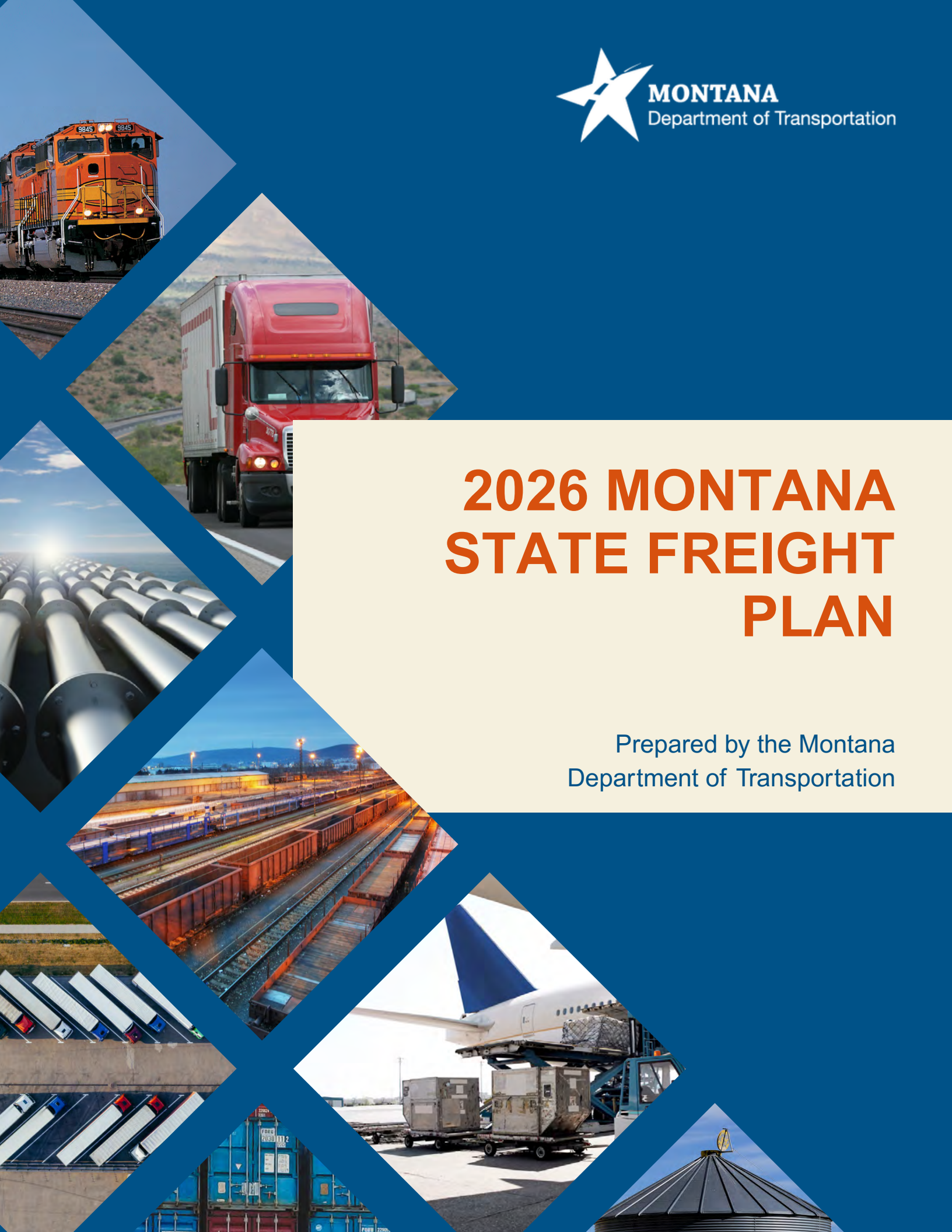




2026 MONTANA STATE FREIGHT PLAN

Prepared by the Montana
Department of Transportation

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Freight Plan Technical Advisory Committee

The Freight Plan Technical Advisory Committee provided valuable input and expertise and is a major contributor to the Freight Plan update.

- ❖ Motor Carrier Services Division, including the Motor Carrier Safety Assistance Program
- ❖ Traffic & Safety Bureau
- ❖ Geotech & Pavements Bureau
- ❖ Maintenance Division
- ❖ Statewide Planning & Modal Operations
- ❖ Montana Department of Transportation Districts
- ❖ Federal Highway Administration

Freight Partners and Stakeholders

MDT would like to thank all the agencies, businesses, and individuals below that contributed their expertise, time, and support to the development of the 2026 State Freight Plan.

