

1.0 THE ROLE OF RAIL IN STATEWIDE TRANSPORTATION

Background and Purpose of Study

This document is the 2015 update to the Minnesota Comprehensive Statewide Freight and Passenger Rail Plan, first developed in 2010, referred to as the 2015 Minnesota State Rail Plan. According to Minn. Stat. Minnesota Session Law 2008, Section 174.03 subd. 1b, the purpose of the State Rail Plan is to guide the future of the rail system and rail services in the state. The development of the plan was jointly undertaken by the Minnesota Department of Transportation's Office of Freight and Commercial Vehicle Operations and the Passenger Rail Office.

The 2015 Minnesota State Rail Plan follows the six-chapter structure required by the Federal Railroad Administration for state rail plans:

- **Chapter 1** provides an overview of the role of rail in the state's multimodal transportation system, and the state organization to support rail development.
- **Chapter 2** describes the state's existing rail system, including future trends, forecasts, needs, and opportunities.
- **Chapters 3 and 4** outline proposed passenger and freight rail improvements and investments, by corridor.
- **Chapter 5** describes the state's rail service and investment program.
- **Chapter 6** documents the coordination with other plans and stakeholder outreach conducted as a part of this effort.

The 2015 Minnesota State Rail Plan builds upon the technical analyses and findings of the 2010 State Rail Plan, incorporates information on changes and happenings between 2010 and 2015, and reflects the most current state of the system and stakeholder comments.

Rail has long played a significant role in the movement of freight in Minnesota, much more than in many comparable states and regions. Minnesota has the eighth highest number of rail miles of all states in the nation. Rail accounts for 25 percent of freight tonnage moving in the state and is especially important in moving bulk commodities such as the minerals and agricultural products that drive Minnesota's economy. The state is first in the nation in the volume of originating and terminating metallic ores (e.g., iron ore from the Mesabi Range) moving by rail, is second for originated farm products, and is third for originated food products.⁵

Recently, the focus of Minnesota's freight rail system planning has shifted due to factors such as record grain harvests and the development of the Bakken Shale Oil fields of western North Dakota. New commodities, such as frac sand, move by rail from Wisconsin and other states through Minnesota to support the shale oil production process, and extracted crude oil is shipped back through Minnesota to refineries in the eastern United States. It is estimated that trains with 100 or more tank cars filled with Bakken crude oil cross Minnesota at a rate of 37 to 52 trains per week on BNSF and nine per week on Canadian Pacific lines.⁶ Because of the volatility of the Bakken crude, rail safety is a top priority in Minnesota; the 2014 legislature has passed several bills aimed at understanding

⁵ AAR State Rankings. www.aar.org/data-center/railroads-states#state/MN

⁶ Minnesota officials: Cost is \$280M to upgrade oil train routes. *Duluth News Tribune*, January 4, 2015.

and ensuring the safety of crude-by-rail movements. These laws require MnDOT to conduct studies on highway grade crossings that have significant safety risks due to increased crude-by-rail activity, provide \$2 million for improving rail grade crossings identified in the study and resulted in the hiring of two additional rail inspectors. MnDOT also has recommended other actions, and the FRA continues to advocate for positive train control implementation by December 2015 to enhance the safety of rail operations nationwide..

Increased traffic on Minnesota's rail system is also a result of record grain harvests, a resurgence in coal traffic, and increasing iron ore and LPG shipments, all occurring during late 2013 and early 2014. Combined with the "crude boom," this activity has resulted in unintended consequences for several of Minnesota's key industries. Rail system congestion has been noted as a reason for the idling of coal-fired power units in the state due to the inability to obtain coal shipments.⁷ While the Class I railroads have embarked on historic capital improvement plans to improve service and increase system capacity, farmers continue to face challenges in getting their product to export ports in the Pacific Northwest. Due to slower travel times and longer cycle times, there was a shortage of rail cars available for grain shipment and other bulk commodities moving via unit trains, including iron ore and coal. Increased capacity and resulting increases in system velocity are the only true long term solution to these service issues. A recent study by the University of Minnesota's Center for Farm Financial Management estimates delays in railroad shipping cost Minnesota corn, soybean and wheat farmers nearly \$100 million due to poor deliverability, loss of market responsiveness, lower prices and higher costs. The report also estimates that, as of June 1, 2014, 330 million bushels of corn remaining in on-farm storage bins across Minnesota due to rail bottlenecks were worth \$122 million less.⁸

These freight rail system statistics are significant on their own; however, they also need to be weighed with respect to passenger rail service and the state's goal to increase service. The 2010 Minnesota Statewide Freight and Passenger Rail Plan laid out a comprehensive plan for priority passenger rail corridors that overlaps with, and would in part share, key freight rail trackage in the state. Funding for rail is changing, and the primary federal intercity passenger rail programs in place during development of the 2010 State Rail Plan were phased out. The advent and continuation of the TIGER grant program continues to provide funds for construction and some planning, but Minnesota's rail and multimodal projects compete with each other, and the program places Minnesota in stiff competition with other states. In 2014, TIGER's sixth year, USDOT received 797 eligible applications valued at \$9 billion for \$600 million in available funding.

The 2015 Minnesota State Rail Plan addresses both freight and passenger rail systems in Minnesota, and ensures that opportunities identified within the plan and as part of other state rail projects strive for balance among economic opportunity, personal mobility, public-private partnerships and investment benefits and costs.

