other safety improvements, and implement quiet zones that can help link the community together.

In addition to considering passenger rail needs, consideration of freight rail facilities is also important. This may include determining the frequency of trains entering an area, assessing potential train schedule impacts on vehicle traffic, siting rail yards and terminals to maximize surrounding uses while minimizing potential negative impacts to community residents, and identifying potential connections between shippers and area businesses with railroad facilities.

In response to these issues, WisDOT will:

- Continue efforts to implement community sensitive solutions to encourage transportation projects that minimize negative impacts while preserving local character
- Continue to work with the Office of the Commissioner of Railroads (OCR) and private railroad companies to identify potential rail crossing safety improvements such as signals, gates, grade separations or closing crossings and discourage trespassing by installing fencing
- Work with the OCR to preserve intercity passenger rail corridors by discouraging new at-grade crossings of the corridor
- Work with local governments and ports to identify solutions to address roadway issues for port areas
- Assist local governments, as requested, in local comprehensive planning efforts
- Work with local communities to identify opportunities to link other modes with rail
- Create guidance regarding rail station development to aid communities when locating and building facilities so that consideration is given to the range of elements including ADA compliance, providing adequate lighting and visibility, emergency response needs, and the location of other services and activities within or adjacent to stations, such as vendors and stores, government and commercial offices and police stations

## *Environmental benefits*

An enhanced rail network, followed by a reduction in auto, truck, and air travel, can result in numerous environmental benefits. The direct reductions in total vehicle miles traveled that result from a shift to more fuel efficient rail can translate into less energy consumption, fewer greenhouse gas emissions and improved air quality. Shifting traffic to rail can also help relieve congestion and lower emissions that result from additional fuel use due to traffic congestion. Amtrak onboard surveys indicate that the majority of rail passengers are traveling alone. This is because rail passenger service tends to be more economically attractive for the solo traveler than the automobile. As a key priority, focusing on shifting solo travelers from the auto to rail yields the greatest energy and greenhouse gas savings.

The following discussion evaluates the issues and recommendations relative to:

- Energy
- Air quality
- Natural environment

> Current passenger rail systems throughout the U.S. consume one-third less energy per passenger-mile than automobiles.
>
> **U.S. Department of Energy**, *Transportation Energy Data Book*, 2007.

**Energy**

Wisconsin's transportation system depends on petroleum and related products. Petroleum-based fuels account for about 97 percent of the energy used by automobiles, trucks, airplanes, trains and ships. According to the U.S. Environmental Protection Agency (EPA), transportation accounts for 25 percent of Wisconsin's total energy resources. Nationally, transportation accounts for 25 percent of all U.S. greenhouse gas emissions. Adding to this demand, future growth patterns also suggest a needed expansion of alternative fuel efficient transportation options.

Fuel prices have driven some changes in the transportation sector. Rising fuel costs encourage consumers and businesses to use fuel more efficiently by either driving less, slower or switching to a more fuel efficient mode of transportation.

The reductions in fossil fuel usage and greenhouse gas emissions that result from a shift to the rail mode is supported by the U.S. Department of Energy's 2008 Transportation Energy Data Book. The data showed that Amtrak is 18 percent more energy efficient than air and 24 percent more efficient than the auto. The same is true for freight traffic. In 2008, one gallon of diesel fuel moved a ton of freight by rail 457 miles – four times the efficiency of trucks.

**Air quality**

While the emissions from the transportation sector are expected to continue to decrease with improvements in technology and regulatory measures, air quality remains a concern for Wisconsin. The state's air quality is affected by emissions generated internally, as well as those moving north along Lake Michigan from neighboring states. The highest levels of air pollution occur in Wisconsin's southeastern

counties and in the counties along Lake Michigan. Pollutants of greatest concern include ozone[2] and particulate matter.

Seven Wisconsin counties – Milwaukee, Kenosha, Racine, Ozaukee, Waukesha, Sheboygan and Washington - are designated as non-attainment[3] for the current ozone standard.

In addition to ozone, particulate matter is a concern for Wisconsin. Particulate matter is a complex mixture of extremely small particles and water droplets. It is made up of a number of components such as nitrates and sulphates, organic chemicals, metals and soil or dust particles. The EPA has designated three counties as nonattainment for the particulate matter 2.5 standard: Milwaukee, Racine and Waukesha.

The rail transportation mode offers a viable option to help reduce emissions. The EPA estimates that for every ton-mile, a typical truck emits three times more nitrogen oxides and particulates than a train. Related studies suggest that trucks emit six to 12 times more pollutants per ton-mile than railroads, depending on the pollutant measured. The American Society of Mechanical Engineers found that 2.5 million fewer tons of carbon dioxide would be emitted into the air annually if 10 percent of intercity freight now moving by highway were shifted to rail.

Also impacting congestion and greenhouse gas emissions is the transport of "overhead freight" through Wisconsin. Overhead freight includes freight shipments by truck, rail or intermodal that do not originate or terminate in Wisconsin. Because of the state's key location between Minneapolis/St. Paul and Chicago, more freight passes through Wisconsin than originates or terminates in the state. Impacted by increases in economic activity, overhead freight is expected to grow through 2030, taking up valuable capacity on Wisconsin's transportation system. See Chapter 4: Economic Development, for more information. Based on data from the American Association of State Highway and Transportation Officials, ton-miles for truck movements of more than 500 miles are projected to increase from 1.40 trillion in 2000 to 2.13 trillion in 2020. Finally, adding to highway congestion and greenhouse gas emissions, many rail/truck intermodal containers originating in Wisconsin are trucked to Chicago to be placed on trains.

In response to air quality concerns, Wisconsin has several targeted initiatives underway to reduce fossil fuel usage and greenhouse gas emissions. These initiatives are:

- A commitment through the Midwest Greenhouse Gas Reduction Accord to establish greenhouse gas reduction targets and to develop a market based cap-and-trade mechanism to achieve those targets

[2] Ground level ozone is formed form NOx and VOCs reacting to sunlight. These pollutants come from motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents, as well as natural sources. Ground level ozone is the primary constituent of smog. Sunlight and hot weather cause ground level ozone to form in harmful concentrations in the air.
[3] The EPA established allowable ambient concentrations for six criteria pollutants: carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead. Areas that exceed or violate these standards are considered to be in nonattainment.

- The State Office of Energy Independence focus on increasing the use of renewable fuels and alternative energy sources
- The Governor's Task Force on Global Warming efforts to stabilize and reduce greenhouse gas emissions[4]

In addition, WisDOT will emphasize air quality improvement by:

- Complying with existing policies and regulations aimed at maintaining and improving air quality
- Supporting and participating in air quality improvement programs and activities
- Monitoring emerging air quality issues

*Connections 2030* documented several key policy recommendations that have direct bearing on the natural environment surrounding rail corridors. Given that these corridors are in large part privately owned, the department's role is one of facilitator and technical expert to aid railroad operators in understanding state and federal requirements.

### *Natural environment*

Whether active or inactive, rail corridors can act to preserve remnants of prairie and other habitats. Due to their linear nature, rail corridors can also provide a continuity of habitat along the corridor. Finally, the corridors can provide nesting and feeding areas for many types of wildlife and birds.

However, rail corridors can also negatively impact the natural environment. Examples of these impacts may include:

- Invasive species – train movement, as well as track maintenance and construction, may contribute to the spread of invasive species
- Habitat fragmentation – changes to rail corridors may fragment habitats or result in a loss of habitat
- Water resources – rail construction activities may change drainage patterns or impact waterway navigability
- Wetlands – rail construction activities may result in the loss of wetlands

For more information on the impacts rail may have to the natural environment, see Chapter 11: System-plan Environmental Evaluation.

In response to these issues, WisDOT will:

- Work with stakeholders to identify sensitive habitats or resources early in the planning process and avoid or minimize impacts
- Monitor state and national efforts and be prepared to address potential future greenhouse gas regulations, pursuant to changes in regulation

[4] The final report of the Governor's Task Force on Global Warming was submitted in 2008. The Task Force is no longer active.

- Develop guidance and procedures to discourage transportation development activities from intensifying the spread of invasive plants
- Identify feasible, cost-effective solutions that avoid, minimize or mitigate impacts
- Track changes and analyze responses to transportation energy and costs

### *Encouraging economic development*

Rail improvements can encourage economic development in various ways. More and faster passenger trains can increase mobility options for intercity travelers, commuters and the transit dependent. More efficient access to the freight rail system, such as new intermodal facilities and continuing state support of short lines, can lower transportation costs for shippers. As a result, benefits resulting from passenger and freight rail investments can enhance the competitiveness of the state and the region. These benefits help retain existing work forces and business, and attract new ones, bolstering economic development. See Chapter 4: Economic Development, for more information.

Investments in passenger and freight rail transportation can produce economic returns achieved through additional connectivity and reductions in congestion. Intercity rail and commuter rail provide an environmentally friendly alternative and an opportunity to connect the state's major economic centers. An expanded and improved passenger rail network improves access to jobs, goods and services and expands the labor pool and market areas for business.

With respect to increased passenger rail services and smart growth, various economic benefits can be anticipated. Foremost is the shifting of personal trips from motor vehicles to trains, with the resulting benefit in fuel savings. Second, with intercity and potentially commuter trains stopping in urban centers, opportunities exist to promote transit-oriented mixed used developments. Transit-oriented development can be a catalyst for new economic activity, potentially resulting in more jobs and higher property values.

Rail enhancement would also help create a more sustainable freight network. Currently, rail shipments account for one-third of the state's total freight movement by tonnage and 15 percent by total value, second only to truck shipments. Shifting this freight from truck to rail would not only help reduce roadway congestion, but also result in less pollutants and a lower cost due to better efficiencies in fuel per ton-mile.

Improved access to the national rail system, whether through short lines or new intermodal centers, will generate economic advantages to shippers and to the state as a whole. The cost of rail transportation per ton-mile is less than the typical alternative, which is truck. Transportation cost savings can be spent on more manufacturing, which can increase payrolls. Growth in payrolls would translate into more revenue for Wisconsin's service industries. The traditional economic theory of a multiplication of benefits resulting from an investment clearly applies here.

Should efforts be made to develop Wisconsin intermodal load centers, such as inland ports, where intermodal containers might be gathered into blocks and hauled to either Minneapolis or Chicago rail centers, the number of trucks on the state's highways could be reduced. The potential benefits of this

diversion would include fuel cost and highway maintenance savings, as well as the minimization of highway crashes and their related costs. Development of intermodal load centers must be done in coordination with freight railroads which would serve the facilities.

For more information regarding intercity passenger rail, see chapter 6. For more information regarding freight rail, see chapter 5. For more information regarding commuter rail, see chapter 7.

In response to these issues, WisDOT will:

- Encourage transit-oriented development at intercity and commuter rail stations, to serve as catalysts for revitalization of urban centers and new economic activity
- Continue to work with Wisconsin's metropolitan planning organizations and regional planning commissions, to coordinate rail planning and investment decisions
- Continue to upgrade and rehabilitate Wisconsin's publicly owned rail lines and bridges
- Continue to preserve rail corridors for future transportation use
- Support improvements in rail systems that lead to a more efficient and safe transportation system
- Create guidance regarding rail station development to aid communities when locating and building facilities so that consideration is given to the range of elements including ADA compliance, adequate lighting and visibility, emergency response needs, and the location of other services and activities within or adjacent to stations, such as vendors and stores, government and commercial offices and police stations.

# Chapter 9: Rail Safety and Security

## Table of Contents

# Chapter 9: Rail Safety and Security

## Introduction

Safety continues to be one of the Wisconsin Department of Transportation's (WisDOT's) fundamental missions. The department emphasizes safety in all of its efforts, from education and enforcement to engineering and emergency response. WisDOT remains committed to a multidisciplinary philosophy that safety "is everybody's business." *Connections 2030,* adopted in 2009, identified the following objectives to help the department achieve its multimodal transportation safety vision:

- Reduce crashes, injuries and fatalities
- Educate users on safety strategies
- Design and construct safe transportation facilities
- Identify and build partnerships between governmental units to achieve safety improvements

Like safety, security considerations have also been a part of WisDOT's policies for many years. In *Connections 2030*, WisDOT defined its transportation security vision for all modes – to be able to prevent, prepare for or coordinate response to any incident, whether caused by natural or human events. The following objectives, first defined in *Connections 2030*, further the department's efforts to achieve this vision:

- Support a comprehensive vision of homeland security and defense mobilization
- Improve emergency response
- Improve data/decision support systems
- Maintain the transportation system to maximize the use of existing facilities
- Use technology and other methods to operate existing facilities and services more efficiently

Building on the vision, policies and actions identified in *Connections 2030*, *Wisconsin Rail Plan 2030* adopts and further refines the safety and security policies specific to rail transportation statewide. Specifically, this chapter reviews:

- Stakeholder roles and responsibilities for rail safety and security
- Rail safety
- Rail security

## Stakeholder Roles and Responsibilities for Rail Safety and Security

As a steward of the state's transportation system, WisDOT is responsible for addressing safety and security for all transportation modes and systems. Unlike the state trunk highway system, in which WisDOT has primary authority, the department must coordinate with other agencies and private rail

companies regarding rail safety and security. The following is a summary of key stakeholders with direct involvement in rail safety or security issues.

**Federal Railroad Administration** (FRA) is responsible for promoting the safety of the nation's passenger and freight railroads. The FRA fulfills this responsibility by developing programs that identify, monitor and address railroad safety issues; and by promulgating and enforcing regulations that prescribe minimum rail safety standards. Each year, federal safety inspectors make nearly 90,000 inspections of track, rail tank cars, operating practices and shipping facilities nationwide. The FRA also coordinates numerous grade crossing and trespass-prevention initiatives, collects and analyzes rail incident data, and creates statistical reports.

**Federal Highway Administration** (FHWA) has a major role in safety at roadway-railway grade crossings. It sets standards for traffic control at roadway-railway grade crossings and establishes reporting requirements for crossings. The FHWA also manages the Railway-Highway Crossing Program, a subset of the Highway Safety Improvement Program. Funds from this program provide for the elimination of hazards and the installation of protective devices at public roadway-railway crossings. To be eligible for these funds, states must publish an annual report on the effectiveness of safety projects in reducing roadway-related crashes, injuries and fatalities. The FHWA also tests proposed new warning devices to ensure they meet the criteria for motorist survival if the device were to be struck by a motorist when installed.

**Federal Transit Administration** (FTA) oversees the safety and security of the nation's transit systems which include commuter rail operations. The goal of the FTA Safety and Security Program is to "achieve the highest practical level of safety and security for all modes of transit." In addition to oversight, the FTA also provides technical assistance to programs that help transit agencies prevent injuries, fatalities, property damage and system interruption, and to ensure transit agencies are able to quickly and effectively respond to any incidents.

**Wisconsin Office of the Commissioner of Railroads** (OCR) is the state agency with primary jurisdiction for the safety of public roadway-railway crossings, regardless of whether the crossing is at-grade or separated. In carrying out its responsibilities, this office works closely with WisDOT on rail safety issues. The OCR's duties include:

- Authorizing installation, alteration, repair and consolidation of roadway-railway crossings
- Making determinations on petitions for closures and establishment of new crossings, and on the adequacy of warning devices at railroad crossings
- Making determinations on railroad fencing and railroad track clearance laws

WisDOT serves as the state sponsor of **Wisconsin's Operation Lifesaver, Inc.**, an international, non-profit, public education program established in 1972. Its goal is to end collisions, deaths, and injuries at places where roadways cross train tracks and on railroad rights of way. Operation Lifesaver, Inc. supports public education, engineering and enforcement efforts. Its programs are sponsored cooperatively by federal, state and local government agencies; highway safety organizations; and the nation's railroads. Trained and certified volunteers make safety presentations to a wide variety of groups throughout the state.

As the state agency with statutory responsibility and legal jurisdiction to investigate the safety of roadway-railway crossings, any order by the OCR is final and has the force of law following any appeal.

**Wisconsin Department of Transportation (**WisDOT**)** is the primary state agency responsible for roadway-railway crossing improvements statewide. WisDOT regularly improves crossings as part of highway projects. These improvements typically address crossing surfaces and active warning devices. Several WisDOT efforts address the security of roads, bridges, buildings and other transportation assets including rail corridors and stations. Because railroads are typically owned and operated by private interests, WisDOT's enforcement efforts are focused on road traffic at grade crossings. WisDOT also promotes rail safety and security through its Internet site and educational programs such as Operation Lifesaver. At the planning level, WisDOT coordinates with local jurisdictions, metropolitan planning organizations, regional planning commissions, railroads and rail transit commissions in considering rail safety improvements.

**Office of Wisconsin Emergency Management** (WEM), located in the Department of Military Affairs, is responsible for coordinating all state security matters. When rail emergencies arise, WEM coordinates the local response effort, including state and local law enforcement, emergency responders and the railroad companies.

**Railroad companies** are private entities that typically own the rail lines on which they operate. They are subject to safety and security regulations, primarily at the federal government level. At the state level, they are subject to the regulations of the Office of the Commissioner of Railroads. The responsibilities of railroads, in terms of safety and security, include:

- Maintaining all public roadway-railway crossing surfaces in good repair and in safe condition for public travel (Section 86.12 and Section 86.13, Wis. Stats.)
- Providing advance railroad crossing warning signs for town and county rail crossings (the local authority installs the signs)
- Maintaining all installed warning devices, both active and passive, at public at-grade roadway-railway crossings, including interconnecting signals to traffic signals
- Providing safety and security preparedness and emergency response efforts on their rail lines

**Amtrak** is responsible for ensuring the safety and security of its passenger operations. Examples of the measures it uses include Amtrak police officers and security teams, onboard security checks and canine (K-9) units.

**Metra** is responsible for ensuring the safety and security of its commuter rail operations. Like Amtrak and private railroad companies, it has its own police department, which provides security for all its lines and stations. Metra also provides training and education on emergency preparedness to its staff and to emergency responders serving communities in which it provides service.

Due to the number of groups having a role in rail safety and security, coordination and communication is very important in ensuring that safety and security issues are addressed quickly and efficiently.

## Rail Safety

Most rail safety rules and regulations fall under the jurisdiction of the Federal Railroad Administration (FRA). The 2008 Rail Safety Improvement Act requires stronger rail safety measures affecting grade crossings, train operations, crews, hours of service, and calls for the improvement of automatic train stop technologies. Railroads operating in Wisconsin are subject to these federal rules and regulations. As a result of federal preemption, Wisconsin has limited autonomy with regard to rail safety issues. While WisDOT can make the FRA aware of particular issues, the department cannot force a railroad to act.

In 2009, there were 57 crashes involving trains in Wisconsin. These crashes resulted in four fatalities and 24 injuries. Nationwide, commuter rail and intercity passenger rail remain one of the safest ways to travel.

There are three key safety concerns with rail transportation:

- Crossings
- Quiet zones
- Collisions and derailments

In addition, there are two concerns that impact both safety and security:

- Trespassing
- Shipment of hazardous materials

### *Crossings*

Over 7,200 rail crossings are located in Wisconsin (Table 9-1). Rail crossings can be either at-grade or grade-separated. At-grade crossings are the most common type of crossing in Wisconsin, accounting for over 89 percent of all crossings in the state. At-grade crossings occur wherever a railway and highway physically intersect. Grade-separated crossings occur when the railway and roadway are physically separated by an overpass or underpass.

Since 1990, crashes at highway-railway grade crossings have declined by more than 50 percent nationally. Even with this decline, railway-roadway crossing safety remains a concern.

**Table 9-1: Roadway-railway crossings in Wisconsin, 2008**

| *Crossing Type* | *Public* | *Private* | *Pedestrian* | ***Total*** |
|---|---|---|---|---|
| At-grade | 4,110 | 2,288 | 87 | **6,485** |
| Separated | 683 | 53 | 31 | **767** |
| **Total** | **4,793** | **2,341** | **118** | **7,285** |

**Source: US DOT National Highway-Rail Crossing Inventory, December, 2008**

At-grade crossings are equipped with warning devices to alert vehicles and pedestrians of the presence of a rail crossing. These warning devices may be either passive or active. Passive devices do not change when a train is approaching. Examples of passive devices include:

- Circular advance warning signs
- Stop signs
- Crossbucks (the familiar X-shaped signs)
- Pavement markings
- Median barriers

In comparison, active devices become active as a train approaches. For example, lights may flash and gates may be lowered. Examples of active devices include:

- Two quad gates
- Four quad (full barrier) gates
- Flashing lights (cantilevered or mast-mounted)
- Bells
- Yield signs
- Highway traffic signals
- Special warning devices such as flagmen

WisDOT and local governments use both active and passive devices.

Crossing safety may also be increased through changes to the roadway or to the area near the crossing. For example, the design of the roadway may be changed to improve sight distances. Likewise, clearing brush or trees can also improve sight distances.

WisDOT and local governments regularly improve roadway-railway crossings as part of roadway projects. Any project that crosses a rail line or ends near a rail line must include a review of whether any crossing improvements are needed. WisDOT and local governments cannot ignore any railway crossing related improvements when completing a roadway improvement project. In some instances, WisDOT or a local government may improve a roadway-railway crossing even though a project is not planned. In all instances, crossing improvements are coordinated with the railroad company.

With over 6,500 at-grade crossings in the state, rail crossing safety remains a challenge and a priority. Actions that can be taken to improve rail crossing safety include minimizing the installation of new crossings of rail lines, increased education about the dangers of rail crossings, constructing grade-separated crossings or closing existing crossings.

Educational efforts can increase public awareness of the dangers at roadway-railway crossings, and emphasize the need for motorists, pedestrians and bicyclists to respond properly to crossing warning devices. *Connections 2030* stated that WisDOT will continue to support the Operation Lifesaver program that teaches safe behavior while crossing railroad tracks.

As noted earlier, grade-separated crossings are safer than at-grade crossings because they physically separate vehicles, pedestrians and bicyclists from trains. Grade-separated crossings also:

- Eliminate the need for signs, barriers or other safety devices and technologies to warn roadway users of oncoming trains
- Reduce traffic congestion caused by vehicles waiting at a crossing for a train to pass, and as a result may also improve air quality and reduce energy consumption

However, grade-separated crossings are expensive to build and maintain. Typically, these crossings are built in locations with higher volumes of vehicle and train traffic. Construction may be hindered by physical limitations such as existing land uses and topography.

The most effective way to improve crossing safety is to close crossings. While closing a crossing can positively impact crossing safety, it can result in hardships to those directly affected by the crossing. For example, eliminating a crossing may result in greater travel times for drivers, bicyclists and pedestrians. It can also result in increased emergency response time for emergency vehicles. Closed crossings may also function as barriers, preventing easy or convenient movement within a community and between neighborhoods. As a result, WisDOT and the Office of the Commissioner of Railroads (OCR) consider many factors when deciding whether to close a crossing. They include:

- Amount of vehicle and pedestrian traffic
- Response time for emergency vehicles
- Physical conditions and visibility
- Feasibility of rerouting traffic to adjacent crossings
- Crash history and predicted crash frequency rate
- Improvement in livability in the area near the proposed closure

Rail line abandonment can result in the closure of large numbers of crossings. However, rail line abandonments typically occur on low volume railway corridors. As a result, the derived safety benefit may be minimal. In addition, the bulk of rail line abandonments occurred during the 1980s. While railroads still abandon low volume corridors, these abandonments occur less often than in the past. Of the 49 crossings closed in the state from 2000 to 2009, none were due to rail line abandonment.

Where possible, WisDOT and OCR target crossing closures in areas with multiple adjacent crossings, concentrating safety improvements at the remaining crossings. By focusing on these areas, many of the negative impacts associated with closures can be minimized.

*Connections 2030* notes WisDOT will continue to work with OCR and private railroad companies to identify potential rail crossing safety improvement such as signals, gates, grade separations, or closing crossings. In addition, for rail corridors with intercity passenger rail service, WisDOT will continue to work with OCR to discourage new at-grade crossings of the corridors. WisDOT will work to equip federally-designated high-speed rail corridor crossings with appropriate warning devices.

## *Quiet zones*

Train engineers are required by the FRA to sound the locomotive horn as a warning at public roadway-railway crossings. However, the FRA also provides an opportunity for communities to mitigate the effects of train horn noise by establishing quiet zones. Wisconsin's local governments have exercised their authority to create quiet zones within their jurisdictions to improve community quality of life.

Implementing quiet zones can present funding challenges for communities. Because locomotive horns are a basic warning device, eliminating this safety measure requires the installation of other safety measures at public crossings within the quiet zone. While WisDOT neither supports nor opposes quiet zones, department policy prohibits federal or state funds from being used for safety upgrades solely to establish a quiet zone in a community. Instead, federal or state funds may be used only if there is an overarching need for safety improvements at the crossing and those improvements happen to meet the standards for creating a quiet zone. In these instances a community has the option of establishing a quiet zone. For all other instances, a community must fund the necessary safety improvements on its own.

Even when quiet zones are established, train engineers retain the authority and responsibility to use the horn if they feel conditions warrant its use.

## *Collisions and derailments*

While derailments may occur when a train collides with a vehicle, the chances for a derailment increase significantly if a train collides with another train. This section focuses on train-to-train collisions. These collisions may result from natural events, such as severe weather, from human error, or from a range of other potential causes.

Examples of technologies used to minimize or avoid collisions and derailments include:

- Positive train control
- Electronically controlled pneumatic braking system
- Distributive power
- GPS-based interactive car location system
- LED signal system
- Wayside detection system
- Automatic train stop system

Table 9-2 provides a brief description of each of these technologies.

**Table 9-2: Examples of technologies that may reduce train collisions and derailments**

| Technology | Description |
|---|---|
| Positive train control | • Enables computers to override human workers in emergency situations<br>• Helps prevents train-to-train collisions, over speed derailments, and casualties or injuries to railway workers<br>• Required for all Class I railroads and Amtrak by December 2015 |
| Electronically controlled pneumatic brakes | • Results in shorter stopping distances, fewer derailments and collisions, and reduced severity of collisions that do occur<br>• Allows each car to be braked simultaneously — in comparison to current braking systems which apply power car-to-car from the front of the train to the rear<br>• Allows engineers to "back off" braking efforts to match track grade and curvature without completely releasing the brakes |
| Distributed power | • Results in improved handling, demonstrated by an average 22 percent reduction in stopping time and a 30 percent reduction in braking distance<br>• Occurs when multiple locomotives, controlled by the lead locomotive, are spaced throughout long trains<br>• Uses radio-signal remote technology to serve as communication link between the locomotives |

## *Trespassing*

Trespassing presents both safety and security concerns. Even as roadway-railway crossing-related fatalities have declined, the number of trespassing-related fatalities has risen. Since 1997, trespassing fatalities have become the leading cause of rail-related fatalities in the United States. In Wisconsin, there were 16 trespassing-related fatalities between 2007 and 2009.

Trespassing also presents rail security concerns. Since the events of September 11, 2001, trespassers are now considered a potential security threat.

The public as a whole is generally indifferent to trespassing, with some even finding it socially acceptable. Since rail facilities are private property, trespassing is illegal and subject to local and state laws. (Note: There is an exception to the trespassing laws for private crossings, whereby a person who owns the property on each side of a railroad is allowed to drive across the railroad on that property.)

Railroads, local jurisdictions, and state and federal agencies rely on a variety of measures to prevent and restrict trespassing. Education is one measure. The FRA sponsors and carries out public education related to the dangers of trespassing on rail facilities. Railroad police departments play a crucial role in monitoring trespassing. These departments work closely with public enforcement agencies. Fencing, lighting, gates and barricades are other measures that can be installed to discourage trespassing.

*Connections 2030* notes that WisDOT will continue to work with the OCR and private railroad companies to discourage trespassing by installing fencing.

### *Shipment of hazardous materials*

The U.S. Department of Transportation defines hazardous materials, or HAZMAT, as substances or materials capable of posing an unreasonable risk to health, safety, or property when transported in commerce. Hazardous materials shipments present a unique safety and security concern. In the absence of a collision, derailment or security threat, these shipments present little risk. However, if a collision or derailment were to occur, or if a terrorist were to use a hazardous materials shipment as a weapon, the potential consequences would be considerable.

A 2006 FRA audit reported an increase in the number of hazardous materials defects for all Class I railroads from a previous audit done in 2003. The audit focused on railroads' compliance with requirements related to hazardous materials shipments and hazard communication. The 2006 audit emphasized the importance of continued preparedness for potential hazardous materials incidents.

As noted earlier in this chapter, the Office of Wisconsin Emergency Management (WEM) coordinates security concerns in Wisconsin, including coordinating emergency response efforts. WEM contracts with eight regional HAZMAT response teams to provide a high level of response capability to the state's communities. These teams may be activated for an incident involving a HAZMAT spill, leak, explosion, injury, or the potential of immediate threat to life, property, or the environment. County-level response teams respond to lower level hazardous materials incidents that exceed the capabilities of standard fire departments.

As discussed in the next section, WisDOT's role in transportation security is limited. *Connections 2030* identities two key policies related to transportation security:

- Enhancing the security of the transportation system by reducing vulnerability
- Improving emergency response to make the transportation system more resilient

WisDOT will continue to implement these policies. In addition, WisDOT will continue to work with WEM, railroad companies and other agencies to discuss rail-related security issues. WisDOT also expects rail carriers to comply with regulations related to the transportation of any hazardous materials and work with the appropriate agencies if a spill occurs.

## Rail Security

Like safety, transportation security is a high priority. However, WisDOT's role in transportation security, including rail security, is limited. The Wisconsin Home Rule statute (Chapters 59 and 163, Wis. Stats.) notes it is the responsibility of the local government to respond to emergency events. WisDOT typically serves in a support role unless the local jurisdiction defers command to WisDOT. As a result, the key players involved in rail security are Wisconsin Emergency Management, local governments and

railroads. Federal agencies may also become involved if there is a threat of an incident or if an incident occurs.

Rail security is often separated into two types: passenger rail, which includes commuter rail and freight rail. Each type has its own security concerns. For example, passenger rail has several characteristics that make it vulnerable to attack:

- Easy accessibility
- Quick service to destinations
- Large number of access points
- High volumes of passengers (particularly for commuter rail operations)

Due to these characteristics, using airport-like security measures is impractical.

No specific threats have been identified regarding the freight rail system. However, security experts note it may be an attractive terrorist target for several reasons:

- Publicly accessible
- Long stretches of open and unattended track
- Difficulty of securing rail assets
- Corridors in densely populated urban areas

To date, freight rail security efforts have focused on securing the shipment of certain hazardous substances, as well as ensuring the security of key infrastructure.

In this section, rail security concerns focus around two key areas:

- Reducing vulnerability
- Improving emergency response

## *Reducing vulnerability*

In 2005, WisDOT conducted a security assessment of the state's critical transportation infrastructure. As part of the assessment, the department identified public and private rail facilities that would compromise Wisconsin's transportation system if damaged or destroyed. WisDOT's vulnerability assessment identified more than 100 transportation facilities – including highways, rail, air, transit and waterways – as having the potential to catastrophically disrupt the state's transportation system. The department also identified possible actions to prevent or mitigate potential security threats. These actions fall into three categories:

- Deterrence – examples include fencing, lighting, barriers, gates, checkpoints, patrols and guards
- Detection – examples include personnel identification, inspection, lighting, alarms, sirens, closed-circuit television, and chemical, biological, radiological, nuclear and explosive detection technology
- Defense – examples include barriers, structural hardening, and blast reinforcement

WisDOT and the railroads use all of these strategies and employ many of these devices and technologies in various combinations on railway locations statewide.

Highway bridges located over rail facilities are particularly vulnerable. Wisconsin has 613 highway bridges over rail facilities (not including pedestrian walkways). Rail cars parked beneath these structures—especially those containing hazardous materials—can pose a security threat to the roadway and to the railway itself if hazardous materials are released. WisDOT coordinates with railroad officials and other private companies to help keep the areas beneath these structures clear.

While grade-separated crossings can also pose a security threat, the threat is considerably less due to the smaller area of roadway and railway exposure. Wisconsin has 736 grade separated rail crossings (not including pedestrian crossings).

Addressing security needs for passenger and commuter rail is challenging. According to passenger rail experts, certain characteristics of passenger rail systems make them inherently vulnerable to terrorist attacks and difficult to secure. Balancing the potential economic impacts of security enhancements with the benefits of such measures is a difficult challenge.

Securing the nation's passenger rail systems is a shared responsibility. It requires coordination between federal, state and local governments; the private sector; and rail passengers who ride these systems. The Federal Transit Administration and Federal Railroad Administration are responsible for passenger and freight rail safety and security. In addition, passenger rail operators also share responsibility for securing their systems. Although all levels of government are involved in passenger rail security, the primary responsibility for securing passenger rail systems rests with passenger rail operators. As a partner in those efforts, WisDOT will continue to participate in discussions and implement measures to ensure the security of the transportation system statewide.

The Department of Homeland Security issued a series of directives regarding protective measures that apply to all passenger rail operators. These directives include:

- Conducting comprehensive vulnerability assessments of rail and transit networks that operate in high-density urban areas
- Training personnel to prevent and respond to potential terrorist events
- Requiring operators to remove trash receptacles except clear plastic or bomb-resistant trash containers at certain locations
- Asking employees and passengers to report suspicious behavior or unattended property
- Using canine explosive teams to screen passenger baggage, terminals and trains, when needed
- Ensuring that security levels are consistent with Department of Homeland Security threat levels

To assist with passenger rail security, *Connections 2030* noted that WisDOT will:

- Seek federal security funding to install and operate flat-panel displays and remote audio announcement technology at all Amtrak stations in Wisconsin
- Take an active role in the oversight of security for new commuter rail systems in Wisconsin

## *Improving emergency response*

The importance of coordinated, skilled emergency response procedures – in both the initial hours after an incident occurs and in the weeks and months following the incident – has been demonstrated repeatedly. Major incidents typically involve a phase of rescue and recovery followed by a longer period of reconstruction. The demands placed on transportation and emergency response partners evolve throughout an emergency situation.

Whether a critical event is triggered by environmental conditions, equipment or structural failure, human error, or terrorist action, numerous agencies have roles in the response effort. These include federal, state and local agencies, railroads and other private companies. Communication between these groups is important to ensure that appropriate and accurate information is shared in a timely manner. To help facilitate a prompt response, every roadway-railway crossing in Wisconsin has a sign indicating that crossing's unique identification number, as well as emergency contact numbers. This allows emergency responders to quickly identify an incident's location.

As mentioned previously, Wisconsin Emergency Management (WEM) coordinates the local response effort, which includes fire departments, hazardous materials response teams, law enforcement, state transportation officials, and the railroads. In some instances, rail personnel might first contact the National Response Center, which will then contact WEM.

In situations where emergency evacuation of residents might be necessary, commuter rail operators and Amtrak coordinate with the Federal Emergency Management Agency (FEMA).

To improve emergency response, WisDOT has adopted an Emergency Transportation Operations Plan. This plan encompasses all modes. It provides the necessary structure for the department to effectively respond to an emergency incident. The Emergency Transportation Operations Plan documents the procedures, processes, technology, roles and relationships used by the department when responding to incidents.

One key area of emergency response focuses on the nation's defense. Each year, the Department of Defense ships a large number of heavy vehicles and equipment by rail for deployment. The department established the Strategic Rail Corridor Network to ensure that its minimum mobility needs are identified and coordinated with the appropriate transportation authorities. The Strategic Rail Corridor Network consists of over 38,000 miles of track nationwide and serves 190 defense installations. In Wisconsin, the STRACNET line is the same as that used by Amtrak for passenger rail travel (see Map 9-1).

> The Department of Defense has identified a network of *highways* –The Strategic Highway Network (STRAHNET)—designated as important to the nation's strategic defense policy.

**Map 9-1: Wisconsin's designated Strategic Rail Corridor**

# Chapter 10: Funding Wisconsin's Rail System Investments

## Table of Contents

# Chapter 10: Funding Wisconsin's Rail System Investments

## Introduction

*Wisconsin Rail Plan 2030* presents a set of transportation policies and recommended actions to be achieved over the next 20 years. Implementation will require the continued investment of staff and funding resources to ensure that the state maintains and enhances its multimodal transportation system, while meeting federal and state law.

Decisions regarding transportation priorities and investment needs are considered and addressed during each biennial budget process. The year 2010 saw new funding opportunities for rail planning and investment. Federal policy and funding facilitated improvements to the nation's intercity passenger rail service. This infusion of federal money into intercity passenger rail complements ongoing federal and state efforts to support freight rail.

Funding will be required for Wisconsin to take advantage of opportunities to expand the state's intercity passenger rail network; enhance and improve the freight rail system; and address interest in commuter rail connectivity. The following chapter:

- Presents funding sources used to finance current freight, intercity passenger, and commuter rail projects in the state
- Discusses potential sources of funding and methods for financing future investments, including an assessment of potential future funding sources

In addition, a long-range rail investment program documenting estimated freight and passenger rail infrastructure costs and investments through 2030 is provided in Appendices 10-A and 10-B.

This chapter fulfills requirements contained in the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) regarding having a financial plan as part of the state rail plan.

## Wisconsin's Commitment to Funding Rail Investments

As discussed throughout *Wisconsin Rail Plan 2030,* there are two primary reasons for the state to continue developing and funding rail policies and programs:

- As part of the state's multimodal transportation system, rail is, and will continue to be, important to Wisconsin
- It is in the public interest to preserve essential rail service when the private sector does not have the economic justification or resources to maintain the service

## Wisconsin's Transportation Budget

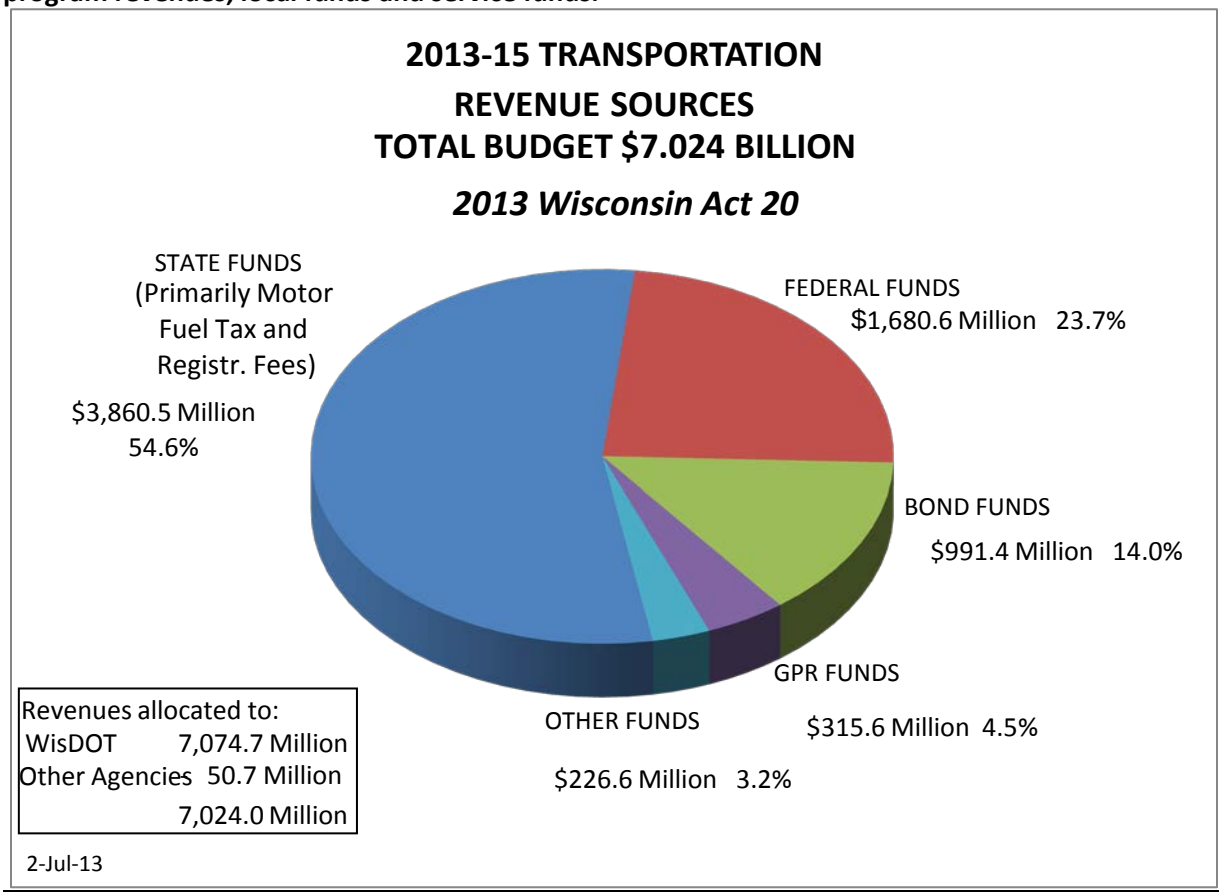
Wisconsin's transportation budget for the 2013-2015 biennium totals $7.0 billion. Figures 10-1 through 10-3 depict:

- All transportation revenue sources
- Distribution of state revenues
- Distribution of all funds (total transportation budget)
- Rail bonding

### *State Transportation Revenue*

Funding for Wisconsin's transportation system comes from several sources including: state revenue; federal funds; bond proceeds; local and service funds; program and general purpose revenue; and other funds. Figure 10-1 shows fiscal year 2013-2015 transportation revenue sources.