- ❖ Idaho Department of Transportation
- ❖ North Dakota Department of Transportation
- ❖ South Dakota Department of Transportation
- ❖ Missoula Metropolitan Planning Organization
- ❖ Billings Metropolitan Planning Organization
- ❖ Greater Helena Metropolitan Planning Organization
- ❖ Great Falls Metropolitan Planning Organization
- ❖ Malmstrom Air Force Base
- ❖ Montana Department of Transportation
- ❖ Montana West Economic Development
- ❖ Montana Wheat and Barley Committee
- ❖ Montana Trucking Association
- ❖ Montana Coal Council
- ❖ Montana Equipment Dealer Association
- ❖ Montana Farmers Union
- ❖ Montana Grain Growers Association
- ❖ Montana Logging Association
- ❖ Montana Petroleum Association
- ❖ Montana Petroleum Marketers Association
- ❖ Montana Manufactured Housing and RV Association
- ❖ Montana Wood Products Association
- ❖ Montana Stockgrowers Association
- ❖ Montana Wool Growers Association
- ❖ Owner Operators Independent Drivers Association
- ❖ Specialized Carriers & Riggers Association
- ❖ Montana Grain Elevators Association
- ❖ Montana Liquid & Gas Pipeline Association
- ❖ Wyoming Department of Transportation
- ❖ Port of Montana
- ❖ Port of Northern Montana
- ❖ Survey Takers

Executive Summary

Introduction

Montana's economy depends on the consistent movement of goods throughout the state, therefore ensuring a safe, resilient, and reliable transportation network is essential for the movement of freight. Montana's 2026 State Freight Plan (Plan) supports this vision by providing a comprehensive view of how freight moves across the state, the types of goods being transported, and the role freight plays in sustaining the state's economy. The Plan also evaluates system performance, identifies emerging trends and challenges, and outlines strategies and goals to guide freight priorities.

While one of the largest states in the nation, Montana also has one of the smallest populations, with the majority living within it's urban areas. It's mostly rural landscape is home to some of the nations most critical roadways, rail lines, and pipelines, providing connectivity to ports and other major freight destinations essential to the supply chain. It's also home to some of the richest energy and agricultural areas in the nation, producing a myriad of products from wheat, peas, and corn, to oil, and coal.

2024 Montana Freight Facts - Did you Know?

<i>Coal and petroleum are Montana's top commodities by value and weight.</i>	By value, <i>trucks</i> move the most amount of freight in Montana.	By weight, <i>pipelines</i> move the most amount of freight in Montana.
Montana is one the <i>top national producers</i> of lentils, dry peas, and chickpeas.	Montana has: > 73,000 miles of road >17,000 miles of pipeline >3,000 miles of active railroad 127 public use airports	<i>Textiles and leather</i> are two of Montana's top exports by value.

Created in accordance with federal requirements, including Title 49, section 70202, of the United States Code (49 U.S.C. §70202), the Plan is aligned with MDT's multimodal policy framework, TranPlanMT, and contributes to national multimodal freight policy objectives. It also addresses the minimum criteria outlined in the United States Department of Transportation's *Guidance on Multimodal State Freight Plans and State Freight Advisory Committees*, published in February of 2026.

Guided by a panel of transportation subject matter experts, the state's Motor Carrier Services, and in collaboration with freight stakeholders, this plan was updated with careful consideration and close attention to established requirements and criteria.

Freight Plan Purpose

MDT's mission is to plan, build, operate, and maintain a safe and resilient transportation system to move Montana forward. Maintaining a federally approved State Freight Plan helps to fulfill this mission. Freight plans are multi-disciplinary documents and contain a broad discussion on freight and economics and include the following topics:

- A brief description of Montana's economy, in relation to freight and economic demand;
- Detailing freight movements by mode;
- Identifying significant freight system concerns and needs in Montana and strategies for improvement;
- Identifying mechanisms to ensure reliability and redundancy within the transportation network;
- Addressing the impacts of freight on the environment;
- A fiscally constrained freight investment plan identifying infrastructure projects that support freight movements;
- Providing a framework to guide freight-related transportation investment decisions; and
- Informing the public and stakeholders as to how MDT manages the transportation system specifically related to freight.

Data Years Reflected in This Plan

Whenever possible, the most recent data available was used in the update of this Plan. Base-year data is typically provided for year 2024. Additional data are presented to demonstrate trends where necessary, with varying years reported based on the most recent data availability. Data years incorporated into this plan are:

- Historical to current trade and cross-border data: 2014 through 2024;
- Commodity flows and values used in the Freight Analysis Framework 5.7.1 (FAF5) data tabulation tool: 2024 year estimates based on 2022 Commodity Flow Survey data, conducted by the Bureau of Transportation Statistics and U.S. Census Bureau; and
- FAF data forecasts: Out to 2050 (Based on the Freight Analysis Framework Version 5.7.1 forecasting analysis).
- NHFP Freight Investment Plan (FIP): 2027 through 2031

Public Outreach and the Planning Process

The development of this Plan began in the spring of 2025 and took approximately a year

and a half to complete. The update included 1) guidance and input from a Technical Advisory Committee; 2) engagement through direct conversations, workshops, and a survey; and 3) a public commenting review period. A general timeline of the Plan's update is illustrated in Figure 1.