The Vision for Minnesota's Multimodal Transportation System

In early 2011, MnDOT launched the Minnesota GO visioning process. Teaming with the University of Minnesota and the Citizens League, MnDOT asked Minnesotans to help shape a Vision that answers the question, "What are we trying to achieve for transportation over the next 50 years?" The visioning effort intended to collectively define a desired destination toward which state, regional and local transportation planning could navigate. The end result was a shared Vision that aligns the transportation system with what Minnesotans expect for their quality of life, economy and natural environment. This is the first long-range transportation vision adopted for Minnesota. It provides the

⁷ Power plants worry about winter coal supplies. *Star Tribune*, November 15, 2014.

⁸ Rail shipping delays cost Minnesota corn, soybean, wheat farmers nearly \$100 million. *Star Tribune*, July 10, 2014.

desired outcomes for the Statewide Multimodal Transportation Plan during the next 20 years, for MnDOT's Family of Plans, and for all modes and transportation partners.

Thousands of Minnesotans played a role in helping craft the Minnesota GO Vision for transportation for future generations. This vision also includes a set of guiding principles that are intended to be used collectively to help guide future policy and investment decisions for all forms of transportation. The Minnesota GO Vision was adopted in November 2011. The Minnesota GO Vision serves as an overarching set of principles guiding the development of freight and passenger rail service, along with other modes of transportation, within the state.

MINNESOTA GO VISION FOR TRANSPORTATION

Minnesota's multimodal transportation system maximizes the health of people, the environment and our economy.

The system:

- Connects Minnesota's primary assets—the people, natural resources and businesses within the state—to each other and to markets and resources outside the state and country
- Provides safe, convenient, efficient and effective movement of people and goods
- Is flexible and nimble enough to adapt to changes in society, technology, the environment and the economy

QUALITY OF LIFE

The system:

- Recognizes and respects the importance, significance and context of place—not just as destinations, but also where people live, work, learn, play and access services
- Is accessible regardless of socioeconomic status or individual ability

ENVIRONMENTAL HEALTH

The system:

- Is designed in such a way that it enhances the community around it and is compatible with natural systems
- Minimizes resource use and pollution

ECONOMIC COMPETITIVENESS

The system:

- Enhances and supports Minnesota's role in a globally competitive economy as well as the international significance and connections of Minnesota's trade centers
- Attracts human and financial capital to the state

Minnesota's Rail System Goals

Minnesota's railroads form a critical part of the state's multimodal transportation system. Many of the state's major industries rely on the rail system as a cost competitive way to deliver goods. The rail system is critical in providing efficient connections to markets beyond the state's borders, throughout North America, and to the world via the deep-water ports on the Pacific and Atlantic coasts and the Great Lakes. Rail provides energy efficient transportation options to shippers in terms of market access, modal economics and service.

For Minnesota, a strong rail system supports economic development, enhances environmental sustainability, helps to preserve the publicly owned roadway infrastructure, and increases the business marketability of the state. Future challenges for Minnesota will include increasing regional and international economic competition, constrained highway capacity, environmental challenges and rising energy costs. Additionally, the state must respond to calls for effectively developing and utilizing a freight rail system to support expanded traffic volumes and a more diverse customer base. The private ownership of Minnesota's rail system presents unique challenges and opportunities for public sector planning.

The rail industry in Minnesota is a vital and vibrant transportation sector, ranging from four large Class I railroads to 17 smaller regional and local carriers. In recent years, growth in traffic hauled by Minnesota's short line railroads outpaced the industry as a whole, and showed success in locations where prior efforts failed. Maintaining and expanding this vitality should be central to the state's involvement with the rail industry.

Minnesota's intercity passenger rail service provides connections to its eastern and western neighbors, and commuter and light rail provide service within the state. Minnesota currently has one active intercity passenger rail service—Amtrak's Empire Builder—which provides service between Chicago and points west, one active commuter rail service—Northstar—which provides service between Big Lake and the Twin Cities, and two light rail lines—the METRO Blue Line (Hiawatha), which operates between the Mall of America and downtown Minneapolis, and the METRO Green Line (Central), which began service between downtown Minneapolis and downtown St. Paul in 2014.

Several existing conditions make it desirable for Minnesota to develop an intrastate and interstate intercity rail system:

- 1) Expected continued population and economic growth place additional demands on the state's capacity-constrained highway system
- 2) Macroeconomic and global environmental and energy trends and policies which are likely to significantly increase long-term fuel prices and require significant controls on greenhouse gas emissions
- 3) Changing travel patterns—lower car-ownership rates and an increase in older and younger populations that seek alternatives to car transportation

FREIGHT RAIL GOALS

A successful, viable rail industry that meets the future needs of Minnesota's economy requires continued investment and improvement to its infrastructure. Owned by private firms, the freight railroad industry is unique in that it has largely borne the cost of maintaining its own infrastructure. This is expected to continue, but further improvements to the infrastructure will be necessary, not all of which may be fully self-funded. In recent experience, rail shippers and public entities have partnered in mainline improvements and secondary lines and shipping facilities. Goals for freight rail are as follows:

- **Continue to make improvements to the condition and capacity of Minnesota’s primary railroad assets** to accommodate existing and future demand and provide reliable freight rail service to Minnesota’s industries. Public-private partnerships, federal grant programs, and other potential state funding mechanisms are necessary to ensure that the state has the ability to make needed improvements and expansions.
- **Address critical rail network bottlenecks** that degrade present service and inhibit the ability of the state’s railroads to serve future traffic.
- **Upgrade main line track (all Class I to III railroads) to 25 mph minimum speed, as warranted.** This is needed to ensure commercial viability and safety for rail operators to meet the needs of the current and future shippers that rely on them.
- **Improve the network (all Class I to III railroads) to support the use of 286,000 pound rail cars throughout.** This weight limit has become the industry-wide standard, and the viability of lines and shipper’s facilities that do not have this capacity will diminish over time.
- **Implement state-of-the-art traffic control and safety systems** to ensure a safe and efficient rail system on key mainlines.
- **Expand intermodal service access options throughout the state.** Rail intermodal services (the haulage of containers and trailers) available today in Minnesota are limited geographically and by capacity. Existing terminals are all located in the Twin Cities. Quality service to a broader set of markets beyond the state’s borders is needed from a competitive and environmental standpoint, as is development of a major new Twin Cities terminal, which will become a necessity if intermodal service is to be developed beyond those lanes currently served.
- **Continue to develop programs promoting safety of freight rail and hazardous material transportation.** Minnesota has made rail safety a top priority, and the legislature has passed several significant bills aimed at understanding and ensuring the safety of crude-by-rail movements. The state should continue to work with industry and stakeholders to improve the safety of freight rail movements.

PASSENGER RAIL GOALS

Minnesota should act in the following ways to meet the Minnesota GO Vision and develop a robust intrastate and interstate intercity passenger rail system that results in improved travel options, lower costs and higher speeds for Minnesotans and interstate travelers:

- **Continue to participate with the Midwest Regional Rail Initiative States** to support the development of minimum 110 mph service for connections from the Twin Cities to Wisconsin and the Chicago Hub Network.
- **Develop an intrastate intercity passenger rail network** connecting the Twin Cities with viable service to major outlying regional centers. These services can be started as stand-alone projects and coordinated as part of a larger regional/national system. These services should use interchangeable and interoperable equipment. Local transit services in the major Metropolitan Planning Organization regions should be coordinated to support the rail system. System speeds should be a minimum of 79 mph, with a short-term goal of achieving 110 to 150 mph where track conditions and market demand permit and warrant. Systems should be built out on existing freight lines where possible, and on new dedicated passenger tracks where desirable and necessary.

- **Develop all services with the ultimate goal to connect to both the Target Field Station and St. Paul Union Depot.**
- **Advance corridors incrementally** to build ridership and system advantages, leaving open all future options for viable improvements such as stand-alone branches, through routes, new alignments, potential airport connections, and true high-speed rail.
- **Prioritize project qualified corridors** based on state of readiness, sequencing depending on financing, right of way acquisition, and agreements with freight railroads.
- **Establish rail connections to intercity and commuter rail markets** in Wisconsin and Minnesota, to the I-35 Corridor, the Red River Valley, the eastern plains and Canada, as demand warrants.
- **Promote energy-efficient technology** and efficient transportation through expanded use of rail and intermodal shipping.

PLANNING AND POLICY DEVELOPMENT

- **Maintain and ensure broad access to competitive freight rail services for shippers throughout the state.** The relevance of rail service to Minnesota’s industry is directly related to geographic coverage, trip times, reliability, availability of appropriate rolling stock, and cost. Industry needs should be met through a range of competitive service offerings, from single carload to high-volume unit train shipments, bulk transloading, intermodal, and innovative solutions.
- **Better integrate rail into the public planning process**, including modal trade-off analysis, local and regional comprehensive plans, coordination with neighboring states, industrial development strategies, and public ports planning.
- **Actively pursue public-private partnerships, partnerships with other agencies, and private financing or operations in support of freight and passenger rail corridor development.**

EXISTING RAIL PROGRAMS

- **Build State assistance for freight rail projects upon the existing Minnesota Rail Service Improvement Program (MRSI).** The 30+-year-old program supported a strong rail system in the state; however, funding levels are inadequate, and a broader program is needed to go beyond small loans for infrastructure improvements. The program should include a range of solutions and financing options, including branch and short line preservation, and an increase in the maximum loan amount beyond the current \$200,000 ceiling. Consistent with the 2013 Freight Rail Economic Development Study, additional strategies have been proposed for an interagency approach including economic development agency collaboration, real estate registries, a Rail Shipper’s Toolkit and a performance-based mix of grants and loan forgiveness.
- **Expand the Rail/Highway Grade Crossing program** to consider a broader array of strategies beyond active warning devices, and match or exceed device replacement needs. The Federal Section 130 grade crossing program provides an institutional structure and a modest source of funds to improve rail/highway grade crossings primarily through the installation of active warning devices. Substantial reductions in grade crossing

incidents have been the result, and Minnesota has embraced the program and the public/private partnership model that lies at its foundation. A more dynamic approach to grade crossings will be necessary in the future, as regions of the state continue to urbanize and rail traffic volumes and speeds increase. Grade crossing warning devices and other low-cost improvements will remain an important part of the mix, but the public is increasingly demanding other more complex and costly strategies, such as quiet zones, advanced crossing systems and grade separations. Expanded state involvement will require creative solutions because resources are insufficient to meet existing program mandates.

