TRANSPORTATION FOR THE 21ST CENTURY

Wisconsin Rail issues and opportunities report

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Front lower left: Wisconsin & Southern Railroad
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Executive summary

Source: CN

The *Wisconsin Rail Issues and Opportunities Report* summarizes critical rail transportation issues that were identified through an aggressive public outreach effort. It reflects input and guidance from a variety of sources including a State Rail Advisory Committee and a Rail Industry and Shippers Advisory Group. The findings from this report—the issues and opportunities for public sector involvement—will serve as a point of departure for the rail component of *Connections 2030,* the Wisconsin Department of Transportation's (WisDOT) multimodal transportation plan.

Historically, WisDOT's role in the railroad industry has been limited, in part, because the majority of railroads in Wisconsin are private operators subject to federal interstate commerce regulations. WisDOT currently improves roadway/railway crossing safety, helps retain or improve freight rail service in partnership with private railroads and local units of government, and supports intercity passenger rail service.

Topics covered in this report affect or involve various rail system components such as the rail network, intercity passenger rail, safety, and items requiring specific legislative initiatives. The topics are grouped and listed below.

Category	Topic
Rail network	➤ Rail congestion in Chicago ➤ Intermodal facilities ➤ Rail corridor and service preservation ➤ Publicly owned rail infrastructure
Intercity passenger rail	➤ Level of intercity passenger rail service
Safety	➤ Hazardous materials ➤ Motor vehicle/ train crashes and trespassing
Legislative	➤ Railroad taxation ➤ Railroad regulations

Other issues were identified as emerging rail issues but were not analyzed in detail pending the results of proposed legislation or emerging policies. They include the following:

- Development of commuter rail systems will generate the need for a policy regarding state participation in commuter rail systems.
- Passage of a ban on the use of locomotive horns at roadway/railway crossings could result in significant expenditures for upgrading warning devices in Wisconsin.
- A proposal to reduce mercury emissions could significantly affect the demand for coal, Wisconsin's single largest freight rail commodity.

This report introduces opportunities that could help WisDOT to accomplish its mission of developing and maintaining a safe, efficient and balanced transportation system. The report focuses on opportunities to maximize the strengths of individual transportation modes functioning as part of a cohesive transportation network. The ultimate goals are to maintain and enhance the quality of life for Wisconsin's citizens and improve the competitiveness of its businesses.

Chapter 1: Introduction

The Wisconsin Rail Issues and Opportunities Report summarizes nine rail transportation issues. This report reflects, in part, input from the general public and from advisory committees representing a wide array of transportation stakeholders.

A comprehensive review of public policies concerning rail transportation in Wisconsin is anticipated as part of Connections 2030, the Wisconsin Department of Transportation's (WisDOT) multimodal transportation plan. The issues and opportunities discussed in this report will serve as a point of departure for Connections 2030.

Purpose and need

Increasing productivity and the emergence of new international markets are expected to produce — even under a conservative economic growth scenario — as much as a doubling of current freight movements in this country by the year 2020. Large portions of the state's transportation infrastructure were built to accommodate freight and passenger movement patterns that are likely to be vastly different from those of the future. Rail corridors with connections to international ports of entry, including those located in Wisconsin, are expected to experience significant transportation pressures.

This increase in freight movements, combined with congestion problems that are already appearing on many segments of Wisconsin's highways, is an incentive for Wisconsin government and business leaders to focus on what actions might be needed now to keep Wisconsin's freight and people moving as efficiently and safely as possible in the future.

Source: Canadian Pacific Railway

Importance of rail

Rail will continue to be an important mode of transportation in Wisconsin's economy for the following reasons:

- Production output levels of key Wisconsin industries that use rail are expected to grow over the next two decades.
- Rail service provides a low cost transportation alternative for the high volume, lower value commodities that are essential to many of Wisconsin's traditional manufacturing industries.
- Rail service continues to be the primary mode of transport for coal, Wisconsin's primary energy source.
- Rail freight movement between Wisconsin, Canada, and Mexico is expected to continue to grow. Containerized shipments to and from overseas are anticipated to increase significantly.
- Intercity passenger rail is a transportation option that can help individuals and business travelers avoid congestion on highways and uncertainty in the air travel industry.

- Intercity passenger rail provides a mobility alternative to those who cannot, or choose not to, drive or fly.

Overview of the state's rail network

This section provides background information on Wisconsin's rail network. Different railroads own individual portions of the network. Transportation is provided for products as well as passengers. Although intercity passenger rail service is provided by a distinct operating entity, it functions entirely on portions of the existing freight network. For purposes of this report, intercity passenger rail and roadway/railway crossings are considered components of the overall rail network. Both of these components are discussed in greater detail in Chapter 2.

Wisconsin's freight rail network mirrors the nation's. The state network is comprised of major railroads that serve large portions of North America, regional railroads that serve a small combination of states, and small, short-line railroads that serve local areas. Based on federal Surface Transportation Board (STB) definitions, Wisconsin is served by four major (Class I) railroads, three regional railroads, and four local railroads.[1] Table 1-1 and Figure 1-1 depict the railroads operating in Wisconsin.

Over the last ten years, the amount of Wisconsin track-miles owned by railroads has declined, due in large part to the consolidation of railroad operators and the subsequent elimination of duplicate routes. Since the merger of the Canadian National Railway Company (CN) and Wisconsin Central Transportation Corporation (WC) in 2001, four Class I railroads now own approximately 80% of the rail lines within Wisconsin. CN owns nearly 1,800 miles of track in the state, nearly half the total mileage.

Historically, Wisconsin has had an imbalanced freight system—more freight flows into the state than out, and a large portion is "overhead" traffic flowing through the state. Freight shipments fluctuated considerably from 1996 to 2000 due to a variety of factors. These included changes in the national economy, changes in contracts for commodity movements by rail, changes in haulage agreements between railroads, and service disruptions caused by mergers and acquisitions that took place during this time period. Table 1-2 provides a synopsis of freight rail flows from 1996–2000.

A recent commodity forecast predicts growth in state freight rail tonnage of 51% by the year 2020.[2] Projected growth for Wisconsin's major rail commodities include intermodal shipments (126%); clay, concrete, glass, or stone (94%); food or kindred products (91%); pulp, paper, or allied products (72%); and lumber or wood products (67%). Shipments of Wisconsin's single largest rail commodity—coal—are projected to increase by 53% by 2020. Other rail commodity increases include nonmetallic minerals (46%), farm products (32%), and metallic ores (8%).

Table 1-1: Wisconsin Railroad Miles Operated 2002

Class I Railroads		Regional Railroads		Local Railroads	
Canadian National (CN)	1,781	Wisconsin & Southern (WSOR)	531	Escanaba & Lake Superior (ELS)	109
Union Pacific (UP)	584	Iowa, Chicago & Eastern (IC&E)	15	Wisconsin Great Northern (WGN)	19
Canadian Pacific Railway (CPR)	326	Duluth, Missabe & Iron Range (DMIR)	12	Municipality of East Troy (METWR)	7
Burlington Northern Santa Fe (BNSF)	276			Tomahawk Railway (TR)	4