Figure 1: 2026 Freight Plan Timeline



Engagement efforts were completed during the update of the 2026 Freight Plan, in addition to the routine consultation of the Technical Advisory Committee (TAC). The TAC was composed of a broad base of subject matter transportation experts, from areas including, transportation infrastructure maintenance, planning, Motor Carrier Services, traffic safety, geotechnical and pavement design, engineering, and more. Five key engagement efforts included:

- Targeted outreach and communications with freight-related associations and members, including neighboring state partners;
- MDT Technical Advisory Committee (TAC) meeting with internal MDT subject matter experts and Federal Highway Administration representative held on September 4, 2025;
- A virtual stakeholder workshop with external industry partners held on September 24, 2025;
- An online stakeholder freight survey made available September 9, 2025 through December 12, 2025; and a
- Press release issued to Montana-based publications on August 25, 2025.

Targeted outreach was conducted as part of a strategic effort to strengthen relationships with associations, representing a broad range of freight-related sectors. The intent was to broaden the project's reach by engaging association memberships and creating additional opportunities for stakeholders to complete the survey and contribute valuable data to the Freight Plan. Identified associations were engaged early in the planning process to support meaningful and informed stakeholder input.

As part of stakeholder engagement efforts, sixteen statewide freight-related associations were contacted in which the project team received responses from over

half. Working relationships were established with nine industry and trade associations representing critical freight stakeholders across coal, agriculture, trucking, and pipeline sectors. This targeted outreach extended stakeholder engagement to more than 3,220 additional members who received an invitation to participate in the survey and to provide comments on the Freight Plan (Figure 2).

Figure 2: Summary of Stakeholder Connection Points



Montana Stakeholder Identified Transportation Needs and Concerns

In the development of this Plan, freight stakeholders and MDT subject matter experts identified concerns and issues, impacting freight movement. The overall approach to addressing these identified issues and needs can be found outlined in federal and state policies that guide MDT's decisions, Montana's long range transportation plan, TranPlanMT, and this Freight Plan. While TranPlanMT provides state-wide policy guidance for transportation-based decisions beyond that of freight, it and the Freight Plan address several overarching goals of national multimodal policy as identified in Figure 3 below.

Figure 3: Shared Goals of Federal and MDT Policy



MDT also actively collaborates with its federal and regional partners and local governments to coordinate freight planning efforts and strategies. Upon review and consideration of stakeholder concerns received, the following needs were identified:

Commercial Vehicle Safety

Impacts to commercial vehicle safety include but are not limited to weather-related crashes, English language barriers for foreign commercial truck drivers, commercial driver qualifications, and limited commercial truck parking during inclement weather.

Infrastructure Condition

Outdated and load limited bridges, infrastructure reaching its end of design life, such as pavement and culverts, and funding challenges continue to be top priorities.

Freight Mobility and Reliability

Recurring and non-recurring congestion, crashes, and adverse weather such as snow storms, high winds, and flooding can impact reliability of the road network.

Strategies and Goals

Technological innovations play a crucial role in MDT's achievement of a safe, secure, and efficient freight network as it touches on safety, reliability, and efficiency. Technology has been deployed in the areas of credentialing and vehicle clearance, route planning and traffic conditions, road system enhancements, and more. These advancements help to make roads safer for travelers and improve efficiency of the highway systems.

The National Highway Freight Program funds projects that support the efficient movement of freight on the National Highway Freight Network (NHFN). At present, Montana's portion of eligible network includes Interstate routes: I-15, I-90, and I-94, and I-94. All NHFP projects must be consistent with federal requirements established for the NHFP and demonstrate fiscal constraint.

The goals of this Freight Plan seek to emphasize the importance of the safe and efficient movement of freight on Montana's highway network and are identified below:

- *Safety: Improve safety for freight operators and the traveling public.*
- *System preservation and maintenance: Preserve and maintain existing transportation infrastructure to support the efficient movement of freight.*
- *System reliability: Implement efficient and cost-effective management solutions, strategically maintain assets, and accelerate project delivery, when feasible, to ensure system reliability.*
- *Environmental stewardship: Employ responsible stewardship of the built and natural environment.*
- *Network resiliency: Implement programs and efforts that promote network resiliency by effectively responding to extreme weather and natural phenomenon.*

Progress towards the above goals will be monitored, in part, through the reporting of federal performance measures for safety, reliability, and asset condition (bridge and pavement) as well as through the implementation of the National Highway Freight Program (NHFP). Success in implementing NHFP projects will be evidence of further progress in achieving the goals outlined in this Plan.

Looking ahead, freight demand is projected to keep rising, with estimates showing a 43 percent increase in freight volumes in Montana by 2050. Meeting this growth will require a transportation system that is safe, efficient, and equipped to handle higher freight activity. Montana's goals—supported by federal policies and strengthened

through infrastructure investments funded by the NHFP and MDT's asset-based programs—represent key steps toward building a network capable of accommodating and sustaining the state's expanding economy.

1. Freight Plan Overview

Federal Requirements and Policies for Freight Plans

Federal efforts that established state freight plan requirements originated through the Fixing America's Surface Transportation (FAST) Act and the Infrastructure Investment and Jobs (IIJA) Act. The purpose of these efforts were to ensure that priority be given to the National Highway Freight Network to ensure that goods are safely and efficiently moved across the nation's multi-modal transportation network through effective planning and funding.