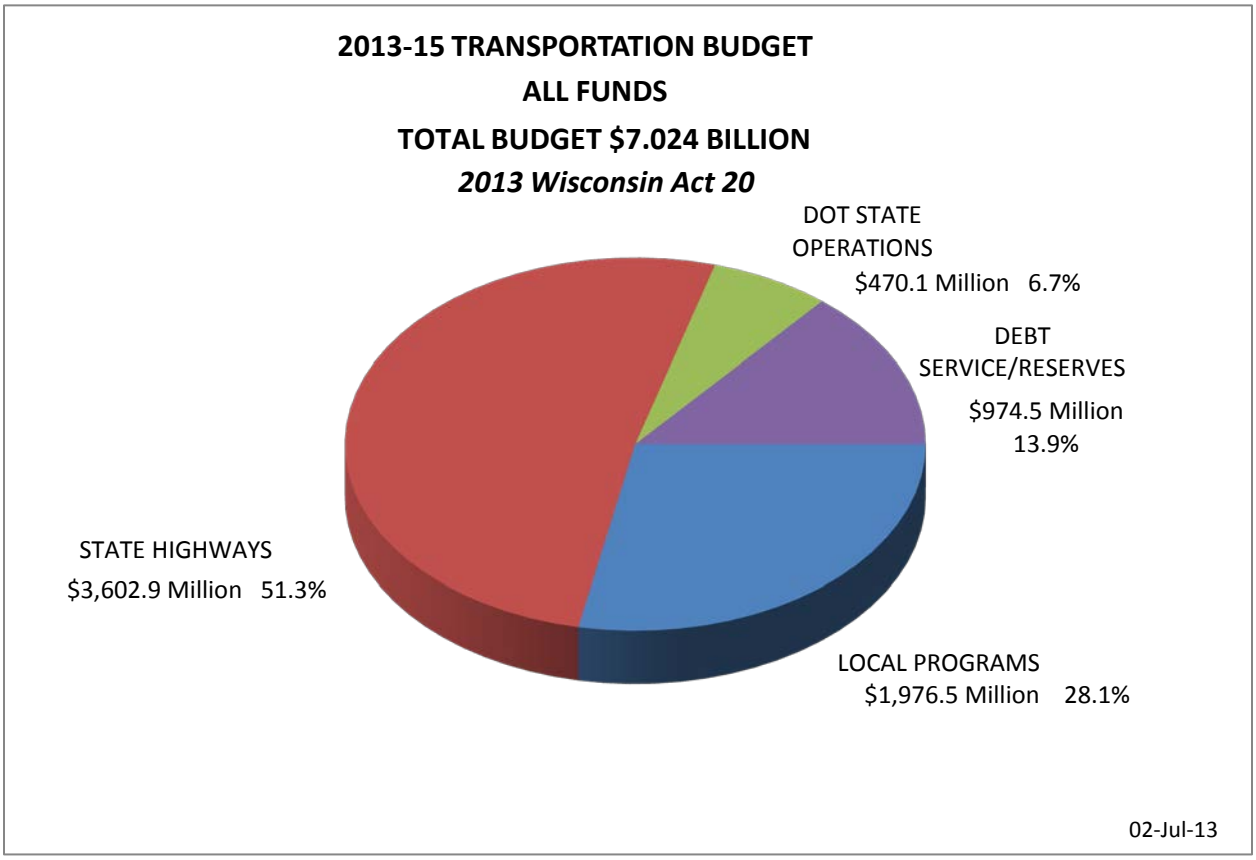
**Figure 10-1: All WisDOT revenue sources (reflects 2013 Wisconsin Act 20). Other funds include: program revenues, local funds and service funds.**



## *Distribution of all funds (total transportation budget)*

Wisconsin's transportation budget for the 2013-2015 biennium totals $7.0 billion. Figure 10-2 shows the distribution of all funds across the department. The majority of funding is directed at state highways and local programs. A portion of these funds is used to make improvements to rail infrastructure. Many other rail activities are covered under the DOT State Operations category.

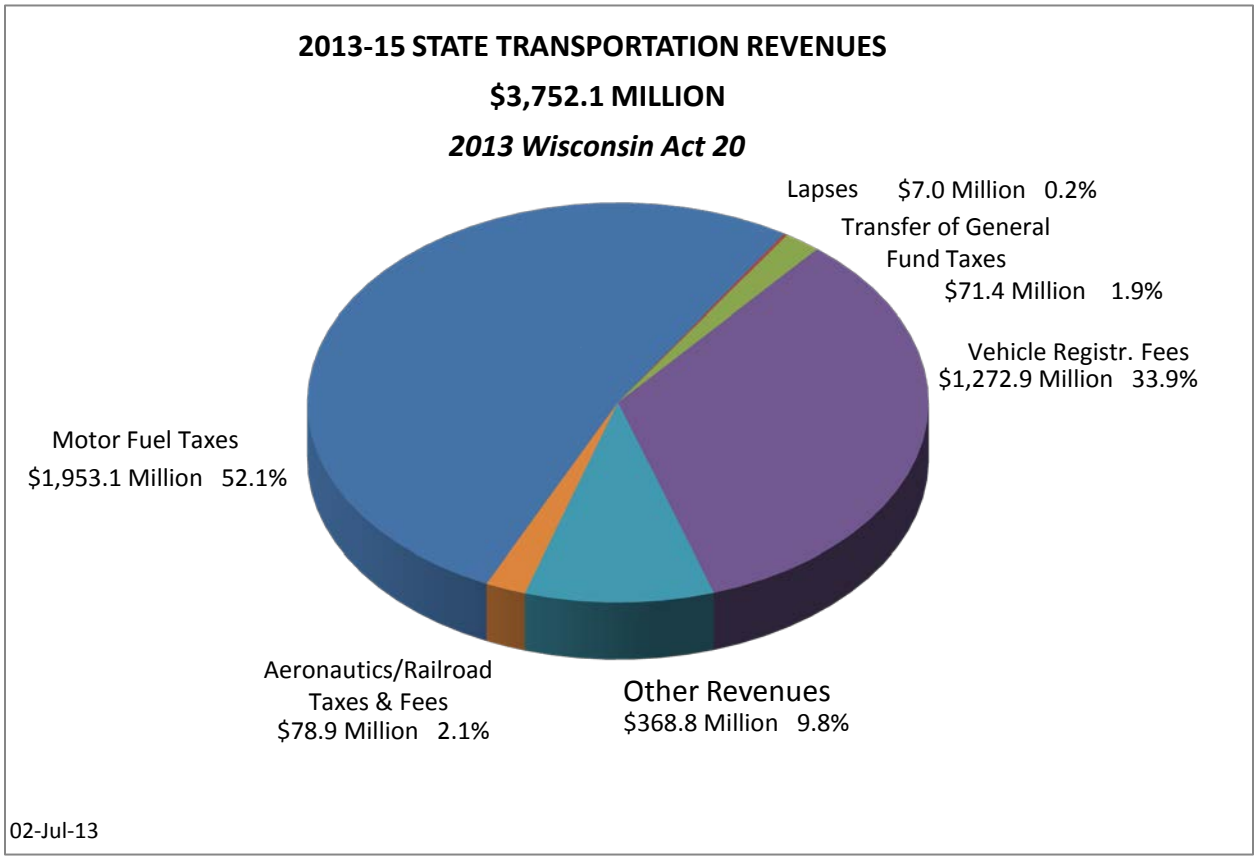
**Figure 10-2: Distribution of all transportation funds (reflects 2013 Wisconsin Act 20)**




## *Distribution of state revenue*

As indicated in Figure 10-1, 54.6 percent of the Wisconsin Department of Transportation's (WisDOT's) budget revenue – almost $3.8 billion in the 2013-2015 biennium – is generated from state fees. Figure 10-3 shows the distribution of these funds among WisDOT's programs. Most rail funding programs are accounted for in the DOT Local Programs category. Rail bond payments are accounted for in the debt service/reserves section.

**Figure 10-3: Distribution of state revenues (reflects 2013 Wisconsin Act 20)**




## *Rail bonding*

Wisconsin uses general obligation bonds to fund some rail programs. The state has used general obligation bonds to fund many projects since the late 1960s. Most recently, general obligation bonds helped finance the Marquette Interchange reconstruction project in southeastern Wisconsin; harbor and railroad projects; and various state highway rehabilitation projects. These bonds are repaid from the Transportation Fund or the state's General Fund. Another type of bonding – transportation revenue bonds that are repaid from specific, pledged Transportation Fund revenue sources – are used to provide funding for the Major Highway Development program.

Freight rail bonding for the 2013-2015 biennium totals $52 million. These funds are used to pay for the Freight Rail Preservation Program (FRPP). In addition, approximately $43 million in previously authorized bonding remains available for passenger rail projects.

## WisDOT Rail Programs

A portion of the state's transportation budget is used to fund rail programs. These programs are targeted specifically at rail or rail/highway activities and funding comes from state, federal and local sources. In the 2013-2015 biennium, these funds account for almost $39.3 million out of the total $7 billion budget. As mentioned earlier, $52 million in additional freight rail bonding authority was also included in the 2013-2015 biennial budget. The distribution of the funds, including program budgets and additional bonding authority, in the 2013-2015 biennium is:

- **Railroad crossings** – $14,468,400
  - 46 percent, or $6,583,600, is federal funds
  - 54 percent, or $7,884,800, is state funds
- **Passenger rail service** – $13,300,000
  - 100 percent is state funds
  - Represents Wisconsin's operating assistance responsibility for Amtrak's *Hiawatha Service* and other passenger rail efforts
- **Freight rail loan repayments (FRIIP program)** – $8,000,000
  - 100 percent of these funds come from repayments of previous loans, and are considered local funding, as the repayments come from project sponsors (often local government entities)
- **Rail service assistance** – $3,510,200
  - 3 percent, or $1,000,000, is federal funds
  - 69 percent, or $2,410,200, is state funds
  - 28 percent, or $1,000,000, is local funds
  - Represents the operating budget for the department's rail program section and for some activities that are not covered by one of the primary rail programs
- **Additional freight rail bonding (FRPP)** – $52,000,000

The following section describes state programs that fund freight, intercity passenger and commuter rail projects.

### *Wisconsin freight rail programs*

WisDOT has been providing freight rail assistance since 1977. Early efforts focused on assisting community efforts to preserve freight rail service to communities that would otherwise have been negatively affected if service was abandoned. In 1992, Wisconsin voters approved an amendment to the state constitution allowing the state to become directly involved in rail acquisition, rehabilitation and development projects. Two programs operate under this authority: the Freight Rail Infrastructure Improvement Program (FRIIP) and the Freight Rail Preservation Program (FRPP).

**Freight Rail Infrastructure Improvement Program**

FRIIP loans enable WisDOT to fund a broad array of improvements to the rail system, particularly on privately owned lines. The program also provides funding for other rail-related projects such as loading

and transloading facilities. Since 1992, $112 million in loans have been awarded. The available funding is from repayments of prior loans. The program provides loans of up to 100 percent of the cost for rail projects that connect an industry to the national railroad system; make improvements to enhance transportation efficiency, safety, and intermodal freight movement; accomplish line rehabilitation; and help further develop the economy. FRIIP loan repayments will fund another $8 million in projects in the 2009-2011 biennium.

**Freight Rail Preservation Program**

FRPP provides grants to industries, railroads and local units of government for the purpose of preserving essential rail lines and rehabilitating them following purchase. Since 1980, under the original Rail Assistance Program and later FRPP, $155 million in grants have been awarded for rail acquisition and rehabilitation projects. The 2013-2015 biennial budget included $60 million in bonding authority for the program. The program provides grants of up to 100 percent of the cost to acquire rail lines and 80 percent of the cost to:

- Conduct rail line improvements in an effort to continue freight service, or for the preservation of the opportunity for future rail service
- Rehabilitate facilities, such as tracks or bridges, on publicly owned rail lines

**Wisconsin Transportation Economic Assistance Program**

In addition to the freight rail preservation and improvement programs, WisDOT manages the Transportation Economic Assistance (TEA) program. It was established by the state legislature in 1986. The program's goal is to attract and retain business firms and create or retain jobs in the state. About 25 percent of the funds have gone to rail projects.

Job creation is an explicit requirement for these grants. Applications are ranked based on cost per job promised, as well as the local unemployment rate and benefits to regional transportation. Recipients must assure that the number of jobs anticipated from the proposed project will be in place within three years from the date of the project agreement and remain after another four years.

From the beginning of the first TEA program cycle in September 1987 through September 2013, 80,595 jobs have been directly and indirectly created or retained through the $93 million invested in grants awarded to 203 communities, and benefiting 363 businesses. A September 2007 job audit revealed that actual job creation and retention is 6.3 percent higher than promised. The average cost per direct job created or retained statewide is $2,577.

The program provides 50 percent funding grants, ranging from $30,000 to $1 million to eligible communities or private businesses for projects that help attract employers to Wisconsin, or encourage businesses and industries to remain and expand in the state. Recipients are responsible for funding the other 50 percent of the project cost. Funding for the TEA program in the 2013-2015 biennium is $6.8 million.

## *Wisconsin passenger rail programs*

WisDOT has supported passenger rail service since 1989. Several funding sources have enabled the department to maintain and enhance passenger rail service in Wisconsin. Wisconsin funds several programs related to passenger rail. The following provides a description of these funding sources, programs and state policies.

**Rail capital improvement bonding authority**
In 1993, Wisconsin's Legislature enacted bonding authority in the amount of $50 million to fund capital improvements for intercity passenger rail. This amount was subsequently increased twice to a total of $122 million. Currently, $43 million of bonding authority remains. The department has used this bonding authority for various rail-related needs, including the purchase of the Milwaukee Intermodal Station. See Chapter 6, Intercity Passenger Rail, for more information.

**Passenger rail operating assistance**
Operating assistance is an important component of the overall successful operation of the passenger rail network. At this time, Wisconsin and Illinois contract with Amtrak to provide the *Hiawatha Service* between Chicago and Milwaukee. Since roughly 75 percent of *Hiawatha Service* riders are Wisconsin residents, Wisconsin pays 75 percent and Illinois pays 25 percent of net operating costs (after operating revenues are subtracted). There is a budget of approximately $13.3 million for the *Hiawatha Service* in the 2013-2015 biennium. In contrast, the *Empire Builder* service is one of Amtrak's long-distance routes; it is part of Amtrak's national network, and does not receive operating support from any state.

Any new corridor services that are implemented will require operating assistance. The exact proportion of costs may change due to factors such as refinements to Amtrak's cost estimate methodology, annual ticket revenues, and changes or decisions made at the national level.

Section 209 of PRIIA requires Amtrak to develop a consistent method for cost sharing to ensure consistency in the way states pay for corridor services. While Wisconsin and Illinois help pay for the *Hiawatha Service*, some other states have not historically paid for their corridor services. The Section 209 cost sharing policy went into effect on October 1, 2013. As Amtrak continues to refine its cost sharing method, some of Wisconsin's costs associated with the *Hiawatha Service* may change.

**State Rail Station Capital Assistance Program**
To further support passenger rail needs statewide, the Wisconsin Legislature created the State Rail Station Capital Assistance Program. This program is not currently funded, but the structure is in place for future use. Working with local governments and the private sector, the program may be used to:

- Upgrade existing stations
- Build new stations
- Ensure that all stations are accessible to people with disabilities
- Encourage connections with other transportation modes such as airplanes, intercity bus, and local transit and taxi service

See Chapter 6, Intercity Passenger Rail, for more information.

**Fixed-Guideway Capital and Operating Assistance Program**
Wisconsin has a commuter rail capital program that may cover up to 50 percent of the total non-federal share of capital costs, or up to 25 percent of total costs, whichever is less. The local sponsor will fund the remainder of the costs.

State transit programs receive state operating assistance based on a tiered system. During the 2009-2011 biennial budget, the legislature created a separate funding tier for commuter rail. Established under state statute 85.062(3), Tier A3 may be used to fund commuter or light rail. To date, however, this tier has not been funded.

## Federal Funding for Rail

Several federally funded programs support intercity passenger rail, freight rail and commuter rail needs. Federal funding that may be used to support rail comes from:

**Federal Railroad Administration**: Funding is determined annually and is discretionary. Changing priorities from both Congress and different administrations have modified the mix of funding programs at the FRA resulting in the introduction of newer initiatives to the already existing long-term programs.

**Federal Highway Administration**: Funding is from the Highway Trust Fund and is allocated to states and metropolitan planning organizations through formulas.

**Federal Transit Administration**: Funding is provided by the Highway Trust Fund and the federal General Fund. Dollars can be used to support planning and implementation of transit activities, including commuter rail.

The following sections briefly discuss the array of existing federal programs and finance tools available.

### *Intercity passenger rail*

**Passenger Rail Improvement and Investment Act of 2008**
The Passenger Rail Improvement and Investment Act of 2008 (PRIIA) authorized the expenditure of over $13 billion between 2009 and 2013. The legislation supports passenger rail service and promotes the development of new and improved intercity passenger rail services. It also establishes an Intercity Passenger Rail Capital Grant Program for states. As part of this program, states are required to identify passenger rail corridor improvement projects in their state rail plans.

PRIIA also established three new competitive grant programs for funding high-speed intercity passenger rail improvements. Each of the three programs provides 80 percent federal funding with a required 20 percent non-federal match. Funding for these authorized programs is subject to annual appropriations by Congress. The intercity passenger rail programs created under PRIIA replaced the State Capital Grant

Program as the FRA's key discretionary grant program for intercity passenger rail network development. WisDOT will continue to apply for PRIIA grants as they become available for eligible projects.

**Intercity Passenger Rail Service Corridor Capital Assistance Program**
This program is intended to create the framework for a new Intercity Passenger Rail Service Corridor Capital Assistance Program. The program authorizes the U.S. DOT to use appropriated funds to issue grants to assist in financing the costs of the facilities, infrastructure, and equipment necessary to provide or improve intercity rail transportation. States or groups of states, interstate compacts, and public intercity passenger rail agencies established by states are eligible for these grants. To be eligible for program funding, projects must be included in an approved state rail plan. Existing or proposed intercity passenger services in Wisconsin are eligible under this program.

**High-Speed Intercity Passenger Rail Corridor Development**
PRIIA also authorized $1.5 billion annually to establish and implement the High-Speed Intercity Passenger Rail Corridor Development (HSIPR) Program. Funding focused on projects intended to develop the 11 federally designated high-speed corridors for intercity passenger rail services that may reasonably be expected to reach speeds of at least 110 miles per hour. There is currently one federally designated high-speed rail corridor in Wisconsin (Chicago-Milwaukee-Minneapolis/St. Paul).

**Congestion Grants**
This program authorizes $325 million annually for grants to states, or to Amtrak in cooperation with states, for financing the capital costs of the facilities, infrastructure, and equipment for high-priority rail corridor projects necessary to reduce congestion or facilitate intercity passenger rail ridership growth.

**American Recovery and Reinvestment Act of 2009**
In February 2009, the American Recovery and Reinvestment Act (ARRA) was enacted. It provided funding for three programs with rail project eligibility to states:

- Flexible highway program – provided $27.5 billion of flexible highway funding for surface transportation improvements, including rail improvements. Eligibility criteria included projects being "shovel ready" for early implementation.
- Intercity passenger rail/high-speed rail program – provided $8 billion of high-speed intercity passenger rail funding to "jump start" intercity passenger rail improvements authorized under PRIIA. The federal share of costs was up to 100 percent. Proposed projects were not required to be included in a state rail plan.
- Transportation Investments Generating Economic Recovery (TIGER) discretionary grants – provided $1.5 billion of discretionary grants. Eligible programs included capital investment projects for rail, highways, bridges, public transportation, and ports. Grants were awarded on a competitive basis.

Wisconsin ultimately received $14 million through HSIPR in 2010 for Chicago-Milwaukee corridor improvements. These funds supported the Truesdell crossover project on Canadian Pacific's C&M Subdivision between Sturtevant and the Wisconsin/Illinois border, and the Milwaukee Airport Rail Station platform extension project.

**Other Federal Railroad Administration grant programs**

Wisconsin received $5 million under FRA's Capital Assistance to States – Intercity Passenger Rail Service Program ($5 million matched by Canadian Pacific Railroad, the owner and operator of the rail line) to support installation of continuously welded rail on the Chicago to Milwaukee corridor, which serves as the corridor for Amtrak's *Hiawatha service*.

**Federal funding support for Amtrak**

The National Passenger Railroad Corporation, Amtrak, operates the nation's intercity passenger rail service. Passenger rail service includes both long-distance and corridor-level service. Amtrak fully funds long-distance trains such as the *Empire Builder* service that operates in Wisconsin, connecting the Midwest to the West Coast. Amtrak contracts with several states to operate corridor services – including Wisconsin and Illinois for the *Hiawatha Service*. A sizable portion of Amtrak's revenues are derived from ticket fares. In addition to revenues from its own operations, Amtrak receives operating and capital funding through the annual budget appropriations from Congress.

## *Freight rail*

**Rail Line Relocation and Improvement Capital Grant Program**

The Rail Line Relocation and Improvement Capital Grant Program (RLR) provides grants to states and communities for the purpose of "mitigating adverse effects" of railroad operations on safety, congestion or other quality-of-life issues. Most of this program's funds are earmarked for specific projects, with the remainder applied to competitive grants. WisDOT will apply for RLR grants for eligible projects as they become available.

**Railroad Rehabilitation and Improvement Financing Program**

This program allows the Federal Railroad Administration to provide direct federal loans and loan guarantees of up to $35 billion to railroads, state and local governments, government-sponsored authorities and corporations, joint ventures that include at least one railroad, and some freight shippers. The funding may be used to acquire, improve or rehabilitate intermodal or rail equipment or facilities; refinance outstanding debt incurred for the purposes listed above; and develop or establish new intermodal or railroad facilities. Direct loans can fund up to 100 percent of a railroad project with repayment periods of up to 35 years and interest rates equal to the cost of borrowing to the government, but the borrower must also pay a credit risk premium for the loan. Wisconsin does not use this program because loans are not a preferred financial tool for the state.

**Railroad Rehabilitation and Repair Program (RRR)**

This program authorizes the secretary of the U.S. DOT to provide $20 million in grants to states. The program is used to repair and rehabilitate Class II and Class III railroad infrastructure damaged by hurricanes, floods and other natural disasters in areas for which the president has declared a major disaster area. The funds cover 80 percent of a project's cost. WisDOT will apply for RRR grants for eligible projects as they become available.

## *Commuter rail*

The Federal Transit Administration (FTA) administers capital funding for commuter rail systems primarily through two separate grant programs:

**The State of Good Repair Program** (Section 5337, of Title 49, United States Code) – provides funds to repair and upgrade fixed-guideway transit systems. Funds are distributed through a formula to state and local government authorities in urbanized areas with fixed-guideway systems that are at least seven years old.

**Fixed Guideway Capital Investment Grants Program** (Section 5309, of Title 49, United States Code) – provides funding for new commuter rail and fixed-guideway systems or extensions of existing systems. Funding is allocated at the discretion of the FTA and the program requires project sponsors to undergo a multi-step, multi-year process to be eligible for funding. The proposed Kenosha-Racine-Milwaukee (KRM) and Transport 2020 commuter rail projects are examples of potential Wisconsin projects that may be funded under this program.

**The Urbanized Area Formula Program** (Section 5307, of Title 49, United States Code) makes federal funds available to urbanized areas (incorporated areas with populations over 50,000) and to governors for fixed-guideway transit capital projects, operating assistance and planning activities. Eligible activities include planning, engineering design, studies and capital investments in new and existing fixed-guideway systems including rolling stock, track, signals, communications, and computer equipment. For urbanized areas with populations less than 200,000, operating assistance is an eligible expense and funds are apportioned to governors for distribution. For urbanized areas with 200,000 in population and over, funds are apportioned and flow directly to the designated local sponsor.

Other fund sources that may be used to support commuter rail planning efforts include the **Metropolitan Planning Program** (Section 5303 of Title 49, United States Code) which apportions 80 percent of program funds to states for distribution to metropolitan planning organizations in urbanized areas. A supplemental amount (the remaining 20 percent) is also provided to the states based on an FTA administrative formula to address planning needs in larger, more complex, urbanized areas.

The American Recovery and Reinvestment Act funded an additional $750 million nationally for these programs in 2009. See Chapter 6, Commuter Rail, for more discussion of commuter rail.

## *Other federal funding or assistance*

In addition to the programs aimed specifically at funding passenger, freight and commuter rail, there are several programs that also address rail transportation needs. The following provides a brief overview of each program. In general, the funds do not support a specific rail mode (freight, passenger, or commuter); instead they may address an issue such as safety or be used for one or more of the types discussed.

**Highway-Railway Grade Crossing Program**

Formerly known as Section 130, these federal funds are available to improve safety for highway-railway grade crossing improvements. Funded under the surface transportation authorization – Moving Ahead for Progress in the 21st Century (MAP-21) – the Federal Highway Administration administers the dollars for improvements to grade crossings including design and traffic control devices. WisDOT will continue to utilize Highway-Rail Grade Crossing Program funds to improve safety at grade crossings.

**Congestion Mitigation and Air Quality Improvement Program**

The Congestion Mitigation and Air Quality (CMAQ) program funds projects that reduce traffic congestion and help meet federal Clean Air Act requirements. Program funding may be used for freight and passenger rail projects that accomplish the program's goals. Funding is generally available for projects located in areas that do not meet the National Air Quality Standards[1] (i.e. non-attainment areas), and in former non-attainment areas now in compliance (i.e. maintenance areas). From 1995 to 2008, Wisconsin used this program to help fund operating costs for the *Hiawatha Service* running between Chicago and Milwaukee. While CMAQ funds are not currently used to fund these operating costs in Wisconsin, they have been used to fund marketing campaigns for Amtrak's *Hiawatha Service*. CMAQ funds were also used to address some of the costs for the Milwaukee Intermodal Station renovation, and have been set aside to pay for some of the costs associated with the Milwaukee Intermodal Station passenger concourse.

**Local Transportation Enhancements Program**

The Transportation Alternatives Program (TAP) funds projects that increase multimodal transportation alternatives and enhance communities and the environment. Federal funds administered through this program provide up to 80 percent of the costs for a wide variety of projects including rehabilitation of historic transportation buildings and conversion of abandoned railway corridors to non-motorized use. Wisconsin communities have used TAP's predecessor to convert abandoned railway corridors into trails, and have rehabilitated and preserved several historic train depots across the state. These activities not only preserve the state's transportation history, they also have increased tourism and economic opportunities for many Wisconsin communities. WisDOT will continue to work with local governments to administer TAP program funds for eligible projects.

[1] Allowable ambient concentrations for six "criteria" pollutants: carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide and lead. The U.S. EPA established the standards as part of the Clean Air Act (as amended in 1990).

**Transportation Infrastructure Finance and Innovation Act of 1998**

The Transportation Infrastructure Finance and Innovation Act allows the U.S. Department of Transportation to fill private financing gaps for major surface transportation projects of national or regional significance by providing direct loans, loan guarantees, and secured lines of credit to state and local governments, transit agencies, and railroad companies. Some intercity passenger rail projects for facilities or rolling stock acquisition are eligible. Assistance is limited to 33 percent of the total project cost. Wisconsin does not use this program, as loans are not a preferred finance tool for the state. Wisconsin prefers grant funding that does not add to the state's debt.

**Private activity bonds**

Tax-exempt private activity bonds are used to facilitate private investment in eligible projects by granting the private entity tax-exempt status on the bonds. Providing private developers and operators with access to tax-exempt interest rates substantially lowers the cost of capital, thus enhancing investment prospects. WisDOT will monitor use of private activity bonds for potential future use, if appropriate.

**State infrastructure banks**

In 1996, a pilot program for State Infrastructure Banks (SIBs) was authorized, creating revolving infrastructure investment funds for surface transportation needs that are established and administered by states. SIBs operate like any other bank. Once they are capitalized with federal aid and state funds, these banks can offer loans or other financial assistance to sponsor projects. Wisconsin has not used this program much for rail because neither the state's railroads nor the state want to incur more debt.

As previously discussed, federal funding can take many forms – grants, direct loans, and beneficial tax status or credit assistance such as loan guarantees – and are used for various purposes. The permitted uses of each type of fund are summarized in Table 10-1.

**Table 10-1: Permitted uses of federal funds by type**

| Funding Source | Planning | Project Development | Project Management | Capital Improvements | Operations |
|---|---|---|---|---|---|
| Fixed Guideway Modernization | | | X | X | |
| New Starts | | X | X | X | |
| Amtrak | | | | X | X |
| High Speed Intercity Passenger Rail | X | X | X | X | |
| Rail Line Relocation | | | X | X | |
| Railroad Rehabilitation and Repair | | | X | X | |
| Grade Crossings | | X | X | X | |
| TIGER | | | X | X | |
| Railroad Rehabilitation and Improvement Financing | | X | X | X | |
| TIFIA | | | X | X | |
| Private Activity Bonds | | | X | X | |

Source: U.S. DOT

**TIGER = Transportation Investments Generating Economic Recovery program**
**TIFIA = Transportation Infrastructure Finance and Innovation Act of 1998**

## Future Funding at the Federal Level

As discussed throughout the rail plan, WisDOT has identified a number of issues and needs, with recommended actions over the next 20 years to address them. Implementation of these actions will require sufficient funding. A number of federal funding programs have been initiated to support rail planning and investment. These will help Wisconsin continue to improve the state's intercity passenger rail network. In addition, legislative support and approval of program increases to support freight rail preservation activities has also been significant. However, a robust rail network that integrates the state's overall transportation system will require ongoing funds. Several ideas and concepts have been discussed; some are under consideration at the national level. WisDOT will continue to monitor the discussion of future transportation funding at the federal level and will take appropriate steps to strategically position the state to apply for federal competitive grants.

Sustained federal funding commitments are crucial to achieving planned improvements of the intercity passenger rail network. Likewise, the role the federal government plays in funding commuter rail is crucial to Wisconsin communities' ability to implement metropolitan commuter rail systems. For freight rail, the federal government will continue to play a role in funding safety programs such as rail-highway crossings and complex multi-jurisdictional freight projects such as the CREATE project in the Chicago area.

## Future Funding at the State Level

As discussed throughout the plan, Wisconsin has a long history of investing in rail initiatives. Whether paying for studies of future passenger rail routes, or the state match on federal grants to improve passenger rail infrastructure, or preserving underutilized rail lines for future use, Wisconsin has shown a commitment to funding rail improvements.

As the department implements the recommendations outlined in each of the rail plan chapters, WisDOT will continue to identify funding needs, set priorities and work with the legislature and other stakeholders including the FRA to manage and build upon Wisconsin's quality rail network.

## Assessing Rail Costs and Benefits

Justifications for public participation in railroad infrastructure improvements generally focus on the public benefits arising from reduced traffic congestion, economic development, reduced environmental emissions, increased safety and other positive externalities. Benefit-cost analysis is a policy evaluation tool that has been used in a variety of public investment projects to determine whether the social benefits of a public investment project outweigh its social costs, and to rank projects according to their cost effectiveness. The tools necessary to identify externalities and quantify the benefits that may result from railroad infrastructure improvements include demand models that account for shipper responsiveness to changes in prices, quality of service, and economic activity; and supply models that can be used to model the impacts of particular infrastructure investments on capacity.

Unlike highway projects, where public infrastructure is involved, the public funding of railroad projects often involves the commitment of public funds to the infrastructure of private entities. However, given the positive externalities or reductions in negative externalities associated with rail transportation (both freight and passenger), public commitments to railroad infrastructure investment can prove to be socially beneficial. The use of cost-benefit analysis that encompasses global costs and benefits is a key to targeting the most socially desirable projects. WisDOT currently has two different methodologies for analyzing benefits and costs of projects. The benefit-cost analysis done for passenger rail projects includes economic and environmental factors, while the analysis done for freight rail projects includes transportation savings for the project sponsor. WisDOT will explore developing more refined tools to evaluate the relative benefits and costs of projects in a multimodal framework and on a consistent basis among passenger, commuter and freight rail projects.

## Wisconsin's Long-Range Rail Investment Program

The Passenger Rail Infrastructure Investment Act requires states to develop a long-range rail investment program as part of its state rail plan development effort. The program must include a list of "any rail capital projects expected to be undertaken or supported in whole or in part by the State." See Appendix 10-A, Wisconsin's Long-Range Rail Investment Program.

# Appendix 10-A: Long-Range Rail Investment Program

## Introduction

*Wisconsin Rail Plan 2030* is the state's first rail plan being developed under the Passenger Rail Improvement and Investment Act of 2008 (PRIIA). PRIIA requires that all state rail plans include a long-range rail investment program. The long-range rail investment program must, at a minimum, include a list of any capital projects expected to be undertaken or supported in whole or in part by the state, and a detailed funding plan for those projects. This marks the first time that states have been required to show all anticipated rail capital projects in one place. Furthermore, the project list must contain a description of the anticipated public and private benefits of each project, and a statement of correlation between public funding contributions for the projects and the public benefits.

The *Wisconsin Rail Plan 2030* long-range rail investment program lists anticipated capital projects. It does not include operating expenses such as maintenance and salaries of railroad employees. Operating expenses of freight railroads are paid by the railroads themselves, while passenger rail operating assistance is established by the legislature through the biennial budget process. In addition, the program list does not include costs associated with corridor studies.

## Assumptions and methodology

As noted in Chapter 10, Funding Wisconsin's Rail System Investments, rail capital funding comes from a variety of federal, state, local and private sources; and is used for constructing or acquiring infrastructure, equipment and real estate. The items contained in the long-range rail investment program depict the information available at the time of writing, and is subject to change. Therefore, due to changing priorities, funding levels or legislation, projects contained in the long-range rail investment program might not be implemented as planned and projects may be implemented in the future that are not listed in this version of the long-range rail investment program. Cost estimates and funding breakdowns may also change over time.

Federal regulation and guidance will also affect the content of the program. At the time of plan development, the federal transportation authorization bill, SAFETEA-LU, was still in effect, with an extension approved through December 31, 2010. When Congress passes a new surface transportation authorization bill, it is likely that the federal programs will change. This may lead to changing program levels at the state level, which in turn, could change the way the long-range rail investment program looks. Furthermore, the Federal Rail Administration (FRA) has not issued guidance on state rail plans under the PRIIA legislation. In order to ensure compliance without guidance, WisDOT reviewed other state rail plans completed since PRIIA and analyzed the PRIIA legislation itself. It is possible that subsequent federal agency guidance may result in changes to the long-range rail investment program.

The anticipated projects for the years 2010 through 2015 have more information available regarding project scope, estimated costs and funding breakdowns. Conversely, the anticipated projects for the years 2016 through 2030 are less defined, with more uncertainty regarding the timing, costs and relative priority among these longer-term projects.

In order to make the long-range rail investment program accessible and understandable, four lists were developed according to the type of projects. The four project lists are:

- Freight rail projects
- Intercity passenger rail projects
- Commuter rail projects
- Rail-highway interface projects

The **passenger rail** project list includes capital investments necessary to support the Wisconsin components of the Midwest Regional Rail Initiative, as detailed in Chapter 6, Passenger Rail. Data for the short-term projects in this list included cost estimates and funding breakdowns. Two projects were funded through the American Recovery and Reinvestment Act of 2009 (ARRA). Although ARRA grants provided 100 percent federal funding, it is expected that there will be no more 100 percent federal funding in the future, and that the customary 80 percent federal, 20 percent non-federal (state, local or other) funding breakdown will be applied to future passenger rail capital projects. For some of the anticipated projects in the long-term, the Wisconsin Department of Transportation (WisDOT) used the 2004 Midwest Regional Rail Initiative (MWRRI) business plan as the source for project information. In general, the federal funds in this project list would come from the Federal Railroad Administration (FRA).

As noted in the plan, once WisDOT completes the Wisconsin component of MWRRI, efforts will shift to studying the feasibility of expanding passenger rail service to other parts of the state. If additional routes are identified for capital expenditure at that time, the long-range rail investment program would be updated to include any such additions as part of the overall rail plan update process.

The **freight rail** project list includes capital investments that support the state's goals contained in Chapter 5, Freight Rail. The projects identified come from two sources:

- Freight Rail Infrastructure Improvement Program (FRIIP) and Freight Rail Preservation Program (FRPP) investment needs

- Potential projects identified by the state's private railroads (The privately-funded projects were identified with the understanding that they were to be used for long-range planning purposes only, and do not constitute a formal commitment to implement the project on the part of the railroads or the state)

WisDOT did not receive lists of potential projects from all of the state's Class I railroads. As a result, there may be additional capital investments made by the private sector that are not currently known and therefore not captured in the long-range rail investment program. In addition, FRIIP and FRPP project proposals are submitted by railroads, local governments and other sponsors, and grants and

funds are awarded annually. Therefore, data regarding project needs beyond the current biennium are incomplete.

The **commuter rail** project list includes the anticipated capital investments needed to implement the state's two commuter rail services that are included in Metropolitan Planning Organizations' long-range plans and that have completed several stages of planning. The two commuter rail services are the Kenosha-Racine-Milwaukee (KRM) service in southeastern Wisconsin and the commuter rail component of Transport 2020, the Madison metropolitan area's long-range transit plan. Specifically, the project information contained in the list, including cost estimates and funding breakdowns, comes from the following sources: "Kenosha-Racine-Milwaukee Request to Initiate Preliminary Engineering," from June 2010 and the "Transport 2020 Environmental Impact Statement and New Starts Application: Request to Initiate Preliminary Engineering," from June 2008.

An assumption contained in the KRM and Transport 2020 reports is that the state legislature will fund the Fixed-Guideway Capital and Operating Assistance Program to the level necessary to support these investments. In general, the federal funds in this project list would come from the Federal Transit Administration (FTA). See Chapter 7, Commuter Rail for more information. If new services are proposed and reach an advanced stage of planning, they will be added to the commuter rail projects list as part of a subsequent rail plan update.