Source: WisDOT Bureau of Planning

Figure 1-1: December 2002 Wisconsin Rail System

Source: WisDOT Bureau of Planning

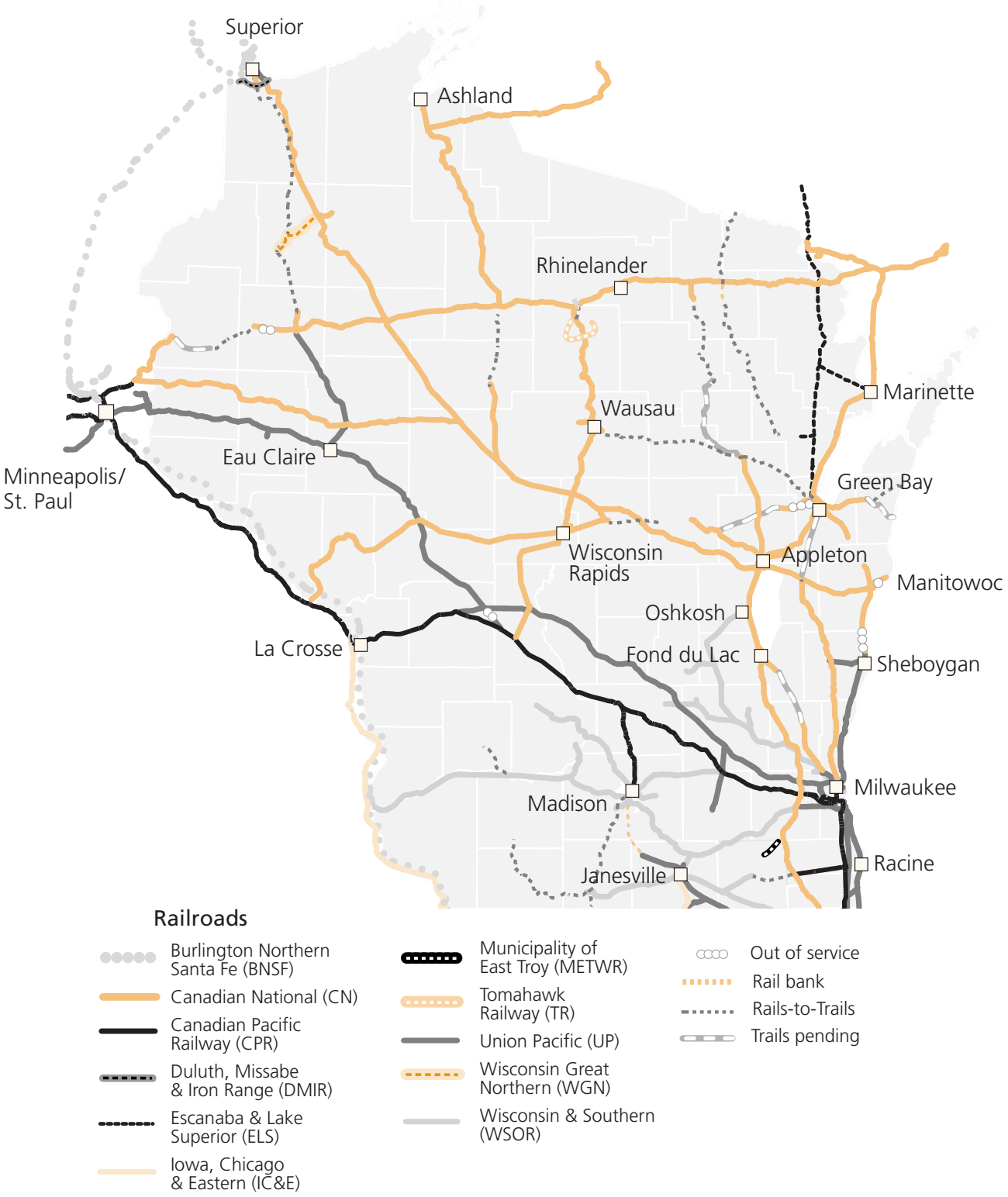


Table 1-2: Wisconsin Freight Rail Shipments 1996–2000 (millions of tons)

Type Shipment	1996	1997	1998	1999	2000	Avg.
Originating Tons	12.9	20.6	16.7	17.6	16.7	16.9
Terminating Tons	64.2	87.2	76.9	78.7	70.6	75.5
Overhead Tons	52.4	61.7	65.1	68.1	67.2	62.9
Total Tonnage	**129.5**	**169.5**	**158.7**	**164.5**	**154.6**	**155.4**

Source: WisDOT analysis of the STB Waybill Sample

The largest 2020 increases in tonnage are projected for coal (20.7 million additional tons), chemicals (7.4 million additional tons), pulp and paper products (7.0 million additional tons), intermodal (6.8 million additional tons), food products (6.7 million additional tons), and lumber or wood products (6.0 million additional tons).

The trucking industry's share of freight shipments in 2020 (when compared to 1996 base figures) are expected to increase from 58% to 64% and the rail share is expected to decrease from 33% to 29%. Trucks have been, and are expected to continue to be, the dominant freight transportation mode in Wisconsin. (*See Figure 1-2.*)

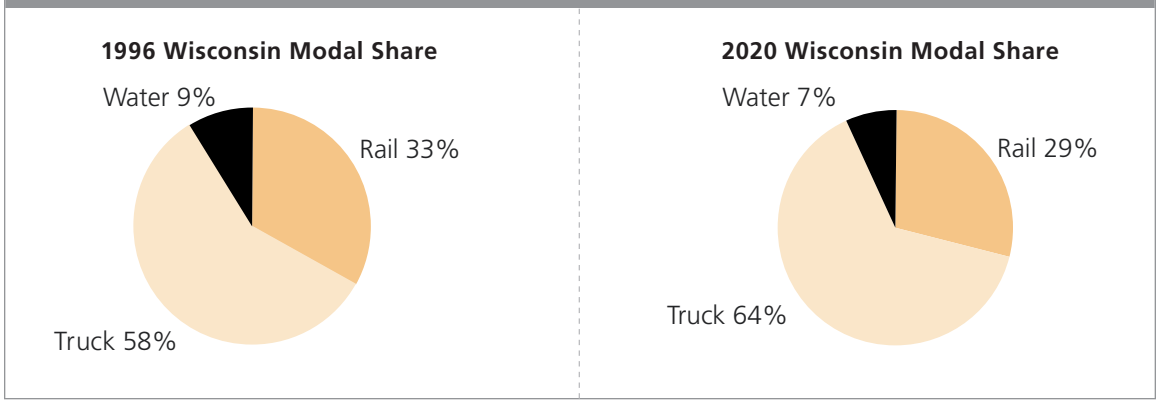
By 2020, 1,550 miles of Wisconsin's privately owned rail lines will be part of corridors carrying less than 3 million gross tons annually.[3] These "light density" lines could require financial assistance in order to preserve rail service and avoid abandonment of track (*See Figure 1-3*). Tonnage increases projected for 2020 are almost exclusively concentrated on mainline corridors and not on those identified here as "light density" lines.

Wisconsin DOT's role

WisDOT's current role in the freight railroad business is focused on helping retain or improve rail service in partnership with rail service customers, private railroads and local units of government. Public funding for freight rail purposes in Wisconsin has primarily been from state revenues.

WisDOT administers two assistance programs specifically for freight rail projects, the Freight Railroad Preservation Program (FRPP) and the Freight Railroad Infrastructure Improvement Program (FRIIP). WisDOT also administers the

Figure 1-2: Actual and Projected Freight Shipments by Mode



Source: Reebie Associates

Figure 1-3: Projected Wisconsin 2020 Freight Rail Density

Source: WisDOT Bureau of Planning

Transportation Economic Assistance (TEA) program, which has a broader focus but can be used to make railroad infrastructure improvements.

The FRPP grant program provides financial assistance to railroads, rail service customers and units of government to help preserve and improve service that might otherwise be lost. FRPP provides grants to fund up to 80% of the cost for several project types:

- To purchase abandoned rail lines in an effort to continue freight service, or for the preservation of the opportunity for future rail service.
- To rehabilitate infrastructure, such as tracks or bridges on publicly owned rail lines.
- To facilitate connectivity to a different transportation corridor as a viable alternative to rail line acquisition or rehabilitation.

The FRIIP loan program provides low interest loans to railroads, rail service customers and units of government for rail projects meeting one or two of these goals:

- Connect an industry to the national railroad system.
- Make improvements to enhance transportation efficiency, safety, and intermodal freight movement.
- Accomplish line rehabilitation.
- Assist business and industrial expansion.

Source: Escanaba & Lake Superior Railroad

The TEA program provides 50% state grants to local units of government for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage businesses and industries to remain and expand in the state. Grants of up to $1 million are available for transportation improvements that are essential for an economic development project.

Between 1993 and 2002, nearly $73 million of public funding was distributed by WisDOT for freight rail assistance. This assistance primarily funded infrastructure improvements such as track reconstruction and extensions through the FRIIP loan program. The remaining expenditures were from FRPP grants and the TEA program.

The state's role in intercity passenger rail consists primarily of funding a portion of the cost of Amtrak's Hiawatha Service operating between Milwaukee and Chicago. The state also owns the Milwaukee Amtrak station and manages grants for passenger station improvements. In addition the state conducts intercity passenger rail studies. These programs are discussed in greater detail in Chapter 2.

With respect to rail safety, the state helps plan, fund, and manage roadway/railway crossing improvements along passenger and freight rail corridors. These programs are also covered more extensively in Chapter 2.

Implications

Several of the rail trends discussed in this chapter may justify reexamining the state's role regarding rail transportation.

- A majority of Wisconsin's railroads are now owned by major (Class I) railroads. The concentration of ownership in a few large railroads and a greater focus on improving the speed and efficiency of overhead traffic could create some challenges to state industries interested in maintaining a rail transportation option. Facilitating discussions between Wisconsin industries and major and/or regional railroads may be a necessary role for WisDOT or other state agencies.
- If the trend continues toward fewer railroads operating on less track, additional money may be needed to not only preserve existing freight service in areas that are faced with abandonment, but to aid the state in potentially preserving entire rail corridors for future transportation needs.
- Future freight transportation patterns and resulting problems are likely to require solutions that are different from those of the past. Transportation experts predict that freight and related passenger congestion is likely to remain localized with congestion at any given bottleneck capable of producing severe system wide repercussions.[4] An analysis of potential Wisconsin's freight chokepoints with an eye toward making the most cost effective infrastructure investments may be in order.[5]
- Additional freight traffic on rail mainlines could impact, or be impacted by, the implementation of passenger rail. The same track generally serves both systems. Increases in either freight or passenger service will also have an impact on roadway/railway crossing safety.