Fixing Americas Surface Transportation Act of 2015

The FAST Act, signed into law December 4, 2015, recognized the need to improve the condition and performance of the National Highway Freight Network (NHFN) and to ensure goods are transported safely, reliably, and efficiently. The FAST Act provided approximately \$305 billion in funding between federal fiscal years 2016 and 2020. To support these goals, the FAST Act created the National Highway Freight Program (NHFP). The NHFP supports overarching national policy for maintenance of the NHFN and includes the following goals (23 U.S.C. §167):

- To invest in infrastructure and operational improvements on that strengthen the NHFN, reduce congestion and bottlenecks, reduce freight transportation costs, improve reliability, and increase productivity;
- To improve the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas;
- To improve the state of good repair of the NHFN;
- To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NHFN;
- To improve the efficiency and productivity of the NHFN;
- To improve the flexibility of states to support multi-state corridor planning; and
- To reduce the environmental impacts of freight movement on the NHFN.

Freight plans address immediate and long-range planning activities and investments of a state, with respect to freight, as well as describe how a state will improve its ability to meet the goals of national freight policy. Pursuant to the FAST Act, state freight plans are required to include the following components (49 U.S.C. §70202):

- Identification of significant freight system trends, needs, and issues;
- Description of freight policies, strategies, and performance measures that guide freight-related transportation investments;
- A list of state designated multimodal critical rural freight facilities and corridors

designated under 49 U.S.C. 70103, when applicable (not applicable to Montana);

- A list of state designated critical rural and urban freight corridors, when applicable (not applicable to Montana);
- A description of the state's ability to meet national multimodal freight goals;
- Innovative technologies and operational strategies that improve the safety and efficiency of freight movement;
- Improvements to reduce or impede the deterioration of roadways traveled by heavy vehicles;
- An inventory of facilities with freight mobility issues and strategies to address these issues at state owned or operated facilities;
- Significant congestion or delay caused by freight movements and mitigation strategies;
- Consultation with the state freight advisory committee, if applicable (not applicable to Montana); and
- A freight investment plan.

Infrastructure Investment and Jobs Act of 2021

IJA was signed into law on November 15, 2021, and built on the existing foundation of freight policy and goals described in its predecessor, the FAST Act, by including additional requirements for freight plans. These requirements include:

- The most recent commercial motor vehicle parking facilities assessment conducted by the state;
- The most recent supply chain cargo flows in the state, expressed by mode of transportation;
- An inventory of commercial ports in the state;
- If applicable, consideration of the findings or recommendations made by any multi-State freight compact (not applicable to Montana);
- The impacts of e-commerce on freight infrastructure in the state;
- Considerations of military freight; and
- Strategies and goals to decrease the impacts of:
 - Severe weather and natural disaster on freight mobility;
 - The impact of freight movement on air pollution;
 - The impacts of freight movement on flooding and storm water runoff; and
 - The impact of freight on wildlife habitat loss.

IIJA further emphasizes the need for freight plans to discuss how states enhance reliability or redundancy to support goods movement or its ability to rapidly restore access to the network. Lastly, IIJA increases the frequency of freight plan updates from every 5 years to every 4 and adjusts the minimum planning horizon from five years to eight years. Within this plan, the planning horizon is forecasted to 2050.

Freight Plan Reference Guide for Federal Code Requirements

To assist in demonstrating that federal requirements have been met in this plan, Table 1 provides a reference to core sections and areas of the Freight Plan which address federal code requirements and recommended content as outlined in the *2026 Guidance on State Freight Plans and State Freight Advisory Committees*.

Table 1: Freight Plan Reference Guide

Freight Plan Federal Code Requirement	Location(s) in the Freight Plan
An identification of significant freight system trends, needs, and issues with respect to the state.	• Executive Summary • Chapter 2 • Chapter 3 • Chapter 4 • Chapter 9, <i>subsection Key Freight Concerns</i>
A description of freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the state.	• Chapter 5 • Chapter 7 • Chapter 9 • Chapter 10
When applicable, a listing of (A) multimodal critical rural freight facilities and corridors designated within the state under section 70103 of title 49 (National Multimodal Freight Network); and (B) CRFCs and CUFCs designated within the state under 23 U.S.C. 167 (National Highway Freight Program).	• Chapter 3, <i>subsection Designation of Montana's Transportation Network</i> • Chapter 10
A description of how the plan will improve the ability of the state to meet the national multimodal freight policy goals described in 49 U.S.C. 70101(b) and the national highway freight program goals described in 23 U.S.C. 167.	• Chapter 6 • Chapter 7 • Chapter 10
A description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of the freight movement, were considered.	• Chapter 8 • Chapter 9, <i>subsection Commercial Motor Vehicle Safety</i> • Chapter 9, <i>subsection Rest Areas and Truck Parking</i> • Chapter 9, <i>subsection Innovative Technologies that Improve Freight Flow</i>

