

Minnesota State Freight Plan Executive Summary

What is the need for a statewide freight plan?

Federal regulations require each state to develop a State Freight Plan, which must comprehensively address the State's freight planning activities and investments (both immediate and long-range).

The State Freight Plan must cover a five-year forecast period, be fiscally constrained, include a freight investment plan with a list of priority projects and describe how the State will invest and match its National Highway Freight Program Funds. The Minnesota Department of Transportation (MnDOT) is updating the State Freight Plan to improve freight access, reliability and connections across the state. Freight helps deliver goods purchased online and food, which can involve multiple modes of transportation. The State Freight Plan considers all types of modes and freight facilities and how they impact broader transportation conditions throughout the state, including:

- Trucks, roadways and truck stops
- Freight trains, railroads and railyards
- Cargo ships, waterways and waterway ports
- Cargo planes and airports
- Pipelines
- Multiple modes of freight

The Plan is vital to identify key investments in the statewide freight system and to better support the transportation of goods and services across multiple modes. MnDOT has worked with public, nonprofit and private partners across various industry sectors to identify future investments to better connect future freight investments with key freight bottlenecks, first- and last-mile connections, safety improvements and intermodal sites.

How does the statewide freight plan connect with other transportation plans?

The Minnesota State Freight Plan serves as a critical component of the broader Minnesota GO Vision, ensuring the safe, efficient and sustainable movement of goods across the state.

By aligning with the Minnesota GO Vision, the Freight Plan supports a multimodal transportation system that is integrated with other state and regional transportation strategies and plans. It connects seamlessly with MnDOT's major modal plans and Metropolitan Planning Organization (MPO) plans, fostering coordination across urban and rural areas and ensuring that freight movement supports the state's economic vitality while enhancing quality of life for all Minnesotans. The plan's integration with other transportation plans ensures a cohesive approach to addressing the current and future freight needs of the state, aligning infrastructure investments and policy initiatives with Minnesota's long-term transportation goals.

- Statewide Multimodal Transportation Plan
- MN Statewide Ports and Waterways Plan
- Statewide Intelligent Transportation Systems Architecture Update
- MN Statewide Freight System and Investment Plan
- MN RR Grade Crossing Action Plan
- Mn Truck Parking Study
- State Transportation Improvement Program
- MN Weight Enforcement Investment Plan
- Metro District Manufacturers Perspective Study
- Minnesota State Rail Plan
- Clean Fuels Standard Summary Report
- Charging Infrastructure Challenges for the U.S. Electric Vehicle Fleet
- MN State Aviation System Plan
- Statewide Intelligent Transportation Systems Plan

What are the goals of the statewide freight plan?

-  **Freight System Stewardship**
Prioritize improvements in multimodal freight system infrastructure to ensure critical segments are available and in a state of good repair. This is essential for Minnesota to meet expected demand.
-  **Improve Freight Safety**
Design roadways that can safely accommodate freight vehicles and separate freight vehicles from other vehicles, and research investments in incident management and new freight technologies.
-  **Connect Minnesotans and Businesses**
Minnesota can make investments that improve first/last-mile freight connections, support a healthy and efficient freight mode balance and support the efficient operation of Minnesota's freight system.
-  **Safeguard Minnesota's Health & Environment**
It is necessary to plan, design, develop and preserve the freight system in a way that respects and complements the natural, cultural and social context of Minnesota.
-  **Support Minnesota's Economy**
Minnesota can support economic activities by maintaining and investing in the freight system while also supporting activities that improve and expand the freight industry workforce.

What does Minnesota's freight look like today?



814 miles of Interstate



10,891 miles of US and State Highways



4,534 miles of rail lines



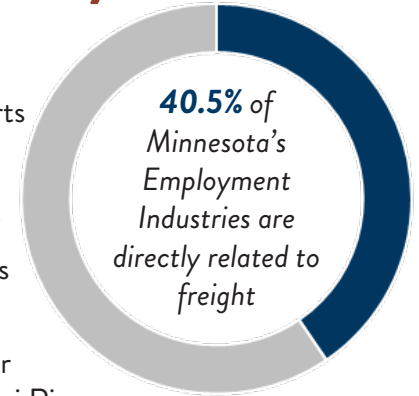
14 Cargo-handling Airports



20,000+ miles of pipelines



7 Ports: 3 on Lake Superior
4 on the Mississippi River



Top Commodities by:

	TONNAGE	VALUE
TRUCK	Cereal Grains: 87 million tons	Machinery: \$27 billion
RAIL	Cereal Grains: 21.2 million tons	Cereal Grains: \$3.3 billion
WATER	Metallic Ores: 5 million tons	Cereal Grains: \$312 million
AIR	Precision Instruments: 81.5 thousand tons	Precision Instruments: \$13 trillion
PIPE	Natural Gas/Fossil Products: 99 million tons	Natural Gas/Fossil Products: \$19 billion

Industries that account for the largest share of freight trips include:

- Agriculture
- Forestry
- Fishing and Hunting
- Mining, Quarrying and Oil and Gas Extraction
- Utilities
- Construction
- Manufacturing
- Wholesale Trade
- Retail Trade
- Transportation and Warehousing

Some challenges facing Minnesota's Freight system today include:

Global Trade and Supply Chain Disruptions

- COVID-19 Residual Impacts
- United States-Mexico-Canada Agreement
- On/Near-Shoring
- Labor Disputes
- Port and Shipping Lane Disruptions
- War in Ukraine

Changing Market Dynamics

- Increased Demand
- Increased Shipping Costs
- E-Commerce Impacts
- Crude Oil Modal Shifts

Demographic and Workforce Changes

- Aging Workforce Population
- Workforce Shortage

Climate Change and Equity Impacts

- Seasonality
- Low-Water Droughts
- Alternative Fuels

Innovations and Trends:

- Connected/Autonomous Vehicles
- Drone/Automated Deliveries
- Truck Platooning
- Big Data

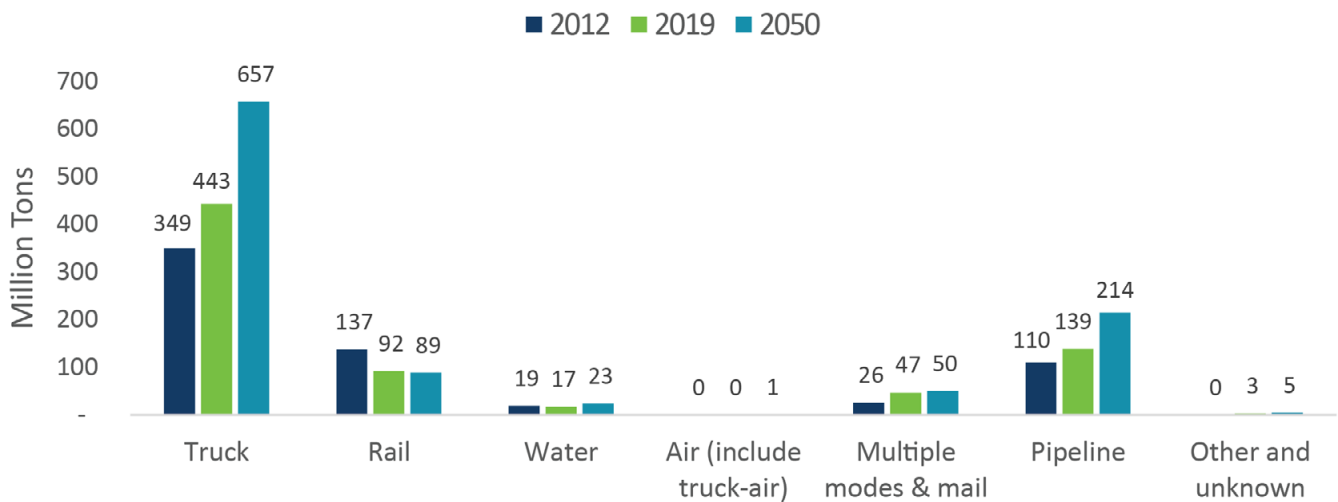
Truck Parking Shortages:

- 98% of truck drivers struggle to find safe and sufficient parking
- 58% of truck drivers admit they park in unauthorized spots at least 3 times per week