The state's role and involvement in rail matters is a complicated issue given that the majority of the rail system in Wisconsin is privately owned. WisDOT's role in the railroad business has historically been limited to supporting intercity passenger rail service, helping to retain or improve freight rail service in partnership with private railroads and local units of government, and improving roadway/railway crossing safety. Acquisition of rail infrastructure with state funds was not allowed until an amendment to the Wisconsin Constitution was passed by two successive legislatures and ratified by the electorate in 1992.

This chapter provided the context for the issues examined in this report. Chapter 2 will discuss the primary issues and outline opportunities for the state to add value as these important rail transportation issues get addressed.

Chapter 2: Issues and Opportunities

This chapter provides a discussion of nine key issues that the public involvement process identified as being critical to Wisconsin's rail transportation future. The issues are grouped under the following categories: rail network, intercity passenger rail, safety, and legislative issues. Each discussion summarizes the issue, provides background information and lists opportunities for Wisconsin to help shape the issue. Chapter 3 will concentrate on emerging rail issues and their potential implications.

Rail Network Issues

Issue 1: Rail congestion

Rail congestion in the Chicago area has a tremendous impact on freight rail transportation in the upper Midwest, including the movement of freight across Wisconsin's transportation network.

Background

The Chicago Metropolitan Area is one of the busiest freight rail hubs in the United States. About one-third of the rail traffic in the U.S. (including much of Wisconsin's rail freight) originates, terminates, or passes through this area.[6] The quality and reliability of Wisconsin freight rail and intermodal service is often dependent on how smoothly freight operations run in the Chicago Metropolitan Area. The thickness of the line running through Chicago in Figure 2-1 highlights the area's significant role in US freight rail movement.

Figure 2-1: Chicago Rail Congestion

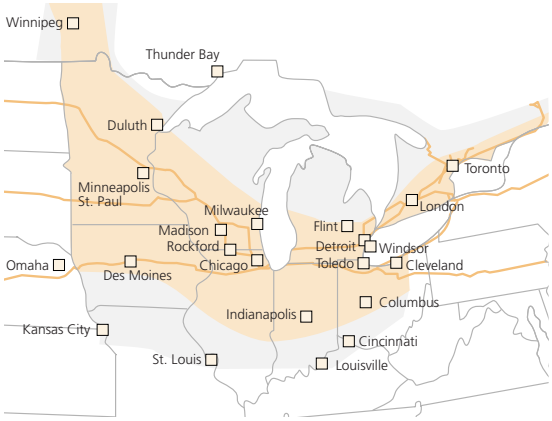
Chicago is America's third most congested metro area

- 37,500 freight car movements daily
- Average train speed under 12 mph
- Average truck speed under 15 mph
- 1,953 at-grade roadway/railway crossings

Source: U.S. Department of Transportation and Business Leaders for Transportation

Significant efforts have recently been undertaken to relieve rail congestion in both Chicago and the Midwest. In 1999, the chief operating officers of the nation's major railroads recognized the congestion issue and decided that they needed to treat Chicago as an integrated terminal rather than viewing it as simply a crossroads for individual rail operations. They formed a joint coordinating council, called the Chicago Planning Group, which ultimately developed an on-going mechanism for coordinating track work within Chicago and analyzing the potential of service design changes or capital improvements at choke points.

Figure 2-2: Midwest Freight Corridor



Corridor study area highlighted in orange.
Areas directly affected highlighted in gray.
Source: Upper Midwest Freight Corridor Study

In April 2002, the Business Leaders for Transportation, a Chicago business coalition focusing on policy and funding issues, made the following short-term recommendations to reduce and possibly eliminate bottlenecks:

- Develop public-private partnerships to make priority capital improvements in the rail network around Chicago.
- Secure $20 million in federal funding to find the best way to implement rail corridor upgrades.
- Create, by Illinois legislative action, a regional, public-private entity to plan, coordinate and obtain financing for the various capital improvements.

In June 2003, six Class I railroads and the city of Chicago designed a $1.5 billion plan to enhance the movement of freight though the city. The proposed public-private partnership calls for more than 70 projects. Examples are listed below:

- Improvements to five rail corridors, including a primary passenger corridor.
- Twenty-five new grade separations that would eliminate delays on rail, and/or highways.
- Six rail-to-rail "flyovers" that would separate passenger and freight rail operations.

Railroads are expected to pay more than $210 million for the project. Local, state, and federal funding sources are being sought for the remaining cost. The project is expected to take six years to complete.

Opportunities

WisDOT is currently participating in regional freight research and planning activities being coordinated by the UW Midwest Regional University Transportation Center (MRUTC). The Upper Midwest Freight Corridor Study, launched in June 2003, is analyzing freight data from several midwestern states and Canadian provinces. (*See Figure 2-2.*) The ultimate goal is to help improve the efficiency of Midwest freight movement by facilitating the development of a regional coalition of public and private interests to coordinate decisions on how and when freight moves throughout the region.

This partnership will consider and address short-term and long-term issues surrounding anticipated increases in freight movement within the region and the likely impacts on the region's infrastructure and economic health.

The first phase of the study is financially supported by six midwestern states, (Illinois, Indiana, Iowa, Minnesota, Ohio, Wisconsin) and MRUTC. Other collaborators include the state of Michigan and the provinces of Ontario and Manitoba. The study is scheduled to be completed in September of 2004.

Existing freight transportation plans and efforts will be synthesized and best practices will be highlighted. Freight regulations and performance measures will also be reviewed.

Participation in this study provides an opportunity for WisDOT to gain a greater understanding of the corridor and could put Wisconsin and other midwestern states in a more favorable position to qualify for potential federal freight transportation funds to address regional issues of national significance.

Issue 2: Intermodal facilities

In Wisconsin, private sector developers generally carry out the construction and operation of intermodal facilities. Sites are selected based on the level of economic activity in the area. WisDOT has traditionally taken part only as a potential source of public funding. It has been suggested that WisDOT should work more aggressively to advance the development of state intermodal freight facilities.

Background

Intermodal facilities are locations where bulk or containerized commodities are transferred from one mode of transportation to another. Intermodalism seeks to take advantage of the most cost-effective elements of each individual mode and maximize overall transportation efficiency.

Truck-rail intermodal facilities are the primary focus of this report. The economic opportunities presented by Wisconsin's ports will be examined in greater detail in Connections 2030.

Three truck-rail intermodal facilities, with a combined operating area of under 50 acres, are currently in operation in Wisconsin. Canadian National (CN) operates a facility in Arcadia and owns a facility in Chippewa Falls (*Figure 2-3*). The Milwaukee Intermodal Terminal at the Port of Milwaukee handles containers under contract with Canadian Pacific Railway. CN recently opted to close intermodal facilities in Neenah and Green Bay.

Forecasts for the year 2020 indicate that roughly 12 million tons of inbound and outbound Wisconsin commodity shipments per year would lend themselves to a truck-rail intermodal movement. That tonnage converts to roughly 877,000 annual truckloads or roughly 2,800 truckloads per day (six days per week).[7]

Figure 2-3: Wisconsin Intermodal Facilities 2004

Source: WisDOT Bureau of Planning

The 2020 forecasts indicate that six Wisconsin counties have concentrations of the types of commodities that generally indicate the potential for truck-rail intermodal movement (Brown, Dane, Outagamie, Milwaukee, Waukesha, and Winnebago).[8] Nearly two-thirds of that estimate was identified as coming from, or to, Milwaukee and Waukesha counties.

Today many shipments with origins or destinations in Wisconsin are currently trucked (drayed) to/from intermodal facilities located in Northern Illinois or the Minneapolis/ St. Paul metropolitan area.

A nearly 1,000 acre intermodal facility recently opened 45 miles south of the Wisconsin border in Rochelle, Illinois. It was designed to handle 350,000 over-the-road trailers or containers per year, and has staging or parking spaces for 4,000 trucks. The facility is likely to have a significant impact on Wisconsin freight shipping patterns.

Wisconsin currently offers financial assistance for intermodal projects through the Transportation Economic Assistance (TEA) grant program and the FRIIP loan program. The Harbor Assistance Program (HAP) can provide financial support for facilities located at Wisconsin ports. In addition, funding through the federal Congestion Mitigation Air Quality (CMAQ) program is potentially available for projects in air quality non-attainment areas.

Opportunities

Opportunities to develop truck-rail intermodal facilities in Wisconsin may be limited by external factors. It is unknown how Wisconsin freight movements may be impacted by large facilities like the Rochelle intermodal facility and a similar sized one in Joliet, Illinois. An analysis of the impact of these large out-of-state facilities and how they might create opportunities for related Wisconsin facilities is called for.