Freight Plan Federal Code Requirement	Location(s) in the Freight Plan
In the case of roadways on which travel by heavy vehicles, including mining, agricultural, energy cargo or equipment, and timber vehicles, is projected to substantially deteriorate the condition of the roadways, a description of improvements that may be required to reduce or impede the deterioration.	- Chapter 9, subsection <i>Asset Management Performance</i> - Chapter 10, subsections <i>Pavement Condition</i> and <i>Pavement Condition Ride Index</i>
An inventory of facilities with freight mobility issues, such as bottlenecks, within the state, and for those facilities that are state owned or operated, a description of the strategies the state is employing to address those freight mobility issues.	Chapter 9, subsection <i>System Reliability</i>
Consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate congestion or delay.	Chapter 9, subsection <i>System Reliability</i>
A freight investment plan that, subject to 49 U.S.C. §70202, including a list of priority projects and how funds made available to carry out 23 U.S.C. §167 would be invested and matched.	- Chapter 10 - National Highway Freight Program - Appendix A: Montana's Freight Investment Plan
The most recent commercial motor vehicle parking facilities assessment conducted by the State.	- Chapter 6, subsection <i>Montana Rest Area Plan (Truck Parking)</i> - Chapter 9, subsection <i>Rest Area and Truck Parking</i> - Appendix C
The most recent supply chain cargo flows in the State, expressed by mode of transportation.	Chapter 3 - subsection <i>Major Freight Sectors (The Energy, Agriculture, and Construction Supply Chains)</i>
An inventory of commercial ports in the state.	Chapter 3 - subsection <i>Montana's Freight Facilities</i>
If applicable, consideration of the findings or recommendations made by any multi-State freight compact to which the State is a party under section 70104.	Not applicable
The impacts of e-commerce on freight infrastructure in the State.	- Chapter 3, subsection <i>Montana Air</i> - Chapter 4, subsection <i>E-Commerce and Warehouse Automation</i>
Considerations of military freight.	Chapter 3 - Military Freight in Montana
Strategies and goals to decrease: (1) the severity of impacts of extreme weather and natural disasters on freight mobility; (2) the impacts of freight movement on local air pollution; (3) the impacts of freight movement on flooding and storm water runoff; and (4) the impacts of freight movement on wildlife habitat loss.	- Chapter 9, subsection <i>Environmental Stewardship and Strategies that Reduce Freight Impacts on the Environment</i> - Chapter 9, Table 18: <i>MDT Strategies for Addressing Incidents that Cause Non-Recurring Congestion</i> - Chapter 9, subsection <i>Network Resiliency</i>

Freight Plan Federal Code Requirement	Location(s) in the Freight Plan
Include requirement that State will either (1) enhance reliability or redundancy of freight transportation; or (2) incorporate the ability to rapidly restore access and reliability with respect to freight transportation.	- Chapter 9, Table 16: <i>Montana Freight Plan Goals</i> (demonstrates commitment to reliability and resiliency) - Chapter 9, subsection <i>System Reliability</i>, first paragraph. - Chapter 9, subsection <i>Measures of Reliability on the NHS</i>, first paragraph
Consultation with the State Freight Advisory Committee, if applicable.	Not applicable