- **Actively manage and evaluate preserved rail corridors held in the State Rail Bank for possible future transportation uses.** While interim uses of preserved rail corridors, typically as recreational trails, have seemingly maintained their integrity for future transportation use, the likelihood of their reuse for freight rail transportation purposes is very unlikely. Currently, the Blue Ox Trail (104 miles), Central Lake Trail (55 miles), and Lake Wobegon Trail (48 miles) are rail bank corridors used as multipurpose trails, along with seven miles of right of way from Starbuck to Glenwood. Encroachment by abutters, regulations and political considerations make conversion to an active railroad extremely difficult and costly. If demand for rail service continues to increase, the reconstitution of some of these trails as rail lines may be desirable. A rail banking strategy that identifies potential key freight corridors and establishes clear policies for line acquisition and disposition, and that differentiates rail banking for purposes of future rail use versus other indefinite “interim” public uses should be established. This will likely require coordination between MnDOT and the Minnesota Department of Natural Resources.

Institutional Governance Structure of the State Rail Programs

Minnesota’s railroads have a broad range of interactions with government agencies at all levels, including the federal, state, and local governments. Collectively these minimal and major interactions significantly affect rail industry behavior and performance in Minnesota. This subsection examines the institutional roles and responsibilities of these agencies and relates the perspectives of rail industry stakeholders to the agencies’ current effectiveness and potential for improvement, particularly as Minnesota embarks on a broader vision for rail. Closer partnership with regional stakeholders and railroads is a clear goal, as is removing barriers to private business proposals that serve the state’s service needs.

The primary emphasis is on the state departments, programs, and legislative mandates that affect railroads. Beyond the state-level interactions, several federal agencies such as the Federal Railroad Administration and Surface Transportation Board also have important roles in overseeing freight and passenger rail activities within the United States.

FEDERAL AGENCIES

Federal Railroad Administration

The FRA was created by the Department of Transportation Act of 1966. One of 10 agencies within the USDOT concerned with intermodal transportation, the FRA’s mission is to enable the safe, reliable, and efficient movement of people and goods in the U.S.

The FRA’s Passenger Rail Division provides technical expertise and direction in the development and implementation of rail safety programs applicable to freight, commuter and intercity passenger railroads, as well as advice and oversight in the areas of safety, procurement and other railroad related issues. The Division

also provides technical support to regional staff regarding enforcement matters affecting the United States's rail network.

Surface Transportation Board

The STB, created in 1995 to succeed the Interstate Commerce Commission, is a regulatory agency charged with resolving railroad rate and service disputes, reviewing proposed railroad mergers, line abandonments and construction of new lines. The STB is independent decision-making body that is administratively affiliated with USDOT.

The STB serves as both an adjudicatory and a regulatory body. The agency has jurisdiction over many rail-related issues, including railroad rate and service issues and rail restructuring transactions such as mergers, line sales, line construction, and line abandonments.

MINNESOTA STATE AGENCIES

Six departments in the Minnesota state government, along with a handful of regional agencies, have ongoing roles and responsibilities related to the rail industry.

Minnesota Department of Transportation

With its mandate to manage transportation issues for the state, MnDOT has the most extensive interactions with the rail industry on a regular basis. MnDOT consists of five divisions, 20 offices, and eight districts located throughout the state. Offices that significantly interact with the rail industry include:

- **Office of Freight and Commercial Vehicle Operations.** Located within the Modal Planning and Project Management Division, OFCVO has primary responsibility in handling freight-related matters for the state, including policy development, multimodal planning, and investment processes. Prior to the creation of the Passenger Rail Office, MnDOT's rail-oriented programs were all located within OFCVO, which presently include the Rail Grade Crossing Improvement program, the Minnesota Rail Service Improvement program, the track inspection program, and management of state-owned rail bank assets. This office has a staff of 70, of which 50 people are assigned to commercial vehicle operations and 20 to other freight and rail functions.
- **Passenger Rail Office.** This office was established in 2009 under the Modal Planning and Project Management Division. Its purpose is to coordinate and manage MnDOT activities related to intercity passenger rail, including planning, and serve as the state's resource on passenger rail matters. As the passenger rail system matures, this office will coordinate rail infrastructure improvements to maximize limited resources and safety for both freight and passenger rail operations. This office has a staff of five people. The Passenger Rail Office also relies on specific staff expertise from the Office of Environmental Stewardship and the Office of Chief Counsel.
- **Office of Transit.** Also located within the Modal Planning and Project Management Division, this office administers grant programs for capital and operating assistance to transit services outside of the Twin Cities metropolitan area, and provides coordination and planning support for nonmotorized travel and telecommuting. Although intercity passenger rail services would not generally fall under the Office of Transit, certain elements, such as station improvements and connections with local transit services in outstate locations, could be included under its jurisdiction.
- **Office of Environmental Stewardship.** This office, located within the Engineering Services Division, conducts environmental reviews for Federal Highway Administration projects, including air/water quality and analysis,

endangered species, noise, regulated materials and waste, and erosion control. Although OES generally focuses on highway projects, more recently it has become involved in FRA rail-related project development.

- **Office of Land Management.** Part of the Engineering Services Division, OLM provides a variety of services for managing and acquiring real estate for transportation purposes. OLM acquires abandoned rail rights of way under the direction of OFCVO, and maintains extensive records on rail property in the state.
- **Office of Chief Counsel.** The MnDOT Office of Chief Counsel provides legal counsel to MnDOT offices. It is a resource that advises on legal implications of projects or decisions.