The **rail-highway interface** project list includes items that use federal and state highway and safety funds to improve the safety and operation of rail-highway crossings, either through crossing surface improvements, signals, gates and warning devices, or by eliminating crossings through grade separations. Some of these rail-highway interface projects are planned to address deficiencies or safety needs identified by WisDOT or the Office of the Commissioner of Railroads, while others are planned as part of a highway project that will alter the alignment of a railroad or affect existing crossings. The rail-highway interface project list was developed by analyzing information from a database containing program information about all transportation projects, and separating out the projects with rail elements. The funding estimates for the rail components were then isolated from all other components. This allowed for the reporting of the estimated costs for the investments in the rail system, independent from the total cost of the project at-large.

## Navigating the project lists

Taken together, the four lists comprise WisDOT's long-range rail investment program. While there are slight variations between lists, the primary pieces of information needed to properly identify each project and meet the requirements from PRIIA are consistent. The project lists are in tabular format, with one project for each row in the table. The columns contain information about the projects that are highlighted either to identify the project (name, location, program year), or to fulfill the project list content requirements from PRIIA (descriptions of public and private benefits, statement of correlation between public funding contributions and public benefits, and project cost estimates). The public and private benefits and the statements of correlation between the public funding contributions and the

public benefits are given in the form of qualitative statements. Each program is managed individually within WisDOT. At this time, the project selection criteria vary depending on the program and funding sources. Quantitative analyses of the benefits and costs of the projects will need to be fully developed in the future, but at the time of the writing of this plan, no sound methodology is available for comparing benefits and costs consistently across modes.

As noted earlier, more detailed information is typically available for projects programmed for the years 2010 through 2015 regarding project scope, estimated costs and funding breakdowns. Longer-term projects are more conceptual and less defined. In some cases, no information is available beyond 2011 because the biennial budget dictates funding levels and investment priorities.

## Updating the long-range rail investment program

Wisconsin's long-range rail investment program will be updated at least once every five years. This timing aligns with the required update cycle for state rail plans prescribed by PRIIA. During this five-year update cycle, WisDOT will continue to analyze, plan and program projects that best meet the needs of the state's rail system. The update process will remove projects that have been completed, add detail to projects that were more conceptual in nature in previous versions, and add new projects that have been identified as priorities.

# Appendix 10-B: Long Range Rail Program Narrative Spreadsheets

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program - Intercity Passenger Rail**

| | ID | Host Railroad | Location | Name | Description | Project benefits | | Proposed project funding sources | | | | Correlation of amount of public funding to benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Public benefits | Private benefits | Total cost | Federal | State | Other | | |
| Short-term: 2010-2015 | P-1 | CP | Milwaukee-Chicago | Existing Amtrak *Hiawatha Service* | Final design of new Milwaukee Intermodal Station Passenger Concourse - CY 2013 | Improved accessibility and compliance with ADA. Increased station capacity. Improved safety in station. More convenient and comfortable rail travel. | Preserves smooth operations of freight through the station. Reconstruction of the platform between the two main line tracks at 8" above the top of the rail will allow continued, uninterrupted freight service. Reconstruction of the platform adjacent to Track #4 will allow level boarding to private cars parked there. Improved access and safety. | $2,306,000 | $1,980,000 | $326,000 | $0 | Public funding will result in: a fully accessible station for the public, especially for those with disabilities; full compliance with federal ADA requirements; greatly improved public transportation facility in terms of comfort, convenience, and safety. | Source: WisDOT |
| | P-2 | CP | Milwaukee-Chicago | Existing Amtrak *Hiawatha Service* | Construction of new Milwaukee Intermodal Station Passenger Concourse - CY 2013-2014 | Improved accessibility and compliance with ADA. Increased station capacity. Improved safety in station. More convenient and comfortable rail travel. | Preserves smooth operations of freight through the station. Reconstruction of the platform between the two main line tracks at 8" above the top of the rail will allow continued, uninterrupted freight service. Reconstruction of the platform adjacent to Track #4 will allow level boarding to private cars parked there. Improved access and safety. | $20,000,000 | $ 9,300,000 | $ 10,700,000 | $0 | Public funding will result in: a fully accessible station for the public, especially for those with disabilities; full compliance with federal ADA requirements; greatly improved public transportation facility in terms of comfort, convenience, and safety. | Source: WisDOT |
| | P-3 | CP | Milwaukee-Chicago | Existing Amtrak *Hiawatha Service* | Construction of expanded platform at Milwaukee Airport Rail Station (Mile Post 78.4) - CY 2012-2013 (Complete) | Improved rail service at station with faster and easier boarding and alighting of trains. Allows more train doors to be open for entry and exit. Accommodates longer trains that accommodate more passengers. | Allow for faster boarding and alighting of trains and longer train lengths, improving operations. | $994,000 | $678,000 | $316,000 | $0 | Public funds will: help improve rail service at the station with faster and easier boarding and alighting of trains; allow for the accommodation of longer trains that accommodate more passengers. | Source: 2009 ARRA grant award estimate in YOE $ (2010 $) |
| | P-4 | CP | Milwaukee-Chicago | Existing Amtrak *Hiawatha Service* | Construction of new cross-overs on Canadian Pacific right-of-way at Truesdell (Mile Posts 50.1 and 53.6) - CY 2012-2013 (Complete) | Improved reliability of passenger rail services. | Improved operations and reliability for freight rail services. Reduces potential conflicts between freight and passenger trains. | $13,377,000 | $13,377,000 | $0 | $0 | Public funds will improve reliability of the passenger rail mode for the public by improving speed and on-time performance. | Source: 2009 ARRA grant award estimate in YOE $ (2010 $) |
| | P-5 | CP | Milwaukee-Chicago | Existing Amtrak *Hiawatha Service* | Replacement of existing single-level cars and locomotives on the *Hiawatha Service,* with new bi-level cars and fuel-efficient locomotives through the ARRA-funded Midwest equipment procurement. Equipment will be incorporated into the Midwest pool of equipment. | Replacement of equipment will improve performance, reliability, efficiency and the amenities of rail travel, attracting more riders, and making operations more efficient. Increases seating capacity while not increasing operating costs. New locomotives are more fuel efficient and have lower emissions. Improves ADA access. | Improved and more efficient operations for freight and passenger operators. Improved access and safety. | $47,000,000 | $47,000,000 | $0 | $0 | Public funding of the project improves reliability and efficiency of publically funded passenger rail services, and makes rail travel more efficient, comfortable, convenient, and reliable. | Preliminary estimate based on contractual prices for coach cars and cab/baggage cars for the Midwest/California equipment procurement and preliminary estimates for locomotives. Source: WisDOT |

## Wisconsin Department of Transportation
## Long Range Rail Investment Program - Intercity Passenger Rail

| | ID | Host Railroad | Location | Name | Description | Project benefits | | Proposed project funding sources | | | | Correlation of amount of public funding to benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Public benefits | Private benefits | Total cost | Federal | State | Other | | |
| **Short-term: 2010-2015** | P-6 | | Milwaukee-Chicago | Chicago-Milwaukee corridor improvements (Midwest Regional Rail Phase 1) | Final design and construction of infrastructure improvements to accommodate up to 3 additional daily *Hiawatha Service* round-trips between Chicago and Milwaukee at speeds up to 90 mph. | Implementation of improved intercity passenger rail service improves mobility, provides an alternative to congestion, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Improves infrastructure that freight trains will operate on. Improves operations for freight companies. Reduces potential conflicts between freight and passenger trains. Improves safety and reliability. Lowers transportation costs for some businesses. | TBD | TBD | TBD | TBD | Public funding for the implementation of expanded intercity passenger rail service improves mobility, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Cost estimates for these improvements are being finalized and will be released in 2014. |
| | P-7 | CP | Minneapolis/St. Paul-Chicago | Second Round-trip Frequency: Chicago-Milwaukee-Minneapolis/St. Paul *Empire Builder* Corridor | Funding for final design and construction of infrastructure improvements to accommodate one additional round-trip on the Empire Builder corridor between Chicago and Minneapolis/St, Paul serving existing Wisconsin stations. | Implementation of improved intercity passenger rail service improves mobility, provides an alternative to congestion, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Potentially improves infrastructure that freight trains will operate on. Reduces potential conflicts between freight and passenger trains. Improves safety and reliability. Lowers transportation costs for some businesses. | TBD | TBD | TBD | TBD | Public finding will result in improved service and schedule options for existing Wisconsin station communities. The Chicago-Minneapolis/St. Paul corridor will become a 2 daily round-trip corridor increasing trip options. Reliability and train on-time performance will be significantly improved on the 2nd frequency. Increased passenger activity at stations will encourage economic activity in station communities. Expanded passenger rail service improves mobility, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | ***Minnesota DOT is the lead agency.*** Implementation depends on the outcome of feasibility study and NEPA/preliminary engineering studies (if necessary). Cost estimates for improvements are being developed as part of the feasibility study and RTC capacity analysis and will be completed in 2014. A NEPA study may be required depending on the type and amount of infrastructure improvements. |
| **Long Range: 2030 Plan Horizon** | P-8 | TBD | Minneapolis/St. Paul-Madison-Milwaukee-Chicago | Minneapolis / St. Paul-Madison-Milwaukee-Chicago Intercity Passenger Rail Corridor (Midwest Regional Rail Phase 2) | Final Design and Construction of Minneapolis / St. Paul to Milwaukee corridor segment infrastructure to accommodate 6 to 8 daily intercity passenger rail round-trips (also includes stations, coach cars and locomotives, and equipment service and inspection facility). | Implementation of new and expanded intercity passenger rail service improves mobility, provides an alternative to congestion, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Improves infrastructure that freight trains will operate on. Improves operations for freight companies. Reduces potential conflicts between freight and passenger trains. Improves safety and reliability. Lowers transportation costs for some businesses. | TBD | TBD | TBD | TBD | Public funds will result in the implementation of new and expanded intercity passenger rail service that: connects two major economic centers of the Midwest, serves other major urban areas in Wisconsin, improves mobility, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | The selected route alternative of the Milwaukee-Minneapolis / St. Paul Tier 1 EIS, being completed by Minnesota DOT, is the current Amtrak Empire Builder route. The Midwest Regional Rail Initiative route alignment through Madison is identified as a future route alignment for the Chicago-Minneapolis/St. Paul corridor. Additional environmental work between Madison and Portage would be required if this route alignment moves forward. The Milwaukee to Madison segment of that route has an independent Environmental Assessment and Finding of No Significant Impact from the Federal Railroad Administration, enabling service on the Madison-Milwaukee-Chicago segment to potentially occur prior to or separately from the overall corridor. A route alignment serving Eau Claire and West Central Wisconsin, as well as service on the Eau Claire and Minneapolis/St. Paul segment, could also advance pending further study. Cost estimate for the Tier 1 EIS selected route alternative is being developed by Minnesota DOT's NEPA/PE study and will be available in 2014. |

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program - Intercity Passenger Rail**

| | ID | Host Railroad | Location | Name | Description | Project benefits | | Proposed project funding sources | | | | Correlation of amount of public funding to benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Public benefits | Private benefits | Total cost | Federal | State | Other | | |
| Long Range: 2030 Plan Horizon | P-9 | BNSF | Minneapolis-Duluth via Superior, WI | Northern Lights Express | Construction of infrastructure, stations, equipment, and other facilities for high-performance intercity passenger rail between Minneapolis, MN and Duluth, MN, with a stop in Superior, WI | Implementation of expanded intercity passenger rail service improves mobility, provides an alternative to congestion, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Improves infrastructure that freight trains will operate on. Improves operations for freight companies. Reduces potential conflicts between freight and passenger trains. Improves safety and reliability. Lowers transportation costs for some businesses. | TBD | TBD | TBD | TBD | Public funding for the project: improves mobility, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Cost estimates are being completed by Minnesota. |
| | P-10 | UP | Eau Claire-Minneapolis/St. Paul | Eau Claire-Twin Cities | Infrastructure, stations, equipment and other facilities for implementation of intercity passenger rail between Eau Claire and Minneapolis/St. Paul | Implementation of expanded intercity passenger rail service improves mobility, provides an alternative to congestion, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Improves infrastructure that freight trains will operate on. Improves operations for freight companies. Reduces potential conflicts between freight and passenger trains. Improves safety and reliability. Lowers transportation costs for some businesses. | TBD | TBD | TBD | TBD | Public funding for the project: improves mobility, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Cost estimates are high-level conceptual cost estimates from the Minnesota State Rail Plan. |
| | P-11 | TBD | Existing and future intercity passenger rail stations in Wisconsin | Wisconsin Rail Station Capital Assistance Program | Provides state funding assistance for station improvements, including improvements to make existing stations fully accessible and compliant with ADA, safety improvements, passenger information improvements, building, platform, or parking lot improvements, signage, etc. | Station improvements provide a safer and more accessible facility for the travelling public. Improved or new stations also have positive economic development opportunities for communities, and support livable communities. | Improves safety and reliability for passenger trains and some improvements at stations will improve safety and operations of freight trains. | TBD | TBD | TBD | TBD | Public funds will improve mobility and accessibility to rail stations, improve safety at rail stations, support economic development, creates jobs, and support livable communities. | State funds could be in addition to federal funds, particularly for new stations that are part of federally-funded intercity passenger rail corridors. |
| | P-12 | TBD | Green Bay-Milwaukee-Chicago | Green Bay-Milwaukee-Chicago Intercity Passenger Rail (Midwest Regional Rail Phase 3) | Final Design and Construction of Green Bay-Milwaukee-Chicago corridor infrastructure to accommodate up to 17 daily round-trips between Chicago and Milwaukee with up to 7 of those extending to Green Bay. | Implementation of expanded intercity passenger rail service improves mobility, provides an alternative to congestion, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Improves infrastructure that freight trains will operate on. Improves operations for freight companies. Reduces potential conflicts between freight and passenger trains. Improves safety and reliability. Lowers transportation costs for some businesses. | TBD | TBD | TBD | TBD | Public funding for the project: improves mobility, supports economic development, creates jobs, reduces transportation costs, supports energy efficiency and efforts to reduce greenhouse gas emissions, and supports livable communities. | Cost estimates to be determined during a future NEPA/Planning study. |
| | **These projects require completion of Preliminary Engineering and NEPA studies that will include separate applications for federal funding.** | | | | | | | | | | | | |

Minnesota DOT led projects as of time of writing

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Commuter Rail**

**The following commuter rail projects are identified in Metropolitan Planning Organizations (MPOs) plans. The projects are not advancing as of the time of writing.**

| | ID | Host Railroad | Location | Name | Description | Public Benefits | Private Benefits | Estimated Total Project Cost* | Federal* | State* | Local* | Other* | Correlation between Public Funding Contributions and Public Benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Long-range: 2030 Planning Horizon** | C-1 | UP | Kenosha, Milwaukee, Racine counties | Kenosha-Racine-Milwaukee (KRM) commuter rail | Construct commuter rail service between Kenosha, Racine and Milwaukee | This project would provide increased transportation options for the general public; provide local economic development potential; and help mitigate highway congestion. | This project will potentially increase private property values near stations; increase personal mobility for the workforce; reduce traveler time lost to congestion; and create local economic development opportunities. | $ 284,100,000 | TBD | TBD | TBD | TBD | Public funds would be used to increase transportation options for the general public; create local economic development opportunities; and help mitigate highway congestion. | Requires preliminary engineering and final design before implementation could occur. Total cost is in year of expenditure dollars (2014-2016)*; funding assumes a mix of federal, state, and local funds. |
| | C-2 | State/ WSOR | Dane County | Transport 2020 | Construct commuter rail service between Middleton, Madison and Sun Prairie | This project would provide increased transportation options for the general public; provide local economic development potential; and help mitigate highway congestion. | This project will potentially increase private property values near stations; increase personal mobility for the workforce; reduce traveler time lost to congestion; and create local economic development opportunities. | $ 225,308,000 | TBD | TBD | TBD | TBD | Public funds would be used to increase transportation options for the general public; create local economic development opportunities; and help mitigate highway congestion. | Requires final Environmental Impact Statement, Preliminary Engineering, and Final Design before implementation could occur. Total cost is in 2007 dollars. Funding assumes a mix of federal, state, and local funds. |

**The commuter rail projects listed above are identified in MPO plans. The projects are not advancing as of the time of writing.**

Note: NEPA studies, preliminary engineering, and identification of funding sources would need to be completed before projects could advance to implementation.

Sources:
Kenosha-Racine-Milwaukee Request to Initiate Preliminary Engineering, June 2010.
Transport 2030 Environmental Impact Statement and New Starts Application: Request to Initiate Preliminary Engineering, June 2008.

* KRM year of expenditure costs calculated for each component in its year of expenditure; the total reflects the sum of these figures.

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Freight Rail**

| | ID | Owner | Operating Railroad | Project Location | Project Description | Public benefits | Private benefits | Estimated Total Project Cost | Federal | State | Local/Other | Correlation between public funding contributions and public benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Short-term (2010 - 2015) | FR-1 | WSOR | WSOR | Milwaukee - Gibson Yard | Acquisition | This project will Increase state options; provides firm base for future investment and enhancements | n/a | $2,200,000 | | X | X | FRPP funds used on this project to allow state to directly get involved in yard acquisition which will lead to potential economic development | FRPP grant, SFY 2011 |
| | FR-2 | UP | UP | Madison Yard | Acquisition | This project will increase state options; provides firm base for future investment and enhancements | n/a | $4,300,000 | | X | X | FRPP funds used on this project to allow state to directly get involved in yard acquisition which will lead to potential economic development | FRPP grant, SFY 2011 |
| | FR-3 | UP | UP | Madison-Reedsburg, Madison-Cottage Grove | Acquisition | This project will increase state options; provides firm base for future investment and enhancements | n/a | n/a | | X | X | FRPP funds used on this project to allow state to directly get involved in yard acquisition which will lead to potential economic development | FRPP grant, SFY 2011 |
| | FR-4 | WisDOT | WSOR | Madison to Milton Junction | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improved safety, improved efficiency, estimated benefits of $22,212,000 | $21,343,090 | - | $17,074,472 | $4,268,618 | FRPP funds invested in upgrading infrastructure to current engineering standards and/or state of good repair, leading to increased safety and efficiency | FRPP grant |
| | FR-5 | WisDOT | WSOR | Janesville to Monroe | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improved safety, improved efficiency, estimated benefits of $4,417,000 | $4,159,223 | | $3,327,378 | $831,845 | FRPP funds invested in upgrading infrastructure to current engineering standards and/or state of good repair, leading to increased safety and efficiency | FRPP grant |
| | FR-6 | WisDOT | WSOR | Plymouth to Kohler | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improved safety, improved efficiency, estimated benefits of $16,615,000 | $15,000,000 | | $12,000,000 | $3,000,000 | FRPP funds invested in upgrading infrastructure to current engineering standards and/or state of good repair, leading to increased safety and efficiency | FRPP grant |
| | FR-7 | WisDOT | WSOR | North Milwaukee to Slinger | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improved safety, improved efficiency | $15,618,921 | | $12,495,137 | $3,123,784 | FRPP funds invested in upgrading infrastructure to current engineering standards and/or state of good repair, leading to increased safety and efficiency | FRPP grant |
| | FR-8 | WisDOT | WSOR | System bridges | Emergency bridge repairs | This project will increase safety; meet current engineering standards and/or state of good repair; minimal environmental impacts | Improved safety | $684,000 | | $547,200 | $136,800 | FRPP funds used on this project to improve bridge safety and meet current engineering standards and/or state of good repair | FRPP grant |
| | FR-9 | WisDOT | WSOR | Waukesha area track | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improved safety, improved efficiency, estimated benefits of $2,665,000 | $1,818,242 | | $1,454,594 | $363,648 | FRPP funds invested in upgrading infrastructure to current engineering standards and/or state of good repair, leading to increased safety and efficiency | FRPP grant, SFY 2011 |
| | FR-10 | WisDOT | WDNR | Yahara River bridges | Emergency bridge repairs | This project will increase safety; meet current engineering standards and/or state of good repair; minimal environmental impacts | Improved safety | $3,000,000 | | $2,400,000 | $600,000 | FRPP funds used on this project to improve bridge safety and meet current engineering standards and/or state of good repair | FRPP grant, SFY 2011 |
| | FR-11 | WisDOT | WSOR | System Bridges | Bridge rehabilitation | This project will increase safety; meet current engineering standards and/or state of good repair; minimal environmental impacts | Improved safety | $3,000,000 | | $2,400,000 | $600,000 | FRPP funds used on this project to improve bridge safety and meet current engineering standards and/or state of good repair | |

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Freight Rail**

| | ID | Owner | Operating Railroad | Project Location | Project Description | Public benefits | Private benefits | Estimated Total Project Cost | Federal | State | Local/Other | Correlation between public funding contributions and public benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FR-12 | E&LS | E&LS | Crivitz to Michigan state line | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improved safety, improved efficiency | $5,473,541 | | $4,378,833 | $1,094,708 | FRPP funds invested in upgrading infrastructure to current engineering standards and/or state of good repair, leading to increased safety and efficiency | FRPP grant, SFY 2011 |
| | FR-13 | Specialty Ingredients | WSOR | Watertown | Spur track | This project will improve access to the system, and create local economic development potential | Improved efficiency, estimated benefits of $823,000 | $737,500 | | $737,500 | $147,500 | FRIIP loan invested in this project will improve access to the rail system and create local economic development potential | FRIIP loan |
| | FR-14 | Zenda Grain | WSOR | Zenda | Grain storage; loading facility; spur track | This project will create local economic development potential, increased tax base, improved intermodal connections | Improved efficiency, estimated benefits of $4,398,000 | $2,468,022 | | $254,800 | $493,604 | FRIIP loan invested in this project will create local economic development potential, increase the tax base, and provide improved intermodal connections | FRIIP loan |
| | FR-15 | Zenda Grain | WSOR | Zenda | Rail spur extension | This project will improve access to the system, and create local economic development potential | Improved efficiency | n/a | | | X | FRIIP loan invested in this project will improve access to the rail system and create local economic development potential | |
| | FR-16 | WisDOT | WSOR | Middleton- Lone Rock | Track rehabilitation | This project will increase safety, reliability, efficiency and improved travel times | Improve safety and efficiency | $23,855,173 | $11,955,173 | $9,500,000 | $2,400,000 | Project is forecast to create significant and immediate construction-related employment and economic benefits accruing to Economically Distressed Areas (EDAs) in southern Wisconsin and northern Illinois | |
| | FR-17 | Millard Grain | WSOR | Avalon | Grain scale; loadout; storage bin | This project will create local economic development potential, increased tax base, improved intermodal connections | Improved efficiency, estimated benefits of $1,525,000 | $852,412 | | $984,412 | $170,482 | FRIIP loan invested in this project will create local economic development potential, increase the tax base, and provide improved intermodal connections | FRIIP loan, SFY 2011 |
| **Long-range: 2030 Plan Horizon** | FR-18 | BNSF | BNSF | Aurora Subdivision Capacity Projects | Series of double tracking projects to expand capacity to accommodate future volumes and improve service reliability. Projects consist of connecting existing sections of double track at:<br><br>1. Ports - Crawford, approximately 2 miles<br>2. Sullivan - Graff, approximately 6 miles | n/a | Improved efficiency and service reliability | n/a | | | X | | Privately funded |
| | FR-19 | BNSF | BNSF | St. Croix Subdivision Capacity Projects | Series of track and signal projects to expand capacity to accommodate future volumes and improve service reliability. Projects consist of connecting existing sections of double track at:<br><br>1. Burns - Prescott, approximately 1 mile<br>2. Mears - Trevino, approximately 1 mile<br>3. East Winona - Winona Jct, approximately 2 miles<br><br>Other projects include installation of crossovers at various locations and the conversion of the entire subdivision to Centralized Traffic Control (CTC). | n/a | Improved efficiency and service reliability | n/a | | | X | | Privately funded |
| | FR-20 | BNSF | BNSF | Lakes Subdivision Grade Crossing Closures | Grade crossing closures at various locations in the Superior, WI area | Improved safety | Improved safety | n/a | | | X | Enhanced safety between trains and motor vehicles by reducing the risk of accidents | Privately funded |
| | FR-21 | BNSF | BNSF | Foxboro Siding Extension | Extension (and associated grade crossing work) of existing siding at Foxsboro, WI to accommodate longer trains | Improved safety | Improved safety | n/a | | | X | Enhanced safety between trains and motor vehicles by reducing the risk of accidents | Privately funded |

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Freight Rail**

| | ID | Owner | Operating Railroad | Project Location | Project Description | Public benefits | Private benefits | Estimated Total Project Cost | Federal | State | Local/Other | Correlation between public funding contributions and public benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FR-22 | UP | UP | Chippewa Falls bridge | Upgrade bridge from 268K to 286K capability | Improved safety | Improved efficiency | n/a | | | X | | Privately funded |
| | FR-23 | UP | UP | Altoona | Upgrade rail and ties | Improved safety | Improved safety and efficiency | n/a | | | X | | Privately funded |
| | FR-24 | UP | UP | Adam | Upgrade rail and ties | Improved safety | Improved safety and efficiency | n/a | | | X | | Privately funded |
| | FR-25 | UP | UP | Adam | Address three overhead clearance constraints for double stacks | Improved efficiency | Improved efficiency | n/a | | | X | | Privately funded |
| | FR-26 | UP | UP | Milwaukee | Address eight overhead clearance constraints for double stacks | Improved efficiency | Improved efficiency | n/a | | | X | | Privately funded |
| | FR-27 | CN | CN | none submitted | n/a | n/a | n/a | n/a | | | | | No response from CN regarding freight projects list |
| | FR-28 | CP | CP | none submitted | n/a | n/a | n/a | n/a | | | | | No response from CP regarding freight projects list |

*Project benefit/cost calculations include the net present value only for private benefits that may be realized from implementing the project with a goal of one-to-one or higher benefit/cost ratio.
n/a = not available
Public benefits: marked n/a in places because DOT has not historically quantified public benefits in this way, but rather has accounted for public benefits in application ranking.
However, freight rail projects create quantifiable public benefits such as reduced congestion, decreased air emissions and increased transportation safety.
RHS is planning to incorporate public benefits calculations into future grant cycles.

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Rail-Highway Interface Projects**

Short-term (2010 - 2015)

| ID | Project Schedule Date | Project Title/Location | Project Limit/Location | WisDOT Program | Project Concept/Description | Estimated Total Cost | Public Benefits | Private Benefits | Correlation between Public Funding Contributions and Public Benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SFY10 | USH 10 RAMPS FOR CTH P, RACINE ST | CN RR XING SURFACES | BACKBONE - NON-SE WI | 693753T, 693752L, 693749D | $ 324,000 | Improves public safety; reduces maintenance; increases reliability | Improves personal safety; reduces wear and tear on private automobiles | Backbone rehabilitation funds used for this project will improve public safety at this crossing and increase system reliability by repairing or constructing new crossing surfaces | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 2 | SFY10 | MONROE COUNTY LINE - NEW LISBON | CP RAILWAY CROSSING | LOCAL STP RURAL | RR - CROSSING | $ 265,000 | | | | |
| 3 | SFY10 | TOWN OF BELOIT, INMAN PARKWAY | DM&E RR CROSSING | LOCAL STP URBAN 50,000 - 200,000 | RR - RAIL CROSSING | $ 215,000 | | | | |
| 4 | SFY10 | SOUTH 2ND STREET | WEST NATIONAL AVE TO MENOMONEE RVR | LOCAL STP URBAN OVER 200,000 | CONST/RR X-ING SURFACE/XING386491T | $ 180,000 | This series of projects will improve public safety; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight operations | Local Surface Transportation Program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | Funding breakdown: 80 percent federal funds; 20 percent state/local funds |
| 5 | SFY10 | LINCOLN AVENUE | CALHOUN RD TO CTH O (MOORLAND RD) | LOCAL STP URBAN OVER 200,000 | RR / INSTALL CONC PANEL RR CROSSING | $ 100,000 | | | | |
| 6 | SFY10 | S. 60th Street | W. Lincoln Ave. to North City Limit | LOCAL STP URBAN OVER 200,000 | RR/Install Concrete Panel Crossing | $ 156,000 | | | | |
| 7 | SFY10 | WEST NATIONAL AVENUE | S 70TH STREET TO S 68TH STREET | LOCAL STP URBAN OVER 200,000 | RR/UPGRADE SIGNALS TO LED LIGHTS | $ 6,000 | | | | |
| 8 | SFY10 | SOUTH 2ND STREET | WEST NATIONAL AVE TO MENOMONEE RVR | LOCAL-NON STP URBAN/RURAL | CONST/INSTALL QUADGATES/XING386491T | $ 360,000 | | | | |
| 9 | SFY10 | JEFFERSON BYPASS | (STH 89 - USH 18) | MAJORS | R/R OPS - NEW UP BIKE PATH CROSSING | $ 21,000 | | | | |
| 10 | SFY10 | JEFFERSON BYPASS | (STH 89 - USH 18) | MAJORS | R/R OPS - NEW UP BIKE PATH SIGNALS | $ 10,000 | | | | |
| 11 | SFY10 | JEFFERSON BYPASS | (STH 89 - USH 18) | MAJORS | R/R OPS - NEW UP RAIL CROSSING | $ 71,000 | | | | |
| 12 | SFY10 | JEFFERSON BYPASS | (STH 89 - USH 18) | MAJORS | R/R OPS - NEW UP RAIL SIGNALS | $ 325,000 | This series of projects will improve public safety; reduce conflicts between trains, automobiles, bicycles and pedestrians; improve signal reliability; and decrease maintenance and signal outages | This series of projects will improve personal safety; reduce conflicts between trains, automobiles, bicycles and pedestrians; and improve signal reliability for freight operations | Major highway project funds used for this project will improve public safety; reduce conflicts between trains, automobiles, bicycles and pedestrians; improve signal reliability; and decrease maintenance and signal outages | Major highway project funds are paid for with Transportation Revenue Bonds |
| 13 | SFY10 | JOHNSON CREEK - WATERTOWN ROAD | UP RR SIGNALS & GATES AT CTH Y | MAJORS | RAILROAD CROSSING SIGNALS AND GATES | $ 185,000 | | | | |
| 14 | SFY10 | JOHNSON CREEK - WATERTOWN ROAD | UP RR CROSSING AT CTH Y | MAJORS | RAILROAD CROSSING UPGRADE | $ 65,000 | | | | |
| 15 | SFY10 | JOHNSON CREEK - WATERTOWN ROAD | CANADIAN PACIFIC XING @ WELSH RD | MAJORS | RAILROAD CROSSING UPGRADE | $ 160,000 | | | | |
| 16 | SFY10 | Pine Street(STH 83) City Burlington | N of Dunford Dr-Robert St | MAJORS | RR / Install RR Crossing Surface | $ 143,000 | | | | |
| 17 | SFY10 | Pine Street(STH 83) City Burlington | N of Dunford Dr-Robert St | MAJORS | RR / Install RR Signals | $ 150,000 | | | | |
| 18 | SFY10 | PRAIRIE DUCHIEN BYPASS/MAIN-LAPOINT | (WSOR RAIL CROSSING) | MAJORS | RR OPS - AT GRADE CROSSING | $ 5,000 | | | | |
| 19 | SFY10 | JOHNSON CREEK - WATERTOWN ROAD | CANADIAN PACIFIC RR @ WELSH RD | MAJORS | SIGNALS AND GATES | $ 213,000 | | | | |
| 20 | SFY10 | STH 32, NORTH OF HILBERT | CN XING SURFACES | RAILROAD CROSSING REPAIR | | $ 155,000 | | | | |
| 21 | SFY10 | BEAVER DAM - FOND DU LAC | WSOR RR XING 387059K | RAILROAD CROSSING REPAIR | CONST OPS/CONCRETE PANEL CROSSING | $ 154,000 | | | | |
| 22 | SFY10 | STH 54, TOWN OF DEXTERVILLE | R/R, RAIL-HWY CROSSING REPAIR | RAILROAD CROSSING REPAIR | CROSSING #281 621U | $ 89,000 | | | | |
| 23 | SFY10 | STH 54, VILLAGE OF PLOVER WEST | R/R, RAIL-HWY CROSSING REPAIR | RAILROAD CROSSING REPAIR | CROSSING #693 765M | $ 159,000 | This series of projects will make improvements to existing at-grade rail-highway crossings, increasing public safety and reducing road maintenance costs | This series of projects will make improvements to existing at-grade crossings, increasing personal safety and reducing wear and tear on private automobiles | Crossing repair funds used for this project will improve public safety and reduce road maintenance costs at these existing at-grade crossings | Railroad Crossing Repair projects are 85 percent state funds; 15 percent railroad company funding match |
| 24 | SFY10 | USH 45, CITY OF NEW LONDON EAST | R/R, RAIL-HWY CROSSING REPAIR | RAILROAD CROSSING REPAIR | CROSSING #693 839C | $ 158,000 | | | | |
| 25 | SFY10 | STH 17, CITY OF RHINELANDER NORTH | R/R, RAIL-HWY CROSSING REPAIR | RAILROAD CROSSING REPAIR | CROSSING #694 011D | $ 35,000 | | | | |
| 26 | SFY10 | V WHEELER, STATE ROAD 25 | CANADIAN NATIONAL RAILROAD #692981C | RAILROAD CROSSING REPAIR | RAIL CROSSING REPAIR | $ 92,000 | | | | |
| 27 | SFY10 | USH 151 - EAST OF VALDERS | CN XING SURFACE | RAILROAD CROSSING REPAIR | RAILROAD XING 689773X | $ 81,000 | | | | |
| 28 | SFY10 | STH 60 | MAIN STREET | RAILROAD CROSSING REPAIR | RR / CROSSING NO 178 932R | $ 80,000 | | | | |
| 29 | SFY10 | STH 83 | GENESEE STREET | RAILROAD CROSSING REPAIR | RR / CROSSING NO 391 539D | $ 80,000 | | | | |
| 30 | SFY10 | 68TH, 70TH, 72ND STREETS | CITY OF WAUWATOSA | WisDOT RAIL-HIGHWAY CROSSING SAFETY | CP - 3 HSR GRADE CROSSING UPGRADES | $ 617,000 | | | | |
| 31 | SFY10 | 113TH STREET | TOWN OF PLEASANT PRAIRIE | WisDOT RAIL-HIGHWAY CROSSING SAFETY | CP - HSR CROSSING SIGNALS | $ 253,000 | | | | |
| 32 | SFY10 | 113TH STREET | TOWN OF PLEASANT PRAIRIE | WisDOT RAIL-HIGHWAY CROSSING SAFETY | CP - HSR Grade Crossing Upgrades | $ 250,000 | | | | |
| 33 | SFY10 | BRAUN ROAD | TOWN OF MT. PLEASANT | WisDOT RAIL-HIGHWAY CROSSING SAFETY | CP - HSR GRADE SEPARATION | $ 1,537,000 | | | | |
| 34 | SFY10 | HSR Grade Crossing Improvement | E JOHNSON STREET -MADISON | WisDOT RAIL-HIGHWAY CROSSING SAFETY | WSOR - HSR GRADE CROSSING SURFACE | $ 256,000 | This series of projects will improve public safety by reducing interference between trains and automobiles; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | This series of projects will improve personal safety; improve communication and signal reliability for freight operations; enhance the quality of freight service, while reducing freight train delays and operational conflicts with passenger trains | The use of grade crossing safety and HSR grade crossing safety funds for these projects will improve public safety; improve signal reliability; improve on-time performance; and decrease maintenance and signal outages | Combination of WisDOT Warning Devices program and WisDOT Rail/Highway Crossing Elimination of Hazards program. 90 percent federal funding; 10 percent state or local funding match |
| 35 | SFY10 | SUPERIOR R/R CROSSINGS | UPGRADE OF 11 CROSSINGS | WisDOT RAIL-HIGHWAY CROSSING SAFETY | FEDERAL DEMO PROJECT, WI020 | $ 122,000 | | | | |
| 36 | SFY10 | CTH N, NIAGARA | E&LS R/R SIGNALS | WisDOT RAIL-HIGHWAY CROSSING SAFETY | R/R XING 388235J | $ 66,000 | | | | |
| 37 | SFY10 | CTH W HENRIETE AVE, CRIVITZ | E&LS R/R SIGNALS | WisDOT RAIL-HIGHWAY CROSSING SAFETY | R/R XING 388536E | $ 95,000 | | | | |
| 38 | SFY10 | CTH E, ABRAMS | E&LS R/R SIGNALS | WisDOT RAIL-HIGHWAY CROSSING SAFETY | R/R XING 388685F | $ 66,000 | | | | |
| 39 | SFY10 | TOWN OF POTOSI, PARK LANE | BNSF RR CROSSING 069929H | WisDOT RAIL-HIGHWAY CROSSING SAFETY | RR - LIGHTS,GATES & TIME CIRCUITRY | $ 231,000 | | | | |
| 40 | SFY10 | TOWN OF WYALUSING, LONG VALLEY ROAD | BNSF RR CROSSING 069957L | WisDOT RAIL-HIGHWAY CROSSING SAFETY | RR - LIGHTS, GATES & TIME CIRCUITRY | $ 235,000 | | | | |
| 41 | SFY10 | MAIN ST, VILLAGE OF COTTAGE GROVE | WSOR RR CROSSING 177344E | WisDOT RAIL-HIGHWAY CROSSING SAFETY | RR OPS - INSTALL FLASHING LIGHTS | $ 101,000 | | | | |
| 42 | SFY10 | STH 33 (DEKORA STREET) | CANADIAN NATIONAL RR | WisDOT RAIL-HIGHWAY CROSSING SAFETY | CONST/RR xing NO 387 154F | $ 159,000 | | | | |
| 43 | SFY10 | BLAIR - MERRILLAN | CANADIAN NATIONAL RAILROAD 913796W | WisDOT RAIL-HIGHWAY CROSSING SAFETY | RR OPS/INSTALLATION CANTILEVERS | $ 82,000 | | | | |
| 44 | SFY10 | CTH K (1st St.) | City of New Richmond | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS/Gates | $ 154,000 | This series of projects will improve public safety by reducing interference between trains and automobiles; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | This series of projects will improve personal safety; improve communication and signal reliability for freight operations; enhance the quality of freight service, while reducing freight train delays and operational conflicts with passenger trains | The use of Office of the Commissioner of Railroads funds for these projects will improve public safety; improve signal reliability; improve on-time performance; and decrease maintenance and signal outages | Office of the Commissioner of Railroads - Warning Devices program: 65 percent federal funds; 35 percent state funds (this ratio can be adjusted by OCR based on state funds available) |
| 45 | SFY10 | CONOCO ROAD | CITY OF LACROSSE | OCR SAFETY - RAILROAD WARNING DEVICES | CP CROSSING CWT UPGRADE | $ 76,000 | | | | |
| 46 | SFY10 | Allen Road | City of New Lisbon | OCR SAFETY - RAILROAD WARNING DEVICES | CP CROSSING SIGNALS & GATES | $ 320,000 | | | | |
| 47 | SFY10 | BOECK ROAD | CITY OF PORTAGE | OCR SAFETY - RAILROAD WARNING DEVICES | CP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 48 | SFY10 | 15th Ave (Reuse) | Village of Bloomer | OCR SAFETY - RAILROAD WARNING DEVICES | Progressive Rail Signal Reuse | $ 125,000 | | | | |
| 49 | SFY10 | CTH T | Town Of Hammond | OCR SAFETY - RAILROAD WARNING DEVICES | UP - Crossing Signals & Gates | $ 219,000 | | | | |
| 50 | SFY10 | CTH E | Town of Red Cedar | OCR SAFETY - RAILROAD WARNING DEVICES | UP - CROSSING SIGNALS & GATES | $ 184,000 | | | | |
| 51 | SFY10 | CTH KR | TOWN OF MT PLEASANT | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS | $ 264,000 | | | | |
| 52 | SFY10 | CTH EF | Village Of Friesland | OCR SAFETY - RAILROAD WARNING DEVICES | UP Crossing Signals & Gates | $ 205,000 | | | | |
| 53 | SFY10 | CTH P | Town of Randolf | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 188,000 | | | | |
| 54 | SFY10 | CTH HH | TOWN OF SCOTT | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 194,000 | | | | |
| 55 | SFY10 | Winnebago Street | Village Of Friesland | OCR SAFETY - RAILROAD WARNING DEVICES | UP Crossing Signals & Gates | $ 224,000 | | | | |
| 56 | SFY10 | Old Spring Street | Town Of Mt Pleasant | OCR SAFETY - RAILROAD WARNING DEVICES | UP Crossing Signals & Gates | $ 295,000 | | | | |
| 57 | SFY10 | CTH S | Town of Beaver Dam | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 204,000 | | | | |
| 58 | SFY10 | CTH CW | Village of North Lake | OCR SAFETY - RAILROAD WARNING DEVICES | UP Crossing Signals & Gates | $ 204,000 | | | | |
| 59 | SFY10 | 1st Street | City Of Merrill | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 170,000 | | | | |
| 60 | SFY10 | Highland Ave | City of Madison | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR Cross Signals & Gates | $ 155,000 | | | | |
| 61 | SFY10 | SPRING STREET | CITY OF BEAVER DAM | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 185,000 | | | | |
| 62 | SFY10 | COTTAGE GROVE ROAD | CITTY OF MADISON | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 212,000 | | | | |
| 63 | SFY10 | WSOR LED Project #3 | VARIOUS CROSSINGS | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR LED Replacements | $ 152,000 | | | | |
| 64 | SFY10 | STH 80 (MONROE STREET) | City of New Lisbon | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS & GATES | $ 205,000 | | | | |
| 65 | SFY10 | STH 54 | TOWN OF BROCKWAY | OCR SAFETY - RAILROAD WARNING DEVICES | UP - CROSSING SIGNALS | $ 266,000 | | | | |
| 66 | SFY10 | N-S FREEWAY - N MILWAUKEE CO RDWY | NORTH LEG ADVANCE WORK | SE FREEWAY-I94 KEN/RAC/MIL | RR/TEMPORARY RR CONST CROSSING | $ 15,000 | This project will allow rail operations to continue during highway construction while maintaining public safety at the crossing | This project will allow freight operations to continue during highway construction while maintaining personal safety | Southeastern Wisconsin Freeway funds used on this project will provide maintained safety for rail and highway travelers and freight operations | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Rail-Highway Interface Projects**