The majority of large commodity shipments, including those generated by rapidly growing international trade markets, utilize rail for the longest ground portion of a movement. A shorter truck movement, or "dray", is generally considered most economical for movements of 500 miles or less.[9] Wisconsin's proximity to large out-of-state intermodal facilities could possibly limit the potential need for additional state intermodal capacity. The state needs to monitor the evolution of Midwest intermodal movements and common drayage practices for opportunities to increase the economic competitiveness of state businesses.

Intermodal Transfer at the Port of Milwaukee
Source: WisDOT Bureau of Planning

Another opportunity for WisDOT to have an impact on intermodal movements involves the maintenance of the infrastructure that connects intermodal facilities with the state and interstate highway systems. Locally owned connecting roads can deteriorate quickly due to heavy truck traffic. These roads are sometimes referred to as "orphan roads" because regional transportation decision makers often overlook them when improvements and repairs are needed. They may not qualify for state and federal assistance, or they may require significant local community funding. Local transportation funds are generally used to maintain the infrastructure that moves people rather than freight.

Finally, the state has the opportunity to continue participating in planning studies that advance the understanding of the overall freight transportation system. Currently WisDOT is participating in a study to determine the intermodal potential of the Twin Ports of Superior, Wisconsin and Duluth, Minnesota. MRUTC and the University of Wisconsin–Superior are the sponsors of the study.

Issue 3: Rail corridor preservation

Wisconsin historically has taken a proactive stance on preserving rail corridors and working with local interests to maintain rail service. Current state rail preservation policy may need to be modified to address the impact of additional railroad mergers and consolidations of duplicate routes. It is projected that by 2020, over 1,550 miles of privately owned rail lines will host low levels of rail traffic. (See Figure 1.3 on page 7.) This may result in rail corridor abandonments or elimination of freight service for Wisconsin communities and businesses that rely on, or benefit from, rail service.

Background

WisDOT's current policy is to preserve freight rail service by working with local governments and affected shippers in situations where the projected benefits of preservation exceed the projected costs.

Rail corridor preservation does not always include preservation of rail service. Where it is not financially feasible to preserve freight rail service, the rail lines may be rail banked for future use or converted to recreational trails under the 1983 National Trails System Act (NTSA).

Lines used as trails under the NTSA are not considered abandoned. These lines retain their titles and easements and hence may be reactivated in the future. The majority of the lines preserved under Rails-to-Trails in Wisconsin have been acquired by the Wisconsin Department of Natural Resources (DNR).

Since 1995, railroads in the state have submitted more than 20 applications to the federal Surface Transportation Board (STB) to abandon more than 300 miles of track. About 85% of the miles have been preserved or are in negotiation to be preserved for future transportation use.

Unused lines that have not been formally abandoned can also be rail banked, in which case they are not converted to a trail but at a later date can be abandoned, sold or converted to Rails-to-Trails. WisDOT's FRPP grants are generally used to purchase lines for rail banking.

State law gives WisDOT the first right to acquire, for present or future transportation use, any property used in operating a railroad. WisDOT can exercise its right of first refusal or assign this right to any other state agency, county, city, or transit commission. This right

International containerized shipping

The Rails-to-Trails program preserves rail corridors for future transportation uses.
Source: Bonnie Gurber, DNR Bureau of Parks and Recreation

can only be invoked when a corridor is officially abandoned. It has not been extensively used because lines are usually preserved under the Rails-to-Trails program.

Opportunities

Rail corridor and service preservation were viewed as a priority by a wide range of individuals and stakeholders during the public outreach effort. A common view was that Wisconsin has historically done a good job of preserving corridors but has been less successful maintaining service.

The state has the opportunity to continue its proactive stance on rail corridor preservation. A first step would be to develop a prioritization methodology to evaluate the importance of individual light density lines to the state rail system. A comprehensive estimate of the range of costs to preserve all, or some, of these lines would be valuable to decision makers.

WisDOT Freight Railroad Preservation Program (FRPP) grants have been the primary mechanism for funding rail corridor acquisitions in Wisconsin. The program pays for 100% of real estate acquisition costs. Eligible projects can also receive grants to cover 80% of track improvement costs, with a 20% local share. The current annual FRPP budget of $2.25 million is not solely reserved for corridor acquisitions and may not be sufficient to fund both an aggressive corridor preservation effort and an anticipated increase in track improvements *(See Issue 4).*

Service preservation efforts have traditionally been state and local partnerships supported partially by FRPP program grants and Freight Railroad Infrastructure Improvement Program (FRIPP) loans. Corridor preservation has traditionally been accomplished under the Rails-to-Trails program.

Having a shared corridor with both rail service and a trail is an opportunity that has not been frequently pursued in Wisconsin. This type of arrangement is referred to as Rails-with-Trails (RWT). The existence of over 60 RWTs across the country indicates that safety and trespassing concerns may be overcome with careful planning and design. More research is needed to determine the potential role of RWTs in Wisconsin rail corridor preservation efforts.

Issue 4: Publicly owned rail infrastructure

Much of the existing state owned railroad track cannot meet future rolling stock and marketplace needs.

Background

The state of Wisconsin, in conjunction with several Rail Transit Commissions (RTCs), owns over 400 miles of railroad track.[10] The Wisconsin & Southern Railroad (WSOR) currently operates on the majority of Wisconsin's publicly owned corridors. WSOR has demonstrated significant growth, expanding from about 7,500 carloads annually in 1988 to over 44,000 carloads annually today.

The majority of Wisconsin's publicly owned lines were originally built to accommodate speeds and weights that are less than optimal today. Operating speed limits of 25 MPH are common on most of the state's publicly owned rail lines. These speed restrictions dictate that operators function essentially as feeder or "stub end" railroads.

Much of the state owned track was built when typical freight carload weights were 100,000 pounds or less. Many lines were upgraded in the 1980s and 1990s to accommodate the then rail industry standard of 263,000-pound gross weight cars. Today the rail industry is moving rapidly from a 263,000-pound gross weight car to a 286,000-pound gross weight car. A 315,000-pound gross weight car is being utilized in some areas and could become a future standard.

WSOR and the RTCs currently use WisDOT's FRIIP loan and FRPP grant programs for rehabilitating publicly owned lines. As old bridges are being replaced they are being built to accommodate cars in the 315,000 gross weight class.

Opportunities

The state of Wisconsin has several different approaches to consider regarding publicly owned track. One option would be to discontinue state participation in rail infrastructure ownership. The state could try to sell its publicly owned lines either as is, or, after making upgrades to make them more attractive to potential buyers. The argument is that WisDOT initially purchased the lines to assure that service would be preserved, and since service has been successfully preserved on many lines, it may now be more appropriate for the state to sell the lines to an operating railroad. A counter argument is that marginal private ownership could ultimately result in those lines needing to be publicly acquired again at a later date.

Wisconsin & Southern Railroad is the primary operator on state owned rail lines.
Source: WSOR

If a publicly owned corridor is a viable one, WisDOT could assist shippers and help regional railroads remain competitive by upgrading track and repairing or replacing bridges so that higher capacity cars can be used. The desire for higher speeds in high-volume corridors or the ability to handle heavier cars could require significant investments for line rehabilitation.

In order to decide a course of action, an inventory of publicly owned rail infrastructure needs (including rail bridges) should be conducted by WisDOT to determine the amount of investment needed to meet future service requirements.

Intercity Passenger Rail Issues

Issue 5: What is the appropriate level of intercity passenger rail service in Wisconsin?

Intercity passenger rail is a transportation alternative that can help individuals and business travelers avoid congestion on highways and uncertainty in the air travel industry. Intercity passenger rail also provides a mobility alternative to those who cannot, or choose not to, drive or fly.

Currently, convenient intercity passenger rail service is limited to southeast Wisconsin. Such service is not provided to three other populous and rapidly growing regions of the state: Madison (Dane County), Green Bay and the Fox Valley, and far western Wisconsin bordering the Twin Cities metropolitan region.[11]

Figure 2-4: Wisconsin Amtrak Service 2004

Source: WisDOT Bureau of Planning

*Empire Builder does not stop in Sturtevant
Amtrak Thruway motorcoach connections not shown

Expansion of passenger rail service in Wisconsin in the near future is highly dependent on the passage and funding of a proposed federal high-speed passenger rail program. Wisconsin needs to be prepared to respond to any and all reasonable opportunities to enhance the mobility of its citizens and the economic competitiveness of its businesses.

Background

Wisconsin's current intercity passenger rail system consists of short- and long-distance train service supplemented by connecting intercity bus ("feeder bus") service. Amtrak's Hiawatha Service and Empire Builder connect to Amtrak's national passenger rail system. Greyhound, Lamers Bus Lines, and Coach USA subsidiary Van Galder Bus Company provide feeder bus service to additional communities throughout the state. Figure 2-4 shows Wisconsin's Amtrak service.