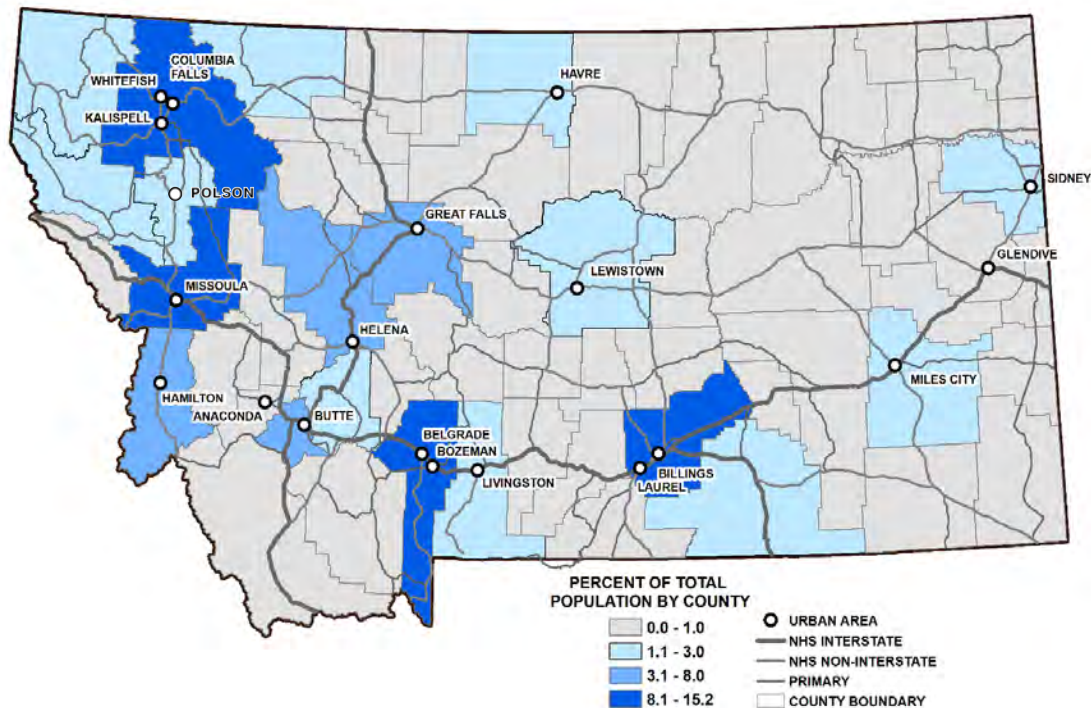
2. Freight and Montana's Economy

During the COVID pandemic Montana fared economically better than many other states. This was in part due to opening the economy back up early after pandemic lock-downs, major federal economic stimulus that boosted the State's general fund, and increased activities in tourism, real estate, and consumer spending.¹ However such a surge could not be indefinitely sustained. By 2022 Montana's economy began to moderate and face new challenges. The effects of the times has ranked Montana as one of the least affordable states to live in and has revealed its vulnerability to tariffs enacted in 2025 due to the state's small manufacturing sector. On the positive, there was strong job growth in 2024. Sectors such as arts, entertainment and recreation, management, and professional services saw major boosts to personal income, exceeding 10 percent over the year, with overall unemployment around 3 percent. The 2026 economic outlook for Montana, by the Bureau of Business and Economic Research, expects continued growth overall, albeit slow, with faster growth in regions with large development projects, such as data centers, mining, and technology. Affordability is also forecasted to improve, due to growth in income, tax cuts, and an increase in housing supply.²

Population and Demographics

The fourth largest state by land mass (approx. 147,000 square miles), Montana ranks 10th for the least populated state with just over 1.1 million residents, according to the U.S. Census Bureau.³ Montana has 7.4 people per square mile, on average, and is the fifth most rural state in the nation.⁴ Despite these numbers, Montana's population grew an estimated 4.6 percent between 2020 and 2024, an unprecedented rate of growth for the state, fueled primarily by significant domestic migration during the COVID pandemic. This trend also exceeded the national growth rate, which grew by 3.09 percent during the same period.⁵ Figure 4 displays the population density (per square mile) by county throughout Montana. It highlights that the state's population is concentrated in urban centers, while much of the remaining area reflects a predominantly rural or remote way of life.

Figure 4: Montana Population Density by County (2024)



Urban Areas

As previously mentioned, Montana's population is mostly skewed towards urban centers, particularly in the western half of the state. According to the U.S. Census Bureau, just over half of Montana's population resides within incorporated urban areas, with approximately 37 percent of the population living in the seven largest cities (Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula). Billings is the state's most populated city and is home to over 10 percent of the State's total population.⁶

From a freight perspective, urbanization and densification have shown to have a net positive effect on volume and efficiency. More people in a particular area allows for consolidation and makes deliveries more efficient. This can be seen with the significant increase in warehouse distribution and fulfillment centers being opened in 6 out of the 7 largest cities in Montana over the past few years. Greater demand for goods requires increased service capabilities.

Since the 2022 update to the Plan, Montana's number of metropolitan planning organizations (MPO) has increased from three to five.

Race

Race estimates for 2024 show that Montana is approximately 88 percent white. The largest minority group in Montana, those who identify as American Indian or

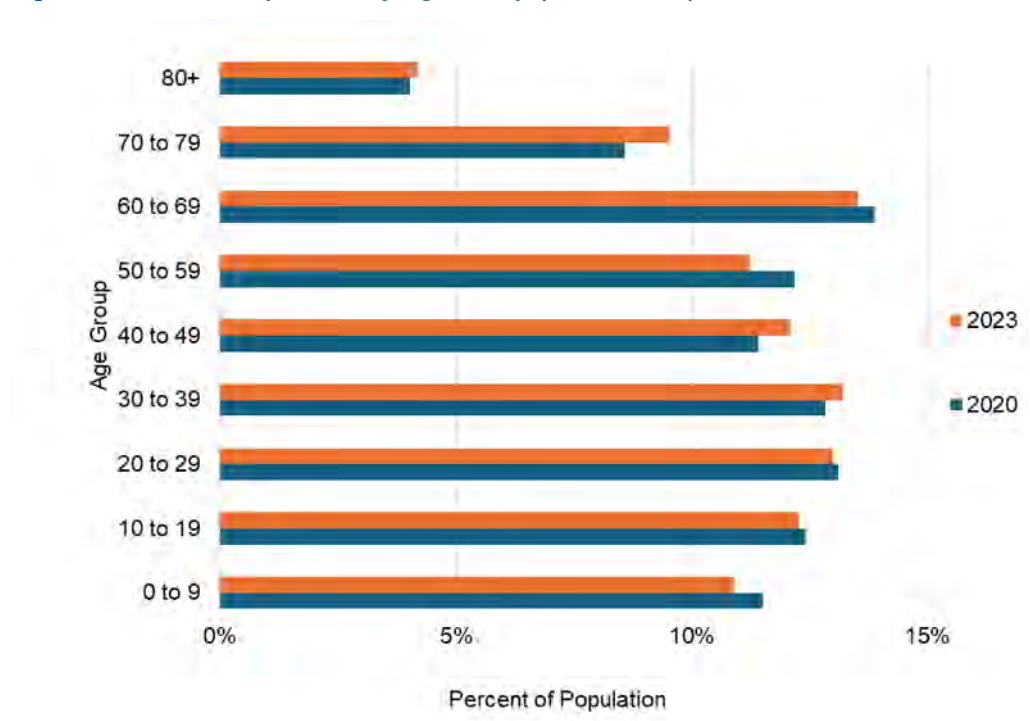
Alaskan Native, represent over six percent of the population while Hispanic or Latino makes up almost five percent of the population. When studying the percentage of race at the county level, Glacier, Blaine, Roosevelt, and Big Horn Counties all have Native American populations greater than 50 percent, due to the presence of tribal reservations. Montana is home to seven reservations representing 12 tribes.