**Short-term (2010 - 2015)**

| ID | Project Schedule Date | Project Title/Location | Project Limit/Location | WisDOT Program | Project Concept/Description | Estimated Total Cost | Public Benefits | Private Benefits | Correlation between Public Funding Contributions and Public Benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 67 | SFY10 | GROVE STREET BRIDGE & APPROACHES | CN RR XING SURFACE 389189N | STATE 3R | BRIDGE R/W=YES | $ 59,000 | | | | |
| 68 | SFY10 | VILLAGE OF BRANDON, CTH TC - WCPL | WSOR RR XING SURFACE | STATE 3R | | $ 116,000 | | | | |
| 69 | SFY10 | STH 64 & USH 41. CITY OF MARINETTE | E&LS RR XINGSURFACE 388576C&388578R | STATE 3R | | $ 135,000 | | | | |
| 70 | SFY10 | JACKSON ST. CITY OF OSHKOSH | CN RR XING SURFACE 179802X | STATE 3R | | $ 66,000 | | | | |
| 71 | SFY10 | JACKSON ST. CITY OF OSHKOSH | CN RR XING SIGNALS 179802X | STATE 3R | | $ 25,000 | | | | |
| 72 | SFY10 | VILLAGE OF BRANDON, CTH TC - WCPL | WSOR RAILROAD SIGNALS | STATE 3R | | $ 182,000 | | | | |
| 73 | SFY10 | WESTBORO - PRENTICE | TAYLOR COUNTY LINE - CTH A (NORTH) | STATE 3R | CROSSING SIGNALS | $ 10,000 | | | | |
| 74 | SFY10 | CITY OF MERRILL, EAST 1ST ST | STH 107-N SCOTT AVE/MILL ST-CENTER | STATE 3R | CROSSING SURFACE | $ 76,000 | | | | |
| 75 | SFY10 | WESTBORO - PRENTICE | TAYLOR COUNTY LINE - CTH A (NORTH) | STATE 3R | CROSSING SURFACE | $ 60,000 | | | | |
| 76 | SFY10 | POST ROAD, VILLAGE OF WHITING | BUS 51 & MINNESOTA AVE INTERSECTION | STATE 3R | MCDILL POND - CN RR | $ 127,000 | | | | |
| 77 | SFY10 | POST ROAD, VILLAGE OF WHITING | BUS 51 & MINNESOTA AVE INTERSECTION | STATE 3R | MCDILL POND - CN RR | $ 74,000 | | | | |
| 78 | SFY10 | STH 16 - STH 33 ROAD | (CTH A - CAMBRIA) | STATE 3R | R/R OPS-REHAB GRADE CROSSING | $ 150,000 | | | | |
| 79 | SFY10 | FAIRWATER-RIPON | WSOR XING SURFACE 387492D | STATE 3R | R/W-NO | $ 111,000 | | | | |
| 80 | SFY10 | FAIRWATER-RIPON | WSOR RR SIGNALS & GATES 387492D | STATE 3R | R/W-NO R/R3877492D | $ 177,000 | | | | |
| 81 | SFY10 | BIRCHWOOD - EXELAND | CANADIAN NATIONAL RR X-ING 679338L | STATE 3R | RAILROAD/CROSSING SURFACE | $ 134,000 | | | | |
| 82 | SFY10 | COLUMBIA CO LINE - KINGSTON | 400'S COLUMBIA CO LNE - N JCT CTH H | STATE 3R | RR CROSSING #179 207E | $ 50,000 | | | | |
| 83 | SFY10 | MEQUON ROAD (STH 167) | STH 57 - I-43 | STATE 3R | RR CROSSING SURFACE | $ 110,000 | | | | |
| 84 | SFY10 | MEQUON ROAD (STH 167) | STH 57 - I-43 | STATE 3R | RR SIGNALS WORK | $ 211,000 | | | | |
| 85 | SFY10 | MEQUON ROAD, GERMANTOWN & MEQUON | STH 145 TO STH 181 | STATE 3R | RR/INSTALL CONC PANEL RR XING SURFC | $ 149,000 | | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight operations | | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 86 | SFY10 | MEQUON ROAD, GERMANTOWN & MEQUON | STH 145 TO STH 181 | STATE 3R | RR/INSTALL CONCR PANEL RR XING SURF | $ 100,000 | This series of projects will improve public safety, improve signal reliability, and decrease maintenance and signal outages | | | |
| 87 | SFY10 | STATE STREET-CITY RACINE | N MEMORIAL DR TO LASALLE ST | STATE 3R | RR/RECONSTRUCTION | $ 272,000 | | | State 3R program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | |
| 88 | SFY10 | MARSHFIELD TO SPENCER | 26TH ROAD - STH 98 | STATE 3R | SIDEROAD INT IMPROVEMENTS | $ 60,000 | | | | |
| 89 | SFY10 | MARSHFIELD TO SPENCER | 26TH ROAD - STH 98 | STATE 3R | SIDEROAD INT IMPROVEMENTS | $ 71,000 | | | | |
| 90 | SFY10 | MARSHFIELD TO SPENCER | APPLE STREET - STH 98 | STATE 3R | WARNING DEVICE 689-932C | $ 311,000 | | | | |
| 91 | SFY11 | MRK TRAIL EXTENSION & BRIDGE | SIX MILE RD TO SEVEN MILE RD | LOCAL (CMAQ) | R.R./TRAIL, BRIDGE OVER UPRR | $ 53,000 | | | | |
| 92 | SFY11 | West Allis Cross-Town Connector | Bike and Pedestrian Trail | LOCAL ENHANCEMENTS | R.R./Bike/ped facility | $ 52,000 | | | | |
| 93 | SFY11 | CTH D | Bridge over Rock River | LOCAL LOW COST BRIDGE | R.R./Bridge Replacement | $ 108,000 | | | | |
| 94 | SFY11 | STH 34 - B STREET | MAIN STREET, VILLAGE OF RUDOLPH | LOCAL STP RURAL | CROSSING SIGNALS | $ 180,000 | This series of projects will improve public safety; reduce conflicts between trains, automobiles and trail users; improve signal reliability; and decrease maintenance and signal outages | | | |
| 95 | SFY11 | STH 34 - B STREET | MAIN STREET, VILLAGE OF RUDOLPH | LOCAL STP RURAL | CROSSING SURFACE | $ 20,000 | | | | |
| 96 | SFY11 | C MENOMONIE, WILSON STREET | UNION PACIFIC RR CROSSING SIGNALS | LOCAL STP URBAN 5,000 - 20,000 | RR/CROSSING #183-910B | $ 253,000 | | This series of projects will improve personal safety; reduce conflicts between trains, automobiles and trail users; improve signal reliability; and decrease maintenance and signal outages | | |
| 97 | SFY11 | C MENOMONIE, WILSON STREET | UNION PACIFIC RR CROSSING SURFACE | LOCAL STP URBAN 5,000 - 20,000 | RR/RAIL CROSSING #183-910B | $ 50,000 | | | Local Surface Transportation Program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | |
| 98 | SFY11 | C MENOMONIE, CEDAR FALLS ROAD | UNION PACIFIC RAILROAD | LOCAL STP URBAN 5,000 - 20,000 | RR/SIGNALS/RAIL XING #183911H | $ 180,000 | | | | |
| 99 | SFY11 | C MENOMONIE, CEDAR FALLS ROAD | UNION PACIFIC RAILROAD | LOCAL STP URBAN 5,000 - 20,000 | RR/SURFACE/RAIL XING #183911H | $ 18,000 | | | | |
| 100 | SFY11 | PIONEER ROAD RAIL SEPARATION | RAILROAD TRACK ADJUSTMENT | LOCAL STP URBAN 50,000 - 200,000 | CROSSING 179037M/690099P | $ 1,515,000 | | | | Funding breakdown: 80 percent federal funds; 20 percent state/local funds |
| 101 | SFY11 | NORTH 91ST STREET | W FLAGG AVENUE TO W MILL ROAD | LOCAL STP URBAN OVER 200,000 | RECONSTRUCT/RR work | $ 150,000 | | | | |
| 102 | SFY11 | CTH JJ | TOWN OF KAUKAUNA | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| 103 | SFY11 | 2ND STREET | VILLAGE OF RUDOLPH | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| 104 | SFY11 | Washington Avenue | City of New Richmond | OCR SAFETY - RAILROAD WARNING DEVICES | CN Crossing Signals and Gates | $ 162,000 | | | | |
| 105 | SFY11 | SHEEP RANCH ROAD (2 XINGS - REUSE) | CITY OF LADYSMITH | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS REUSE | $ 152,000 | | | | |
| 106 | SFY11 | GUNS STREET | VILLAGE OF BELLEVUE | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS REUSE | $ 167,000 | | | | |
| 107 | SFY11 | HUDSON ROAD | TOWN OF OAKDALE | OCR SAFETY - RAILROAD WARNING DEVICES | CP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 108 | SFY11 | 19TH AVENUE | VILLAGE OF BANGOR | OCR SAFETY - RAILROAD WARNING DEVICES | CP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 109 | SFY11 | FAIRY CHASM | VILLAGE OF BAYSIDE | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| 110 | SFY11 | REGENT ROAD | VILLAGE OF BAYSIDE | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGHALS & GATES | $ 179,000 | | | | |
| 111 | SFY11 | 20th AVENUE | TOWN OF STRONGS PRAIRIE | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS | $ 202,000 | | | | |
| 112 | SFY11 | MAIN STREET | VILLAGE OF MERRILLAN | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 113 | SFY11 | MILL STREET | VILLAGE OF MERRILLAN | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 198,000 | This series of projects will improve public safety by reducing interference between trains and automobiles; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | | | |
| 114 | SFY11 | OLD HIGHWAY 18 | TOWN OF STOCKTON | OCR SAFETY - RAILROAD WARNING DEVICES | WCL CROSSING SIGNALS & GATES | $ 202,000 | | This series of projects will improve personal safety; improve communication and signal reliability for freight operations; enhance the quality of freight service, while reducing freight train delays and operational conflicts with passenger trains | | |
| 115 | SFY11 | 1st Street | City of Wisconsin Rapids | OCR SAFETY - RAILROAD WARNING DEVICES | WCL Crossing Signals / Gates | $ 162,000 | | | | |
| 116 | SFY11 | CN Statewide LED Project #3 | Canadian National RR | OCR SAFETY - RAILROAD WARNING DEVICES | WCL LED Replacements | $ 259,000 | | | The use of Office of the Commissioner of Railroads funds for these projects will improve public safety; improve signal reliability; improve on-time performance; and decrease maintenance and signal outages | Office of the Commissioner of Railroads - Warning Devices program: 65 percent federal funds; 35 percent state funds (this ratio can be adjusted by OCR based on state funds available) |
| 117 | SFY11 | RURAL STREET | CITY OF HARTFORD | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| 118 | SFY11 | GRANT STREET | CITY OF HARTFORD | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| 119 | SFY11 | WSOR LED Project #4 | VARIOUS CROSSINGS | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR LED Replacements | $ 101,000 | | | | |
| 120 | SFY11 | STH 80 (BRIDGE STREET) | City of New Lisbon | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS & GATES | $ 206,000 | | | | |
| 121 | SFY11 | STH 21 (THIRD RD) | VILLAGE OF NECEDAH | OCR SAFETY - RAILROAD WARNING DEVICES | CN CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 122 | SFY11 | STH 83 (MAIN STREET) | CITY OF HARTFORD | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 213,000 | | | | |
| 123 | SFY11 | MARSHFIELD TO SPENCER | APPLE STREET - STH 98 | STATE 3R | CROSSING SURFACE 689-932C | $ 81,000 | | | | |
| 124 | SFY11 | Capitol Dr-Vil/City Pewaukee & Brookfield | STH 74 to 124th Street | STATE 3R | R.R./Canadian National RR | $ 5,000 | | | | |
| 125 | SFY11 | NEW LISBON - MAUSTON | ORANGE RD - STATE STREET | STATE 3R | R/R OPS - CROSSING | $ 66,000 | | | | |
| 126 | SFY11 | OCONOMOWOC - MAYVILLE | WISCONSIN & SOUTHERN RAILROAD | STATE 3R | R/R OPS - FLS AND GATES | $ 202,000 | | | | |
| 127 | SFY11 | NEW LISBON - MAUSTON | ORANGE RD - STATE STREET | STATE 3R | R/R OPS - SIGNALS | $ 182,000 | | | | |
| 128 | SFY11 | STH 16 - STH 33 ROAD | (CTH A - CAMBRIA) | STATE 3R | R/R OPS-REHAB GRADE CROSSING | $ 60,000 | | | | |
| 129 | SFY11 | Downtown to Bayview | E Russell Ave to N Milwaukee St | STATE 3R | RR / CROSSING SURFACES NO. 177 160E | $ 100,000 | | | | |
| 130 | SFY11 | Downtown to Bayview | E Russell Ave to N Milwaukee St | STATE 3R | RR / RAILROAD SIGNALS 177 160E | $ 100,000 | | | | |
| 131 | SFY11 | V MERRILLAN, WASHINGTON & HAMMOND | CANADIAN NATIONAL RR X-ING 281716C | STATE 3R | RR OPS/INSTALLATION GATES & SIGNALS | $ 182,000 | | | | |
| 132 | SFY11 | PACKERS & NORTHPORT, C OF MADISON | INTERNATIONAL LN TO 300'N OF R/R | STATE 3R | RR OPS/NEW GATES & SIGNALS | $ 303,000 | | | | |
| 133 | SFY11 | V MERRILLAN, WASHINGTON & HAMMOND | CANADIAN NATIONAL RR X-ING 281716C | STATE 3R | RR OPS/SURFACE | $ 104,000 | | | | |
| 134 | SFY11 | 256TH AVENUE | STH 50 TO STH 11 | STATE 3R | RR/INSTALL CONCRETE PANEL RR XING | $ 71,000 | | | | |
| 135 | SFY11 | MEQUON ROAD, GERMANTOWN & MEQUON | STH 145 TO STH 181 | STATE 3R | RR/INSTALL FLS W/ 12" LEDS & GATES | $ 160,000 | | This series of projects will improve personal safety; reduce conflicts between trains and automobiles, and improve signal reliability for freight operations | | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 136 | SFY11 | MEQUON ROAD, GERMANTOWN & MEQUON | STH 145 TO STH 181 | STATE 3R | RR/INSTALL FLS W/ 12" LEDS & GATES | $ 160,000 | This series of projects will improve public safety, improve signal reliability, and decrease maintenance and signal outages | | | |
| 137 | SFY11 | Downtown to Bayview | E Russell Ave to N Milwaukee St | STATE 3R | RR/INSTALL RR CROSSING SURFACE | $ 100,000 | | | State 3R program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | |
| 138 | SFY11 | Downtown to Bayview | E Russell Ave to N Milwaukee St | STATE 3R | RR/INSTALL RR CROSSING SURFACE | $ 100,000 | | | | |
| 139 | SFY11 | Downtown to Bayview | E Russell Ave to N Milwaukee St | STATE 3R | RR/INSTALL RR CROSSING SURFACE | $ 100,000 | | | | |
| 140 | SFY11 | Downtown to Bayview | E Russell Ave to N Milwaukee St | STATE 3R | RR/INSTALL RR CROSSING SURFACE | $ 100,000 | | | | |

**Wisconsin Department of Transportation**
**Long Range Rail Investment Program: Rail-Highway Interface Projects**

Short-term (2010 - 2015)

| ID | Project Schedule Date | Project Title/Location | Project Limit/Location | WisDOT Program | Project Concept/Description | Estimated Total Cost | Public Benefits | Private Benefits | Correlation between Public Funding Contributions and Public Benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 141 | SFY12 | STEVENS POINT - WAUSAU | MAPLE RIDGE ROAD INTERCHANGE | BACKBONE - NON-SE WI | R/R CROSSING #392 786Y SURFACE | $ 81,000 | Improves public safety; reduces maintenance; increases reliability; and reduces conflicts between trains and automobiles | Improves personal safety; reduces wear and tear on private automobiles; increases reliability of freight operations; reduces conflicts | Backbone rehabilitation funds used for this project will improve public safety at this crossing by reducing conflicts and increase system reliability by repairing or constructing new crossing surfaces | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 142 | SFY12 | STEVENS POINT - WAUSAU | MAPLE RIDGE ROAD INTERCHANGE | BACKBONE - NON-SE WI | R/R CROSSING #392 786Y WARNING DEV | $ 116,000 | | | | |
| 143 | SFY12 | CENTRAL PARK, CITY OF MADISON | GATEWAY WSOR RAILROAD CROSSING | LOCAL ENHANCEMENTS | R/R OPS - INSTALL SIDEWALK CROSSING | $ 10,000 | This project will improve public safety by reducing conflicts between trains and pedestrians | This project will improve personal safety and reduce trespassing on railroad right of way | Local Surface Transportation Program funds will improve public safety by reducing conflicts between trains and pedestrians | Funding breakdown: 80 percent federal funds; 20 percent state/local funds |
| 144 | SFY12 | STINSON / 24TH AVENUE | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | SOO LINE CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 145 | SFY12 | CATLIN AVENUE | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 354,000 | | | | |
| 146 | SFY12 | GRAND AVENUE | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 303,000 | | | | |
| 147 | SFY12 | 9TH STREET (WINTER) | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 303,000 | | | | |
| 148 | SFY12 | Center Valley | Town of Center | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 167,000 | | | | |
| 149 | SFY12 | CTH S | Town of Center | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 167,000 | | | | |
| 150 | SFY12 | CTH A | Town of Black Creek | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 167,000 | | | | |
| 151 | SFY12 | CTH O | Town of Center | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 167,000 | | | | |
| 152 | SFY12 | PUETZ ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| 153 | SFY12 | 2ND STREET | CITY OF DELAVAN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS | $ 167,000 | | | | |
| 154 | SFY12 | WRIGHT STREET | CITY OF DELAVAN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS | $ 167,000 | | | | |
| 155 | SFY12 | COUNTY LINE ROAD | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | This series of projects will improve public safety by reducing interference between trains and automobiles; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | This series of projects will improve personal safety; improve communication and signal reliability for freight operations; enhance the quality of freight service, while reducing freight train delays and operational conflicts with passenger trains | The use of Office of the Commissioner of Railroads funds for these projects will improve public safety; improve signal reliability; improve on-time performance; and decrease maintenance and signal outages | Office of the Commissioner of Railroads - Warning Devices program: 65 percent federal funds; 35 percent state funds (this ratio can be adjusted by OCR based on state funds available) |
| 156 | SFY12 | COUNTRY AIRE ROAD | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 157 | SFY12 | MAIN STREET | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 158 | SFY12 | RIVER LANE | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 159 | SFY12 | FREISTADT ROAD | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 160 | SFY12 | MAPLE ROAD | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 161 | SFY12 | CTH Y (GOLDENDALE RD) | CITY OF GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 162 | SFY12 | USH 2 (BELKNAP ST) | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | SOO LINE CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 163 | SFY12 | STH 32 (GRAND AVE) | PORT WASHINGTON | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 164 | SFY12 | STH 145 (PILGRIM RD) | GERMANTOWN | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 165 | SFY12 | CITY OF KAUKAUNA, DELANGLADE STREET | LAWE STREET - USH 41 | STATE 3R | | $ 897,000 | | | | |
| 166 | SFY12 | CTH A - E CPL VALDERS | CN RR XING SURFACE 690337F | STATE 3R | R/R CROSSING | $ 91,000 | | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight operations | State 3R program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 167 | SFY12 | STH 58/82 REDESIGNATION, MAUSTON | CANADIAN PACIFIC R/R | STATE 3R | R/R OPS/EXTEND CROSSING PANELS | $ 11,000 | This series of projects will improve public safety; improve signal reliability; and decrease maintenance and signal outages | | | |
| 168 | SFY12 | STH 58/82 REDESIGNATION, MAUSTON | CANADIAN PACIFIC R/R | STATE 3R | R/R OPS/GATES & SIGNALS | $ 202,000 | | | | |
| 169 | SFY12 | THORP - INGRAM | CANADIAN NATIONAL RR X-ING #691313V | STATE 3R | RAILROAD/SURFACE | $ 40,000 | | | | |
| 170 | SFY12 | BARRON - STH 48 | USH 8 TO 15TH AVENUE | STATE 3R | WI CENTRAL LTD RR 691-152C/ SIGNALS | $ 155,000 | | | | |
| 171 | SFY12 | BARRON - STH 48 | USH 8 TO 15TH AVENUE | STATE 3R | WI CENTRAL LTD RR 691-152C/ SURFACE | $ 52,000 | | | | |
| 172 | SFY13 | SUBWAY ROAD | TOWN OF FRIENDSHIP | OCR SAFETY - RAILROAD WARNING DEVICES | CN - CROSSING GATES | $ 141,000 | | | | |
| 173 | SFY13 | CTH P | TOWN OF CURRAN | OCR SAFETY - RAILROAD WARNING DEVICES | CN - CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| 174 | SFY13 | LINCOLN ROAD | TOWN OF FRIENDSHIP | OCR SAFETY - RAILROAD WARNING DEVICES | CN - CROSSING SIGNALS AND GATES | $ 167,000 | | | | |
| 175 | SFY13 | CEMETERY ROAD | TOWN OF FRIENDSHIP | OCR SAFETY - RAILROAD WARNING DEVICES | CN - CROSSING SIGNALS AND GATES | $ 167,000 | | | | |
| 176 | SFY13 | DEPOT ROAD | Town of Dale | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SIGNALS & GATES | $ 202,000 | This series of projects will improve public safety by reducing interference between trains and automobiles; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | This series of projects will improve personal safety; improve communication and signal reliability for freight operations; enhance the quality of freight service, while reducing freight train delays and operational conflicts with passenger trains | The use of Office of the Commissioner of Railroads funds for these projects will improve public safety; improve signal reliability; improve on-time performance; and decrease maintenance and signal outages | Office of the Commissioner of Railroads - Warning Devices program: 65 percent federal funds; 35 percent state funds (this ratio can be adjusted by OCR based on state funds available) |
| 177 | SFY13 | SCHOOL ROAD | Town of Dale | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 178 | SFY13 | SHAKY LAKE ROAD | Town of Dale | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 179 | SFY13 | GARFIELD AVENUE | CITY OF MENASHA | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 180 | SFY13 | 12TH STREET | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | SOO LINE CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| 181 | SFY13 | CTH Y (Lannon Rd) | City Of Menomonee Falls | OCR SAFETY - RAILROAD WARNING DEVICES | UP Crossing Signals & Gates | $ 202,000 | | | | |
| 182 | SFY13 | OGDEN AVENUE | CITY OF SUPERIOR | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 303,000 | | | | |
| 183 | SFY13 | HILL VALLEY ROAD | CITY OF BURLINGTON | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 202,000 | | | | |
| 184 | SFY13 | HUNTERS ROAD | TOWN OF DALE | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - Crossing Signals & Gates | $ 167,000 | | | | |
| 185 | SFY13 | SHERMAN ROAD | CITY OF OSHKOSH | OCR SAFETY - RAILROAD WARNING DEVICES | WCL CROSSING SIGNALS AND GATES | $ 167,000 | | | | |
| 186 | SFY13 | ZOO INTERCHANGE | INTERCHANGE STUDY | SE FREEWAY-ZOO INTERCHANGE | RR / TRACK WORK | $ 1,000,000 | This project will increase public safety; increase system reliability, efficiency and travel times | This project will improve personal safety, and increase reliability, efficiency and speed of freight operations | Southeastern Wisconsin Freeway funds used on this project will provide increased safety for rail and highway travelers and improve freight operations | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 187 | SFY13 | CHESTNUT AVE, CITY OF OCONTO FALLS | RAILROAD XING SURFACE REPLACEMENT | STATE 3R | #181553U RW-N | $ 41,000 | | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight operations | State 3R program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 188 | SFY13 | CHESTNUT AVE, CITY OF OCONTO FALLS | INSTALL RAILROAD XING SIGNALS | STATE 3R | #181553U RW-N | $ 135,000 | This series of projects will improve public safety; improve signal reliability; and decrease maintenance and signal outages | | | |
| 189 | SFY13 | MARINETTE - WAUSAUKEE | MARINETTE - CTH G | STATE 3R | E & LS RAILROAD SIGNALS, ID 389905 | $ 73,000 | | | | |
| 190 | SFY13 | MAIN STREET, VILLAGE OF WAUNAKEE | WSOR RAIL CROSSING | STATE 3R | R/R OPS/CROSSING GATES | $ 182,000 | | | | |
| 191 | SFY13 | MAIN STREET, VILLAGE OF WAUNAKEE | WSOR RAIL CROSSING | STATE 3R | R/R OPS/REPLACE CROSSING | $ 111,000 | | | | |
| 192 | SFY14 | STEVENS POINT - WAUSAU | BUS 51 INTERCHANGE | BACKBONE - NON-SE WI | RR WARNING DEVICE TIP NEEDED | $ 61,000 | This project will increase public safety and reduce conflicts between trains and automobiles | This project will increase personal safety and reduce conflicts between trains and automobiles | Backbone rehabilitation funds used for this project will improve public safety at this crossing and reduce conflicts between trains and automobiles | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| 193 | SFY14 | DEPERE - SUAMICO | MEMORIAL DRIVE - CTH M | MAJORS | CN RR CROSSING / PARK ACCESS | $ 40,000 | This project will improve public safety and provide access | This project will improve personal safety and reduce conflicts | Major highway project funds used for this project will improve public safety; reduce conflicts between trains and automobiles; and provide park access | Major highway project funds are paid for with Transportation Revenue Bonds |

**Wisconsin Department of Transportation**

**Long Range Rail Investment Program: Rail-Highway Interface Projects**

| | ID | Project Schedule Date | Project Title/Location | Project Limit/Location | WisDOT Program | Project Concept/Description | Estimated Total Cost | Public Benefits | Private Benefits | Correlation between Public Funding Contributions and Public Benefits | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 194 | SFY14 | CTH S | TOWN OF LITTLE SUAMICO | OCR SAFETY - RAILROAD WARNING DEVICES | CN (SSAM) CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 195 | SFY14 | SOUTH STREET (NORTH RD) | VILLAGE OF AUBURNDALE | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SIGNALS AND GATES | $ 202,000 | | | | |
| | 196 | SFY14 | GEORGE STREET | VILLAGE OF AUBURNDALE | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SIGNALS AND GATES | $ 202,000 | | | | |
| | 197 | SFY14 | CTH T (DIVISION ST) | VILLAGE OF WITHEE | OCR SAFETY - RAILROAD WARNING DEVICES | CN (WCL) CROSSING SINGALS & GATES | $ 202,000 | | | | |
| | 198 | SFY14 | HAZELWOOD ROAD | TOWN OF SPARTA | OCR SAFETY - RAILROAD WARNING DEVICES | CP RR CROSSING SIGNALS | $ 202,000 | | | | |
| Short-term (2010 - 2015) | 199 | SFY14 | COLGATE ROAD | VILLAGE OF SUSSEX | OCR SAFETY - RAILROAD WARNING DEVICES | UP Crossing Signals & Gates | $ 202,000 | | | | |
| | 200 | SFY14 | CTH KK (MOORE ROAD) | PORT WASHINGTON | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 201 | SFY14 | OAKLAND AVENUE | PORT WASHINGTON | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 202 | SFY14 | KETTLE MORAINE DR. | Village of Slinger | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 203 | SFY14 | CTH E | TOWN OF ADAMS | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 204 | SFY14 | CTH E (MAIN ST) | VILLAGE OF WARRENS | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 205 | SFY14 | CTH F | TOWN OF HAY RIVER | OCR SAFETY - RAILROAD WARNING DEVICES | WCL - CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 206 | SFY14 | CTH KK (MINNESOTA ST) | VILLAGE OF OOSTBURG | OCR SAFETY - RAILROAD WARNING DEVICES | WCL CROSSING SIGNALS | $ 202,000 | | | | |
| | 207 | SFY14 | TOWER DRIVE | VILLAGE OF AUBURNDALE | OCR SAFETY - RAILROAD WARNING DEVICES | WCL CROSSING SIGNALS AND GATES | $ 167,000 | | | | |
| | 208 | SFY14 | OAKWOOD ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| | 209 | SFY14 | DREXEL ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| | 210 | SFY14 | FOREST HILL ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | This series of projects will improve public safety by reducing interference between trains and automobiles; improve signal reliability; improve on-time performance; enhance operating safety; decrease maintenance and signal outages | This series of projects will improve personal safety; improve communication and signal reliability for freight operations; enhance the quality of freight service, while reducing freight train delays and operational conflicts with passenger trains | The use of Office of the Commissioner of Railroads funds for these projects will improve public safety; improve signal reliability; improve on-time performance; and decrease maintenance and signal outages | Office of the Commissioner of Railroads - Warning Devices program: 65 percent federal funds; 35 percent state funds (this ratio can be adjusted by OCR based on state funds available) |
| | 211 | SFY14 | ELM ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| | 212 | SFY14 | COUNTY LINE ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| | 213 | SFY14 | RYAN ROAD | OAK CREEK | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGHALS & GATES | $ 202,000 | | | | |
| | 214 | SFY14 | BROOKHILL ROAD | VILLAGE OF GENESEE DEPOT | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| | 215 | SFY14 | STH 32 (ASHLAND AVE) | ASHWAUBENON | OCR SAFETY - RAILROAD WARNING DEVICES | CN (FVW) CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 216 | SFY14 | STH 173 | VILLAGE OF WARRENS | OCR SAFETY - RAILROAD WARNING DEVICES | UP CROSSING SIGNALS & GATES | $ 202,000 | | | | |
| | 217 | SFY14 | STH 52 (5TH ST) | CITY OF WAUSAU | OCR SAFETY - RAILROAD WARNING DEVICES | WCL CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| | 218 | SFY14 | STH 52 (6TH ST) | CITY OF WAUSAU | OCR SAFETY - RAILROAD WARNING DEVICES | WCL CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| | 219 | SFY14 | YSH 51 | CITY OF EDGERTON | OCR SAFETY - RAILROAD WARNING DEVICES | WSOR CROSSING SIGNALS & GATES | $ 167,000 | | | | |
| | 220 | SFY14 | N-S FREEWAY - STH 11 INTERCHANGE | STH 11 INTERCHANGE RRC#338-092G | SE FREEWAY-I94 KEN/RAC/MIL | RR/CROSSING SURFACE | $ 89,000 | This series of projects will improve public safety, improve signal reliability, and decrease maintenance and signal outages | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight | Southeastern Wisconsin Freeway funds used on this project will provide increased safety for rail and highway travelers and improve freight | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and |
| | 221 | SFY14 | N-S FREEWAY - STH 11 INTERCHANGE | STH 11 INTERCHANGE RRC#388-092A | SE FREEWAY-I94 KEN/RAC/MIL | RR/CROSSING SURFACE | $ 89,000 | | | | |
| | 222 | SFY14 | N-S FREEWAY - STH 11 INTERCHANGE | STH 11 INTERCHANGE RRC#338-091G | SE FREEWAY-I94 KEN/RAC/MIL | RR/RR POLE LINE ALTERATION | $ 9,000 | | | | |
| | 223 | SFY14 | N-S FREEWAY - STH 11 INTERCHANGE | STH 11 INTERCHANGE RRC#338-092G | SE FREEWAY-I94 KEN/RAC/MIL | RR/RR SIGNALS | $ 67,000 | | | | |
| | 224 | SFY14 | N-S FREEWAY - STH 11 INTERCHANGE | STH 11 INTERCHANGE RRC#338-092E | SE FREEWAY-I94 KEN/RAC/MIL | RR/RR SIGNALS | $ 67,000 | | | | |
| | 225 | SFY14 | DURAND AVENUE (STH 11) | Union Pacific Railroad Crossing | STATE 3R | CONST/TRACK WORK | $ 1,050,000 | This series of projects will improve public safety, improve signal reliability, and decrease maintenance and signal outages | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight operations | State 3R program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| | 226 | SFY14 | INDEPENDENCE - NORTHFIELD | CANADIAN NATIONAL RR XING # 281801S | STATE 3R | RAILROAD OPS/RESURFACE CROSSING | $ 71,000 | | | | |
| | 227 | SFY14 | INDEPENDENCE - NORTHFIELD | CANADIAN NATIONAL RR XING # 281801S | STATE 3R | RAILROAD OPS/SIGNALS & GATES | $ 202,000 | | | | |
| | 228 | SFY15 | STEVENS POINT - WAUSAU | BUS 51 INTERCHANGE | BACKBONE - NON-SE WI | RR SURFACE TIP NEEDED | $ 76,000 | Improves public safety; reduces maintenance; increases reliability | Improves personal safety; reduces wear and tear on private automobiles | Backbone rehabilitation funds used for this project will improve public safety at this crossing and increase system reliability by repairing or constructing new crossing surfaces | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| | 229 | SFY15 | CITY OF KAUKAUNA, DELANGLADE STREET | CN RR XING SURFACE 180053T | STATE 3R | | $ 71,000 | This series of projects will improve public safety, improve signal reliability, and decrease maintenance and signal outages | This series of projects will improve personal safety; reduce conflicts between trains and automobiles; and improve signal reliability for freight operations | State 3R program funds will improve public safety, reduce conflicts, and improve signal reliability at these locations | Fed/State/Other funding split varies for some Rail-Highway Interface projects. It can be assumed that some combination of federal and state funds are used for all. |
| | 230 | SFY15 | CITY OF KAUKAUNA, DELANGLADE STREET | CN RR XING SIGNALS 180053T | STATE 3R | | $ 81,000 | | | | |
| | 231 | SFY15 | WCPL WAUPUN - S CPL BRANDON | WSOR RR XING SURFACE | STATE 3R | | $ 41,000 | | | | |
| | 232 | SFY15 | WCPL WAUPUN - S CPL BRANDON | WSOR RR XING SIGNALS | STATE 3R | | $ 140,000 | | | | |
| Long-range: 2030 Plan Horizon | 233 | SFY19 | PESHTIGO - MARINETTE | COUNTRY MEADOW INTERSECTION | STATE 3R | CN R/R XING SURFACE 910730L R/W-YES | $ 61,000 | | | | |

Program definitions:

**Backbone (non-SE WI) Program** - this sub-program manages funding for improvement projects on designated Backbone System routes not in WisDOT's Southeast Region. Sometimes railroads are within project limits.

**Surface Transportation Program (STP)** - see Chapter 10 - Funding Wisconsin's Rail System Investments for more information

**Major** Highway Development program or **"Majors" -** Major Highway Development project candidates are those with costs greater than $5 million. They must also include at least one of the following: Constructs a new highway 2.5 or more miles long; Relocates 2.5 or more miles of existing highway; Adds at least one lane 5 or more miles in length to the existing highway; or Improves to freeway standards 10 or more miles of an existing divided highway with at least two lanes in each direction

**Railroad Crossing Repair** - this program manages the funding WisDOT reimburses railroad companies for 85 percent of the costs they incur in repairing the highway surface at rail-highway grade crossings. Only projects on the State Highway System are eligible for this state-funded program

**WisDOT Rail-Highway Crossing Safety** program (Warning Devices and Crossing Elimination of Hazards) - Warning Devices projects primarily involve active warning device installations and upgrades. Engineering assessment and benefit-cost analysis justify the appropriate warning device configuration for a specific crossing; Crossing Elimination of Hazards projects improve crossing geometrics or eliminate at-grade crossings with a separation structure or crossing closure

**OCR Safety: Railroad Warning Devices** - Wisconsin's Office of the Commissioner of Railroads (OCR) has statutory authority and supportive funding to investigate existing warning devices at rail-highway crossings for adequacy and to order appropriate improvements to those warning devices determined to be inadequate for protecting public safety. Both WisDOT and the OCR manage programs that provide funding for rail-highway crossing safety improvements, the difference being the OCR program is limited to warning devices only.

**SE Freeway** - The Southeast Freeway sub-program manages funding for improvement projects on the 270 miles of Interstate and non-Interstate freeways crossing the seven southeastern Wisconsin counties in and around Milwaukee. Sometimes railroads are within project limits.

**State 3R** - The State 3R (resurfacing, reconditioning, reconstruction) sub-program's objective is to identify and evaluate system needs, and select appropriate levels of improvement to maintain an acceptable level of service on the State Trunk Highway system while staying within dollar allocations. Sometimes railroads are within project limits.

**CMAQ -** see Chapter 10 - Funding Wisconsin's Rail System Investments for more information about the Congestion Mitigation and Air Quality program.

**Local Enhancements** - see Chapter 10 - Funding Wisconsin's Rail System Investments for more information

Note: Costs are estimated project delivery costs for only the rail component(s) of each project.

# Chapter 11: System-Plan Environmental Evaluation

## Table of Contents

# Chapter 11: System-Plan Environmental Evaluation

## Introduction

This chapter presents the System-plan Environmental Evaluation (SEE) developed in conjunction with the Wisconsin Rail Plan 2030. The evaluation meets the requirements of Wisconsin's administrative code, Trans 400, *Wisconsin Environmental Policy Act Procedures for Department Actions*.