Minnesota Pollution Control Agency

The PCA monitors environmental quality, offers technical and financial assistance, and enforces environmental regulations. Four of eight divisions regularly intersect with the rail industry—Industrial, Remediation, Prevention, and Assistance—however, most interactions are related to hazardous materials releases and facility permitting. PCA's rail-related responsibilities include:

- **Permitting and clean-up.** Most interactions rail carriers experience with PCA follow an environmental mishap, giving some rail carriers the perception that the PCA primarily focuses on enforcement, rather than working cooperatively to develop effective solutions that minimize risk.
- **Emissions reduction.** Some states, such as California and Texas, have programs that aid railroads in acquiring emissions reduction technologies, such as genset locomotives and standby systems, usually through grants. Genset locomotives, which shut down automatically when they are not in use, are far less polluting in switching applications. Such a program could be administered through PCA or MnDOT.

Minnesota Department of Agriculture

The Department of Agriculture consists of 10 divisions. The Agricultural Marketing and Development and the Pesticide and Fertilizer Management Divisions most commonly interact with the rail industry. Agriculture Marketing and Development develops new markets and uses for agricultural products, of which the most noteworthy recent development from the perspective of the rail industry is ethanol.

The Pesticide and Fertilizer Division enforces regulation of chemicals used for the control of noxious weeds, which the rail industry became subject to on June 1, 2009, through an amendment to Minn. Stat. 18B.346, Pesticide Application on Railroad Property. Applicants must be properly trained in the use of restricted-use pesticides on railroad property, which must only be used for their intended use as specified on the label. Since the railroads almost entirely rely on third-party specialists to apply pesticides, this is already occurring.

Minnesota Department of Employment and Economic Development

DEED is the state's principal economic development agency, with responsibilities for managing the unemployment and job services programs and retaining and attracting businesses to Minnesota.

Although DEED participates in MnDOT's Rail Advisory Committee, there is little active coordination between DEED, MnDOT, and the railroads in retaining existing or attracting new businesses. At times DEED has had in-house rail expertise, but it has not been a consistent focus, and coordination with MnDOT has generally been infrequent. Stronger focus on this function should be provided, either at DEED or MnDOT.

Minnesota Department of Revenue

Collecting taxes to fund state programs is MDOR's primary function. Most importantly for the railroads, the agency administers the property and corporate tax collection process. While MDOR administers the collection process, revenues are dispersed to local jurisdictions. MDOR also enforces compliance with state purchasing regulations of other state departments, including MnDOT.

Minnesota Department of Public Safety

DPS provides a one-stop shop for most safety-related functions in which the state is involved, including law enforcement, emergency management and driver and vehicle services. Consisting of 12 divisions and offices, DPS's involvement with rail is primarily through law enforcement functions and collection of accident statistics, including grade crossing incidents. At one time, DPS also collected data on railroad accidents, a function that is now handled federally by the FRA. DPS provides the State Duty Officer, who coordinates all major statewide emergency responses, public and private. DPS is also the named recipient of federally-mandated crude oil unit train reporting by the railroads through USDOT.

In the DPS realm, two issues are of concern to railroads: trespassing on rights of way, and the authority of railroad police. Trespassing is not permitted in yards, but along main lines it is only a major misdemeanor. This raises serious safety concerns, and exposes railroads to potential liability. Carriers feel that these risks could be reduced if their own officers had the authority to make arrests. Minnesota and Wyoming are the only two states where railroad police are not deputized and must rely on local law enforcement authorities to enforce the law.

Minnesota Environmental Quality Board

The EQB oversees the state environmental process and ensures compliance with state environmental policy. The Passenger Rail Office works closely with EQB to secure state environmental approval of passenger rail planning projects.

REGIONAL AUTHORITIES AND METROPOLITAN PLANNING AGENCIES

Regional Rail Authorities

Through legislative action in 1980, Minnesota created Regional Rail Authorities for counties to preserve and improve local rail service for both industrial shippers and/or passenger traffic. Twenty-four RRAs currently exist. Minn. Stat. 398A grants significant powers to the RRAs, including the ability to acquire and dispose of property, apply for state and federal funds, exercise eminent domain, and levy taxes.

The performance of RRAs has been mixed. Many authorities are only minimally active and have not developed into robust entities. Only a few of the authorities have a regular funding stream, with the others funded sporadically, if at all. Some RRAs have been very active, however, and have effectively used different elements of the statute. The Twin Cities region RRAs are active to varying degrees in acquiring and preserving rights of way and active facilities, and planning for future transit and regional rail uses; however, many of these rights of way have been acquired for use as recreational trails. Among rural authorities, the Minnesota Valley RRA and the St. Louis and Lake Counties RRA stand out. The Minnesota Valley RRA owns and oversees operation of the Minnesota Prairie Line, a 94-mile line from Norwood to Hanley Falls, while the St. Louis and Lake Counties RRA operates a tourist line (the North Shore Scenic) and is active in freight rail service development elsewhere in its region.