The Hiawatha Service offers seven daily round-trips. Service was increased from six to seven round trips in November 2002, resulting in the greatest number of frequencies on the Amtrak system outside of California and the Northeast Corridor. The trains travel between Milwaukee and Chicago in 89 minutes. In 2002, the service operated on-time 94% of the time representing the best on-time performance record on the entire Amtrak system. In calendar year 2003 Amtrak Hiawatha Service attracted just over 430,000 riders.

The Empire Builder provides Wisconsin residents one train daily in each direction between Chicago, Minneapolis/St. Paul and the Pacific Northwest. Travel time between Chicago and Minneapolis/St. Paul is roughly eight hours. In 2003, about 75,000 travelers rode the Empire Builder to and from stations in Wisconsin.

The state of Wisconsin is actively involved in Wisconsin's intercity passenger rail system. The states of Wisconsin and Illinois contract with

Source: Martin J. Simane

Amtrak to provide Hiawatha Service. Under the current one-year contract, the state of Wisconsin will pay approximately $5.1 million for the service through June 2004. The state of Illinois will contribute approximately $1.7 million. Amtrak provides the Empire Builder service without direct subsidy from any state as part of its national system of long distance passenger service.

The state of Wisconsin owns the Milwaukee Amtrak station and plans to redevelop it into a multimodal transportation terminal by 2005. The state is also developing a new station at Milwaukee's General Mitchell International Airport (GMIA). Expected to be completed in 2005, the new GMIA station will serve the southern Milwaukee metropolitan region and will provide a multimodal opportunity to make rail/air connections. The state is also supporting the development of a new station in Sturtevant that will replace the current facility.

Opportunities

WisDOT has been studying ways in which Wisconsin's intercity passenger rail system could be expanded and developed into a more robust component of the state's overall transportation system. WisDOT, along with Amtrak and eight other Midwestern state DOTs, is currently evaluating the Midwest Regional Rail System (MWRRS), a proposed 3,000-mile Chicago-based passenger rail network in the Midwest *(See Figures 2-5 and 2-6).*

The MWRRS would provide frequent train trips between Chicago, Milwaukee, Madison, La Crosse, and St. Paul and between Chicago, Milwaukee, and Green Bay. Modern trains operating at peak speeds of up to 110-mph could produce travel times competitive with driving or flying.

Expansion of passenger rail services in Wisconsin is dependent on three premises:

- Significant federal financial support is required for expansion of intercity passenger rail.

Figure 2-5: Proposed Midwest Regional Rail System

Source: WisDOT Bureau of Planning

- The full benefits of intercity passenger rail service can only be achieved if the service is part of an integrated local, regional, and multi-state transportation network. This approach will require intercity passenger rail service to be closely coordinated, not only with a multi-state passenger rail system, but also with a feeder bus network, local transit systems and potential commuter rail service.
- The public sector will be financially responsible for all rail infrastructure improvements beyond those needed to add freight capacity. Agreements with potentially affected freight railroads will have to be reached before intercity passenger rail improvements can be implemented.[12]

Figure 2-6: Proposed Midwest Regional Rail System in Wisconsin

Source: WisDOT Bureau of Planning

Figure 2-7: Eau Claire Passenger Rail Route Possibilities

Source: WisDOT Bureau of Planning

"Eau Claire plus La Crosse" alternative
Every second train through WI Dells travels to Eau Claire first and returns via La Crosse

"Eau Claire West" alternative
Service is extended from Minneapolis to Eau Claire and back

Potential MWRRS Expansion

As a result of WisDOT's ongoing study of the proposed MWRRS, public officials and citizens from other Wisconsin communities have expressed interest in having passenger rail service return to their communities. Several regions, and options within those regions, have undergone preliminary examination to assess their potential for implementation after completion of the MWRRS.[13]

Several different passenger rail options for the rapidly growing region of West Central Wisconsin (including the cities of Eau Claire, Menomonie and Hudson) were examined for feasibility after completion of the MWRRS. Figure 2-7 depicts two options that could be more closely examined at a later date.

Both the "Eau Claire Plus La Crosse" and "Eau Claire West" routes were considered likely to produce ridership and revenue figures that could improve the overall financial performance of the base Midwest Regional Rail System. The "Eau Claire Plus La Crosse" alternative would require a much greater capital investment. The Rail Advisory Committee was on record supporting the closer examination of these options only after completion of the proposed MWRRS route through La Crosse.

The initial analysis of a potential Janesville route, which would provide direct train service to Madison and Chicago, produced ridership numbers similar to the Eau Claire routes. However, much of this ridership would be diverted from the MWRRS' base Madison–Milwaukee–Chicago route. The Janesville route would likely reduce the overall financial performance of the base Midwest Regional Rail System.

An updated MWRRS Business Plan, scheduled for completion in 2004, will provide critical information that will be incorporated into Connections 2030.

Safety issues

Issue 6: Hazardous materials

Rail incidents involving hazardous materials occur infrequently in Wisconsin but do have the potential to have significant health, safety, and/or property impacts. An increasing interest in national security and the potential of terrorists targeting hazardous material shipments may require added safety measures in the future.

Background

The United States Department of Transportation (U.S. DOT) defines hazardous materials, or "Hazmat", as substances that are capable of posing an unreasonable risk to health, safety, or property.

During the ten-year period of 1993 to 2002, U.S. DOT statistics show that there were 42 documented Hazmat incidents involving rail in Wisconsin.[14] None of the Wisconsin rail Hazmat incidents occurred at roadway/railway crossings, and seven were due to derailments. The remaining 35 incidents were generally caused by equipment failure, often gasket and valve leaks while in non-public areas. No injuries occurred during any of the incidents.

In the same ten-year period a total of 10,528 rail-related Hazmat incidents were reported nationally compared to 134,812 truck-related Hazmat incidents. U.S. Census Bureau Commodity Flow Surveys indicate that trucks generally transport about ten times more Hazmat tonnage than railroads.

In Wisconsin, over seven million tons of Hazmat traveled to, from, or through the state by rail in 2000. Table 2-1 shows that 4.8% of all of state train carload movements carried hazardous materials, which represents 4.6% of total state rail tonnage in 2000.

A 1990 Hazmat study coordinated by Wisconsin Emergency Management (WEM) indicated that the state was at risk at that time for various types of Hazmat releases, and that statewide capability for responding to such releases was lacking. In response, the Wisconsin Department of Military Affairs created eight Regional Hazardous Materials Response Teams capable of dealing with such incidents.

Considerable progress has been made to address the concerns of the 1990 report through the creation of the regional team program, and the formation of local and county emergency planning committees.

The FRA has safety enforcement authority for railroad operations within the United States. More than 400 inspectors make nearly 90,000 total annual inspections of track, rail tank cars and shipping facilities around the country (including Wisconsin). Violations of any of the federal Hazmat regulations could result in a fine of up to $25,000.

The FRA allows states to take part in the inspection of privately owned rail infrastructure. States can hire supplemental inspectors at their own expense and receive FRA training in Hazmat and other inspection programs. Wisconsin does not participate in the supplemental FRA inspection program.

Table 2-1: Hazmat Movements by Rail in Wisconsin (2000)

	Carloads	% of all Carloads	Tons	% of Total Tonnage
Hazmat	123,370	4.8%	7,180,887	4.6%
All Commodities	**2,573,478**	**100%**	**154,584,599**	**100%**

Source: 2000 Surface Transportation Board Waybill Sample

Railroads operating in Wisconsin also conduct their own Hazmat inspections.

There are also several federal programs that assist local governments and tribal governments in preparing for emergencies. One of these programs is called the Comprehensive Hazmat Emergency Response-Capability Assessment Program (CHER-CAP). This Federal Emergency Management Agency (FEMA) program assists communities and tribal governments in obtaining a greater understanding of Hazmat risks. The FEMA program assists communities with training, planning, simulation and testing for all transportation modes.

Opportunities

Wisconsin has the opportunity to take a proactive stance on the handling of hazardous materials. This would involve developing a greater understanding of what types of hazardous materials pass through Wisconsin and on which routes. Also, monitoring the development of new hazardous commodities in Wisconsin, such as ethanol, will assist emergency planners.

WisDOT has the opportunity to be a partner with other agencies to encourage increased attention to the issue of hazardous materials and to encourage communities to participate in advanced emergency response training.

Issue 7: Motor vehicle/train crashes and trespassing

WisDOT maintains an aggressive approach to improving safety at roadway/railway crossings. Implementing a combination of strategies has the greatest potential for reducing crashes and fatalities.

Prioritizing crossing improvements is complicated because WisDOT and the Office of Commissioner of Railroads (OCR) follow different methodologies for prioritizing improvements.

Nationally, trespassing is becoming the leading cause for railroad fatalities.