## Chapter Structure

The following chapter highlights:

- Plan overview and the role of the Wisconsin Department of Transportation (WisDOT)
- Evaluation purpose and methodology
- Qualitative assessment, by key topic area

## Plan Overview and WisDOT's role

*Wisconsin Rail Plan 2030* reviews the existing system, related needs and issues and outlines a series of recommendations for the next 20 years. The full scope of the *Wisconsin Rail Plan 2030* can be traced back to the state's recently adopted multimodal long-range transportation plan, *Connections 2030* and previous efforts. The rail-specific policies defined as part of *Connections 2030* are adopted and further refined in this mode-specific plan.

In Wisconsin, private railroads own and operate the majority of the rail lines. Of the approximate 3,600 miles of state rail network, the Wisconsin Department of Transportation (WisDOT) owns about 530 miles. While the majority of rail-related decisions are made by private entities the department remains the steward of the entire system. In this capacity, WisDOT offers a leadership role in providing a system-level and regional view that considers each mode and its function as part of the overall system.

## Evaluation Purpose and Methodology

A SEE (System-plan Environmental Evaluation) must be prepared for any WisDOT state-level plan when the department determines that the plan contains "major and significant new proposals" likely to affect the quality of the human and natural environments. The SEE is a qualitative assessment of the plan's recommended policies and potential effects on the environment. It is a conceptual and general document that analyzes potential environmental concerns. Because of the scale of analysis and conceptual focus, the analysis does not replace future project-level environmental reviews.

*Wisconsin Rail Plan 2030* analyzes a base case alternative and the plan alternative. Adopted in October 2009, *Connections 2030*, the state's multimodal 20 year plan, is the base case. The rail plan alternative is *Wisconsin Rail Plan 2030*. While the recommendations contained in the state rail plan generally represent those first introduced in *Connections 2030*, the department prepared this evaluation to:

- Inform the public of the system level plan's recommendations and possible negative and positive environmental impacts of implementation
- Continue its commitment to disclosing the potential environmental impacts of its activities
- Assess whether the plan's recommendations respond to potential negative impacts and, if so, offer related direction or guidance during implementation

Development of the *Wisconsin Rail Plan 2030* followed a comprehensive process that included consultation with environmental resource agencies (see *Wisconsin Rail Plan 2030* Environmental Consultation Summary) and Tribal Governments (see *Wisconsin Rail Plan 2030*, Tribal Consultation), as well as a public involvement component detailed in Chapter 2. The plan also incorporates the considerable feedback received during previous and current planning efforts, including: *Connections 2030* outreach, analysis conducted as part of the *Midwest Regional Rail Initiative* and development of Wisconsin's portion and early rail plan outreach conducted between 2001 and 2004.

## Qualitative Assessment by Key Topic Area

In response to the requirements defined under Trans 400, the SEE focuses on:

- Congestion
- Energy consumption
- Air quality
- Economic growth and development
- Communities and cultural resources
- Sensitive land and water resources
- Agriculture
- Indirect effects
- Cumulative effects

### *Congestion*

Rail network congestion can occur when the capacity of the network is unable to accommodate a specific incident or need. For example, congestion may result when a train has to make an unexpected stop or slow down as a result of an event such as a blocked track, track sharing need, inclement weather, or a crash that prevents the train from moving as intended. It may also occur if the existing infrastructure (bridges, tunnels, track, rail station and rail yards) is insufficient to handle the volume or type of rail cars and/or commodities. Congestion can cause backups and delays.

In Wisconsin, there are no significant line capacity constraints that hinder the flow of rail traffic. However, there are a number of elements that, over time, may affect Wisconsin's rail network (additional capacity issues are identified in Chapter 5, Freight Rail.) These include:

- Projected growth in rail shipping and potential infrastructure upgrade needs
- Proximity to Chicago and the Twin Cities
- Panama Canal Expansion and Port of Prince Rupert, British Columbia
- Track sharing
- Rail line abandonments and possible restoration

**Projected growth in rail shipping and potential infrastructure upgrade needs**

Wisconsin's railroads move 33 percent of Wisconsin's total freight[1] by weight, about 180 million tons annually. In 2007, rail movements statewide were 46 percent overhead[2], 42 percent terminating, 10 percent originating and two percent intrastate. Because of the state's key location between Minneapolis/St. Paul and Chicago, more freight passes through Wisconsin than originates or terminates in the state. Impacted by increases in economic activity, overhead freight is expected to grow through 2030, taking up valuable capacity on Wisconsin's transportation system. By 2030, the amount of freight shipped by rail in Wisconsin is expected to grow 16 percent. This projected growth will place increased demands on the state's rail network. The impact may mean an increase in the number of trains, carload weight, or changes to carload structure (longer or taller trains – double stack trains).

In addition to rail infrastructure needs, the connections between modal freight carriers such as rail to truck are also very important. Because a train's carrying capacity may allow it to be loaded with twice the weight currently carried, the projected increase in freight rail shipment does not necessarily imply more trains will be running on the system; it more likely means that the weight or length of the carloads will increase. Two single flat cars, for example, can carry equal the weight of one double-stack flat car. Accommodating increased carload weights or train lengths requires railroad upgrades. Private railroad operators address needs on their rail networks. The state works with operators on the publicly owned lines to address needs. WisDOT has assessed infrastructure on the publicly owned lines and the need for future upgrades. As a result, funding for the department's freight programs was increased during the 2009-2011 biennial budget process. This was done to address the needs and further support the department's role in rail service statewide.

Large railways typically favor dedicated movement of container traffic and seldom promote locations that are not capable of loading an entire train for movement to a single location. Several facilities of this scale are located in the Chicago region and two are located in the Twin Cities (operated by Burlington Northern Santa Fe and Canadian Pacific Railway). This means that Wisconsin shippers seeking access to long-haul intermodal service for import/export containers generally must move their commodities by truck across state lines to deliver boxes for delivery by freight rail to major U.S. port facilities.

[1] Wisconsin's rail freight movement is characterized as the amount of freight that: originates or terminates within the state (with corresponding destinations or origins outside of the state); moves entirely within the state (intrastate); or passes through from an out-of-state origin to an out-of-state destination (overhead).

[2] Overhead freight includes freight shipments by truck, rail or intermodal that do not originate or terminate in Wisconsin.

Increased freight and passenger rail activity can result in increased congestion at at-grade crossings. As the number of trains or the length of trains increases, roadway congestion near crossings increases. In addition to affecting system capacity, this can negatively impact air quality and energy consumption.

Finally, Wisconsin faces challenges at the connections between the rail and truck networks, which typically occur at ports or intermodal facilities. These facilities are usually located away from highways and interstates, which are designed to handle the larger vehicles. This separation forces the local roadway system to function as the link between these facilities. Unlike highways, local streets typically have more congestion due to traffic signals, poor turning radii, inadequate overhead clearances and narrow bridges. These factors make access to terminals difficult. As congestion increases, the efficiency and quality of service provided by truck and rail carriers is reduced.

**Proximity to Chicago and the Twin Cities**

Given the proximity of large rail terminals in Chicago and the Twin Cities, the majority of Wisconsin's import/export rail intermodal traffic will continue to move over the state's highway system before transferring to the rail mode in adjoining states. As mentioned previously, Wisconsin's overhead rail freight tonnage accounts for 46 percent of Wisconsin's freight shipments. This is due in large part to the preferences of large railways for dedicated movements of container traffic to a single port.

As the nation's busiest and most complex rail transportation hub and principal gateway for transcontinental traffic, Chicago continues to be a major regional rail bottleneck. Because none of the U.S.-based rail systems serve both the Pacific and Atlantic Coasts, all east-west traffic must interchange at one of the nation's rail "gateways." Chicago is the largest interchange point, moving over 35,000 freight rail shipments per day. Traffic moving east from Wisconsin must use the Chicago gateway. Congestion in the Chicago terminal area can back up rail operations and negatively impact service in southeastern Wisconsin.

The Chicago Region Environmental and Transportation Efficiency Program (CREATE), has been organized as a partnership between the U.S. DOT, the State of Illinois, the city of Chicago, Metra (Chicago's commuter rail operator), Amtrak and the nation's freight railroads to improve freight and passenger rail mobility, enhance safety and promote economic development. See Chapter 4, Freight Rail, for more information.

**Panama Canal expansion and Port of Prince Rupert, British Columbia**

The expansion of the Panama Canal is expected to be completed in late 2014 or early 2015. The expansion will enable the canal to accommodate ships that are longer, wider and deeper than those currently passing through the facility. As a result, while the number of ships traveling through the canal will likely not increase, the doubling of permitted vessel size will improve the competitive position of the U.S. Gulf and East Coast ports in handling Asian trade. While the impacts to Wisconsin are not fully known, the expansion may result in slower growth or a decrease in intermodal rail traffic through Wisconsin.

In contrast, the Port of Prince Rupert, in British Columbia, Canada and the intermodal train service introduced there in 2007 by Canadian National (CN) may have a substantial impact on Wisconsin. First,

the location offers cargo ships an opportunity to unload two days earlier than the next closest coastal port, helping to speed vessel cycle times and productivity. Containers are then moved by expedited double stack trains to Harvey, Illinois (south of Chicago) and Memphis, Tennessee. This service may result in an increase in rail traffic through Wisconsin, with as many as 20 container trains per day traversing CN's main route through Wisconsin. This would represent an approximate doubling of rail traffic.

**Track sharing**

The majority of Wisconsin's intercity passenger rail network operates on routes owned or operated by freight railroads. Proposed intercity passenger and commuter rail services would use some of the existing capacity of these lines. Unlike Amtrak, commuter rail operations do not have a legal right of access to the general railroad system. For commuter rail operators to gain access, they must reach a voluntary agreement with the freight railroad.

Shared use can sometimes lead to capacity issues that impact freight trains and passenger rail service if adequate infrastructure is not in place. On shared corridors, passenger rail service can experience congestion due to delays caused by problems with host-railroad train dispatching, speed restrictions, track maintenance, track sharing, insufficient track capacity, or problems with track and signals, delays, assisting passengers boarding or alighting, holding trains for connections, or equipment. Delays can increase operating costs of passenger rail and negatively impact revenues. Fortunately, Amtrak's Hiawatha Service has a very good on-time performance record due in large part to sound host railroad dispatching and maintenance practices.

Future freight and passenger rail service growth must be accommodated with minimal delays through appropriate track capacity improvements. Both state and freight railroad operators will work together to complete capacity analyses to ensure freight railroad service is not negatively impacted by the expansion of passenger rail service. Improvements necessary to accommodate passenger rail are expected to enhance freight service as well. The sponsoring agency, the state or another entity, will share in the cost of capacity improvements necessary to address increased passenger rail service.

Capacity improvements to accommodate these new services may include new passing sidings, improved coordination of signalization and scheduling, and track upgrades. WisDOT has completed a detailed operations simulation of the Chicago-Milwaukee-Madison intercity passenger rail corridor and determined that with appropriate infrastructure improvements new service can be implemented without harming current and future freight operations. See Chapter 4, Freight Rail, for more information.

To address capacity concerns, WisDOT continues to encourage coordination between different service providers; however, the department does not have a direct role. The impacts of congestion and corresponding air quality concerns are discussed later in the chapter.

**Rail line abandonments and possible restoration**

Rail line abandonments may cumulatively influence rail line congestion levels. When lines are not used due to abandonment or other reasons, fewer active lines are available to handle rail-related activity. Passage of the Staggers Act in 1980 greatly changed the nature of freight rail movements in the country.

With modifications to rail industry regulatory requirements, carriers were able to focus on their most profitable commodities and routes. This had a substantial impact on Wisconsin. By 1986, over 2,000 miles of track had been abandoned in Wisconsin. In response, WisDOT has worked with its partners to preserve rail corridors – proposed for abandonment – for future use. If a corridor is being abandoned and the department and communities are not able to preserve the current use, efforts shift to a rail corridor preservation approach. This preserves rights-of-way for future transportation purposes. While preserved for future rail use, some of these corridors are used as recreation trails. Map 11-1 shows the locations of rails-to-trails[3] corridors and rail bank corridors as of 2009.

With the anticipated growth in freight rail shipping and expansion of intercity passenger rail service, some of these preserved corridors may be restored over the next 20 years. Restoration may be based on economic feasibility, creating system redundancy, or other factors. Other corridors may be converted for other transportation uses. This conversion will likely address capacity concerns, potentially enhance air quality issues by offering an expanded rail mode for transportation and further support economic development. However, it will likely affect surrounding communities that may have been using the corridor for other purposes such as recreation, or allowed development that is now incompatible with future rail service.

The base case and the state rail plan alternative both support the department's recommendations to: upgrade and rehabilitate Wisconsin's publicly owned rail lines and bridges to accommodate heavier railcars and projected increases in rail traffic. Both also support the department's focus on work with the state's private railroads to identify opportunities to address system needs, coordinate freight and passenger rail movements, and identify multimodal connections. In addition, both alternatives support and recognize WisDOT's role in preserving essential rail service and corridors for future use; ensure that appropriate service will be provided to all shippers through the increased investment in the network; and support efforts to address congestion in and around Chicago. Finally, both the base case and the state rail plan alternative recommend implementing Wisconsin's portion of the Midwest Regional Rail System

Beyond the base case alternative, the state rail plan recommends that Wisconsin, in cooperation with its partners, formalize its ability to assess the value of rail assets by working to implement an asset management system for state-owned rail lines. This approach would enable the department and its partners to identify needs and help ensure that the system performs to its desired level. In addition, the state rail plan recommends cooperation with others to monitor effectiveness of communication systems with regard to quick, clear and accurate dissemination of information to all involved parties during and after rail incidents. The plan also recommends support of research, development and demonstration of advances in signal communication and train control systems on existing rail lines. Finally, the state rail

[3] Rails-to-Trails program

plan alternative supports Wisconsin & Southern Railroad's continued service to Chicago as a method of serving Wisconsin's carload rail traffic to and from eastern points.

Each of these recommendations will continue to support the state's rail system and has the potential to address capacity and congestion issues that may arise over the life of the plan.

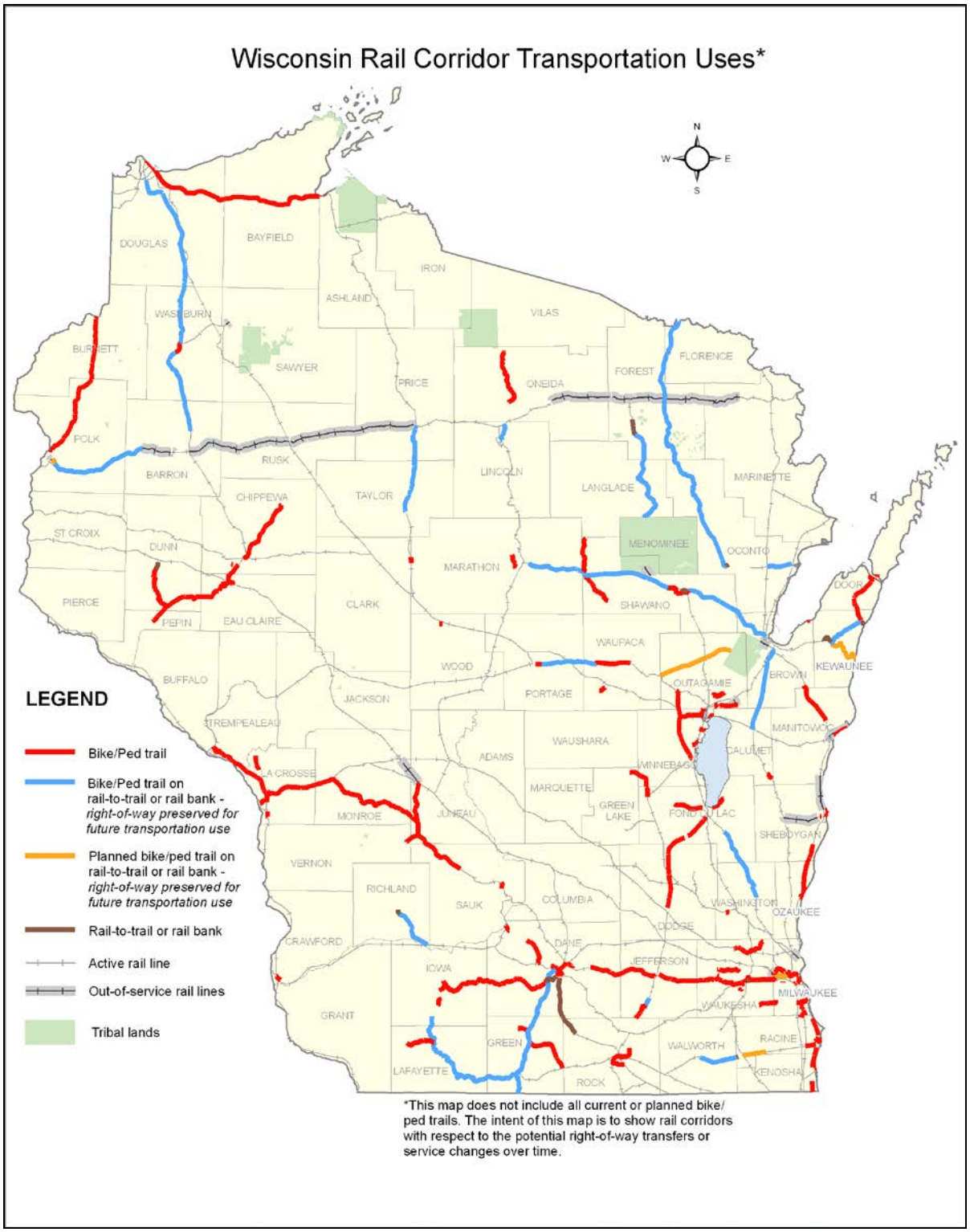
## *Energy Consumption*

In Wisconsin, all modern railroad engines use diesel as their main fuel source. In 2006, 25 percent of Wisconsin's total energy resources were consumed by transportation. Based on data from the American Association of State Highway and Transportation Officials (AASHTO), for each one percent of long-haul freight shifted from truck to rail, fuel savings could total approximately 111 million gallons per year and annual greenhouse gas reductions could total 1.2 million tons per year.

Compared to other modes of transportation, freight rail is second only to inland barges in fuel efficiency for transport. Trucking is less energy efficient than freight rail in ton-miles per gallon of fuel consumed. This is due in part to the low rolling resistance between the rail car's wheels and the track, even at high speeds. Passenger rail systems throughout the U.S. consume one-third less energy per passenger-mile than automobiles[4]. On a per passenger basis, Amtrak operations are 18 percent more energy efficient than airlines and 17 percent more energy efficient than automobiles. If traveling and shippers chose rail over other modes, this could result in fuel efficiency gains. Factors influencing rail-related energy consumption include U.S. rail passenger equipment, development patterns and train set technologies.

[4] U.S. Department of Energy, *Transportation Energy Data Book*, 2007

**Map 11-1: Wisconsin Rail Corridor Transportation Uses**



**Passenger rail equipment standards**
Current U.S. rail passenger equipment safety standards are designed to keep passengers and crew safe in an operating environment that includes conventional heavy freight equipment. The heavier equipment can result in increased fuel use, as well as reduce acceleration and deceleration speeds. Future rail systems may use lighter weight equipment to achieve performance efficiencies through reduced fuel use and faster train speeds. New equipment will help reduce maintenance costs through reliable and easier to maintain systems, reduced fuel consumption and better performance. WisDOT will monitor these issues and work with the federal government and other states, as well as freight and passenger rail operators to implement guidance or regulations and identify equipment needs.

**Development patterns**
Mixed used development often results in higher densities that are more transit-, bicycle- and pedestrian-friendly. This development pattern, known as transit-oriented development or smart growth, facilitates travel patterns that can be more energy efficient than auto-oriented development, thus contributing to more livable, sustainable communities. The state rail plan continues WisDOT's emphasis on expanding rail transportation and linking rail routes with intercity and local bus service through multimodal transportation centers. The potential benefits derived from encouraging these connections include fostering less auto-dependent development, expanding options for transit-dependent persons in urban areas and improving transportation options in rural communities. In addition, rail has the benefit of reducing air emissions and energy consumption.

The base case and the rail plan alternative both support the department's efforts to increase transportation sustainability and monitor the implications of increased fuel costs to individuals, businesses, families and communities. The department will consider the recommendations of the Midwest Governors Greenhouse Gas Reduction Accord, the state Office of Energy Independence and the Governor's Task Force on Global Warming to reduce fuel dependency.

As part of the state rail plan alternative, WisDOT will share regulatory information that encourages operational efficiency improvements, including improving crossings, constructing grade-separated crossings where warranted and addressing safety needs.

**Train set technologies**
Train set technologies can impact energy consumption. For example, on a given route, multiple trains timed with positive train control can be managed more efficiently than on routes without positive train control. Properly timed railroad crossings can increase rail-related energy efficiencies if automobile idling is kept to a minimum. In the future trains may become even more energy efficient as a result of more efficient diesel engines, better fuels types, training of engineers on practices to conserve fuel use for most efficient service, lower-resistance wheel bearings, and use of distributed power.

Other factors influencing rail energy consumption include transportation system characteristics (terrain, speed, congestion and service levels), federal fuel regulations (type and characteristics) and energy efficient buildings and amenities (e.g. lighting).

### *Air Quality and Greenhouse Gas Emissions / Climate Change*

While emissions from the transportation sector are expected to continue to decrease with improvements in technology and regulatory measures, air quality remains a concern for Wisconsin. The state's air quality is affected by emissions generated internally, as well as those moving north along Lake Michigan from neighboring states. The highest levels of air pollution occur in Wisconsin's southeastern counties and in the counties along Lake Michigan.

The potential air quality impacts discussed here focus on:

- Ground-level ozone
- Particulate matter
- Greenhouse gas emissions

> The Clean Air Act (as amended in 1990) directed the U.S. EPA to establish allowable ambient concentrations for six criteria pollutants: carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide and lead. The standards for these six criteria pollutants are commonly referred to as the National Ambient Air Quality Standards (NAAQS).

**Ground-level ozone**

Ground-level ozone is a pollutant of primary concern in Wisconsin. Ozone is formed when volatile organic compounds and nitrogen oxides combine in the presence of heat and sunlight. Motor vehicle exhaust and gasoline vapors, as well as industrial emissions and chemical solvents, are some of the major sources of volatile organic compounds and nitrogen oxides. While a threshold for human health exposure to ozone has not been established, exposure to ozone has been linked to both acute and chronic adverse health effects, including heart and lung disease. When inhaled into the lungs, ozone can aggravate existing lung diseases, exacerbate asthma attacks and bronchitis and may shorten life span. In 2010, seven Wisconsin counties were designated non-attainment for the eight hour ozone standard: Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha. In 2013, these areas are portions of Kenosha County and Sheboygan County.

**Particulate matter**

Particulate matter is another pollutant of concern to Wisconsin. Particulate matter is a complex mixture of extremely small particles and liquid droplets. It is made up of a number of components such as nitrates and sulfates, organic chemicals, metals and soil or dust particles. Like ozone, when inhaled into the lungs, fine particles can aggravate existing heart and lung diseases and cause cardiovascular symptoms, arrhythmias, heart attacks, chronic obstructive pulmonary disease, asthma attacks and bronchitis. The U.S. EPA has designated Milwaukee, Racine and Waukesha counties as nonattainment for the particulate matter 2.5 standard.

**Greenhouse gas emissions**

The burning of fossil fuels results in greenhouse gas (carbon dioxide, methane and nitrous oxide) emissions, which trap heat in the earth's atmosphere. Fossil fuels are the largest contributors to the climate crisis, and transportation sources remain a large contributor. Impacts resulting from continued increases in greenhouse gas emissions include more extreme weather events, changing landscapes,

weather related illnesses, disease and economic losses. In Wisconsin, the transportation sector contributes about 24 percent of greenhouse gas emissions.[5]

Effects on air quality can change based on changing land use patterns, transportation mode shifts, source locations and forecasted congestion increases and reductions.

In general, reductions in vehicle miles traveled resulting from increased availability of modal choices, such as intercity passenger rail and commuter rail, may reduce overall carbon dioxide emissions from the transportation sector and help reduce future greenhouse gas emission targets. Intercity passenger rail travel emits an estimated 40 percent fewer kilograms of CO2 emissions per passenger mile than auto travel and less than half that of air travel.[6] Communities next to intercity passenger and commuter rail stations and rail yards, including areas where trains idle for long periods of time will potentially have more concentrated exposure to engine emissions. However, the diversion of people traveling by rail instead of automobile is likely to offset some of the potential negative air quality impacts. In response to concerns about train idling and emissions, communities may be able to influence the amount of landscaping around rail corridors and stations. In addition, changes in locomotive technologies may help to address emissions concerns.

In 2007, nine Midwest states, including Wisconsin, signed a climate change accord to target greenhouse gas emission levels. In 2008, the Governor's Task Force on Global Warming presented recommendations to reduce Wisconsin's contribution to the global climate crisis.

The base case and the state rail plan alternative support the department's commitments related to air quality improvement. WisDOT will monitor ways to reduce transportation-related emissions in the state. Both the base case and state rail plan alternative emphasize the importance of expanded rail service and continue WisDOT's focus on improving the transportation system and providing modal alternatives to help improve air quality.

The rail transportation mode offers a viable option to help reduce emissions. The U.S. Environmental Protection Agency (EPA) estimates that for every ton-mile, a typical truck emits three times more nitrogen oxides and particulates than a train. Related studies suggest that trucks emit six to 12 times more pollutants per ton-mile than railroads, depending on the pollutant measured. The American Society of Mechanical Engineers found that 2.5 million fewer tons of carbon dioxide would be emitted into the air annually if 10 percent of intercity freight now moving by highway were shifted to rail.

[5] World Resources Institute, Wisconsin Greenhouse Gas Emissions Inventory and Projections, 25 June 2007.
[6] www.amtrak.com. Energy Efficiency and Environmental Benefits. Critical Link. 2007. Emissions factors based on calculations from the World Resources Institute (WRI) and Carbonfund.org. Calculations assume single-occupant car and the added impact of high-altitude emissions for air.

Factors affecting air quality related to rail transportation include:

- Congestion
- Federal regulatory changes
- Train set technologies
- Expanded mobility options

**Congestion**

Rail network congestion can impact air quality, particularly at railroad-highway crossing locations where automobile engine idling occurs. With anticipated increases in freight shipment movements on Wisconsin's rail network, emissions may increase at roadway-rail crossings. In addition, because a large percentage of freight shipments neither originates nor terminates in the state, a portion of Wisconsin's freight shippers must move goods over the highway system to access large railroad intermodal facilities in Chicago. West bound intermodal freight traffic from Minnesota and the Dakotas often travels east by truck on I-94 and I-90 through Wisconsin before it is transferred in Chicago to west-bound trains. Truck volume on these interstate routes is large – around 10,000 vehicles per day – and is expected to grow faster than passenger vehicle traffic over the next 20 years.

The base case (*Connections 2030*) supports several policies that will address highway system preservation and transportation system efficiencies. As part of the state rail plan, WisDOT supports service and infrastructure improvements to reduce automobile congestion and congestion-related impacts at crossing locations.

**Federal regulatory changes**

In March 2008, the EPA finalized new rules and clean diesel requirements that when fully implemented will cut allowable particulate matter emissions from railroad locomotive engines by as much as 90 percent and NOX emissions by as much as 80 percent. The EPA expects air quality to continue to improve based on increased regulations, examples of which include the *Locomotive Engines and Marine Compression-Ignition Engines Rule* and the *Clean Air Non-Road Diesel Rule*.[7]

**Train set technologies**

Engines produce exhaust. As train speeds increase, levels of particulate matter and other toxins increase. Heavier freight cars (due in some part to the urea that is added to fuel to reduce particulate matter and nitrous oxides) take more fuel to move, which can result in negative impacts to the environment. However, when older model rail engines are replaced with newer models in combination with clean diesel requirements, locomotives produce fewer emissions.

**Expanded mobility options**

The state rail plan alternative emphasizes expanding rail transportation and linking rail routes with intercity and local bus service through multimodal transportation centers. The potential benefits derived from encouraging these connections include fostering development that is less auto-dependent,

[7] United States Environmental Protection Agency, "Our Nation's Air: Status and Trends through 2008," (EPA-454/R-09-002, February 2010), pg 2.

expanding options for transit-dependent people in urban areas and improving transportation options in rural communities. With a shift to other transportation modes, the potential for reduced emissions increases.

Both the base case and state rail plan continue the department's emphasis on air quality improvement. WisDOT will continue to comply with federal and state policies and regulations, encourage development and expansion of the state's multimodal system, identify opportunities to support the rail network and preserve essential rail service where appropriate. Further, the department will support the efforts of CREATE, improve communication and encourage operators to meet regulatory agency goals as soon as possible.

Wisconsin's railroad industry results in over $1 billion (2008) invested in the state through infrastructure investments, wages and indirect expenditures like purchases and housing.

The 2006 Midwest Regional Rail Initiative economic analysis estimates that Wisconsin communities would see $704 million in increased joint development potential and $173 million in extra household income with full build-out of the Wisconsin portion of the proposed Midwest Intercity Passenger Rail System. The analysis also found that Wisconsin will receive $1.80 in benefits for every $1 invested in the system.

See Chapter 4: Economic Development.

Other entities, including private railroads and local governments, can help to address air quality concerns. For example, Amtrak plans to minimize its carbon footprint by reducing diesel fuel use per single engine, over time.[8] Another example is the increased intermodal movement (highway to rail freight) of goods by private entities to address greenhouse gas emissions, improve energy efficiency and encourage the sustainable transport of goods. Wisconsin-based Schneider National is one of the nation's largest users of rail intermodal services.

## *Economic Growth and Development*

Wisconsin benefits from a transportation system that safely and reliably moves people and goods to their destinations. Rail improvements can encourage economic development in various ways. Wisconsin's businesses directly benefit from enhanced freight mobility and connectivity to economic centers located in and out of state. Investments in passenger and freight rail transportation also produce economic returns achieved through additional connectivity and reductions in congestion. The benefits of passenger and freight rail investments can enhance the competitiveness of the state and the region by retaining existing work forces and businesses, as well as attracting new ones and further bolstering statewide economic development.

Intercity rail and commuter rail provide environmentally friendly alternatives that connects the state's major economic centers. More and faster passenger trains can increase mobility options for intercity travelers, commuters and people who are transit dependent. An expanded and improved passenger rail network improves access to jobs, goods and services, and expands the labor pool and market areas for business.

[8] Amtrak, "Amtrak ink, A Monthly Publication for and by Amtrak Employees," (Volume 14, Issue 4, April 2009), pg 4.

With respect to increased passenger rail services and smart growth, various economic benefits can be anticipated. Foremost is the shifting of personal trips from motor vehicles to trains, with resulting fuel savings. Second, with intercity and commuter trains stopping in urban centers, opportunities exist to promote transit-oriented mixed used developments. Transit-oriented development can be a catalyst for new economic activity that results in more jobs and higher property values. Commuter rail can increase economic activity around commuter rail stations within a corridor.

Rail enhancement will also help create a more sustainable freight network. Currently, rail shipments account for one-third of the state's total freight movement by tonnage and 15 percent by total value, second only to truck shipments. Shifting this freight from truck to rail would not only help reduce roadway congestion, but would also result in less pollutants and a lower cost due to better efficiencies in fuel per ton-mile.

If efforts are made to develop Wisconsin intermodal load centers, such as inland ports, where intermodal containers might be gathered into blocks and hauled to either Minneapolis or Chicago rail centers, the number of trucks on the state's highways could be reduced. Potential benefits of this diversion would include fuel cost and highway maintenance savings, as well as the minimization of highway accidents and their related costs.

Abandonments and rail lines converted from rails-to-trails or from trails-to-rails can affect economic growth and development as well. WisDOT has worked with its partners to preserve, for future use, rail corridors proposed for abandonment. Wisconsin has preserved about 330 miles of track statewide. With the anticipated growth in freight rail shipping and expansion of intercity passenger rail service, some of these preserved corridors may be restored over the next 20 years.

Both the base case and state rail plan alternative support the department's emphasis on connectivity between modes, freight rail mobility and ensuring that rail remains a viable mode for the state. Both alternatives continue the department's emphasis on preserving rail service, addressing network needs to maintain and improve the state's economic competitiveness (which may include improvements to accommodate heavier car loads and faster trains) and continue support for the department's grant and loan assistance program aimed at promoting rail freight and economic development.

As part of the rail plan alternative, WisDOT will continue economic analysis on transportation projects.

### *Communities and Cultural Resources*

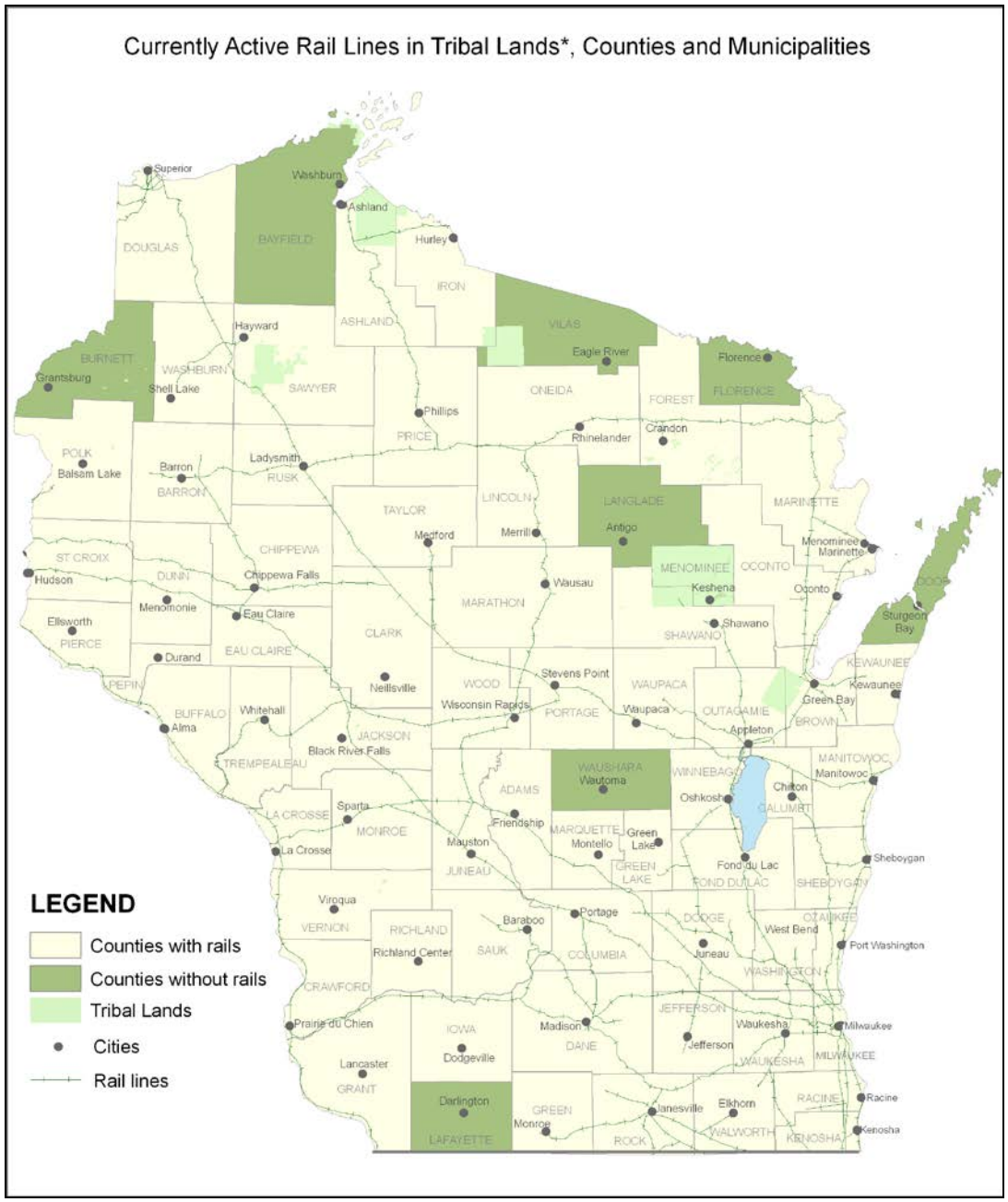
The character of communities and neighborhoods is impacted by rail activities. The following discussion focuses on:

- Land use
- Community barriers
- Connectivity and economic development
- Service needs/governance structures
- Noise and vibration

- Project-level and site impacts
- Safety

Map 11-2 depicts active rail lines statewide in 2009. Tribes, counties, county seats and cities with populations over 5,000 alongside existing rail lines are noted. Eight Wisconsin counties and one-third of the county seats do not have rail service. These are predominately located in northern and southwestern Wisconsin. In general, tribal lands have few connections to rail services.

**Map 11-2: Active Rail Lines Statewide in 2009**



**Land use**

Enhancements to the rail network can encourage land use decisions that support the availability of rail and encourage appropriate development around station locations. This is often mixed-use development, which combines residential, commercial and retail uses into a small area. Mixed-used development often results in higher densities that are more transit-, bicycle- and pedestrian-friendly. This type of development pattern, facilitates travel patterns that can be more energy efficient than auto-oriented development and contribute to a more livable, sustainable community.

As part of the development of the state rail plan, WisDOT conducted an inventory of rail stations statewide. The station inventory highlights needs and challenges at current passenger rail stations and will help guide station improvements and investment in the future. See Appendix 6-D, Wisconsin Intercity Passenger Rail Station Inventory, for more information. In addition, WisDOT will work with communities to facilitate connections and coordination between modes. This includes designing and locating stations to accommodate transit and intercity buses, facilitation of interlining agreements between rail operator and intercity bus operators, coordinating with communities and transit agencies to increase service to stations, providing adequate bike facilities at all stations and providing bike accommodations on trains.

In some parts of the state, restoring service on preserved rail corridors may present challenges for adjacent or nearby communities. Transportation corridors are some of the most valuable assets in the state. Several hundred miles of rail lines or rail rights-of-way at risk for abandonment may have been preserved so that future rail transportation options could be maintained. These corridors may be used by adjacent communities or other entities as recreational trails. Growth and development may have occurred around them, which may be incompatible with future rail service. Conversion back to rail service will impact many communities that must address how to handle land uses that may have changed over the years as rail use declined. For example, the conversion of abandoned rail lines to trails likely resulted in economic and residential development near trails. Some communities have redeveloped their downtowns to highlight the trails. In other areas, residential communities have been built adjacent to these former rail lines. Previous freight rail or passenger rail activity may have been minimal and train speeds may have been slow. As a result, even older residential neighborhoods may have been built near active rail lines with minimal impacts. Increasing the frequency, length or speed of these trains could negatively impact these neighborhoods.

**Community barriers**

Rail facilities that run through a developed area can, in many cases, act as a barrier to communities. This impact can occur if tracks are cannot be easily crossed because of safety concerns. Long, slow-moving freight trains split communities for periods of time, triggering delays in motor vehicle traffic and potentially impacting emergency services. In addition to freight train impacts, intercity passenger rail with speeds of up to 110 mph will require additional crossing safety treatments, such as median barriers or quad gates, to minimize the possibility of motorists driving around gates. While the addition of gates or other safety devices may create a barrier, the expected 17 percent increase in freight rail traffic and an increase in passenger rail activity is a safety concern that must be addressed. Improving the rail line to accommodate increased rail traffic will encourage planning activities that may include addressing

community concerns, offsetting grade crossing closures, installing fencing and other safety improvements and implementing quiet zones that can help link the community together. To assist with assessing impacts and considering mitigation opportunities, WisDOT will participate in local comprehensive planning efforts when requested and offer technical expertise and guidance where appropriate. If the project is a state led, the department will coordinate with the surrounding communities as appropriate.