Age

In 2024, Montana's median age was estimated to be 41.3 years.⁷ This value is slightly higher than the national median age of the United States which is 39.2. Based on median age, Montana ranks among the top ten states with the oldest population.⁸

As shown in Figure 5, 28 percent of Montana's population was over the age of sixty and 23 percent were under the age of 19 in 2023. With roughly half of the population falling into non-working age groups, the state faces challenges in maintaining a sufficient number of eligible workers to meet workforce demands. To help address this issue Montana has implemented the 406 Jobs Initiative. This initiative seeks to support labor force growth by addressing barriers that hold individuals back from entering the work force, expanding jobs for Montana graduates, providing support for apprenticeship programs, and establishing local sector partnerships in high demand sectors.⁹

Figure 5: Montana Population by Age Group (2020 - 2023)²⁶

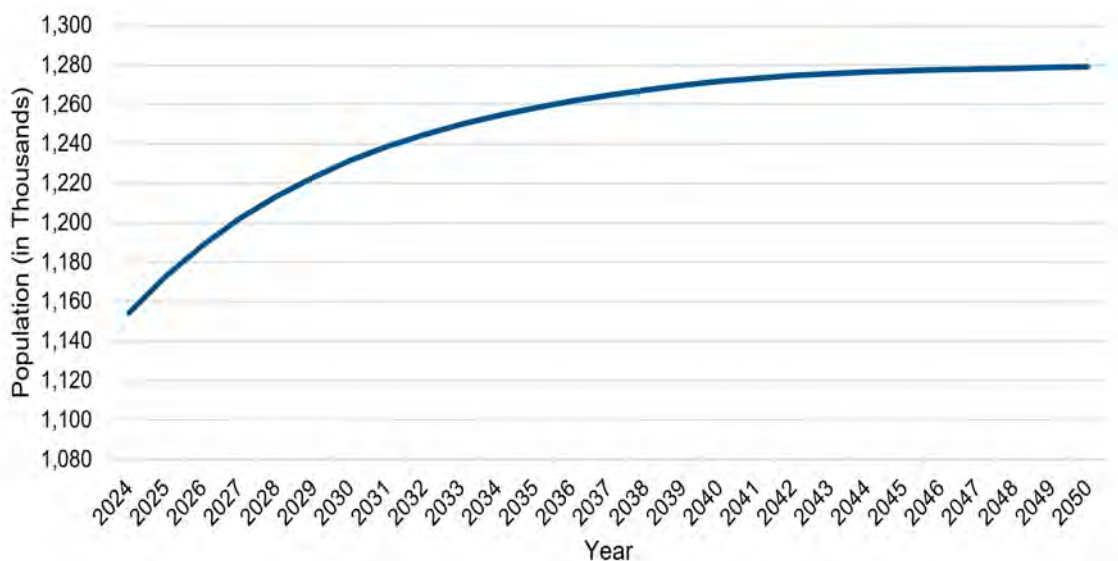


Population Projections

During the COVID pandemic from 2020 to 2021, Montana experienced a record

increase in population growth. Since then, population growth has declined from a nearly 1.8 percent annual growth rate in 2021 to an estimated 0.63 percent in 2025.¹⁰ This is in stark contrast to the nation's annual growth rate which increased by almost a full percentage point between 2021 and 2025 (Based on preliminary data).¹¹ Based on the Regional Economic Model Inc's (REMI) model outputs, the long-range projection for Montana's population is estimated to increase 11 percent by 2050 (or roughly 125,000 people). REMI's forecast for the state's population growth is more robust through the 2030's and then tapers off to nearly flat as seen in Figure 6. Overall, however, the average annual growth rate for the forecasted period is 0.5 percent.

Figure 6: Montana Population Projections (2024 - 2050)



Jobs and Income

Over the next decade, Montana is projected to see a meaningful demand for workers. Over 71,590 job openings annually are projected through 2033. Approximately 51 percent of these openings will be due to turnover, around 40 percent will result from retirements, and 9 percent will come from job growth. Industries driving growth in the state include computer and mathematical fields, healthcare, and construction.¹²

In 2022, Montana set a record high in employment by adding 18,000 jobs. This was primarily driven by the rehiring of employees laid off due to the COVID pandemic and a major migratory influx. Employment opportunities and family are the top two reasons people migrate to the state.¹³

Since 2022, the job growth rate has slowed back to a more traditional trend, translating to a growth of 1.1 percent annually through 2033. This growth may see some constraints however as migration into the state is beginning to slow and a growing, aging population enters retirement. Figure 7 provides a detailed breakdown of job

growth by industry. Healthcare and construction are forecasted to have the highest growth rates.