Background

The state of Wisconsin has jurisdiction over 4,255 public roadway/railway crossings. A large percentage of these crossings are located on roads in the state with lower levels of traffic. Table 2-2 provides a breakdown for all the crossings in the state and the highest level of warning device present.[15]

Incidents at roadway/railway crossings usually are the result of one or more causes ranging from problems with the site to human error. Three basic types of actions can be pursued to increase safety at roadway/railway crossings. These are engineering actions, educational actions, and enforcement actions. Efforts to eliminate rail property trespassers also have the potential to reduce the increasingly significant number of injuries and fatalities attributed to trespassing.

Table 2-3 shows crashes and fatalities by type of warning device for the year 2000. The 13 crossing fatalities compare to 801 roadway fatalities that year in Wisconsin.[16]

Engineering

The greatest safety and traffic flow improvements are typically achieved by completely eliminating an at-grade crossing either by closing the crossing and routing traffic to a nearby crossing with better protection, or by physically separating the railway and the roadway with an underpass or overpass. The latter option, commonly referred to as a grade separation, is sometimes costly and is very often limited by physical and/or jurisdictional factors.

Low investment engineering efforts also can play an important role in reducing train/motor vehicle crashes. These actions include improving roadway surface, sight distance, geometric configuration, brush and tree cutting and consolidating lightly used and redundant crossings.

Education

Educational efforts attempt to increase public awareness of the potential for crashes at

roadway/railway crossings. They emphasize the need for motorists, pedestrians, and bicyclists to properly respond to crossing warning devices. Educational efforts are primarily implemented through the WisDOT-sponsored Operation Lifesaver, Inc. program.

Wisconsin and neighboring states have periodically carried out supplemental crossing safety media campaigns. In 1997 and 1998, Wisconsin, Iowa and Minnesota all ran American Association of Railroads (AAR) radio and television Public Service Announcements (PSAs). PSAs run without charge at the discretion of radio and television station programmers. They often are aired in portions of the broadcast day with the fewest listeners/viewers. They can also be run as paid advertisements in more desirable time slots.

The Wisconsin, Iowa and Minnesota supplemental campaigns all were followed by similar reductions in crashes. Purchased media campaigns had a greater impact on reducing crashes than the PSA programs. In all three states, there was a permanent reduction in the number of crashes per year following the campaign.

Enforcement

In 2000, almost a third of the motor vehicle-train crashes and over half of the crossing fatalities in this country occurred at roadway/railway crossings equipped either with flashing lights or with gates and flashing lights. How frequently and forcefully motorist violations at these high traffic crossings are enforced and prosecuted has the potential to significantly contribute to crossing safety.

In 2000, the most common roadway/railway crossing offense in Wisconsin was "Failure to Stop at a Roadway/Railway Crossing with a Warning Signal Operating". A total of 177 citations were issued. In over 23% of these cases the citation was amended to "Illegal Passing at a Roadway/Railway Crossing" which carries a 3-point drivers license penalty instead of a 6-point penalty.

Table 2-2: Current Highest Level of Warning Device by Type of Crossing

Type of Crossing	Highest Level of Warning Device			
	Passive	Active		Total
		Lights	Gates	
Public	2,354	1,366	535	4,255
Private	2,606	1	4	2,611
Pedestrian	95	1	---	96
Totals	**5,055**	**1,368**	**539**	**6,962**

Source: WisDOT Bureau of Planning

Table 2-3: Public Roadway/Railway Crossing Crashes, Fatalities and Injuries by Type of Warning Device - 2000

	Type of Device	Crashes	Fatalities	Injuries
Active	Lights & Gates	8	1	3
	Lights Only	28	5	12
Passive		74	7	31
Totals		**110**	**13**	**46**

Source: WisDOT Bureau of Planning

Source: WisDOT Bureau of Planning

Citations for "Driving Under, Around or Through a RR Crossing Gate" carry the highest fine and a six-point penalty. These offenses were amended even more frequently. One out of every three of the 59 citations for this offense in 2000 was amended.

Trespassing reduction

Engineering, education and enforcement actions have all contributed to a reduction in fatalities at roadway/railway crossings in Wisconsin and around the nation. This decline led the U.S. DOT's Office of Inspector General (OIG) to conclude in 1999 that, "As grade crossing fatalities have declined, trespassing has become the leading cause of railroad fatalities."[17]

Nationwide, in 2000, 463 people were killed and 414 people injured in trespassing related crashes. The age group 21–25 had the highest death and injury experience. Wisconsin had five fatalities and six injuries related to trespassing incidents in 2000.[18] While 72 people died in roadway/railway crossing crashes in Wisconsin between 1991 and 2000, 62 died in railroad property trespassing incidents. Many of the trespassing injuries and deaths involve individuals under the influence of alcohol. The U.S. DOT Office of Inspector General estimates that suicide is suspected in up to 40% of railroad trespassing fatalities.

The Wisconsin penalty for "incidental" trespassing on railroad property is between $2 and $50. Many other states have trespassing penalties ranging from a Class C misdemeanor (30 days in jail and/or a fine of up to $1,000), to a Class A misdemeanor (one year in jail and/or a $5,000 fine). Oregon has the strictest trespassing law in terms of broadly defining trespassing. Anyone found guilty of walking along railroad tracks outside of a public street crossing is subject to a $5,000 fine and/or a year in jail.

Typical Wisconsin railroad trespassing citations are for walking directly across the tracks, getting on and off of moving cars, walking, jogging, fishing, or biking on railroad bridges. This statute does not cover private crossings and special farm equipment crossings.

Trespassing on railroad property now has added national security ramifications. Railroads are taking extra precautions to secure rail yards and facilities.

Agencies involved in crossing safety

Making improvements to roadway/railway crossing safety involves individual railroads and the coordinated efforts of several agencies at the federal and state level.

Federal Government

Several different federal agencies share responsibilities for maintaining and improving the safety of roadway/railway crossings. They include the Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), Surface Transportation Board (STB), Federal Transit Administration (FTA), National Transportation Safety Board (NTSB), and the National Highway Traffic Safety Administration (NHTSA). Although not a federal agency, Operation

Lifesaver, Inc. (OLI) plays a significant role in roadway/railway safety as a private nonprofit corporation with close ties to the U.S. DOT.

State Government

At the state level the Office of the Commissioner of Railroads (OCR) and WisDOT share the responsibility for safety issues related to public roadway/railway crossings. Both agencies identify projects for federal funding for roadway/railway crossing safety improvements.

Office of Commissioner of Railroads (OCR)

The OCR is the only agency with statutory responsibility and legal jurisdiction to investigate the safety of roadway/railway crossings. It has the legal jurisdiction and the responsibility for determining the level of protection and the adequacy of protection needed for each roadway/railway crossing.

Currently WisDOT works in coordination with the OCR to maintain safety at roadway/railway crossings. The separation of regulatory authority and infrastructure improvement responsibility can sometimes cause confusion. The agencies frequently have different priorities when it comes to determining what crossings need safety upgrades.

Wisconsin Department of Transportation (WisDOT)

WisDOT is the primary state agency responsible for managing and administering federal and state transportation aids used to fund roadway/railway crossing improvements. WisDOT also serves as sponsor of the Wisconsin Operation Lifesaver, Inc. program.

WisDOT regularly improves crossings as part of highway projects. For example, if a highway project impacts a roadway/railway crossing, WisDOT conducts an evaluation of the crossing to determine if any crossing improvements are warranted. The cost of a needed crossing improvement is generally included in the total highway project budget.

WisDOT, with the cooperation of an affected railroad, also initiates its own projects aimed at improving roadway/railway crossing safety through the installation of warning devices on the highway or through hazard elimination projects on the highway side. Hazard elimination efforts include such activities as smoothing the roadway surrounding a roadway/railway crossing or separating the highway from the railroad tracks by building a bridge over or under the intersection.

WisDOT also works to ensure that roadway/railway crossing designs conform to applicable standards. This includes ensuring that traffic signals are timed with oncoming trains.

Railroads

The responsibility for maintaining the roadway/railway crossing surface and traffic warning devices falls on the railroads. Grade separations are maintained by the railroad if the tracks are over the highway and by WisDOT if the highway is over the tracks.

Opportunities

The number of safety improvements completed each year is limited by fiscal constraints and the ability of railroads to make the improvements once funding is authorized. A WisDOT system-level analysis of potential improvements to enhance safety at Wisconsin roadway/railway crossings is conducted regularly. The analysis forecasts potential crossing improvement projects out to the year 2020 based on projected increases in today's traffic volumes. Criteria used in the analysis have been adjusted to produce a list of crossing improvements that, in five-year increments, could be completed with the current level of public funding. The program has the potential to produce significant crossing safety improvements.

Another opportunity to increase safety at Wisconsin's crossings could come with the possible passage of a new federal high-speed passenger rail program. If implemented, it is reasonable to assume that the program would include new funding for an accelerated roadway/railway crossing improvement effort.