Consideration of freight rail facilities is also important. This may include determining the frequency of trains entering an area, assessing potential train schedule impacts on vehicle traffic, siting rail yards and terminals to maximize surrounding uses while minimizing potential impacts to community residents, and identifying potential connections between shippers and area businesses with railroad facilities.

**Connectivity and economic development**
Positive effects of increased passenger and commuter rail services include creation of new economic development opportunities, enhanced service and increased mobility. Upgraded freight rail lines may positively impact freight shipments and create other economic opportunities as well.

Rail systems can foster focused growth around activity centers like rail stations, compared to current auto/truck centric greenfield locations. This pedestrian-friendly development pattern reduces fuel use, air pollution and greenhouse gas emissions. It also reduces urban sprawl by satisfying housing and business needs in a more efficient manner. Reducing urban sprawl will reduce the pressure to develop farms and forest lands. Also, compared to adding highway lanes, expanding rail lines in rural areas will require little, if any, additional land. The department's Rail Station Capital Assistance Program may be used to upgrade existing stations and build new ones.

**Service needs/governance structures**
Political boundaries can present obstacles to providing transit services such as commuter rail. In some areas insufficient coordination among transit services that cross county or municipal borders raises challenges. Local governments will need to cooperate to successfully implement commuter rail. Special purpose governments, such as regional transit authorities (RTAs) that can administer and fund transit systems on a region-wide basis, offer a possible governance structure. RTAs are special purpose units of government that can administer and fund transit systems and manage regional transit systems that would serve a greater portion of the traveling public.

**Noise and vibration**
Engines, locomotive mounted horns, ventilation systems, train cars, construction activities, track maintenance and rail yard activities all cause noise. Typically, sound levels caused by trains are measured relative to the existing ambient sound without a train present. When a train is present, significant sound impacts may be heard as far out as 600 feet from the centerline of the rail line. With greater train frequencies and speeds, train noise increases. Dominant noises during intercity passenger rail speeds of 0 to 80 miles per hour include propulsion noise of motors and cooling fans. When speeds increase to 125 miles per hour, noise predominately radiates from the wheels and rails. The effects of

noise on humans may include general disturbance and other secondary economic impacts. Train noise may also deter wildlife and impact habitat.

Design decisions influencing noise levels include whether the rail line is grade-separated from other infrastructure (including roadways), the number of railroad crossings, surface choice for track and locations of sound barriers. Sound barriers that utilize surrounding land masses absorb sound; these include ditches, embankments and trenches. Walls act as independent structures and reflect more sound. While a barrier can mitigate noise for humans, the same barrier may cause habitat fragmentation for plants and wildlife.

Train engineers are required by the Federal Railroad Administration to sound the locomotive horn as a warning at public roadway-railway crossings. However, the FRA also provides an opportunity for communities to mitigate the effects of train horn noise by establishing quiet zones. Wisconsin's local governments have exercised their authority to create quiet zones within their jurisdictions to improve their community's quality of life. Trains running during the day have less perceived noise than trains running at night. Similarly, train maintenance activities occurring during the day, surrounded by other ambient noise, are less "noisy" than those that occur at night. Slower trains cause less friction on the rails, resulting in decreased decibel level.

Before intercity passenger rail is implemented, project level studies will be conducted on proposed sound levels prior to infrastructure improvements. Measures for future noise level reduction will be considered as appropriate. On portions of routes that are envisioned for intercity passenger rail service with higher speeds, noise levels may cross decibel-level thresholds that would require mitigation. These concerns will be addressed during project-level environmental analyses.

Train vibration is caused by rough track and wheel touch points, high engine throttle settings and topography. Unfortunately, vibration may cause impacts to the environment, especially on properties near tracks or rail yards. Vibration can affect a greater number of people in suburban and urban areas, where populations are dense. Corridors with more trains and higher speed trains may have more frequent episodes of earth vibration. In some areas, building damage could occur, if proper measures are not incorporated in project design.

The state rail plan does not specifically address vibration. However, increased efforts to repair wheel flats on freight cars, newer equipment and reconstructed track and roadbed could mitigate vibration impacts. Component development (using new technologies and materials) could also help reduce earth vibration from trains. Project-related reviews for vibration thresholds will occur as rail projects continue.

**Project level impacts and site impacts**

Railroad crossings, contaminated properties and transport of hazardous materials pose safety risks to communities and may also have business or economic impacts. During construction of new or expanded rail yards, replacement of historic bridges and railroad abandonments, archeological site impacts are identified with surveys that rediscover surviving remnants, habitat or archeological items. WisDOT recognizes the importance of archeological sites and historic properties. WisDOT will continue to comply with State Statute 44.40 and Section 106 of the National Historic Preservation Act of 1966.

**Safety**

The expansion of rail service can provide a safer travel option. However, consideration must be given to safety around rail stations. Concentrated development can result in increased potential for collisions as a result of high auto, bike and pedestrian traffic volumes near rail facilities.

Increased freight and passenger rail activity can increase congestion at at-grade crossings and result in several safety concerns. As wait time increase, the likelihood of drivers, pedestrians or bicyclists attempting to "beat the train" increases. Likewise, emergency response services can also be negatively impacted, particularly if services are located on one side of the track and an incident occurs on the other. *Wisconsin Rail Plan 2030* states that WisDOT will continue to work with the Office of Commissioner of Railroads to ensure proper safety upgrades at rail crossings of roadways. WisDOT will improve crossings, and through intercity passenger rail projects, accelerate a program to upgrade intercity passenger rail corridor crossings.

Finally, safety is a factor as it relates to corridors shared by rail and non-motorized modes such as bikes and pedestrians. While the use of the actual rail corridor by a non-rail mode is considered trespassing, the potential conflict between these modes must be addressed during the design phases to ensure that adequate safety devices are in place to reduce the risk of accidents.

The base case and state rail plan alternative continue to emphasize policies related to community impacts. These include continuing integrated approaches to transportation and environmental issues, preserving and enhancing positive land use and transportation relationships, and incorporating environmental justice in all transportation decisions. Furthermore, both alternatives continue recommendations to avoid and minimize impacts to sensitive natural areas and historical and archeological sites; and to mitigate unavoidable impacts and work with key partners to address safety concerns. The base case and state rail plan alternatives also continue the department's emphasis on improving connectivity, encouraging access to intercity passenger rail by expanding implementation of new and improved intercity bus service and routes that connect to rail stations.

The Wisconsin Department of Natural Resources' *Wisconsin Land Legacy Report: An Inventory of Places to meet Wisconsin's Future Conservation and Recreation Needs* describes 229 named legacy/state places. The report outlines a vision for land and environmental resource goals.

The rail plan alternative recommends that WisDOT increase public awareness of the benefits of intercity passenger rail service, including opportunities to connect to rail service using intercity bus service.

## *Sensitive Land and Water Resources*

Wisconsin has 16 distinct ecological landscapes defined by the state's climate, soils, vegetation, topography and aquatic features. Wisconsin's public lands include local parklands, county and state forests, national wildlife refuges and national forests. Wisconsin's natural resources are some of the state's most valuable assets. These range from critical species habitat, undeveloped woodlands and pastures, to wetlands, park lands and the surrounding Great Lakes.

Rail-related projects can impact these resources.
This discussion focuses on:

- Habitat
- Water quality
- Wetlands
- Public lands

WisDOT emphasizes the preservation of protected resources and continues its comprehensive approach to integrating transportation and environmental issues. With that in mind, WisDOT considers the range of potential environmental impacts and identifies feasible, cost-effective solutions that avoid, minimize or mitigate impacts.

**Habitat**

Habitat is defined as the area where plants and animals are located. Transportation projects can impact natural habitats by fragmenting an area and introducing invasive species. As a result, species of plants and animals can be negatively impacted. Conversely, projects can positively impact natural habitats through mitigation activities that might modify facility design to accommodate migratory movements (e.g. underpasses), natural plantings along rights of way and addressing the spread of invasive species through modified mowing schedules and washing of equipment prior to moving to a new location.

Rail rights-of-way provide potentially rich natural habitats for both plant and animal species. As corridors dedicated to a single mode of transportation, with little other activity, rail lines can provide a habitat of nesting and feeding areas for many types of wildlife and birds, as well as possibilities for habitat continuity along the corridor. Similar to highways, the movements of the trains do, however, raise environmental concerns, including impacts resulting from invasive species, wildlife collisions and habitat fragmentation.

The *Finding of No Significant Impact* (2004) for the Milwaukee to Madison intercity passenger rail corridor called for fences to protect the secure transport of hazardous material cars and for human safety in urban areas. Fences can fragment prairies and habitat and threaten the viability of species.

Invasive species are plants or animals not native to an environment; they have the potential to cause severe environmental devastation by overwhelming native species. Invasive species can also diminish the economy by affecting recreational opportunities and public health, as well as incurring mitigation costs. Controlling invasive species is often difficult as they are easily spread by human activities such as transportation maintenance, operation and construction activities. WisDOT continues to work with the Wisconsin DNR to address concerns regarding invasive species.

Endangered or threatened species located near transportation infrastructure, such as railroads, can be impacted by the construction, operation and maintenance of the facility.

The movement of trains can contribute to the spread of invasive plants and seeds. Right-of-way owners strive to keep

areas around rail infrastructure free of all vegetation to provide surface drainage, accommodate utilities, prevent erosion, reduce the risk of fires, control weeds, provide visibility and prevent buildup of windblown debris and snow. While clearing the invasive plant life around and along the rights-of-way offers benefits, the potential remains for plant life to transfer from moving trains to other parts of the corridor.

Some of the negative impacts associated with invasive species are addressed in the *Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way.*[9] The activities apply to utility and transportation corridor construction as well as maintenance activities. The report includes best management practices for soil disturbance, vegetation management and inspection/monitoring transport of materials, re-vegetation and landscaping. Best management practice examples include scouting for, locating and documenting invasive species infestations prior to implementing activities, and selecting noninvasive or native species for re-vegetation and landscaping activities. Limited construction in native prairies can also mitigate negative impacts to prairies. Further, rail line abandonments can help mitigate habitat losses because these lands often remain without active management, in long-term rest.

The base case and the state rail plan alternative continue WisDOT's commitment to addressing invasive species along transportation corridors.

Changes to rail corridors can fragment critical habitats or result in habitat loss. If new habitat is created during construction, each new piece of habitat (fragmented from a larger whole) may not be capable of supporting the same wildlife or plant species as an older, undisturbed piece. Smaller, fragmented habitats are less likely to be as sustainable as a larger regional habitat. Given that the majority of the corridors considered as part of the rail plan are existing facilities, concerns regarding habitat fragmentation are minimal.

The Wisconsin Department of Natural Resources *Wild Life Action Plan* defines the state's focus on native wildlife species most at risk of becoming endangered or threatened or already listed by either the state or federal government. Currently, over 230 species in Wisconsin are listed as threatened or endangered. The state's strategy emphasizes the importance of protecting habitats as a means of protecting a whole suite of species rather than focusing on conservation efforts targeting individual species.

While neither the base case nor the state rail plan alternative specifically identifies new rail line construction, new intercity passenger or freight service may occur along rail lines preserved for future use. Because the natural environment may have reclaimed an abandoned rail line, new construction or resuming rail activity along these corridors may result in some negative impacts.

A wildlife collision with all types of transportation modes is a risk. Overall, wildlife hazards associated with the base case and state rail plan alternative are essentially the same. As train frequencies increase, the potential for collisions will also likely increase. However, rail passenger corridors may include fencing

[9] Wisconsin Council on Forestry, Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way, (Version: January 6, 2010), pg 4.

and other structures to minimize trespassing concerns. This may help to minimize the number of collisions along certain sections.

Both the base case and the rail plan alternative continue the department's efforts to collaborate with the DNR to educate others on environmental issues. The department will continue to emphasize safeguarding protected resources by identifying sensitive resources early in the planning process and avoiding or minimizing impacts. Both the base case and the state rail plan alternative emphasize that WisDOT should develop guidance and procedures to discourage transportation development activities from intensifying the spread of invasive plants. On state-owned lines, when projects occur, WisDOT will improve crossings over waterways to address any previous natural resource impacts.

**Water quality**

Wisconsin has more than 12,600 rivers and streams and over 15,000 lakes, most of which are located in the northern half of the state. Wisconsin's highest quality waters, or outstanding resource waters, consist of about 200 streams and 100 lakes. There are about 1,500 streams classified as exceptional resource waters in Wisconsin.[10] Surface waters provide recreational opportunities, support fisheries and have unique physical features and environmental settings. Communities use water resources for drinking, irrigation, recreation and industrial processes.

Rail facility construction may affect water resources by filling or diverting ponds or wetlands (changing drainage patterns), reducing groundwater absorption through compression of surface soils, affecting the navigability of waterways and affecting access to recreational resources. Track construction activities can impact multiple acres of wetlands for each one mile of track construction. During construction, storm water runoff must be carefully managed. Additionally, development patterns accompanying transportation system changes may result in indirect impacts to water supplies or the demand for water. State Statute 88.87(2) (a) requires the department to ensure that when building and maintaining any railroad grade in or across a waterway (which may range from marshes, to drainage courses), it shall not impede the general flow of the surface water or stream. In addition, WisDOT will continue to encourage and use wetland bank sites to help mitigate the unavoidable loss of wetlands with efforts focused on on-site mitigation and wetland banking during projects. WisDOT's continued adherence to 'no net loss' wetland strategies supports the policies of the United States Army Corps of Engineers and the Wisconsin Department of Natural Resources.

During railroad operations, hazardous materials from small leaks in switching yards or large spills during a derailment can harm water resources. The transport of hazardous materials by rail is considered much safer than by truck. According to the Association of American Railroads, the risk of an accidental hazardous waste material release is 16 times greater for hazardous material shipped over roadways compared to those shipped by rail.[11]

[10] Wisconsin Department of Natural Resources, *Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need*, http://dnr.wi.gov/org/land/er/wwap/plan/pdfs/02_4_0_Vert_Habitat.pdf, accessed April 2008.
[11] Association of American Railroads, HAZMAT FAQ, http://www.aar.org.

Much of the state's rail network is comprised of wooden railroad ties. Creosote is applied to the wooden ties in a pressurized chamber that allows the creosote to penetrate into the wood fiber. As a result, there is very little creosote migration from a treated tie into the ground except perhaps at the treating facility. Generally speaking, concrete ties are used on lines that carry heavier loads or have severe curves. The advantages of using reinforced concrete over wood include longer service life, greater strength (thus requiring fewer ties per mile of track) and lower maintenance costs. Concrete ties also form a more stable track bed that results in a smoother ride. This leads to longer track and equipment life, lower fuel consumption and lower maintenance costs for both locomotives and rolling stock. Early analysis suggests that the longer life and corresponding benefits of the concrete ties will help reduce greenhouse gas emissions.

In response to waterway impacts, specific regulations have been created to address and mitigate water resource impacts at the project level, through an environmental analysis or an environmental impact statement. To prevent contamination in state waters, Amtrak is improving wastewater treatment.[12]

Both the base case and state rail plan alternative continue the department's efforts to identify sensitive resources early in the planning process. The goal of these efforts is to continue to minimize impacts to sensitive resources, identify costs, and identify effective and feasible solutions that will avoid, minimize and mitigate potential negative impacts resulting from transportation decisions.

Under the base case and state rail plan alternative, proposed expansion of intercity passenger rail service may result in upgraded or new track construction. Expansion of intercity passenger rail service to other areas of Wisconsin may result in upgraded or new track construction. Working with Class I railroads to maintain, improve and increase freight rail service may also result in the need to upgrade and construct additional track. Each of these activities could impact water quality through an increased amount of impervious surface and increased density of harmful chemicals in runoff.

The state rail plan alternative will encourage the use of best practices to control invasive species by implementing department policies, as well as using the guidance in *Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way.* WisDOT will encourage and use wetland bank sites to help mitigate the loss of wetlands. On-site mitigation efforts will continue during projects. WisDOT will continue to collaborate with the DNR to educate others about environmental issues.

**Wetlands**

Wetlands are ecological systems that are typically partially or completely covered by water for part of the year. They are among the most productive natural ecosystems in the world. Wetlands support aquatic plants and provide habitat for more species of plants and animals than any other type of landscape in Wisconsin. Additionally, wetlands improve water quality, decrease flooding and protect shorelines. Wisconsin has 5.3 million acres of wetlands, most of which are located in the northern portion of the state. The DNR estimates that Wisconsin has lost about half of the estimated 10 million acres of wetlands that were present in the 1800s.

[12] Amtrak, "Amtrak ink, A Monthly Publication for and by Amtrak Employees," (Volume 14, Issue 4, April 2009), pg 4.

WisDOT mitigates unavoidable wetland losses using the Wetland Mitigation Banking Technical Guideline established and implemented in cooperation with state and federal agencies. Through 2030, WisDOT will continue its commitment to protect and preserve wetlands. However, efforts to locate and fund future wetland bank sites will likely experience greater challenges due to higher real estate costs.

Potential wetland impacts related to intercity passenger rail service, commuter and freight rail might occur. Both the base case and the rail plan alternative recommend expansion of intercity passenger rail service to other areas of the state. This may result in new track construction or upgrading of existing track. Additional Class I rail infrastructure may need to be constructed to maintain, improve and increase existing freight service.

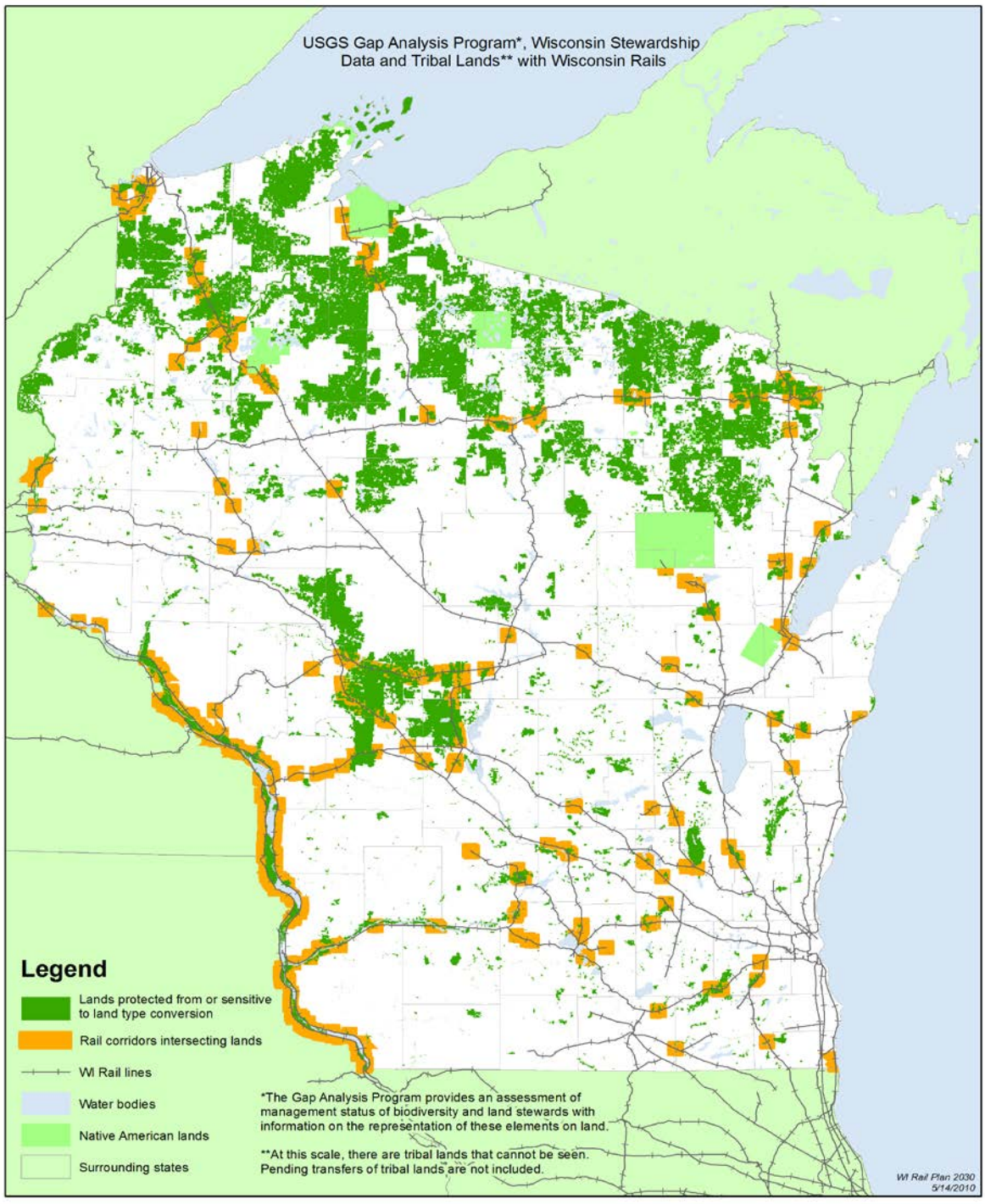
**Public lands**

Wisconsin has about 2.5 million acres of county forest, two million acres of national forest and 0.5 million acres of United States Fish and Wildlife lands. The DNR manages 1.5 million acres of land across the state, including state forests, state parks, wildlife areas, trails, natural areas and forest nursery facilities. Map 11-3, Wisconsin Rail with Stewardship Data, shows where rail lines intersect lands protected from or sensitive to land conversion (one type of analysis to show how rails and lands intersect on a larger scale). Specifically, it shows that the Mississippi River corridor has more DNR program lands near rail corridors and that sensitive lands are prominent in Douglas, Washburn, Sawyer, Jackson, Wood, Juneau, Monroe and Marinette counties.

Changes to rail right-of-way and increasing the capacity of track can impact surrounding lands and related uses. Potential changes to lands occur when constructing infrastructure such as additional track, sidings, rail yards, stations, fences, bridges (including land bridges over wetlands), pedestrian crossings and other facilities. Possible impacts would likely be mitigated during the project level design activity. Impacts to public lands are the same for the base case and the state rail plan alternative.

As noted in Map 11-1, Wisconsin Rail Corridor Transportation Uses, rails-to-trails corridors can be converted from recreational trails back to rail uses in the future. If this were to occur, WisDOT would follow all applicable laws and environmental processes for conversion. For example, the Hank Aaron Trail has been identified in the Southeast Wisconsin Regional Plan Commission's long-range transportation plan as a potential future commuter rail corridor.

**Map 11-3: Wisconsin Rail with Stewardship Data**




Because commuter rail is a local initiative, WisDOT would participate if requested. WisDOT will also examine whether shared uses are appropriate.

## *Agriculture*

In 2005, Wisconsin's working lands covered 21.4 million acres (or 61 percent) of the state's total 34.8 million acres. Of these working lands, 12.1 million acres were agricultural land and 9.3 million acres were forest. From 2000 to 2005, the state lost 600,000 acres of working lands to non-agricultural development and the growth of undeveloped land. Non-agricultural development lands, commonly known as "development," occur when agricultural lands are converted to residential, commercial, manufacturing, or other uses. Of these 600,000 acres, 255,000 acres were developed. Undeveloped lands are lands that were previously productive, but are now unfarmed or left fallow. Of the 600,000 acres of agricultural lands lost between 2000 and 2005, 345,000 acres were allowed to go fallow. Rail projects may affect individual farms and the resources of farmland area.

Implementation of intercity passenger rail may impact agricultural land. Both the base case and state rail plan alternative recommend implementation of the Wisconsin component of the Midwest Regional Rail System. Once this system is complete, the state will consider expansion to other parts of the state if appropriate (see Chapter 6, Intercity Passenger Rail, for more information). The service will result in increases in the number of trains passing through the state and will likely impact agricultural operations. Under both the base case and state rail plan alternative, improvements are recommended at roadway-railway crossings to address passenger rail service and other safety concerns. Improvements may include changing the physical structure of the crossing, adding gates or signals, improving the track or closing crossings. As a result, farm operations may become less efficient since the movement of farm equipment between fields may require alternative routes and that require more travel time.

Passenger rail service offers several benefits as well. Rail systems can foster more focused growth around activity centers like rail stations as compared to auto/truck centric greenfield locations. This pedestrian-friendly development pattern reduces fuel use, air pollution and greenhouse gas emissions. It also reduces urban sprawl by satisfying housing and business needs in a more efficient manner.

In terms of agriculture, the opportunity to promote development around urban centers and potentially attract residents to adjacent areas may reduce urban sprawl. This could subsequently reduce the pressure to develop farms and forest lands. Also, compared to adding highway lanes, expanding rail lines in rural areas will require little, if any, additional land.

Under the base case and the state rail plan alternative, WisDOT will continue to consider the importance of agriculture lands when making project level decisions and will continue to focus efforts on minimizing, to the extent possible, the negative impacts on agriculture. WisDOT will continue to work with the Wisconsin Department of Agriculture, Trade and Consumer Protection to assess impacts of rail projects on agricultural lands. WisDOT will also coordinate with the Natural Resource Conservation Service. In addition, WisDOT will continue to preserve and enhance a positive land use and transportation relationship and address the direct land use effects of transportation.

Through *Wisconsin Rail Plan 2030*, WisDOT will develop passenger rail corridors within the existing right-of-way, where feasible, to minimize the impacts to the surrounding landscape. WisDOT will continue to work with others to identify feasible, cost-effective solutions that avoid, minimize or mitigate impacts.

## *Indirect Effects*

Transportation projects can have a wide range of direct and indirect effects on the environment. Direct effects result from a specific project. For example, increased speeds for passenger rail may require the closing of railroad crossings in response to train frequency changes and corresponding safety concerns. Indirect effects associated with transportation projects may be caused by the decisions of others, such as local governments or developers. These effects may:

- Be viewed as either positive or negative or both, depending on the specific effect
- Occur in the future, or outside the project right-of-way, but can be reasonably foreseeable
- Include changes in land use, population density, growth rate, economic development and the rate of development

Factors such as improved access, improved travel time and change in property values influence the growth and development of communities. Improved access to the transportation system has the potential to induce development and additional travel; however, improved access by itself is not likely to spur development. Instead, other factors need to be present, such as the availability of sewer and water services, market demand and support for local land use decisions.

Under the base case and state rail plan alternatives, the actions with the greatest potential for indirect effects include intercity passenger rail and commuter rail service.

Both include additional actions that may have indirect effects. These actions include:

- Seeking on-going funding for the capital and operating assistance program to implement fixed-guideway transit in major metropolitan areas
- Improving intercity bus service and connections
- Funding track and bridge upgrades on publicly owned rail corridors
- Working with Class I and other railroads to ensure that local service is maintained, improved and increased

Each of these recommendations may result in induced or diverted travel. Induced travel is any increase in daily travel that occurs due to a change in transportation service (e.g., increased passenger rail service) and refers to trips that were not taken before the change. Diverted travel occurs when existing users move from one service to another after a change. For example, intercity passenger rail service may divert trips taken on the highway or intercity bus. The amount of induced or diverted travel is location-specific and depends on numerous factors such as cost, travel time and ease of use. Depending on perspective, induced or diverted travel can be a positive or negative indirect effect.

Community or neighborhood redevelopment and in-fill development, both promoted under the state's comprehensive planning law, are potential positive indirect effects of the base case and state rail plan alternative. For example, the resumption of intercity passenger rail service may result in redevelopment activities near rail stations. Similarly, development may increase or occur around a new rail spur or rail yard as area shippers and businesses seek efficient access to freight rail operations.

The indirect effects associated with implementing the base case or rail plan alternative are often beyond WisDOT's control. While WisDOT will work with local governments and private entities to assess potential impacts on the transportation system, the local government or private entity makes the final decision regarding the amount and type of development that occurs within their municipal boundaries.

### *Cumulative Effects*

Cumulative effects are the total effects of past, present and future activities or actions on an environmental resource. Transportation project impacts are just one of many categories of impacts. Other factors include additional transportation and infrastructure developments, as well as all public and private development projects. For this reason, cumulative impacts differ based on individual communities and environmental resources.

Cumulative effects are the result of the combined actions of various agencies and private entities. WisDOT is responsible for mitigating the effects of WisDOT projects. It is not responsible for, nor required to mitigate, the impacts of non-WisDOT actions. However, WisDOT will provide information on potential cumulative effects and will work with local governments and other interested stakeholders to suggest potential mitigation strategies for those effects.

Based on the potential direct and indirect effects described previously, the following resources have the greatest potential for negative cumulative impacts:

- Water quality
- Wetlands
- Endangered and threatened species
- Agriculture
- Water quality
- Air quality

Table 11-1 shows some of the possible direct, indirect and cumulative impacts related to land use changes that may result from implementation of *Wisconsin Rail Plan 2030*.

**Table 11-1: Potential rail-related land use impacts**

| | Urban Areas | Suburban Areas | Rural Areas |
|---|---|---|---|
| **Passenger Service Increase (increased service on current routes)** | • Increased travel-oriented service businesses<br>• Redevelopment of under-utilized sites including brownfield sites<br>• Increased business attraction<br>• Increased intermodal/mass transit facilities at station sites<br>• Potential for reduced home values at locations near tracks, especially if whistle bans are not permitted<br>• Increased noise and vibration<br>• Traffic congestion at rail crossings and signals | • Increased business attraction as in urban areas<br>• Redevelopment<br>• Increased apartments/housing near station locations<br>• Demand for additional parking spaces in immediate station area<br>• Increased noise and vibration | • Increased environmental sensitivity, especially at locations of major bridge and roadbed reconstruction<br>• Reduced access between farm fields separated by rail right-of-way<br>• Increased noise and vibration |
| **Passenger Service Addition (Service to new destinations)** | • Increased business attraction, as in urban areas<br>• Redevelopment<br>• Increased intermodal/mass transit facilities at station sites<br>• Potential for greater degree of impacts than at locations currently with passenger service<br>• Increased noise and vibration | • Increased business attraction as in urban areas<br>• Increased apartments/housing near station locations<br>• Demand for additional parking spaces in immediate station area<br>• Increased noise and vibration | • Increased noise and vibration |
| **Freight Service Increase** | • Increased noise and vibration<br>• Expanded, new rail yards, intermodal facilities and trackside warehousing<br>• Displaced businesses or residents<br>• Increased truck traffic at intermodal facilities, affecting air quality<br>• Increased attraction of "heavy industry," where permitted by local zoning, affecting air quality<br>• Redevelopment<br>• Reduced home values at locations near tracks, especially if whistle bans are not permitted | • Similar impacts as in urban areas<br>• Increased noise and vibration | • Increased business and expansion of business<br>• Increased noise and vibration |
| **Freight Service Reduction/ Elimination** | • Closed, relocated businesses<br>• Abandonment<br>• Redevelopment<br>• Increased chance of mode shifts to truck<br>• Air quality improvement<br>• Less noise and vibration impacts | • Similar impacts as in urban areas | • Similar impacts as in urban areas |
| **Roadway-Railway Crossing Improvements** | • Increased quiet zones<br>• Safer crossings<br>• Enhanced value of adjacent commercial or industrial properties if traffic flows are improved | • Similar impacts as in urban areas | • Enhanced value of adjacent land if traffic flows and safety are improved |
| **New Grade Separated Crossings** | • Displaced adjacent houses or businesses<br>• Separated communities<br>• For rail-over-road crossings, would create "walls" of earth, eliminating views to other side of tracks<br>• Altered hydrology in area | • Displaced adjacent houses or businesses<br>• Altered hydrology in area | • Altered hydrology in area |
| **Roadway-Railway Crossing Maintenance** | • Decreased degree of quiet<br>• Reduced housing values for properties in close proximity to crossings | • Similar impacts to urban areas | • Similar impacts to urban areas |
| **Roadway-Railway Crossing Closings** | • Isolated neighborhoods or businesses<br>• Diverted traffic to remaining crossings, potentially contributing to congestion and air quality<br>• Reduced access would reduce value of most commercial/industrial property while lack of signal noise may enhance residential property value | • Similar impacts to urban areas | • Reduced access to bisected farm fields<br>• Reduced farm property value<br>• Increased emergency response times to properties |

## Summary of Consultation Efforts and Plan Comparison

### *Legislative Requirements*

In the absence of state rail plan development guidelines from the Federal Railroad Administration, WisDOT followed public participation requirements identified in the Passenger Rail Investment and Improvement Act of 2008 and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

SAFETEA-LU requires that states develop their long-range statewide transportation plans in consultation with state, tribal and local agencies that are responsible for land use management, natural resources, environmental protection, conservation and historic preservation. The consultation process includes a comparison of the state rail plan alternative to any available state and tribal conservation plans or maps and to inventories of natural and historic resources.

### *Process*

WisDOT conducted environmental consultation activities with state, tribal and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation, voluntarily following SAFETEA-LU for rail planning activities.

Two environmental consultation meetings were held. The Wisconsin Department of Transportation (WisDOT) and the Wisconsin Department of Natural Resources (WisDNR) met on March 1, 2010. The second and primary all-agency meeting with state and federal environmental agencies and tribes was held on June 3, 2010. Those invited to participate are shown below; those followed by an asterisk participated in the meetings.

- *Federal Emergency Management Agency*
- *Federal Railroad Administration*
- *Federal Highway Administration*
- *Federal Transit Administration*
- *National Park Service*
- *Public Service Commission of Wisconsin**
- *US Army Corps of Engineers**
- *US Coast Guard-Eighth Coast Guard District*
- *US Dept. of Agriculture*
- *US Environmental Protection Agency**
- *US Fish and Wildlife Service*
- *USDA Forest Service*
- *WI Dept. of Administration*
- *WI Dept. of Agriculture, Trade and Consumer Protection**
- *WI Dept. of Health Services**
- *WI Dept. of Natural Resources**
- *WI State Historical Society*

The feedback received will further shape and refine the content and focus of the long-range plan.

## *Plan Comparison*

The following are lists of key environmental agencies' plans and policies that relate to the state rail plan:

**Wisconsin Dept. of Natural Resources (WisDNR)**
Sets emission levels for engine pollutants; regulates and enforces rules and permits; educates, researches, conducts environmental analysis; sets policy; has a role in NEPA/WEPA; has a cooperative agreement with WisDOT; has trails group; has shared HAZMAT (Title 3 – spills) role with Wisconsin Emergency Management; and sets policy on brownfield redevelopment.

- *Land Legacy Report*
- *Wisconsin Wildlife Action Plan*
- *Fish, Wildlife and Habitat Management Plan*
- *State Comprehensive Outdoor Recreation Plan*
- *Wisconsin State Trails Strategic Plan*
- *Statewide Forestry Plan*
- *State Facility Master Plans*
- *Endangered Resource Management Plan*
- *Outstanding and Exceptional Water Resources*
- *Wisconsin State Implementation Plan*
- *Contaminated Lands Environmental Action Network (CLEAN)*
- *Solid and Hazardous Waste Information Management System (SHWIMS)*
- *Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need (WisDNR)*
- *Wisconsin's Biodiversity as a Management Issue (WisDNR)*
    - Air quality
    - Economic growth and development
    - Communities
    - Environmental effects
    - Land use

**U.S. Environmental Protection Agency (EPA)**
Develops emission and air quality standards; enforces and regulates air quality and idling rules; develops "clean" switcher locomotive standards, sets policy for engine and fuel 'controls', hazardous waste and materials (spill response techniques); and researches noise, environmental justice and speed break issues.

- *2006-2011 Strategic Plan*
- *American Clean Energy Act*
    - Air quality (including particulate matter)
    - Energy
    - Environmental effects (including wetlands and waters)
    - Land use

**Natural Resources Conservation Service (NRCS)**
Educates; oversees land use policies and programs; helps develop engineering standards relating to lands and waters; engages in farmland preservation strategies; and works with railroads when ownership changes impact programs.

- *Productive Lands, Healthy Environment, Strategic Plan 2005-2010*
- *Wetland Reserve Program, Farm and Ranchland Protection Program - Maps*
- *Prime and Unique Farmland Soils - Maps*
  - Air quality
  - Economic growth and development
  - Environmental effects
  - Land use

**U.S. Fish and Wildlife Service (USFWS)**
- *National Wildlife Refuges*
- *Wetland Management Districts*
- *Fish and Wildlife Service Properties – Maps*
  - Air quality
  - Economic growth and development
  - Environmental effects

**National Park Service/National Register of Historic Places**
Guides processes, funds renovations and ensures program consistency.

- *The Future of America's National Parks*
- *National Register of Historic Places*
  - Economic growth and development
  - Communities
  - Environmental effects

**Wisconsin Historical Society**
Maintains, educates and develops policy on significant places (including State Historical Society sites).

- *Wisconsin Historic Preservation Plan, 2006-2015*
- *National Register of Historic Places*
  - Communities
  - Environmental effects
  - Land Use

**U.S. Army Corp of Engineers**
Oversees regulatory programs including Section 10 of the Rails and Harbors Act; oversees waterway concerns (including the discharge of fill into U.S. waters), maintains "404" permits; clarifies mitigation watershed approach; and cooperates and partners on project-level NEPA phases.

- Communities
- Environmental effects (including aquatic resources)

**Wisconsin Dept. of Administration (WisDOA)**
Authorizes municipal boundaries; oversees comprehensive plans; implements coastal management policies; clarifies laws concerning planning-related issues; interacts with the WisDNR and Army Corps of Engineers on permits; and oversees rails-to-trails and abandonment issues.

- *Wisconsin Community Comprehensive Plans*
- *Wisconsin Coastal Management Program: A Strategic Vision for the Great Lakes*
  - Communities
  - Land use
  - Environmental effects (coastal management and great lakes)

**Wisconsin Council on Forestry (in partnership with Wisconsin's environmental agencies)**
- *Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way*
  - Environmental effects

**U.S. Forest Service**
Enforces laws and policies and regulates national forest land use within national forest lands.

- *USDA Forest Service Strategic Plan FY 2007-2012*
- *Forest Service Lands - Maps*
  - Land use
  - Environmental effects

**Wisconsin Department of Agriculture, Trade and Consumer Protection (WisDATCP)**
Sets farmland rules and pesticide policies (including licensing pesticide applicators and enforcing pesticide safety training for railroad employees) and works with county drainage boards overseeing wet soils and flooding.

- *Working Lands Initiative*
- *Drainage District Program*
- *Agriculture Chemical Clean-Up Program (Act 286 – Pesticide Use by Railroads)*
  - Land use
  - Environmental effects (including water runoff from farm fields and drainage in railroad right of way)

**Office of Commissioner of Railroads (OCR)**
Sets policies and laws on safety and adequacy of warning devices at crossings.

- Communities
- Land use

**Federal Emergency Management Agency (FEMA) [and Wisconsin Emergency Management]**
Organizes approach to HAZMAT, spills.

- Communities

**U.S. Department of Transportation (U.S. DOT)**
Federal Railroad Administration provides funding, technical assistance and regulations; oversees and enforces railroad safety and operations programs; and establishes train set vehicle codes. Within U.S. DOT, Federal Highway Administration provides funding, regulation of highway safety and operations programs, technical assistance and oversight. Also within U.S. DOT, Federal Transit Administration coordinates with transit issues, funding.

- *Department of Transportation Strategic Plan: New Ideas for a Nation on the Move, Fiscal Years 2006-2011*
- *Preliminary National Rail Plan*
  - Communities
  - Land use
  - Environmental effects
  - Energy
  - Air quality

**U.S. Department of Homeland Security/U.S. Coast Guard (8th and 9th Coast Guard Districts)**
This agency oversees the application of federal bridge statutes and regulations through permit requirements or drawbridge operations, clarifying jurisdictional issues with railroads.

- *Bridges that Cross Navigable Waters*
  - Land use
  - Environmental effects

**Metropolitan Planning Organizations (MPOs)**
MPOs create and implement plans, develop policies, determine transportation impacts and priorities, and review federal, state and local plans that have the potential to impact regional transportation.