Metropolitan Council

Established in 1967, the Metropolitan Council was created to coordinate planning and development within the Twin Cities metropolitan area and to address issues that could not be adequately addressed within existing governmental arrangements. In addition to being one of the oldest regional planning agencies in the United States, the Metropolitan Council also is unique in having not only planning responsibilities, but also operational responsibility through its Metro

Transit division, operator of the core bus system and the METRO light rail system consisting of the Blue and Green Lines. Metro Transit also oversees the operation of the Northstar Commuter Rail.

Close cooperation with the Met Council is a prerequisite to a successful statewide initiative to improve Minnesota's rail system. Many of the most critical bottlenecks are located in the Twin Cities, affecting both future freight and passenger needs. Efforts to expand regional rail service will draw on much of the same infrastructure as intercity services, and the public's investment will be maximized if the intercity rail services are closely coordinated with Metro Transit.

Minnesota's Authority for Grants, Loans and Public-Private Partnerships

GRANTS AND LOANS

State and local funding commitments to planning, capital investment and operations are already demonstrated in Minnesota. State general fund and bonding funds are dedicated to the existing freight and safety programs (including the Minnesota Rail Service Improvement Program); the MnDOT Passenger Rail Office; projects such as the Northstar Commuter Rail; passenger rail corridors like the Twin Cities to Chicago High-Speed Rail, X, and Zip Rail; and station facilities like the Target Field Station and Union Depot. A \$26 million state bonding commitment was made in 2009 to advance and match federally funded projects and future applications. Minnesota counties and RRAs also committed local matches from both general funds and tax levies toward these and other projects.

The 2008 Passenger Rail Improvement and Investment Act created three new passenger rail investment programs for states: the State Capital Grant for Intercity Passenger Rail, Congestion Grants and HSR Grants. The American Reinvestment and Recovery Act of 2009 (ARRA, commonly referred to as "the stimulus") appropriated \$8 billion for projects in the three PRIIA programs, and another \$2.5 billion was appropriated in 2010. In FY 2011 congress rescinded \$400 million of unobligated balances from the program and did not provide any additional funding.⁹

Tools for leveraging private sector investment include:

- Expanding MRSI from a revolving loan program to a combination of loan and grant programs as has been done in states including Iowa, Wisconsin, Pennsylvania and Virginia, and increasing the loan ceiling from the current \$200,000
- Offering financial assistance for Railroad Rehabilitation and Improvement Financing applicants (Oregon has such a program)
- Providing state maintenance and investment tax credits for rail improvements
- Broadening access to the Minnesota Revolving Loan Fund for rail projects beyond grade crossing improvements

In addition to these existing or potentially expanded federal funding programs and federal/state programs designed to leverage private investment, a dedicated stream of state and or local/regional revenue is needed to support bonding for capital investment and annual operating subsidies. Otherwise, this program will always be in competition with a broad array of annual state priorities and it will be difficult to achieve the unified system envisioned in the 2015

⁹ www.aashtojournal.org/Pages/041511appropriations.aspx

Minnesota State Rail Plan. The constitutional limit of \$200 million in debt to support rail projects needs to be amended to achieve full state participation.

PUBLIC-PRIVATE PARTNERSHIPS

MnDOT has authority to design and construct transportation projects through design-build contracts.¹⁰ From 1996 through 2002, MnDOT awarded DB contracts on a lowest bid basis, and changed to a best value award basis in 2002. Since 2002, MnDOT awarded seven DB highway projects totaling more than \$860 million. Four more projects funded through ARRA are being procured through DB.

Minnesota statutes do not restrict DB projects to highway projects; however, given the structure of the legislation (which limits the number of DB contracts on an annual basis and requires an annual report on DB contracts), MnDOT might seek more explicit authority to use DB for rail projects.

MnDOT has had authority since 1993 to enter into PPPs for toll roads through a development agreement that “may provide for any mode of ownership or operation approved by the road authority,” specifically authorizing BOT or BTO methods.^{11,12} This authority does not extend to other transportation projects such as railroad projects.

The Willmar Wye is an example of a PPP actively being developed between the state, the railroad and local partners. In this case, BNSF and MnDOT partnered with Kandiyohi County, the City of Willmar and the Kandiyohi/Willmar Economic Development Council to pursue TIGER Funds for rail improvements to BNSF rail lines and highway improvements to Highway 12 and Highway 40 in the City of Willmar. The rail wye, which is a triangular junction, would connect the Marshall and Morris subdivisions and alleviate congestion in the downtown area of Willmar, which is also where BNSF’s Willmar Yard is located. The project includes two highway bridges over the proposed rail line. In total, the project sponsors pledged about \$32 million and requested \$18 million in TIGER Grants in the 2014 funding cycle. The application was not successful, but will likely be resubmitted for the next round of TIGER. This coordination among all parties has served as an example for other projects in the state.

¹⁰ Minn. Stat., Section 161.3410 to 161.3428.

¹¹ Minn. Stat., Section 160.84 to 160.98.

¹² Section 160.85 (4) (a).

PAST FIVE YEAR FUNDING

For the period of 2010–2015, Minnesota invested \$40,634,000 in rail, as shown in [Table 1.1](#).