WisDOT has also recently implemented a Rail Crossing Information System (RCIS). This is a database that houses over 160 fields about the physical characteristics of rail crossings. Much of this information is related to crossing safety. An investment in populating the database on a statewide basis will assist decision makers in prioritizing crossing improvements.

The agencies and railroads responsible for improving roadway/railway safety should also take advantage of all opportunities to get local law enforcement officials to place a high priority on roadway/railway traffic violations and trespassing. Although there is no evidence to suggest that local law enforcement officials are not responsive to roadway/railway crossing and railroad trespassing incidents, a shared understanding of the seriousness of the problem would be positive. Issuing citations to offenders is one step in the enforcement process. Prosecuting those offenders and invoking the appropriate fine or penalty is another.

Some of the possibilities for improving enforcement and reducing trespassing include the following options:

- Media campaigns stressing both safety and the risk of a significant fine due to an acceleration in enforcement efforts could provide double benefits. An educational campaign linked with a strong enforcement message could also strengthen the message to the law enforcement community that crossing violations have to remain a priority.
- Enforcement efforts aimed at reducing the number of motor vehicle crashes at roadway/railway crossings can involve both routine observation and special operations targeted at selected crossings. Special operations are usually conducted at the discretion of local police agencies in reaction to a serious accident or a high volume of accidents.
- Posting marked police cars at roadway/railway crossings would likely reduce the number of traffic violations but the actual task of issuing a citation for a crossing violation is a logistical problem. Chasing crossing violators across railroad tracks in front of a train is inherently unsafe.

WisDOT also has the opportunity to review other states' successful roadway/railway crossing improvement strategies. Local law enforcement agencies in some states address roadway/railway crossing violations by using an automated crossing enforcement system. A camera records a driver's response to automatic or mechanical signal devices and crossing gates. Two photographs, one of the vehicle's license plate and the other of the driver's face, are taken as the basis for issuing a citation. The camera equipment is usually mounted on a 12-foot high pole in a vandal-proof cabinet. Signs informing motorists that photo surveillance is underway are installed on all street approaches to the crossing. Each surveillance unit is estimated to cost $66,000.

Wisconsin does not allow the use of cameras for enforcing speeding laws. There are, however, no prohibitions on the use of cameras to enforce other violations. At the very least, cameras could document the number and types of violations occurring at a given crossing to identify the need for more aggressive enforcement efforts at that particular crossing.

Legislative issues

Issue 8: Railroads taxation

The Class I railroads operating in Wisconsin say that the cost of state rail taxes puts state businesses at a competitive disadvantage and consumes money that could be used for infrastructure improvements.

Background

In 1996, the Wisconsin Departments of Transportation and Revenue created the State of Wisconsin Railroad Taxation Study Committee. The committee included leadership and staff from the two agencies, the railroads operating in Wisconsin, several shippers, and a trucking company. The committee's report indicated that, "… there was a difference in the amount of funds that railroads pay in … taxes and the amount of benefits that they receive." The report also stated "…the $90 million of expenditures that the railroads incur to maintain and improve their track structure (or maintenance of way) is significant."[19]

Some shippers on the committee noted specific instances where shippers lose competitive advantages with shippers in other states due to higher rail rates necessitated by higher Wisconsin railroad taxes. They indicated that the state's railroad taxes lead shippers to look for other transportation alternatives even though rail might be the most appropriate mode to meet a particular shipping need.

A property tax that produces an average of between $10 million and $12 million per year generates the bulk of taxes collected from Wisconsin railroads. These taxes go into the state transportation fund and are used for transportation related expenditures. They are based on the market value of Wisconsin rolling stock and infrastructure multiplied by the statewide average net property tax rate. Railroad terminals and repair facilities are also taxed, but the tax revenues generated by terminals and repair facilities are ultimately distributed to the Wisconsin communities where these structures are located.

Other rail taxes, including the sales and use tax on materials for track and right-of-way maintenance, go to either the State General Fund or to local governments. Taxes vary from year to year but are estimated at just over $1 million annually.

The railroad industry tax committee ultimately recommended tax relief for the railroads. Two specific forms of relief were recommended: a sales and use tax exemption for maintenance of rail right-of-way materials used in Wisconsin; and, an income tax credit for all expenses related to maintenance of right-of-way. Neither would have any affect on Wisconsin funds dedicated to transportation.

Although the 1997–99 state budget passed by the legislature supported exempting railroads from the sales and use tax for right-of-way improvement materials, the provision was later eliminated by a gubernatorial veto.

Opportunities

The state of Wisconsin has the opportunity to revisit the issue of railroad industry tax relief. The consensus of both the State Rail Advisory Committee and the Rail Industry and Shippers Advisory Group was that it would be desirable but extremely difficult to mandate that any tax savings be credited directly to Wisconsin shippers. Any effort aimed at trying to help keep the Wisconsin railroad industry competitive with other transportation modes was viewed as positive.

Issue 9: Railroad regulations

Some of the state's railroad regulations are outdated, do not reflect current agency responsibilities and may be detrimental to providing efficient rail service.

Background

Wisconsin railroads point to the problems created by regulations contained in Wisconsin State Statutes that remain in place even though they were pre-empted by later federal legislation.

Preliminary WisDOT research indicates that outdated Wisconsin rail industry statutes do exist. A scan of Wisconsin railroad industry regulations produced a list of at least 51 statutes that pre-date federal railroad industry deregulation legislation and have not been updated. Other statutes that have been amended since these federal deregulatory initiatives also could contain provisions that are outdated and obsolete.

The effect that outdated state statutes have on rail service is difficult to assess. They create the potential for problems. The exposure to civil complaints that could be based on antiquated state statutes continues to be a railroad industry concern. The costs of defending these actions in court have been said to be substantial for railroads in the past. Shippers usually absorb added costs in the form of higher rates. Outdated state regulations may also waste the valuable time and resources of state regulators.

In addition to outdated regulations, existing regulations may be appropriate and up-to-date, but assign enforcement responsibility inappropriately. For some of these regulations the Office of the Commissioner of Railroads is charged with oversight responsibility but often does not have adequate staff or expertise on the subject to enforce them. An example is railroad workforce health and safety regulations that may be more appropriately handled by Wisconsin's Department of Workforce Development.

Opportunities

Wisconsin has the opportunity to improve the level of railroad service by examining the strengths and weaknesses of its current railroad regulations. A review of enforcement responsibility will also result in a more efficient role for state government agencies.

This chapter discussed the key issues that are likely to have an impact on Wisconsin's rail transportation system. The following chapter reviews several emerging issues.

Chapter 3: Emerging Issues

Source: Martin J. Simane

A number of possible state and federal policy and regulatory changes could have a significant impact on the future of Wisconsin's railroads. Three issues are briefly discussed in this chapter. Although it is premature to know what impact these issues may ultimately have, it is important to monitor their development.

Commuter rail

Commuter rail refers to passenger rail service that operates between and within metropolitan and suburban areas, connecting those areas with large business and/or urban centers. Commuter rail service usually operates during peak travel times with limited stops, and usually operates in conjunction with other transit modes as part of a regional transit system. Commuter rail service operates primarily on existing railroad tracks.[20]

Five commuter rail corridor studies have recently been conducted. These studies include the following:

- Dane County/Greater Madison Metropolitan Area–Transport 2020.
- Kenosha–Racine–Milwaukee Transportation Corridor Study.
- Rock County–Harvard, IL to Clinton, WI Metra Commuter Rail Extension Study.
- Walworth–Fox Lake Corridor Commuter Rail and Bus Service Feasibility Study.
- Burlington–Antioch Corridor Commuter Rail and Bus Service Feasibility Study.

All potential commuter rail routes except Dane County's are envisioned as extensions of Chicago's Metra commuter rail system.

Developing commuter rail systems is an issue that has moved to the forefront of transportation planning in Southeastern Wisconsin and Dane County. The issue is addressed in Governor Jim Doyle's 2003–2005 budget, which includes the following language … "WisDOT

shall administer a commuter rail transit system development grant program. The amount of a grant awarded shall be limited to an amount equal to 50% of the portion of the project cost in excess of the federal aid funding for the project, or 25% of the total project cost, whichever is less."

An appropriation of $400,000 was approved to fund commuter rail studies during the budget period. Prior funding had already been secured for the Dane County commuter rail project planning efforts.

As these projects move from the planning phase to the potential implementation phase, WisDOT needs to initiate the process of examining the issues surrounding possible state participation in commuter rail system operating expenses.

Locomotive horns at roadway/railway crossings

The sounding of locomotive whistles or horns at roadway/railway crossings has been a safety issue since the late 1800s. With the growth of urban areas, "quiet zones" have been established in response to complaints and concerns about the volume and frequency of train horns. Municipalities across the country, including 35 in Wisconsin, have enacted local ordinances or agreements with railroads to establish quiet zones banning the sounding of train horns entirely or during evening hours.