**Native American Tribes**
Native American Tribes create and implement plans, develops policies, determines transportation impacts and priorities and review federal, state and local plans that have the potential to impact tribal interests.

**Public Service Commission of Wisconsin (PSC)**
Regulates the transport of coal; co-locates transmission lines including interacting with railroads (rails-to-trails); and reviews construction plans.

- *Strategic Energy Assessment: Energy 2014, Ensuring the Availability, Reliability and Sustainability of Wisconsin's Electric Energy Supply, Final Report*
  - Energy
  - Land use (including utility and transmission line location)

**Wisconsin Department of Commerce**

- Communities (through their major economic centers)
- Land use (through discussions of economic sustainability)

**Wisconsin Department of Revenue (WisDOR)**

Regulatory, collects taxes from railroads.

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

HUD's Office of Sustainable Housing and Communities helps to create strong, sustainable communities by connecting housing to jobs, fostering local innovation and helping to build a clean energy economy.

- Communities
- Land use

**Wisconsin Department of Health Services (WisDHS)**

WisDHS sets state health policies, focuses on health impacts, works with local health departments to ensure that whistle bans may be placed, and works on all-hazards mitigation plans with communities, Wisconsin Emergency Management and the Department of Military Affairs.

- *2010 Plan*
  - Communities (including environmental justice issues)
  - Land use (including brownfield revitalization and rails-to-trails)
  - Air quality

**Department of Military Affairs**

Creates and implements hazard mitigation plans (including 100-year flood planning) with communities and Department of Health Services.

# Chapter 12: Environmental Justice Analysis

## Table of Contents

# Chapter 12: Environmental Justice Analysis

## Introduction

As stated in *Connections 2030*, Wisconsin Department of Transportation's (WisDOT's) policy regarding environmental justice is "to incorporate environmental justice in all planning, programming and project decisions." This chapter presents the environmental justice analysis completed for *Wisconsin Rail Plan 2030*. Specifically, this chapter:

- Provides a general overview of the locations of Wisconsin's minority, low-income, age 65 years and older and zero-vehicle household populations
- Evaluates the relationship between the plan's recommendations and the state's minority, low-income, age 65 years and older, and zero-vehicle household populations
- Supplements Chapter 11: System-Plan Environmental Evaluation
- Identifies areas for potential consideration by the department during planning and project-level activities

The state rail plan provides a 20 year framework for decisions and investments statewide. This chapter presents a system-level analysis of the potential impacts on minority populations, low-income populations, persons age 65 and older and households with no vehicles if the plan's recommendations are implemented over the next 20 years. At the state level, the analysis is general and offers a starting point for more specific project level analyses. Efforts to identify potential impacts on communities and neighborhoods depend on location-specific design decisions that are evaluated and addressed during the project planning and delivery phases.

The analysis presented in this chapter:

- Builds on the policies and recommendations identified in *Connections 2030* by focusing on potential rail-related impacts
- Focuses on recommendations described in the plan and potential disproportionate impacts to minority, low-income, age 65 years and older and zero-vehicle household populations at the regional and state levels
- Is a state-level, systems analysis and is not intended to replace project-level analyses
- Lays a framework for future planning, programming and project development decisions

## Environmental Justice Overview

Presidential Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and

activities on minority and low-income populations." The order reinforced Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color or national origin and provides protection to low-income groups.

Executive Order 12898 defined four minority groups for the purposes of environmental justice:

- Black – a person having origins in any of the black racial groups in Africa
- American Indian or Alaskan Native – a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition
- Asian American – a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands
- Hispanic – a person having origins in of Mexico, Puerto Rico, Cuba, Central America, South America, or other Spanish culture, regardless of race

The order also defines low-income populations as persons whose household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Other federal orders and guidelines issued by the U.S. DOT summarize and clarify the executive order and describe processes for incorporating environmental justice principles into the U.S. DOT programs, policies and activities. In addition, the U.S. DOT has identified three fundamental principles that guide environmental justice:

- Avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

While not specifically addressed by either the Executive Order or Title VI, other federal laws and regulations protect persons age 65 and older. For example, the Age Discrimination Act of 1975 prohibits age discrimination in programs or activities receiving federal financial assistance. Because of this, WisDOT analyzed the location of people age 65 and older.

Likewise, zero-vehicle households are not specifically addressed by any orders, laws or regulations. However, one of the themes presented in *Connections 2030* focused on providing mobility and transportation choice. Zero-vehicle households benefit from increased transportation options. For the reason given above, WisDOT included these groups in the analysis.

## Summary of Wisconsin's Minority, Low-income, Age 65 and Older and Zero-vehicle Household Populations

According to the U.S. Census Bureau, Wisconsin's population was 5.36 million persons in the year 2000. Table 12-1 depicts Wisconsin's year 2000 population based on race, ethnicity, age, income and zero-vehicle households. As noted in the table:

- 89 percent of the population is white
- 13 percent of the population is age 65 and older
- Six percent of the population is black; Wisconsin's black population is the state's largest minority group
- Eight percent of the population is in poverty
- Eight percent of households have zero-vehicles

Populations and densities targeted by environmental justice efforts are not evenly distributed across the state. To increase the accuracy of the data, WisDOT used a geospatial analysis to identify environmental justice populations within WisDOT's five transportation regions (Map 12-1). Geospatial analysis included establishing threshold levels, inputting data and analyzing outcomes.

**Map 12-1:**
**WisDOT transportation region offices**

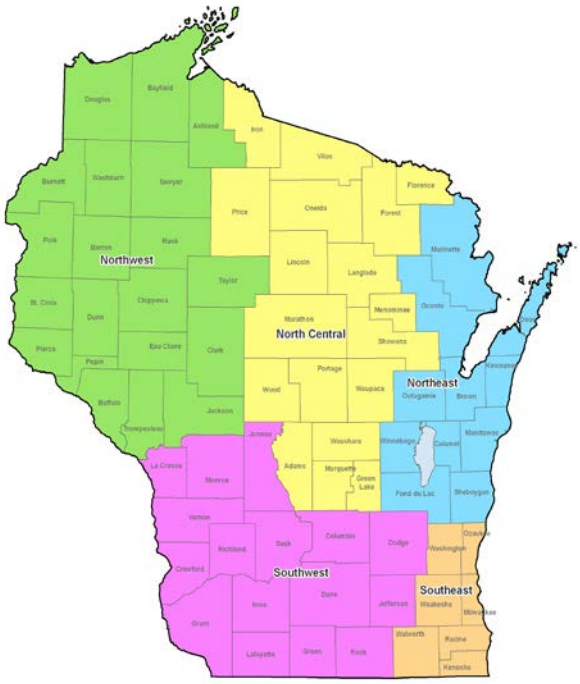



**Table 12-1: Wisconsin demographics, 2000**

| Population group | Number of persons | Percent of total state population |
|---|---|---|
| State of Wisconsin | 5,363,675 | 100% |
| White | 4,769,857 | 89% |
| Black | 304,360 | 6% |
| American Indian | 47,228 | 1% |
| Asian (including Hawaiians and Pacific Islanders) | 90,393 | 2% |
| Hispanic | 192,921 | 4% |
| Age 65 and older | 702,553 | 13% |
| Persons in poverty | 451,538 | 8% |
| **Population group** | **Number of households** | **Percent of total state households** |
| Zero-vehicle households* | 163,969 | 8% |

*Wisconsin had 2,084,544 households in 2000.
**Source: 2000 U.S. Census**

## *Threshold level establishment*

Using the year 2000 U.S. Census Bureau data, thresholds for each environmental justice demographic group were calculated by dividing the specified population within a WisDOT transportation region by the total population in that same WisDOT region. The threshold is what is typical for the region.

Thresholds shown in the "Percent of Region Population" column in Table 12-2 show that population demographics by WisDOT transportation region and various populations are not distributed equally across the state. For example:

- The Southeast Region has the:
    - Largest concentration of the state's population
    - Largest percentage of minority populations for all groups except American Indian
    - The North Central Region has the largest American Indian population.)
    - Greatest concentration of blacks, Hispanics, persons in poverty and zero-vehicle household populations
- American Indian, Asian and age 65 and older populations are more equally distributed across the state

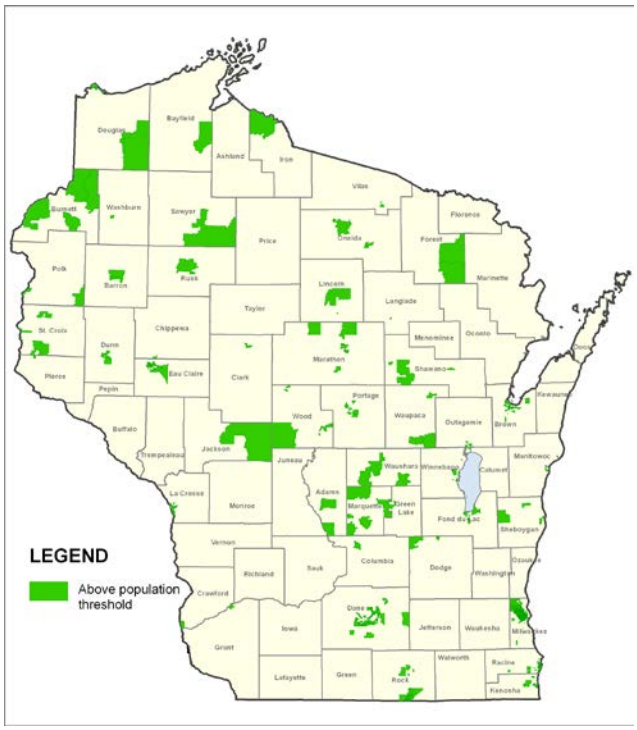
**Table 12-2: Wisconsin demographics by WisDOT Region, 2000**

| | North Central Region | | Northeast Region | | Northwest Region | | Southeast Region | | Southwest Region | |
|---|---|---|---|---|---|---|---|---|---|---|
| U.S. Census Year 2000 Population | Total region population | Percent of region population | Total region population | Percent of region population | Total region population | Percent of region population | Total region population | Percent of region population | Total region population | Percent of region population |
| Total | 588,247 | 100% | 1,005,138 | 100% | 633,219 | 100% | 1,932,908 | 100% | 1,204,163 | 100% |
| White | 557,791 | 95% | 947,990 | 95% | 607,447 | 96% | 1,534,464 | 79% | 1,122,165 | 93% |
| Black | 2,096 | 0% | 7,965 | 1% | 2,165 | 0% | 263,200 | 14% | 29,034 | 2% |
| American Indian | 12,018 | 2% | 10,393 | 1% | 10,789 | 2% | 9,510 | 0% | 4,518 | 0% |
| Asian | 9,537 | 2% | 18,800 | 2% | 5,451 | 1% | 35,154 | 2% | 21,451 | 2% |
| Hispanic | 6,959 | 1% | 23,509 | 2% | 5,402 | 1% | 126,394 | 7% | 30,657 | 3% |
| Persons in poverty | 45,552 | 8% | 58,906 | 6% | 57,410 | 9% | 189,548 | 10% | 100,122 | 8% |
| Age 65 and older | 93,807 | 16% | 129,836 | 13% | 89,780 | 14% | 241,024 | 12% | 148,106 | 12% |
| Zero-vehicle households | 13,088 | 2% | 22,725 | 2% | 14,471 | 2% | 81,325 | 4% | 32,360 | 3% |

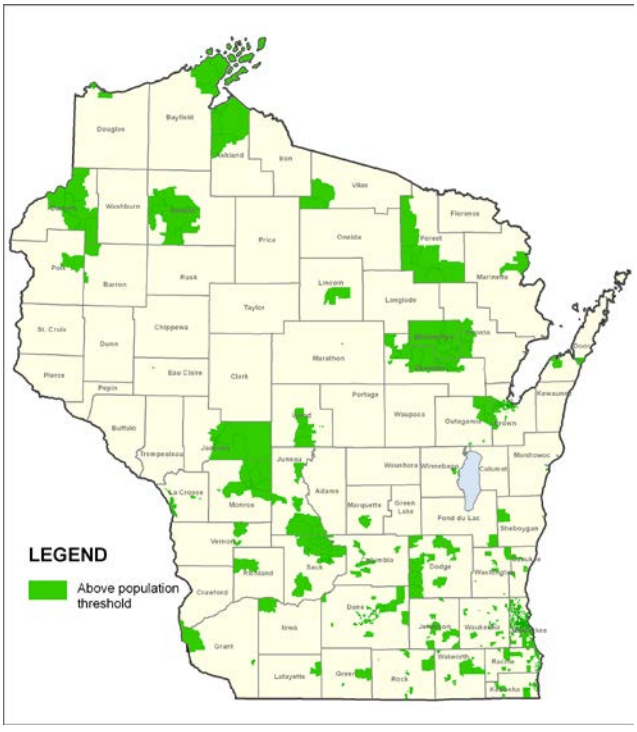
**Source: 2000 U.S. Census**

Maps 12-2 through 12-8 depict the Census block groups in which the size of the specified population group is equal to or above the region threshold.

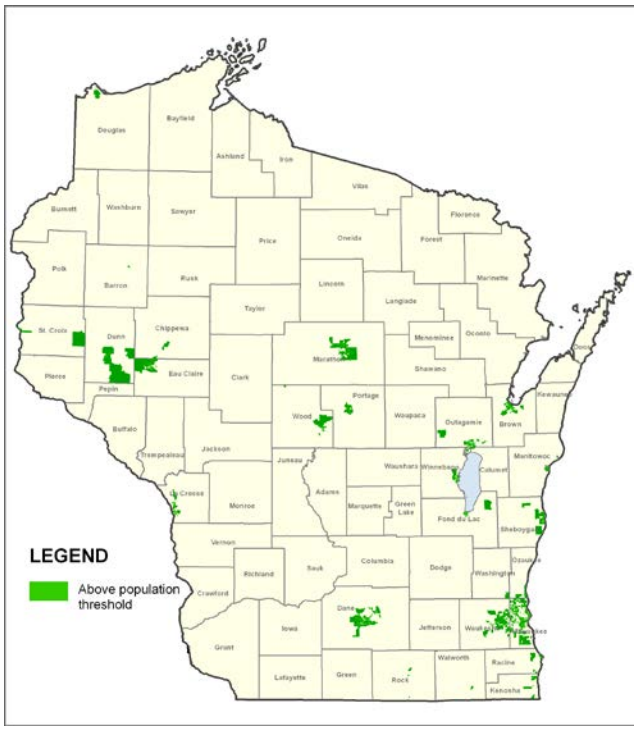
**Map 12-2:** Census block groups with **black population** equal to or above region threshold



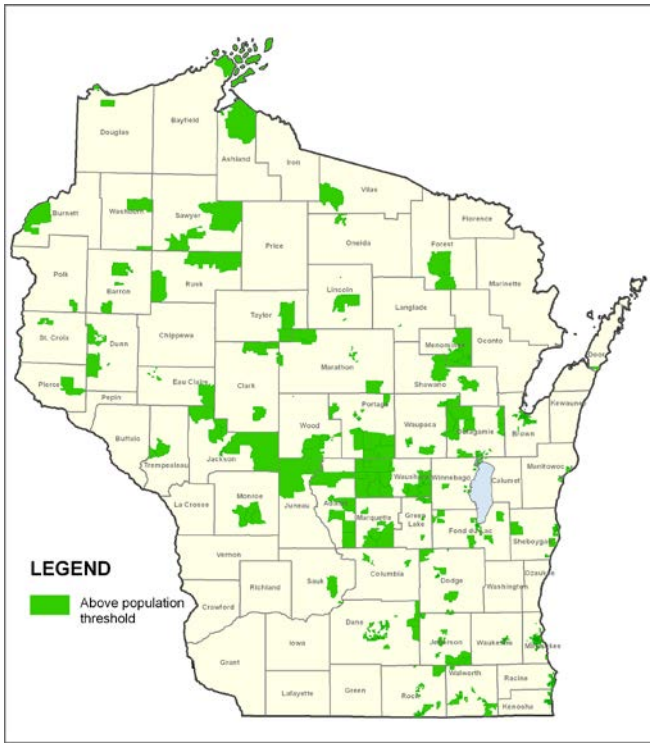

**Map 12-3:** Census block groups with **American Indian population** equal to or above region threshold



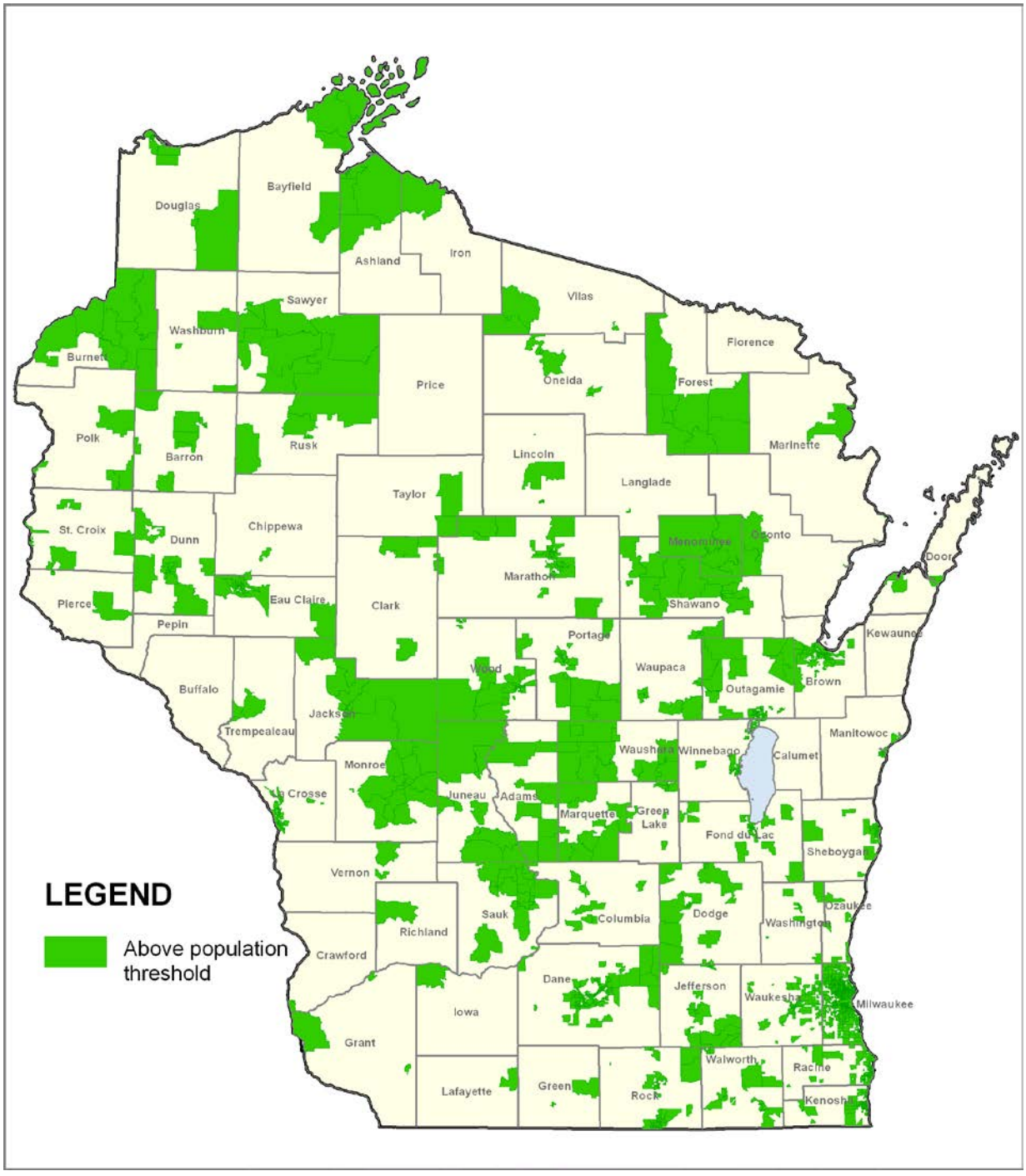
**Map 12-4:** Census block groups with **Asian American population** equal to or above region threshold




**Map 12-5:** Census block groups with **Hispanic population** equal to or above region threshold

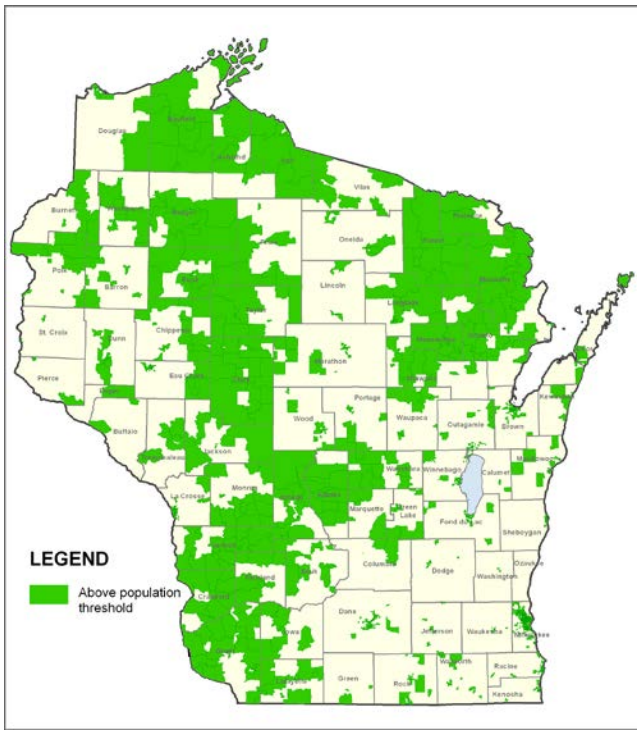


**Map 12-6: Census block groups with any minority population equal to or above region threshold**

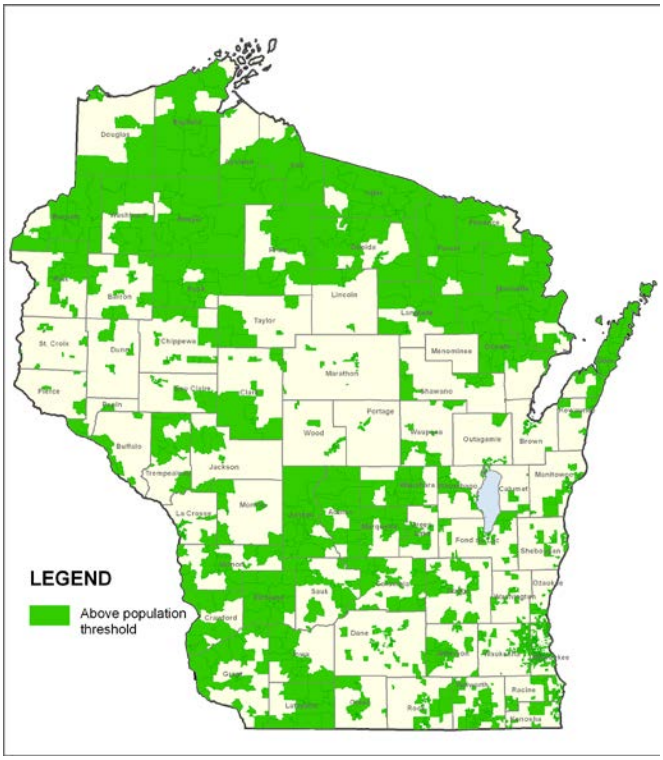



**Note: Any census block groups that equal or exceeded a population threshold for black, American Indian, Asian American or Hispanic (as shown in Maps 12-2 through 12-5) are shown on this map.**

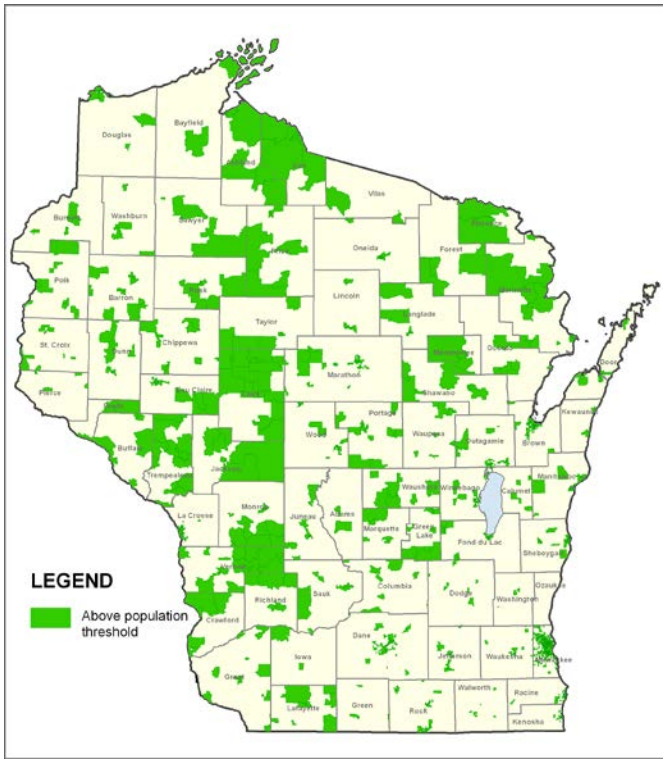
**Map 12-7:** Census block groups with **persons in poverty** equal to or above region threshold




**Map 12-8:** Census block groups with **age 65 and older population** equal to or above region threshold



**Map 12-9:** Census block groups with **zero-vehicle households** equal to or above region threshold




## *Data input and analysis*

As stated earlier, the region threshold was calculated by dividing the specified population within a WisDOT transportation region by the total population in that same WisDOT region. The subgroup percentage is defined as the total population of a subgroup (Hispanic) within that U.S. Census block group divided by the total region block group population. If the calculated percentage within a block group is greater than the established region threshold, the block group is considered atypical for the region. This may indicate a higher presence of the specified population and require greater consideration of the potentially disproportionate impacts of transportation decisions. If the percentage of the specified population within a block group is equal to or less than the threshold, it is considered either typical for the region or as having a lower concentration of specified population.

**Example 1:**

- The Southwest Region has a calculated three percent threshold for Hispanics
- Southwest Region Census Block Group A has a total population of 100 persons
- 5 percent of the Census block group's population is Hispanic

Example 1 analysis: Census Block Group A exceeds the three percent threshold and is atypical for the Southwest Region.

**Example 2:**

- The Southwest Region has a calculated three percent threshold for Hispanics
- Southwest Region Census Block Group B has a population of 100 persons
- 2 percent of the population is Hispanic

Example 2 analysis: Census Block Group B would be considered typical for the Southwest Region.

Maps 12-2 through 12-9 identify census block groups that exceed the established thresholds. The maps show:

- Census block groups exceeding the thresholds vary in distribution across the state.
- The largest concentration of blacks is located in the Southeast Region. Over 233,000 blacks live in census block groups that exceed the established threshold. The smallest populations are located in the Northwest and North Central regions.
- The number of American Indians living in census block groups exceeding the established thresholds is fairly consistent across all WisDOT regions except the Southwest Region, which has the fewest. The largest population is located in the North Central Region.
- The number of Asian Americans living in census block groups exceeding the established thresholds is highest in the Southeast Region. The smallest population is located in the Northwest Region.
- The largest concentration of Hispanics is located in the Southeast Region. Over 84,000 Hispanics live in census block groups that exceed the established thresholds. The smallest populations are located in the Northwest and North Central regions.
- The greatest number of persons in poverty living in census block groups exceeding the threshold live in the Southeast Region. The number of persons in poverty is fairly equal across the three northern regions.
- The greatest number of households with no vehicles located in census block groups above the threshold is in the Southeast Region. The smallest number is located in the North Central and Northwest regions.

## *Methodology limitations*

The methodology discussed above includes several limitations. The methodology generates assumptions from year 2000 data, is cumulative for a given transportation region and does not utilize future population projections.

- Even though the year 2000 U.S. Census Bureau data is outdated, it was the only data available at the time of the analysis. The 2010 U.S. Census Bureau data will be used at the five-year update.
- The thresholds are based on what is “typical” for each WisDOT transportation region. In some of the less populous areas of the state, block groups that exceed the threshold may only have a few persons of the specified population residing in that area. On the other hand, in more populous areas of the state, like the Southeast and Southwest regions, some block groups may

be below the threshold but have relatively high numbers of persons of the specified population, compared to the less populous regions.

- Population projections are not available for race, ethnicity, income or number of household vehicles at the census block group level. For this reason, the analysis does not account for changes in environmental justice populations over *Wisconsin Rail Plan 2030* timeframe.

While there are limitations, the analysis provides a basis for evaluating the plan's recommendations and their relationship to minority and low-income populations, as well as persons age 65 and older and zero-vehicle households. As a system-level plan, the threshold methodology locates concentrations of the specified group based on population density. This method is appropriate for a state-level plan like *Wisconsin Rail Plan 2030*. As stated previously, the analysis conducted for the long-range plan is not intended to replace more detailed analyses completed when individual projects are undertaken.

## *Wisconsin Rail Plan 2030* Public Outreach Activities

WisDOT implemented an inclusive and comprehensive outreach effort to ensure that Wisconsin residents had an opportunity to participate in the development of the *Wisconsin Rail Plan 2030*. Chapter 2: Development Process and Outreach, outlines plan development and outreach activities.

Public outreach activities included efforts specifically targeted to minority, low-income and persons age 65 and older populations. In the spring of 2010, WisDOT conducted a web-based survey to gain a better understanding of the public's views of freight, intercity passenger and commuter rail. To ensure representation of specific population groups, WisDOT conducted a separate telephone survey of African Americans, Hispanics, Asians, urban and rural low income (less than $25,999/year) populations as well as persons age 65 and over. The phone survey identified the fact that service lapses and vehicle availability, when arriving at a destination, prevent people from using trains for travel. The web survey also noted that commuter rail service was not important to most respondents. Only a few respondents indicated concerns with trains, safety and noise. The results of this outreach were reviewed and integrated into the overall plan where appropriate.

As part of the outreach conducted during development of *Connections 2030*, WisDOT specifically targeted to minority, low-income and age 65 and older populations. Rail issues were discussed as part of this outreach. WisDOT used the input from these targeted meetings, as well as input from other public outreach activities, to update the *Wisconsin Rail Plan 2030* as appropriate. To reach a broader base at the end of the planning process, WisDOT translated the *Wisconsin Rail Plan 2030* summary into Spanish.

## Recommendations Related to Minority, Low-income, Age 65 and Older and Zero-vehicle Household Populations

This environmental justice analysis focuses on disproportionate impacts to indicated populations. As noted previously, the policies and recommendations of the *Wisconsin Rail Plan 2030* further refine the policies and recommendations identified in *Connections 2030*. In drafting those policies, WisDOT

considered the concerns and needs of minority, low-income, age 65 and older and zero-vehicle household populations.

Proposed activities that may occur as a result of *Wisconsin Rail Plan 2030* may impact environmental justice populations and, in some instances, will be unavoidable. However, if and when projects are to occur under WisDOT authority, the department will work to avoid, minimize and mitigate impacts. In addition, *Wisconsin Rail Plan 2030* specifies continued efforts to incorporate environmental justice in all planning, programming and project decisions. To achieve this, WisDOT will:

- Conduct environmental justice analyses on all transportation planning and project activities
- Seek input from a wide variety of stakeholders
- Assist metropolitan planning organizations in addressing environmental justice in transportation planning activities

Maps 12-10 through 12-17 provide a comprehensive view of the plan's recommendations in relation to the locations of minority, low-income, age 65 years and older and zero-vehicle household populations. The maps identify areas where these population subgroups are present and provide a system-level tool for project sponsors to identify whether additional public outreach activities or measures should be considered to address the interests of environmental justice populations.

## *Freight rail*

Freight rail plays an important role in Wisconsin's multimodal transportation system and the overall economy. As of 2010, eleven freight railroads operate in Wisconsin and serve 95 intermodal facilities. Railroads move 33 percent of Wisconsin's total freight tons annually.

The *Wisconsin Rail Plan 2030* identifies several recommendations related to freight rail transportation. Specifically, it states that WisDOT will:

- Monitor railroad activity and create partnerships among businesses and railroads to increase the use of rail
- Investigate new policies and new financing strategies for projects that improve freight service
- Continue to work collaboratively with appropriate stakeholders in support of upgraded and expanded *Hiawatha Service*
- Continue to support freight rail shippers and short line carriers in preserving service to light density rail lines
- Evaluate and support freight shipper investments that permit new or continued local service in high-traffic areas on a case-by-case basis.
- Continue to provide planning support, as requested, in support of developing rail-friendly industrial development sites
- Monitor changes in economic regulation of the rail industry and work with Wisconsin's short line rail partners, as appropriate, to broaden shipper access to freight rail services

Map 11-2 in Chapter 11: System-plan Environmental Evaluation shows Wisconsin rail lines in relation to the state's communities. The map notes that active rail lines do not serve eight Wisconsin counties, one-third of the county seats and most tribal lands. Maps 12-10 to 12-13 compare the locations of active rail lines with environmental justice populations. The maps show that rail lines randomly reach locations with high minority populations, persons in poverty, persons age 65 and older and households without vehicles.

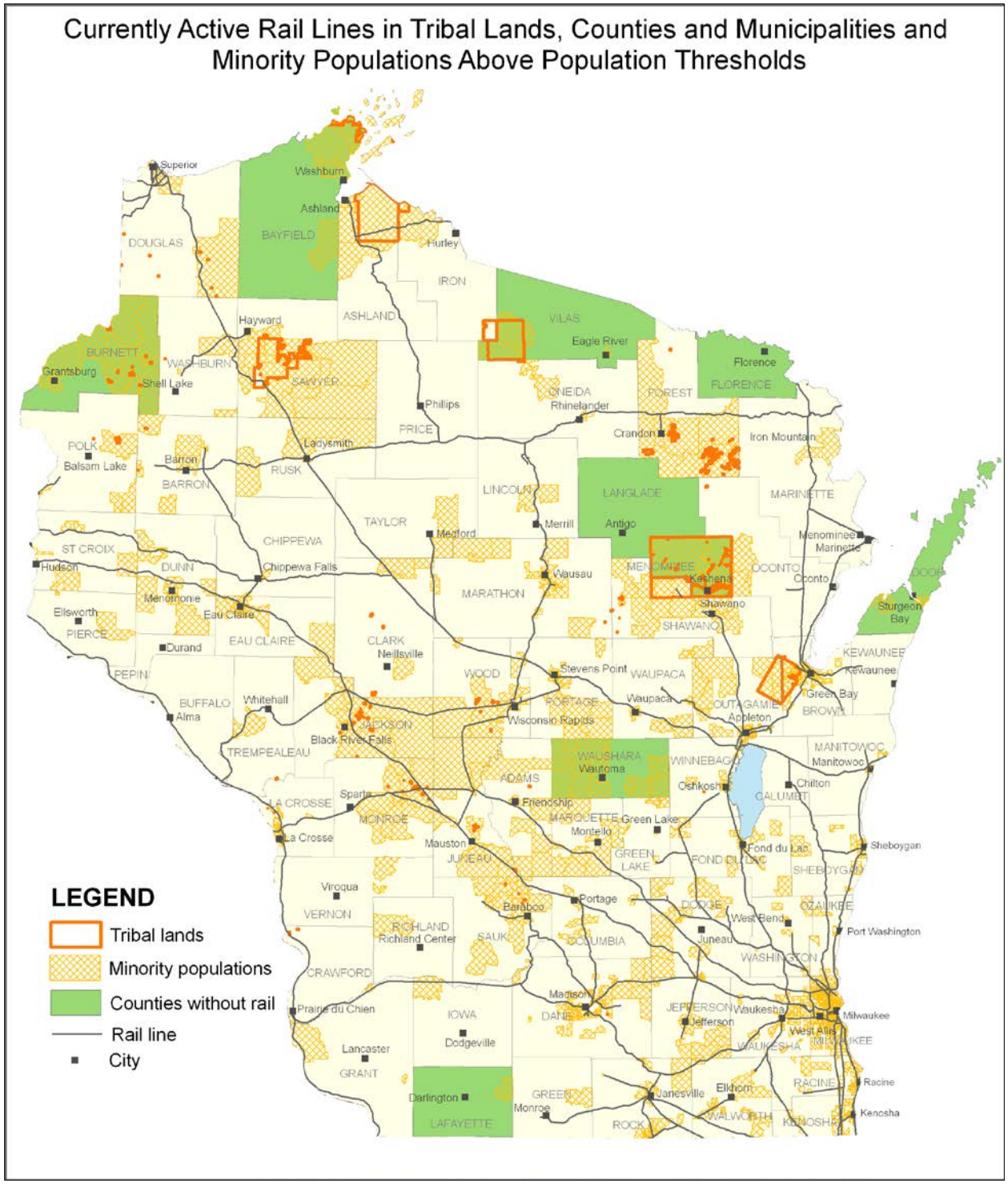
The state rail plan recommends policies that support freight rail service statewide as well as department efforts to work with shippers and businesses to ensure that rail service remains a viable transportation option into the future. As a result, the recommended policies are likely to have a positive impact on the state's populations. Positive impacts of implementing the plan's freight rail policies include potential job growth, more economic activity resulting from rail freight service supporting area businesses and improved linkages to global markets. Potential negative impacts include increased frequency of freight trains passing through a community, resulting in safety considerations at crossings, as well as an increase in the level of noise and vibration caused by trains passing through the communities and over the tracks.

**Table 12-3: Populations living in census block groups located adjacent to active rail lines**

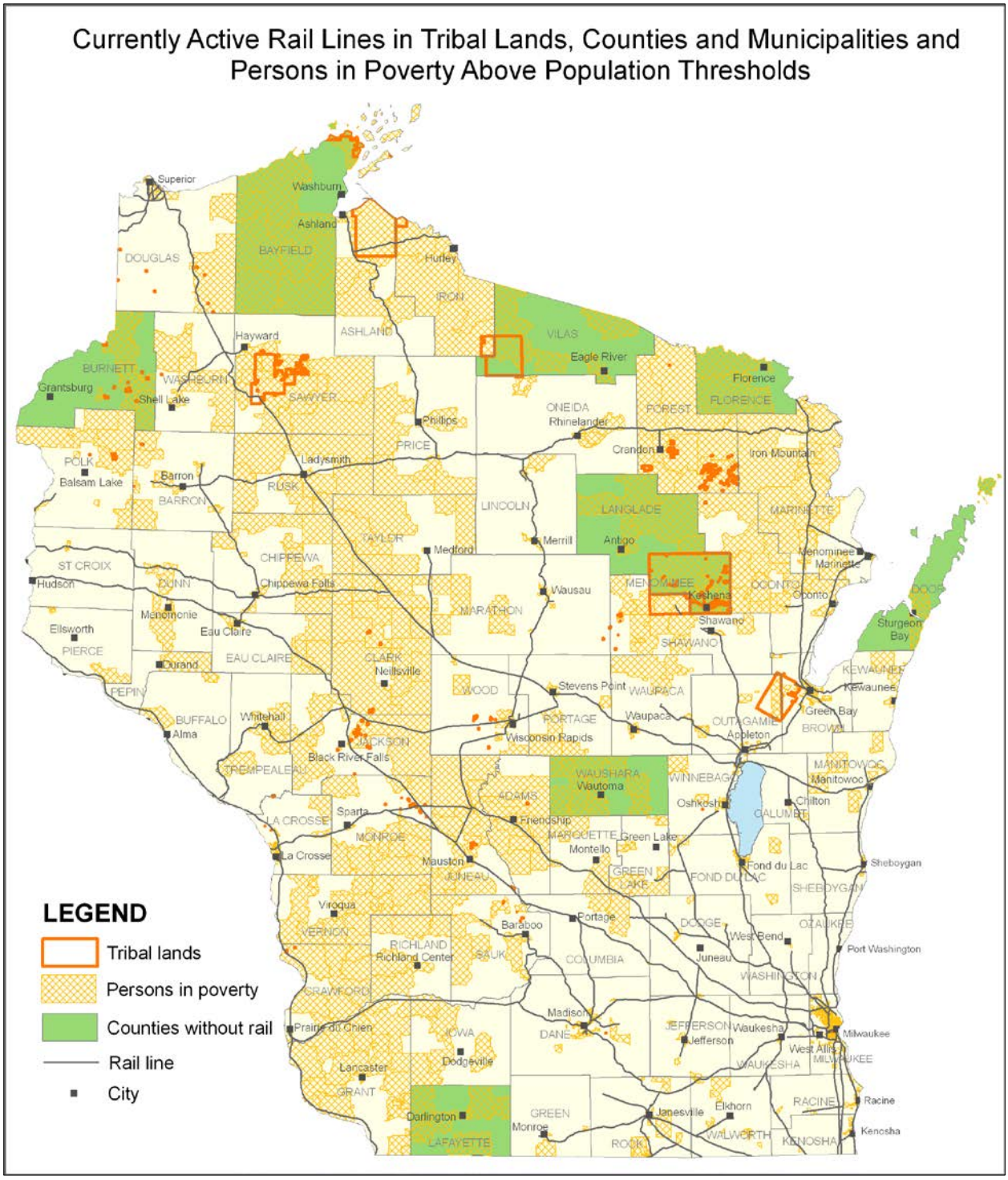
| U.S. Census Year 2000 Population | Total | Percent of population subgroup |
|---|---|---|
| State of Wisconsin | 1,886,849 | 35.2 |
| Black | 61,275 | 20.1 |
| American Indian | 14,615 | 30.9 |
| Asian | 32,506 | 36.0 |
| Hispanic | 55,577 | 28.8 |
| Age 65 & older | 241,039 | 34.3 |
| Persons in poverty | 139,669 | 30.9 |
| Zero-vehicle households | 50,418 | 30.7 |

As shown in Table 12-3, 35 percent of the state's population lives adjacent to active rail lines. The percentage of environmental justice populations living adjacent to active rail lines, with the exception of Asian Americans, is less than that of the state's total population.