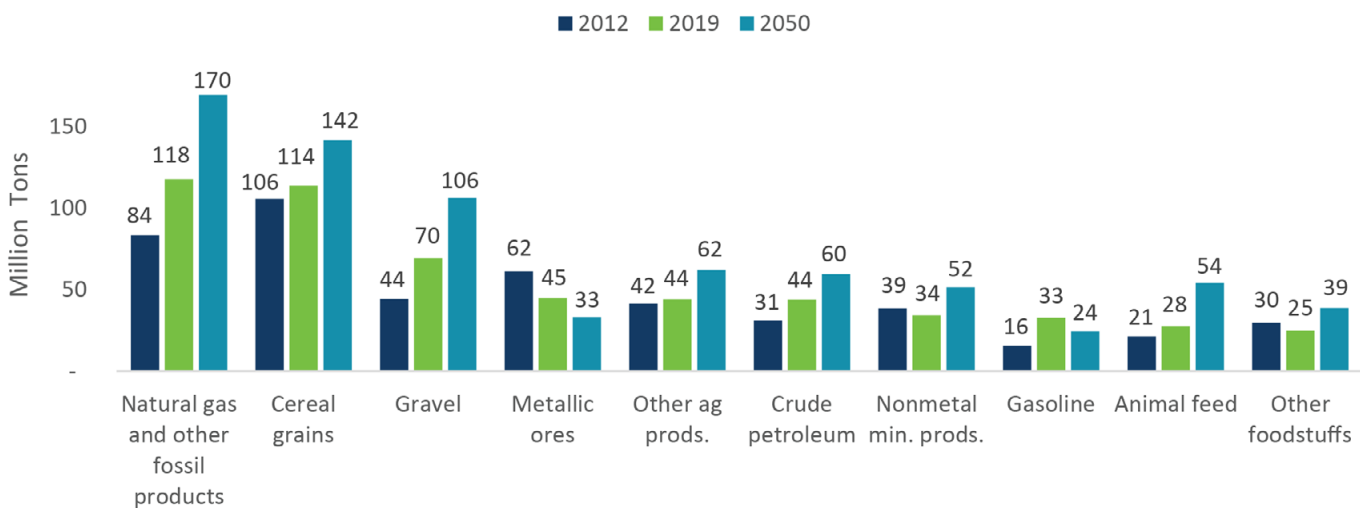
What is the future of Minnesota's freight?

Understanding trends of freight movements by mode is critical to understanding the supply chain, whether the movement is within, through, or into or out of Minnesota. Minnesota freight flows have increased 16% between Freight Analysis Framework (FAF) 4 2012 data and FAF 5 2019. Modal share has shifted over time. Rail tonnage has dropped 33% between 2012 and 2019 while tonnage of pipeline freight movement has increased 26%. This shift has made pipelines the second highest mode of freight movement by tonnage in the state, behind trucking.

FAF 4 - FAF 5 TONNAGE MODAL SPLIT



FAF 4 - FAF 5 TOP 10 COMMODITIES BY TONNAGE



Minnesota Highway Freight Program (MHFP)

The FAST Act and the NHFP (National Highway Freight Program) provide flexibility to the states in determining how each state will spend NHFP funding. MnDOT developed a centralized competitive solicitation, the MHFP, to solicit projects from a wide variety of state and local partners. The MHFP was developed at the recommendation of local stakeholders on the Statewide Freight Investment Committee and other groups. Since 2017 there have been three formal MHFP solicitation rounds that have awarded funding to partners for various freight projects, including freight mobility, safety, first and last mile connections and intermodal improvements.

What is the Minnesota Freight Action Agenda?

The Freight Action Agenda is a set of actions created by MnDOT in partnership with the Minnesota Freight Advisory Committee to implement the State Freight Plan. The Action Agenda provides guidance in how to improve the freight network statewide in Minnesota along with opportunities to collaborate on how to better maximize the health of the economy, people and environment. Each Action ties into one of the established Goal areas.



1 Freight System Stewardship

- Encourage and Support Partnerships
- Freight Education and Advocacy
- Improve Freight-Related Data Collection
- Develop a Freight Investment Plan
- Prioritize Maintenance of the National Multimodal Freight Network
- Integrate Freight into All Planning Projects
- Preserve Key Rail Corridors
- Maintain MnDOT Superload Corridors
- Targeted Freight System Investments



2 Improve Freight Safety

- Establish Incident Management and Emergency Response Plans
- Design for Freight Safety
- Address Truck Parking Needs
- Improve Freight System Safety
- Invest in New Freight Technology



3 Connect Minnesotans and Businesses

- Improve First- and Last-Mile Connections
- Support Freight Modal Balance
- Support Multimodal Freight Options and Expansions



4 Safeguard Minnesota's Health and Environment

- Explore Urban Goods Movement Programs
- Implement Sustainable Freight Efforts
- Mitigate Impacts on Environmental Justice Populations
- Integrate Freight into Land Use Planning and Policies



5 Support Minnesota's Economy

- Improve and Expand Freight Industry Workforce Development

MnDOT's Minnesota State Freight Plan is an all-encompassing approach to Minnesota's Freight system, including an analysis of the freight network as it exists today; the issues that the system faces; the innovations that will guide the future of freight; the future forecasts of Minnesota's freight system; and the funding processes that are critical to the success of the freight system as it grows.

The State Freight Plan offers goals and strategies that can be implemented to help alleviate issues that the freight system faces, as well as preparing the freight system for the future.

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