Table 1.1: Funding Summary

FUNDING SOURCE	DESCRIPTION	AMOUNT
MRSI	12 projects involving loading facilities, spurs and sidings for shippers and short lines (includes the State Rail Plan and Freight Rail Economic Development studies)	\$3,748,000
MRVRRRA	Rehab Short Line track to Class II standards over a 20-mile segment from Young America to Winthrop, Minn.	\$5,886,000
Grade Crossing/Antiquated Equipment Projects	Upgrade existing grade-crossing active warning devices including obsolete or antiquated equipment	\$5,000,000
Passenger Rail Projects	Four passenger rail projects in advanced planning, environmental work and design; rail and signal installations for rehabilitation of St. Paul Union Depot; Phase 1 upgrade of passenger and transfer facilities at Target Field Station	\$26,000,000
TOTAL		\$40,634,000

Integration with Previous Planning Efforts

SUMMARY OF PREVIOUS RAIL PLANS

In 2010 MnDOT released the Comprehensive Statewide Freight and Passenger Rail Plan at a time when state rail planning guidance from the FRA was still under development as part of the broader PRIIA legislation. In PRIIA, Congress called for enhanced state involvement in rail transportation, and tasked the FRA with providing guidance to state efforts to develop rail plans. These plans, which were to be a prerequisite to gaining federal funding for rail projects, would set policy involving freight and passenger rail transportation within state boundaries, establish priorities and implementation strategies to enhance rail service in the public interest, and serve as the basis for federal and state rail investments within the state. Final guidelines on rail plan content under Section 303, Chapter 227 were not issued until September 2013.

The FRA and other agencies lauded MnDOT for the 2010 State Rail Plan, considering the general intent of the law to be met. The plan included many required elements, although not in the required format, while exceeding other requirements. The 2010 State Rail Plan was subsequently “grandfathered in” and accepted as FRA-compliant in 2013. One requirement of PRIIA is that state plans must be updated every five years, however, so MnDOT is molding the previous plan into a fully PRIIA-compliant State Rail Plan.

Changes in the 2015 Minnesota State Rail Plan

The following sections assess and document the updates in this plan to become compliant with the 2013 FRA guidance by:

- Summarizing 2013 FRA rail plan final guidance
- Summarizing the 2010 Comprehensive Statewide Freight and Passenger Rail Plan

- Summarizing a sample of recently completed FRA-approved statewide rail plans as a point of reference for MnDOT
- Ensuring the 2015 Minnesota State Rail Plan's compliance with Minnesota GO and the state "family of plans" guidance
- Proposing an approach for incorporating 2010 content into 2015 Minnesota State Rail Plan

Integration with Statewide Planning Efforts

During the past several years, MnDOT has developed a "Family of Plans," a set of statewide planning documents that have shaped policies related to the movement of freight in Minnesota. The overarching *Minnesota GO* establishes a 50-year statewide vision for transportation. It is a long-term plan that describes the end goal of what is envisioned in Minnesota and serves as the overarching umbrella for statewide planning. The Minnesota Statewide Multimodal Transportation Plan takes the vision and establishes policy direction and guidance for the integration of all modes. This 2015 Minnesota State Rail Plan uses the framework established by the multimodal transportation plan to document the issues and needs of, and develop recommendations for, the state's freight and passenger rail networks. The findings from this plan will be used by MnDOT as guidance to develop future iterations of the Statewide Multimodal Transportation Plan.

The consolidated findings and recommendations from the previous plans and studies highlight the key issues, needs and opportunities identified in each document, as well as any proposed solutions or recommendations. A total of 21 previous plans and studies were reviewed as part of this exercise, documented in [Table 1.2](#). The focus is on plans that were developed after the publication of the 2010 Rail Plan, although some key statewide and regional studies conducted prior to 2010 are also included. Each document was placed into one of three categories: rail planning documents, freight plans, and supplemental plans, and studies.

An overview and summary of the scope and purpose of each plan is provided in [Appendix A](#).

OVERVIEW OF FINDINGS

Common Rail Issues, Needs and Opportunities in the Minnesota Family of Plans and Related Studies

A number of common statewide rail-related issues, needs and opportunities were identified within the plans and studies reviewed. These "core" rail issues are highlighted below.

RAIL (GENERAL)

- **Safety:** The need for improved safety at highway-rail grade crossings is a concern due to a history of crashes with crossing vehicles, bicyclists and pedestrians. The safety of rail crossings in Minnesota has improved significantly, but many of the currently installed warning devices will need to be replaced by 2030 and new infrastructure is also recommended. The dramatic growth in freight rail demand puts added pressure on the existing safety procedures and systems.
- **Public-Private Partnerships:** Improved communication, coordination and formalized partnerships between public and private stakeholders are needed. Freight rail is privately owned and operated, and many of the lines envisioned for enhanced passenger service are privately owned and operated freight lines. Public/private cooperation is essential to addressing many freight and passenger rail needs. Since 2010, public/private and private passenger rail ventures have emerged around the country, including in Florida, Virginia, Texas, and Oklahoma, presenting new alternatives for development. The Willmar Wye project is an example of a PPP that is

actively being developed in Minnesota. This is a partnership between the state, railroad, local partners and possibly the federal government.

- **Corridor Reclamation:** Many currently unused rail corridors were preserved through interim uses such as trails. Converting these corridors back to active use is often difficult and costly due to encroachment, regulations and political considerations. In Wisconsin, at least two corridors have been successfully reactivated due to shipping needs.
- **Rail Capacity:** Demand for rail service to transport Minnesota's agricultural products, raw materials and consumer goods are increasingly competing with other rail traffic moving through the state. Infrastructure investment and continued work with rail stakeholders will need to continue to serve Minnesota's industries and passenger traffic. Double tracking and other capacity expansion projects are currently under way on all four Class 1 railroads in Minnesota.