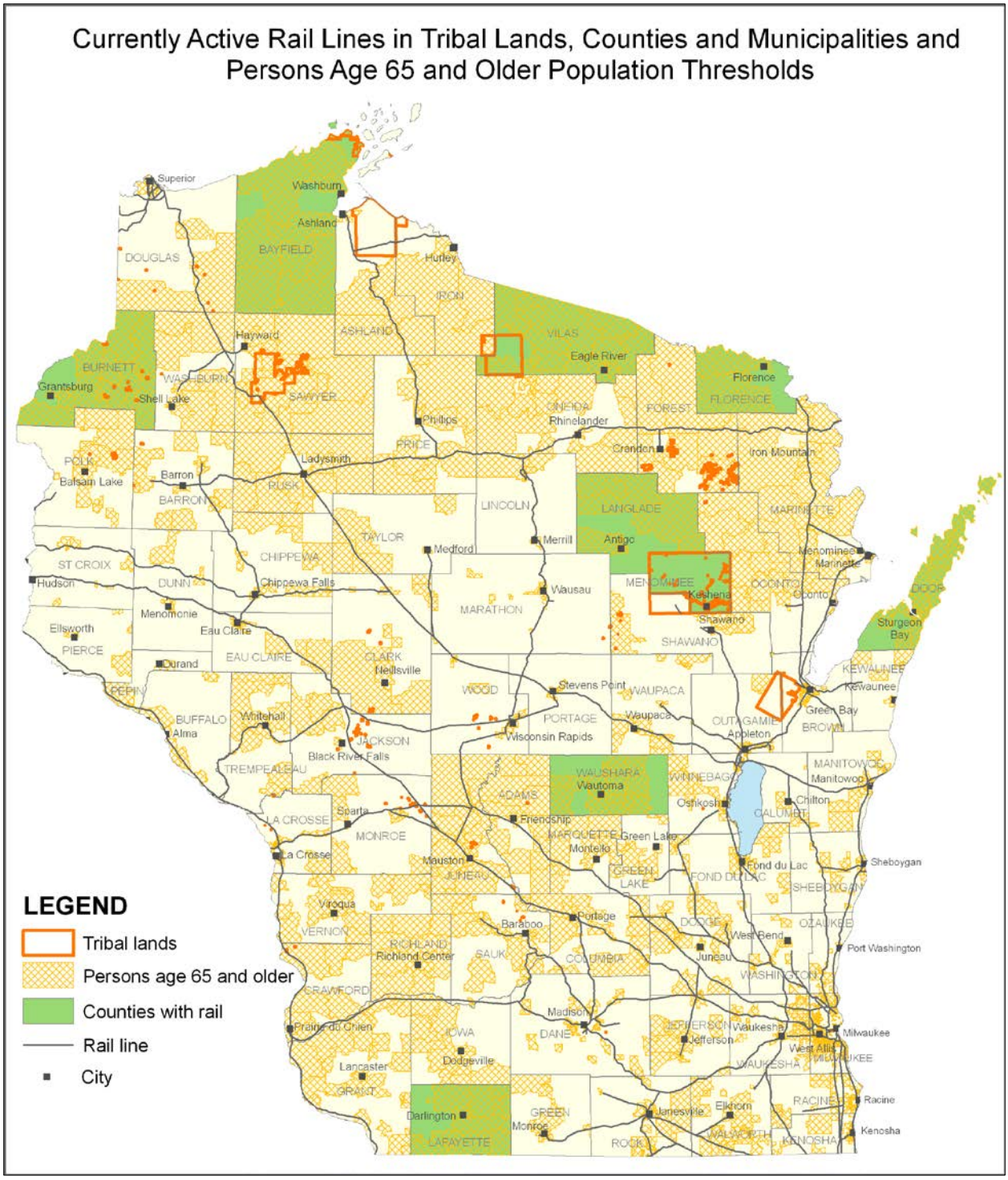
**Map 12-10: Wisconsin's Rail Lines Relative to Communities and Minority Populations**



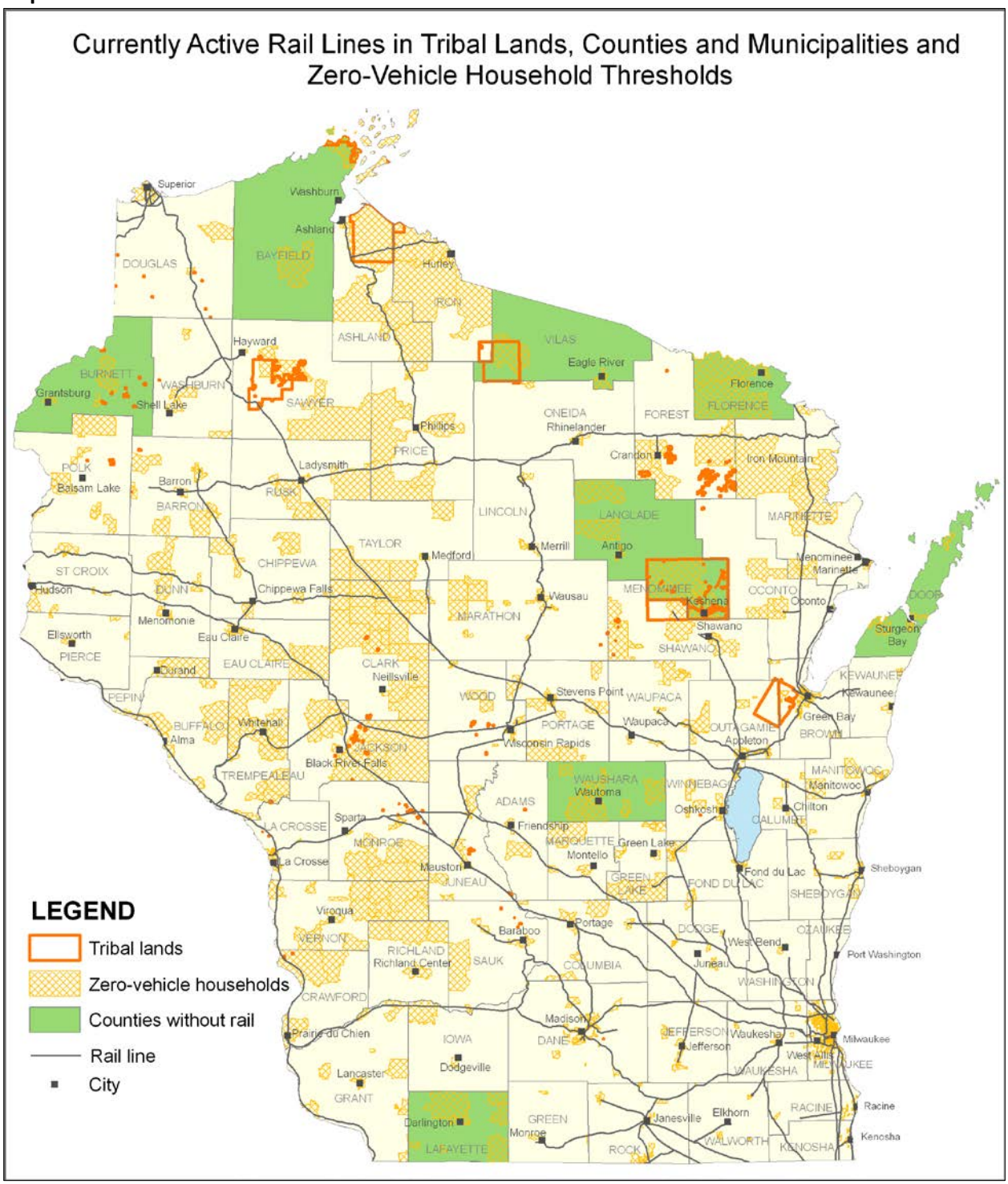
**Map 12-11: Wisconsin's Rail Lines Relative to Communities and Persons in Poverty**



**Map 12-12: Wisconsin's Rail Lines Relative to Communities and Age 65 and Older Populations**



**Map 12-13: Wisconsin's Rail Lines Relative to Communities and Zero-Vehicle Households**



## *Intercity passenger rail*

*Wisconsin Rail Plan 2030* addresses intercity passenger rail and provides a set of recommended actions to be undertaken over the next 20 years. These include WisDOT's commitment to:

- Continue to support, implement and enhance existing intercity passenger rail service
- Facilitate intermodal connections and promote livable communities
- Continue to assist and/or coordinate with neighboring states on intercity passenger rail studies and projects that impact Wisconsin
- Consider opportunities to expand intercity passenger rail service to other Wisconsin regions
- Continue to partner with freight railroads when planning and implementing passenger rail service
- Continue with the implementation of improved intercity passenger rail service

Analysis of the potential impacts – either positive or negative – to communities statewide includes consideration of access to intercity passenger rail stations and intercity bus stations.

To measure access to intercity passenger rail stations and intercity bus stations, the analysis identified populations located within 10 miles of an intercity bus station and 20 miles of an intercity passenger rail station. The intercity bus distance was identified in a paper entitled "Access to Intercity Public Transportation Services from Small Communities" in Transportation Research Record 1666, while the intercity passenger rail distance was used by the Midwest Regional Rail Initiative.

Amtrak currently provides the state's only intercity passenger rail service. As shown in Table 12-4, approximately 39 percent of the state's population is located within 20 miles of an existing intercity passenger rail station. Amtrak also provides intercity bus service as part of its Thruway program. There are 25 Thruway bus stations in Wisconsin that connect to Amtrak intercity passenger rail service in Milwaukee. Currently, 50.9 percent of the state's population is located within 10 miles of an Amtrak Thruway bus station (Table 12-5). Maps 12-14 through 12-17 show the locations of recommended intercity passenger rail stations and Census block groups that exceed a threshold for a specified population. Under this recommended system of expanded passenger rail and intercity bus service, service could potentially expand to 14 Wisconsin communities that currently have no intercity passenger rail service: Hudson, Menomonie, Eau Claire, Green Bay, Appleton, Neenah, Oshkosh, Fond du Lac, West Bend, Madison, Watertown, Oconomowoc, Brookfield and Granville (northwest Milwaukee). In addition, Minnesota is analyzing the potential to extend intercity passenger rail service from Duluth to St. Paul. The service may include a stop in Superior.

Implementation of the Wisconsin component of the Midwest Regional Rail System, as well as service between Duluth and St. Paul with a stop in Superior, would result in up to 68 percent of the state's population (based on U.S. Census year 2000 population figures) being located within 20 miles of an intercity passenger rail station (Table 12-4). This is an increase of up to approximately 29 percent compared to existing intercity passenger rail service. With the exception of the state's black population,

a high percentage of which already has access due to existing stations in Milwaukee and Racine, all the other population subgroups would experience substantial increases in the population served.

**Table 12-4: Population located within 20 miles of an intercity passenger rail station**

| U.S. Census Year 2000 Population | Existing intercity passenger rail service | | Proposed intercity passenger rail service* | |
|---|---|---|---|---|
| | Total | % of population subgroup | Total | % of population subgroup |
| State of Wisconsin | 2,115,552 | 39.4 | 3,498,711 – 3,648,477 | 65.2 – 68.0 |
| Black | 266,649 | 87.6 | 290,436 – 291,291 | 95.4 – 95.7 |
| American Indian | 11,990 | 25.4 | 22,605 – 23,829 | 47.9 – 50.5 |
| Asian | 38,934 | 43.1 | 67,465 – 68,375 | 74.6 – 75.6 |
| Hispanic | 126,377 | 65.5 | 162,093 - 162,642 | 84.0 – 84.3 |
| Age 65 & older | 270,334 | 38.5 | 422,762 – 438,479 | 60.2 – 62.4 |
| Persons in poverty | 210,823 | 46.7 | 299,281 – 308,636 | 66.3 – 68.4 |
| Zero-vehicle households | 87,241 | 53.2 | 120,038 – 122,189 | 73.2 – 74.5 |

*Includes route options through La Crosse or Eau Claire; includes proposed Northern Lights Express service in Superior

The Midwest Regional Rail Initiative also includes an intercity bus component. Many of these stops are already part of Amtrak's Thruway bus service. The addition of seven stops to the existing Thruway bus network would reflect the vision presented in the Midwest Regional Rail Initiative. These seven stops are Sturgeon Bay, Peshtigo, Mosinee, Beloit, Eau Claire, Black River Falls and Tomah. A few other changes would also occur. Existing Thruway bus stops in Oshkosh and Fond du Lac would be replaced with intercity passenger rail stops. Existing Thruway stops in Appleton, Green Bay and Madison would serve as both intercity bus and intercity passenger rail stops. As a result, 53.4 percent of the state's population would be located within 10 miles of an intercity bus station connecting to an intercity passenger rail station (Table 12-5). Since only seven additional stops are added to the current Amtrak Thruway system, there is only a small increase in the population served.

**Table 12-5: Populations located within 10 miles of an existing Amtrak Thruway intercity bus station or a proposed Midwest Regional Rail Initiative intercity bus station***

| | Existing Amtrak Thruway intercity bus service | | Proposed Midwest Regional Rail Initiative intercity bus service* | |
|---|---|---|---|---|
| U.S. Census Year 2000 Population | Total | % of population subgroup | Total | % of population subgroup |
| State of Wisconsin | 2,729,611 | 50.9 | 2,862,632 | 53.4 |
| Black | 250,895 | 82.4 | 256,063 | 84.1 |
| American Indian | 24,267 | 51.4 | 25,965 | 55.0 |
| Asian | 70,177 | 77.6 | 69,655 | 77.1 |
| Hispanic | 124,452 | 64.5 | 128,301 | 66.5 |
| Age 65 & older | 335,634 | 47.8 | 352,998 | 50.2 |
| Persons in poverty | 270,050 | 59.8 | 278,238 | 61.6 |
| Zero-vehicle households | 105,667 | 64.4 | 107,815 | 65.8 |

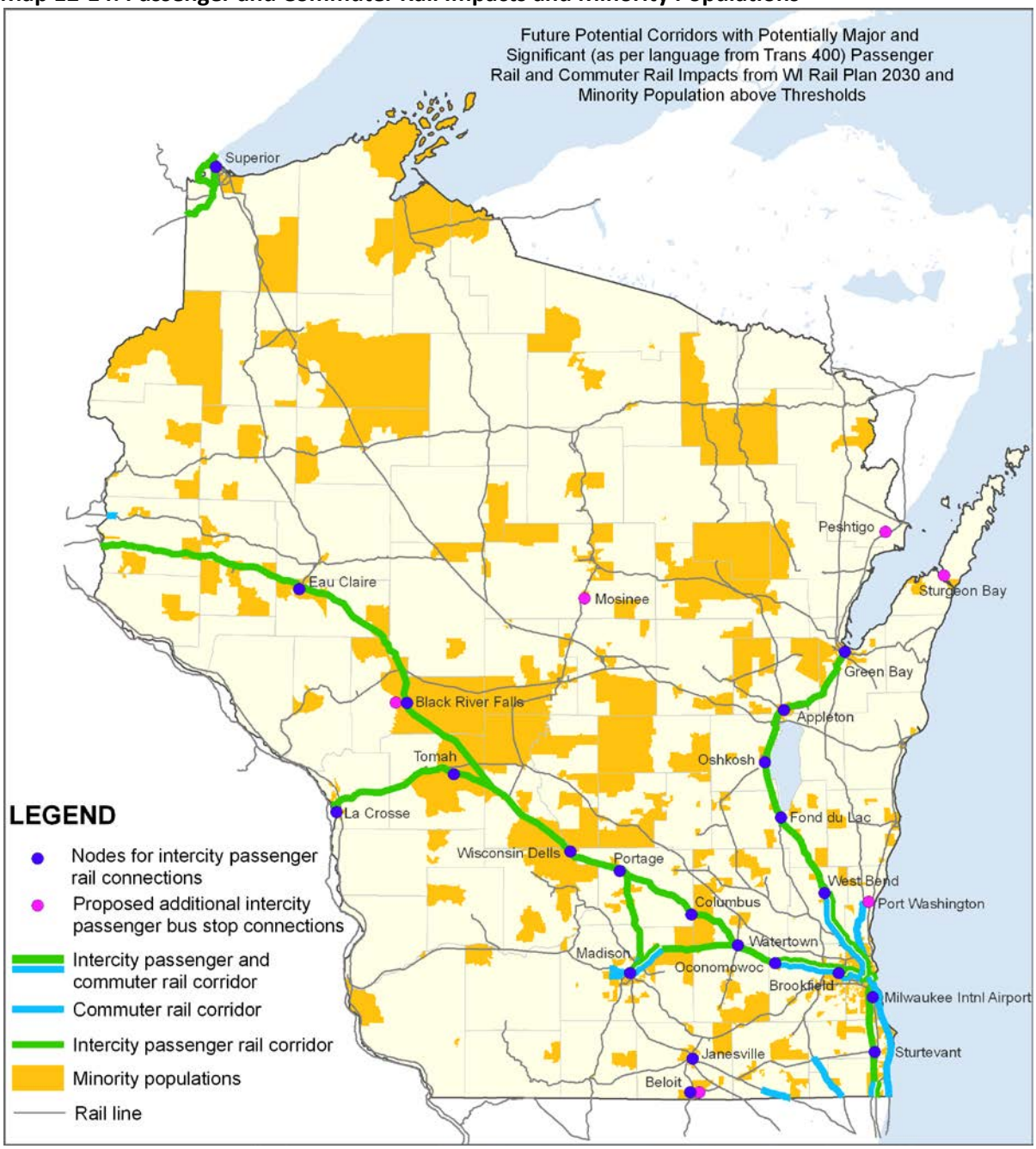
*Includes existing stops currently served by Amtrak Thruway service

The Northeast Region will experience the greatest level of intercity passenger rail service expansion since five new stations are recommended within the region. The intercity passenger rail recommendations also expand service to the state's second largest metropolitan area – Madison. The Milwaukee area will also experience expanded intercity passenger rail service due to a wider range of travel times.

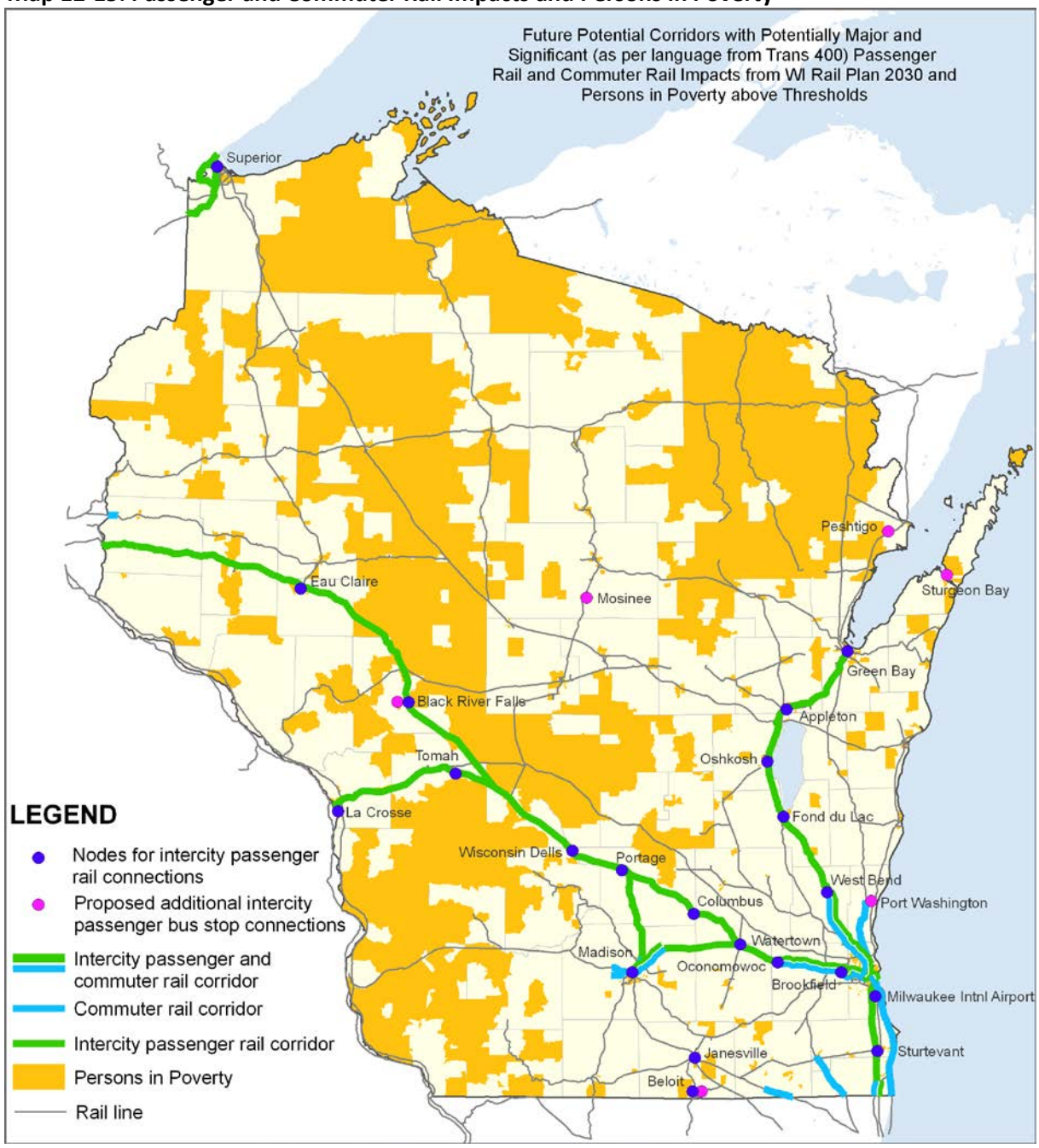
For intercity bus, all regions except the Southeast Region will gain additional stops. Overall, increased intercity bus service will increase mobility options for individuals statewide.

Implementation of intercity passenger rail and intercity bus service will expand the transportation options for a large percentage of the state's population. In addition, the rail stations will likely encourage community development that is transit oriented and attracts businesses into the area. Negative implications of increased passenger rail service resulting from implementation of the plan's recommendations may include increased traffic around stations, which could affect congestion levels and increase safety concerns for pedestrians or other travelers. Other possible impacts may include increases in the amount of noise, vibration and emissions resulting from idling vehicles and more trains passing through the area. The increase in the number of trains passing through a community may impact vehicle traffic crossing the railroad tracks.

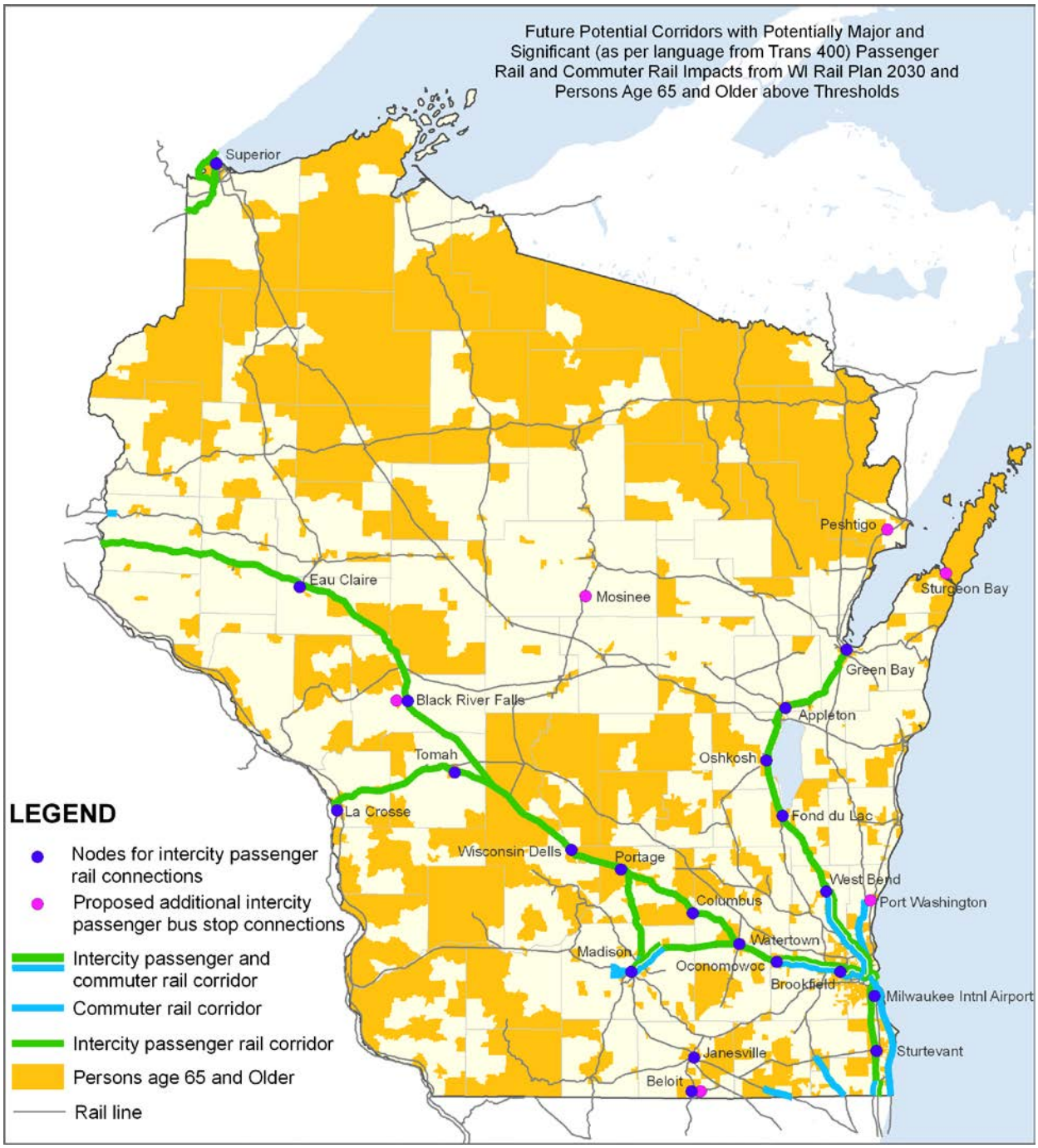
**Map 12-14: Passenger and Commuter Rail Impacts and Minority Populations**



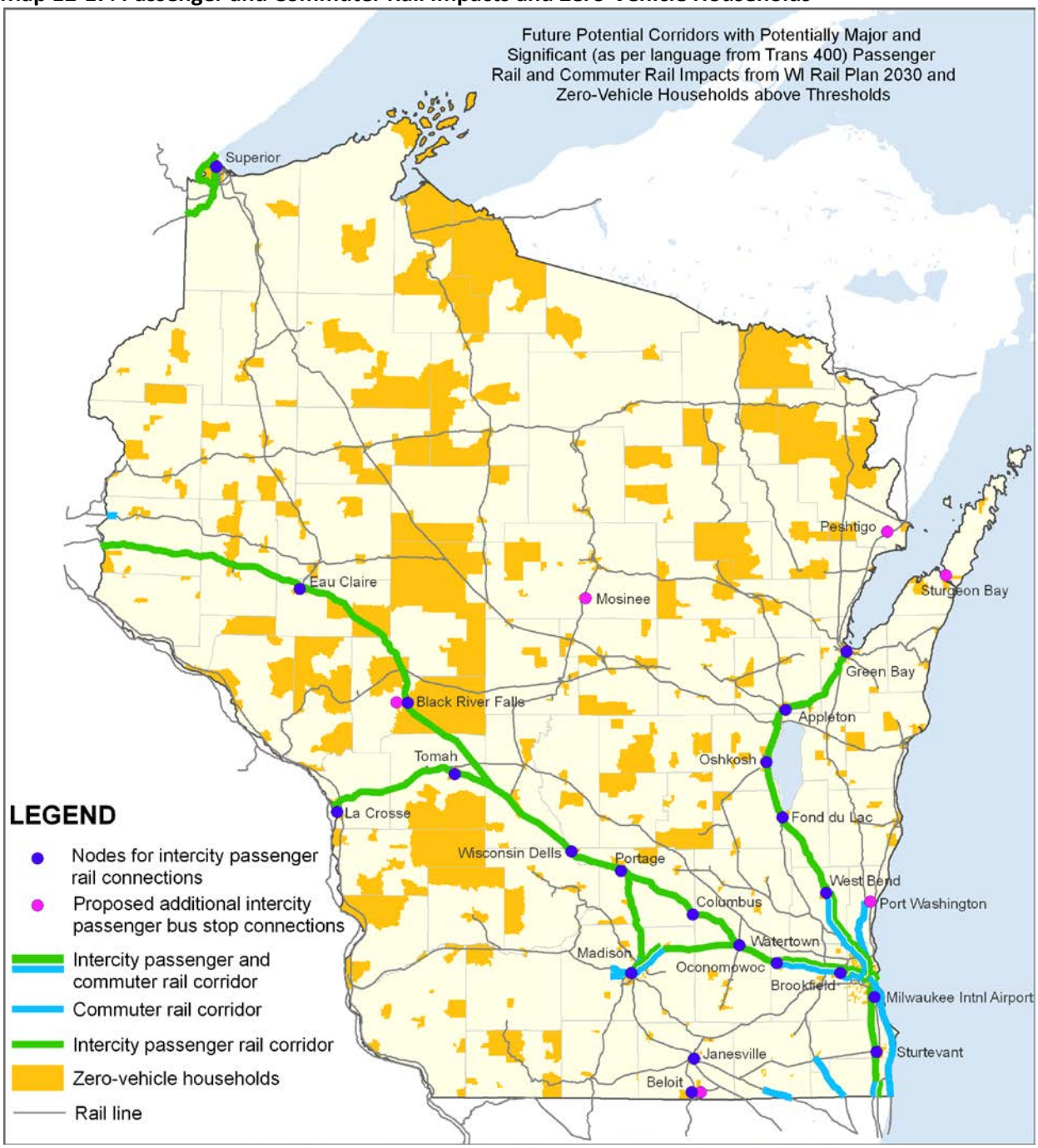
**Map 12-15: Passenger and Commuter Rail Impacts and Persons in Poverty**



**Map 12-16: Passenger and Commuter Rail Impacts and Persons Age 65 and Older**



**Map 12-17: Passenger and Commuter Rail Impacts and Zero-Vehicle Households**



## *Commuter rail*

Transit is often peoples only transportation option and it is an alternative option for others. Robust transit service helps attract and retain businesses and jobs. In Wisconsin's largest urban areas, fixed-guideway transit systems, such as commuter rail, can provide a robust and environmentally friendly alternative to congested roadways; can increase transportation options; and can promote economic development. Commuter rail service faces many challenges including coordination between different rail providers, sufficiency of intermodal connections and funding, and governance structures.

*Wisconsin Rail Plan 2030* includes recommendations to address commuter rail in the state over the next 20 years. These include WisDOT's commitment to:

- Support existing and expanded urban and rural transit systems with new governance structures, funding sources and increased coordination
- Support development of fixed-guideway transit systems
- Facilitate intermodal connections

Commuter rail projects are typically located in urban areas. Similar to decision regarding other transit services, decisions regarding commuter rail systems are local ones; WisDOT does not decide whether commuter rail service will be implemented. In *Wisconsin Rail Plan 2030*, fixed-guideway transit systems (which include commuter rail) are identified in Wisconsin's largest urban areas consistent with Metropolitan Planning Organizations' long-range plans. Several stages of the planning process have been completed for the Kenosha-Racine-Milwaukee commuter rail project in southeastern Wisconsin and the Transport 2020 project in Dane County. If implemented, these projects would establish commuter rail service in the state's two largest urban areas.

Table 12-6 identifies populations within three miles of existing and proposed commuter rail lines. This summary assumes all of the commuter rail studies – discussed in Chapter 7: Commuter Rail – are implemented. Additional analysis of each commuter rail recommendation may reveal that implementation of commuter rail is not feasible.

A little over two percent of the state's population is located within three miles of existing commuter rail lines. This result is not surprising since the only existing commuter rail service in Wisconsin is located in Kenosha. If all the studies are implemented, over 30 percent of the state's population would live within three miles of a commuter rail line. The Southeast and Southwest regions would experience the greatest increase in access to commuter rail service. If implemented, commuter rail will improve transportation options within and between cities. In addition, station development will likely encourage transit oriented development and attract businesses into communities. Similar to the potential impacts of implementing the passenger rail recommendations, increases in the number of trains traveling on a rail corridor may impact a community through increased noise and vibration, vehicle traffic delays at crossings, as well potential increases in air emissions from idling trains or vehicles.

**Table 12-6: Population located within three miles of existing and proposed commuter rail line**

| | Existing commuter rail service | | Potential commuter rail service* | |
|---|---|---|---|---|
| U.S. Census Year 2000 Population | Total | % of population subgroup | Total | % of population subgroup |
| State of Wisconsin | 115,175 | 2.1 | 1,747,460 | 32.6 |
| Black | 7,147 | 2.3 | 262,116 | 86.1 |
| American Indian | 473 | 1.0 | 9,006 | 19.1 |
| Asian | 1,171 | 1.3 | 44,878 | 49.6 |
| Hispanic | 9,797 | 5.1 | 110,978 | 57.5 |
| Age 65 & older | 13,683 | 1.9 | 205,269 | 29.2 |
| Persons in poverty | 9,359 | 2.1 | 204,091 | 45.2 |
| Zero-vehicle households | 3,383 | 2.1 | 82,523 | 50.3 |

*Assumes all studies discussed in Chapter 7: Commuter Rail, are implemented.

## *Multimodal connections and livability*

Livable communities are those that typically include clean air, clean water, safe streets, positive race relations, affordable homes, quality public schools, greenery, open space, uncongested roadways and low taxes. Rail-related transportation can play a role in creating livable communities. Transportation efficiency, smart growth development, multimodal connectivity (including integration of modes, station access and habitual auto-oriented travel behaviors), environmental impacts and economic growth and development provide both challenges and opportunities in supporting livable communities.

*Wisconsin Rail Plan 2030* discusses multimodal transportation and livability considerations and offers a set of recommended actions through 2030. Specifically, it states that WisDOT will:

- Improve coordination among transportation modes and facilitate intermodal connections
- Encourage transportation demand management strategies aimed at creating viable travel alternatives to the single occupant vehicle and increase the availability of alternative modes
- Coordinate community sensitive solutions efforts with local stakeholders and encourage transportation projects that minimize negative community impacts while supporting and preserving local character
- Coordinate state transportation efforts with local comprehensive plans, land use and transit agency activities
- Emphasize air quality improvement
- Continue to work with local jurisdictions to designate truck routes on appropriate state roads, support new truck route designations, and work with others to identify solutions to address roadway issues for port areas
- Continue to improve street design and connectivity at crossings for all modes of transportation

The department will continue working with key stakeholders statewide to implement the plan's recommendations regarding livability and sustainability. Overall, it is expected that this will provide

benefits statewide and ensure that consideration of actions and their potential impacts are considered early in the decision making process.

### *Rail safety and security*

Safety is a fundamental mission for WisDOT and will continue to be one of the department's top priorities for all modes of transportation. The following objectives guide WisDOT's planning and policy development for safety across all transportation modes:

- Reduce crashes, injuries and fatalities
- Educate people regarding safety strategies
- Design and construct safe transportation facilities
- Identify and build partnerships between federal, state, and local agencies and advocates to achieve safety improvements

Like safety, security considerations have been part of WisDOT's policies for many years. WisDOT's vision is to be able to prevent, prepare for or coordinate response to any incident, whether caused by natural or human events.

To address safety and security, *Wisconsin Rail Plan 2030* states that WisDOT will:

- Support a comprehensive vision of homeland security and defense mobilization
- Improve emergency response to make the transportation system more resilient
- Work with the Office of the Commissioner of Railroads and private companies to identify potential rail crossing safety improvements, discourage trespassing and continue to support the Operation Lifesaver program that teaches safe behavior while crossing railroad tracks
- Enhance the security of the transportation system by reducing vulnerability and continue to work with the Office of Wisconsin Emergency Management, railroad companies and other agencies to discuss rail-related security issues
- Seek federal security funding to install and operate flat-panel displays and remote audio announcement technology at all Amtrak stations in Wisconsin
- Take an active role in the oversight of security for new commuter rail systems in Wisconsin

Safety and security continue to be department priorities. Implementing the plan's recommendations will benefit all users of the transportation system.

## Summary of Potential System-Level Impacts

All of the maps and tables in this chapter depict the relationship between the plan's recommendations and the state's minority, low-income, age 65 years and older and zero-vehicle household populations. As noted earlier, this chapter serves as the starting point for a more detailed analysis at the project level. Project decisions are made after consideration of environmental and community impacts and may be

influenced by decisions of the legislature or the governor and through coordination with local units of government and public involvement opportunities.

Table 11-1 in Chapter 11: System-Plan Environmental Evaluation, outlines in-depth rail-related land use impacts of a more cumulative or indirect nature. It also outlines potential mitigation strategies. For more information, refer to Chapter 11: System-Plan Environmental Evaluation.

The system-level analysis presented in this environmental justice chapter of the state rail plan is only one step in WisDOT's commitment to ensuring that its plans and projects do not result in disproportionate impacts. The plan's environmental justice analysis demonstrates that minority and low-income populations, as well as persons age 65 and older and zero-vehicle households, are found in all WisDOT regions and are impacted by *Wisconsin Rail Plan 2030* activities.

The *Wisconsin Rail Plan 2030* environmental justice analysis concludes:

At the system-level, policy recommendations outlined in *Wisconsin Rail Plan 2030* offer a balanced framework for specific rail and other multimodal investment strategies and do not include any inherent disproportionate negative impacts on minority and low-income populations, or on persons age 65 and older and zero-vehicle households.