In 1984, the state of Florida enacted legislation to allow communities to ban the non-emergency use of locomotive horns during nighttime hours at crossings equipped with flashing lights, gates and special signs. By 1990, over 500 crossings in Florida were affected by horn bans. The Federal Railroad Administration (FRA) expressed concern about a dramatic increase in collisions at roadway/railway crossings during ban hours and began studying the safety impacts of horn bans. Subsequent FRA

Source: WisDOT Bureau of Planning

studies indicated a 58% greater probability that roadway/railway crossings incidents will occur at crossings where train horns are not sounded.

The FRA proposed a rule that would require a locomotive horn to be sounded while a train is approaching or entering a public roadway/railway crossing. The proposed rule also provides for an exception to this requirement where: (1) there is not a significant risk of loss of life or serious personal injury; (2) use of the locomotive horn is impractical; or, (3) supplementary safety measures fully compensate for the absence of the audible warning provided by the horn.

Implications

If promulgated and adopted as proposed, the rule could have a significant impact. Thirty-five communities in Wisconsin have enacted ordinances banning the sounding of locomotive horns and there are over 700 public roadway/railway crossings in Wisconsin affected by these ordinances.

Implementation of the proposed rule could significantly increase the number of crossing signalization upgrades requested in Wisconsin. If each quiet zone community in the state were to comply, the total estimated cost could exceed $75 million.

Proposal to reduce mercury emissions

In May of 2000, the Wisconsin Department of Natural Resources (DNR) received a citizen petition to adopt rules requiring reductions in mercury emissions from our state's largest known sources of mercury emissions. The targeted emission sources included Wisconsin's 14 coal-powered energy plants.

Coal contains a number of trace elements, including mercury. When coal is burned mercury is released into the air. If airborne mercury comes into contact with water, it can be transformed by aquatic bacteria into methylmercury. Methylmercury can readily enter the food chain and accumulate in animals.

In recent years, methylmercury levels found in some Wisconsin predatory fish and aquatic mammals have been increasing. The rise in methylmercury levels has forced the DNR to increase the number of consumption advisories for fish taken from Wisconsin waterways. Mercury has been associated with both neurological and developmental damage in humans.

In June of 2003, the Wisconsin Natural Resources Board approved a revised mercury emissions reduction rule. In order to comply with the rule, utilities would need to cut mercury emissions by 40% by 2010, and 80% by 2015. These reductions could occur as existing coal-fired equipment is taken out of service and/or replaced with new equipment using improved technology or a different energy source.

The proposed rule contained compliance flexibility. Utilities would have had up to two years to satisfy the annual requirements. A multi-pollutant option was included that would allow relief from the initial reduction requirement of 40% to accommodate those major utilities that needed additional time for comprehensive long-range planning. There was also a clause to obtain a waiver from meeting an annual requirement based on electric supply emergency, fuel supply disruption or other unavoidable events.

In the summer of 2003, the Assembly Natural Resources Committee rejected the proposed regulation and sent it back to DNR for further study. Once a final version of this rule is known, WisDOT will be better able to calculate how this may affect coal shipments to, and through, the state.

Implications

New restrictions on mercury emissions would probably result in Wisconsin energy companies having to choose between installing expensive equipment to remove mercury from coal power plant emissions or switching to other methods of electricity generation.

Coal is Wisconsin's largest rail commodity both for internal state use and as an overhead commodity. Restrictions on its use would greatly impact Wisconsin's railroads. Wisconsin utilities have made a huge investment in coal energy generation and it is unlikely to be easily altered in the short-term. The mercury rule needs to be monitored for its potential long-term impact on the railroad industry.

Source: Thomas E. Johnson

Chapter 4: Synopsis

Wisconsin's rail system provides a network over which freight and people can be transported efficiently. As such, rail is and will continue to be an important mode of transportation for Wisconsin.

- Freight rail service provides a low cost transportation alternative for the high volume, lower value commodities that are essential to many of Wisconsin's traditional manufacturing industries. Rail provides a low cost energy source (coal) to the state's electric utilities. In the expanding arena of international trade, freight rail movement between Wisconsin, Canada, and Mexico will continue to increase, and transcontinental containerized shipments involving ship/rail/truck intermodal movements are projected as a significant growth area.
- Intercity passenger rail service in Wisconsin provides access to commercial and cultural attractions in Chicago, Minneapolis/St. Paul and other parts of the country. It provides a mobility choice for those traveling in congested areas and for those who cannot, or choose not to, drive or fly.
- Crossing safety measures allow the two modes — roadways and railways — to interact with minimum risk and maximum transportation network efficiency.

Numerous rail issues have an impact on the efficiency of the rail network. These include rail congestion, intermodal facilities, preserving rail corridors and maintenance of publicly owned infrastructure. Another issue, determining the appropriate level of intercity passenger rail service is currently being studied under the Midwest Regional Rail Initiative. The transportation of hazardous materials, reducing crashes at roadway/railway crossings and trespassing are other issues that affect citizens, communities and businesses. Inefficiencies in the regulatory arena in which private railroads operate are impacting shippers, and possibly, the quality of rail network infrastructure.

There are many opportunities for the state to position itself for the impact of growth in both freight and passenger rail. Several opportunities involve increasing current public sector efforts along with monitoring the rail industry to ensure that Wisconsin business and citizens continue to have a viable alternative for shipping freight and transporting people. An assessment of the range of potential costs to preserve and improve the state's rail infrastructure should be undertaken. As always, maximizing the safety of Wisconsin's citizens and fair and equitable treatment across all transportation modes will be guiding principles along with maximizing public benefits and preserving Wisconsin's environment and quality of life.

Emerging issues such as efforts to reduce the level of mercury emissions from coal-powered energy plants, bans on locomotive horn use, and the implementation of commuter rail services must be closely monitored.

The issues raised in this report and the critical issue of how to fund rail system initiatives will be further examined in Connections 2030.

Footnotes

[1] Canadian National and Canadian Pacific Railway have enough revenue that they would be considered Class 1 railroads if they were U.S. companies.

[2] *Construction and Forecast of Freight Traffic Data for the Wisconsin State Rail Plan 2020,* (2002), Reebie Associates. WisDOT hired the firm of Reebie Associates to forecast commodity movements for the year 2020.

[3] *Modal Analysis of Wisconsin Freight Traffic Data,* (2002), Wilbur Smith and Associates. Based on freight projections by Wilbur Smith and Associates, 2002. Three million gross tons per year is considered a minimum threshold for maintaining cost-effective rail freight operations in a corridor.

[4] *Freight Transportation for the 21st Century,* (2003), Transportation Research Board Special Report #271.

[5] The *Freight Bottom Line Report,* (2003), American Association of State Highway and Transportation Officials, draws the conclusion that "…relatively small additional investments in the nation's freight rail system can be leveraged to provide relatively large public benefits."

[6] *Critical Cargo, a Regional Freight Action Agenda,* Business Leaders for Transportation, April 2002

[7] This compares, for example, to a 2020 estimate of 22,000 trucks per day inbound and outbound at the I-94 gateway to SE Wisconsin at Kenosha based on six day per week operations.

[8] *Modal Analysis of Wisconsin Freight Traffic Data,* (2002), Wilbur Smith and Associates.

[9] The 500-mile figure represents the total out and back travel distance likely accomplished by a truck in a single day.

[10] RTCs were created before a 1992 change to the Wisconsin Constitution allowed state investment in rail infrastructure. Although no longer legally required, they continue to be used as a mechanism to provide local input and ownership of rail lines.

[11] Wisconsin Demographic Services Center, 2003

[12] *The Governor's Blue Ribbon Task Force on Passenger Rail,* February 2001

[13] *Intercity Passenger Rail Corridors Feasibility Study,* June 2002, Wisconsin Department of Transportation.

[14] State agencies record Hazmat incidents using a variety of qualifying criteria. The U.S. DOT Hazardous Materials Information Database is the only source that allows incidents to be sorted by mode.

[15] Active crossings are equipped with warning, and occasionally protection devices, that change when a train approaches. Almost 45% of all Wisconsin public roadway/railway crossings fall into this category. Passive crossings are equipped with warning devices that do not change state when a train approaches the intersection. Such devices include cross-bucks, stop signs, yield signs, and pavement markings.

[16] WisDOT Bureau of Transportation Safety

[17] *U.S. DOT Inspector General's Grade Crossing Safety Audit* — FRA Report RT-199-140 — September 1999.

[18] FRA Office of Safety Analysis

[19] *Draft RR Taxation Study Committee Report and Recommendation,* February 21, 1997.

[20] *The Governor's Blue Ribbon Task Force on Passenger Rail Service*, February 2001.

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