PASSENGER RAIL

- **Passenger and Freight Rail Coordination:** Passenger rail systems that will share infrastructure with Minnesota's freight network will require coordination between operations.
- **Transportation Alternatives:** Communities desire passenger rail as an alternative that is direct, convenient and competitive with other modes of transport.
- **Funding for Passenger Rail Projects:** Advancing passenger rail projects is complex, and competition for limited funding is intense. Great attention needs to be paid to choosing the best projects with detailed and credible supporting analyses, and moving the projects through the project development process.

FREIGHT RAIL

- **Crude-by-rail:** The North Dakota oil boom resulted in a rapid increase in crude oil and silica sand transported by rail through Minnesota. This increase in traffic has significantly impacted rail and roadway congestion, safety and quality of life. Despite volatility and uncertainty in crude oil prices, current levels of crude-by-rail unit train activity are expected to continue, and could increase significantly with a future rise in worldwide oil prices and increasing crude oil extraction from North Dakota and Canadian sources.
- **Intermodal Service:** Intermodal container service in Minnesota is limited in geography and capacity. There is increasing demand for improved containerization service, expanded intermodal facilities and intermodal connections, particularly on domestic corridors and to the Pacific Southwest.

A summary of the frequency with each issue is mentioned within the reviewed plans and studies is provided in [Table 1.2](#).

Table 1.2: Common Rail Issues Summary

	SAFETY	PUBLIC-PRIVATE PARTNERSHIPS	INTERMODAL SERVICE	RAIL CORRIDOR RECLAMATION	RAIL CAPACITY	PASS. & FREIGHT COORDINATION	TRANSPORTATION ALTERNATIVES	CRUDE-BY-RAIL	FUNDING FOR PASSENGER RAIL
RAIL PLANNING DOCUMENTS									
Minnesota Comprehensive Freight and Passenger Rail Plan (2015)	✓	✓	✓	✓	✓	✓	✓		✓
Northern Lights Express Tier I EA (2013)	✓				✓	✓	✓		✓
Rochester-Twin Cities Zip Rail Tier I EIS (2015)		✓			✓		✓		✓
Twin Cities-Milwaukee High Speed Rail Tier I EIS (2015 – On Hold)	✓				✓		✓		✓
Commuter Rail Tech Memo 10 (2010)					✓	✓	✓		✓
East Metro Rail Capacity Study (2012)	✓	✓	✓		✓	✓	✓		✓
MnDOT Grade Crossing Safety for Crude-by-rail (2014)	✓							✓	
Southeastern Minnesota Freight Rail Capacity Study (2013)	✓				✓	✓		✓	
Freight Rail Economic Development Study (2013)		✓	✓	✓	✓				✓
FREIGHT PLANS									
Statewide Freight Plan (2005)	✓	✓	✓		✓				
Southwest Minnesota Regional Freight Study (2009)	✓	✓	✓		✓				
Western Minnesota Regional Freight Study (2009)			✓		✓				
N Minnesota/NW Wisconsin Regional Freight Plan (2009)		✓	✓		✓				
Central Minnesota Freight Study (2012)		✓	✓						
Southeast Minnesota Regional Freight Study (2012)		✓	✓		✓			✓	
Twin Cities Metro Area Regional Freight Initiative (2012)	✓		✓		✓				
SUPPLEMENTAL PLANS AND STUDIES									
Supplemental Interregional Corridor Study			✓						
Scenario Planning		✓	✓		✓			✓	
Manufacturers' Perspectives on MN's Transportation System (2014)		✓							
Statewide Ports and Waterways Plan (2014)		✓	✓		✓				
Integrating Freight in Statewide Planning and Programming (2013)		✓	✓		✓				

Common Rail Solutions and Recommendations in the Minnesota Family of Plans and Related Studies

The most common solutions and recommendations shared among the plans and studies are highlighted in this section.

ALL MODES

- **Better Integrate Freight into Planning Processes:** Freight issues should be a key focus of regional and state transportation planning investment decisions. MnDOT should develop freight system performance measures and strengthen the consideration of freight during project planning.
- **Strengthen Partnerships to Address Significant Freight Issues:** MnDOT should focus on strengthening and promoting interagency, multi-state and PPPs. Regional freight advisory committees are one proposed solution for gaining private-sector input.
- **Expand Intermodal Service:** MnDOT should improve intermodal facilities and connections in areas of high demand throughout the state.

RAIL

- **Restructure Funding Programs:** Programs should be restructured to more adequately address rail improvement projects. The Minnesota Rail Service Improvement Program should allow for larger projects and for performance-based incentives for loan forgiveness. The Rail/Highway Grade Crossing should expand to consider strategies beyond active warning devices.
- **Manage Preserved Rail Corridors:** Preserved rail corridors held in the State Rail Bank should be more actively managed and evaluated for possible future transportation uses.
- **Improve Rail Safety:** MnDOT should implement state-of-the-art traffic control and safety systems throughout the freight system.
- **Infrastructure Investments on Key Passenger Corridors:** MnDOT should achieve infrastructure improvements on key shared passenger/freight corridors, including station, at-grade crossing and track configuration upgrades.

More detailed information on each of the plans can be found in [Appendix A](#).