Figure 7: Job Growth Rates by Industry (2023 - 2033)²⁷

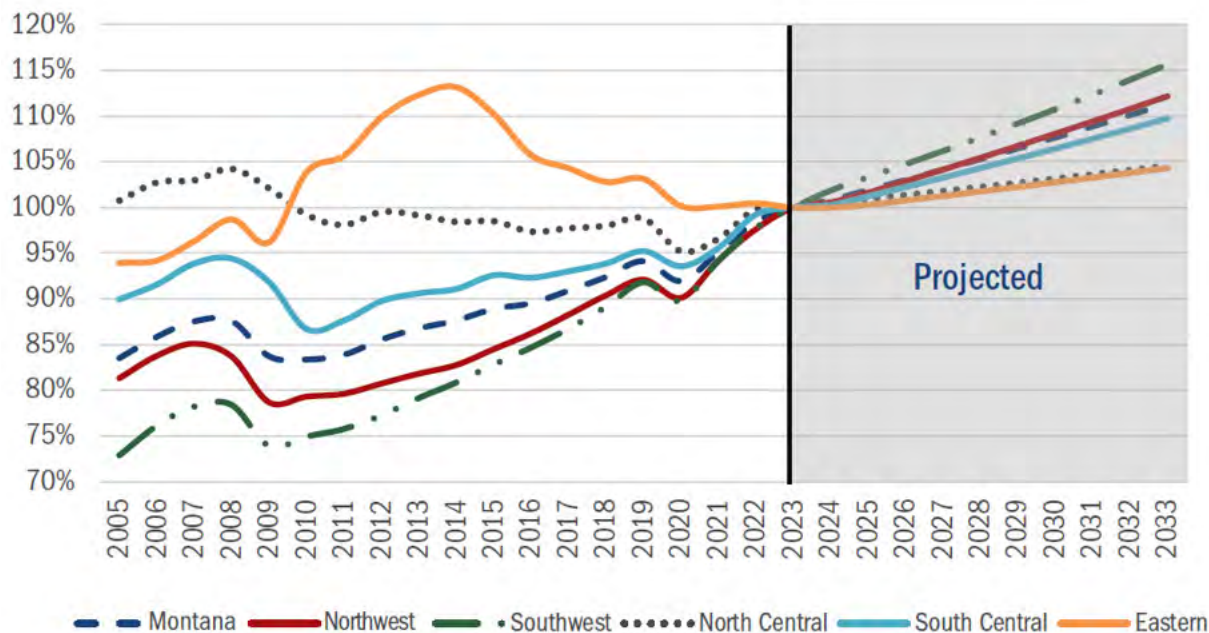
Industry	2021-2023 Growth Rate	2023-2025 Growth Rate	2023-2025 Annual Job Growth	2013-2023 Growth Rate	2023-2033 Growth Rate	2023-2033 Annual Job Growth
Healthcare	2.0%	1.9%	1,440	1.5%	1.6%	1,310
Construction	5.5%	2.1%	800	4.4%	2.3%	930
Accommodation & Food	5.4%	0.9%	540	2.1%	1.2%	740
Professional & Technical	6.0%	1.5%	430	3.5%	1.7%	510
Retail Trade	1.8%	0.6%	400	1.1%	0.6%	370
Manufacturing	1.1%	0.9%	200	1.7%	1.2%	290
Wholesale Trade	4.0%	1.6%	300	1.0%	1.1%	220
Other	2.9%	1.0%	190	1.2%	1.1%	210
Local Government	1.7%	1.0%	210	1.2%	0.9%	200
Admin & Support Services	4.1%	0.6%	130	1.8%	0.7%	160
Agriculture	3.0%	1.9%	130	3.7%	1.9%	140
Finance	2.0%	0.7%	110	1.3%	0.8%	140
Arts & Entertainment	1.8%	0.9%	110	1.2%	1.0%	130
Transportation & Warehousing	0.0%	0.7%	120	0.8%	0.6%	110
Education	1.9%	0.3%	120	0.3%	0.3%	100
Real Estate	3.8%	0.4%	30	2.8%	0.9%	60
Management	-3.7%	3.0%	60	0.7%	1.6%	40
Mining	4.5%	1.4%	100	-2.7%	0.5%	30
State Government	-0.4%	0.6%	70	0.0%	0.2%	30
Utilities	1.8%	0.6%	20	-0.9%	0.3%	10
Federal Government	2.7%	0.0%	0	0.8%	0.0%	0
Postal Service	-2.4%	0.7%	10	-0.6%	0.1%	0
Information	-0.1%	-1.1%	-60	-2.1%	-0.4%	-20
Payroll Employment	2.9%	1.1%	5,630	1.5%	1.1%	5,730
Total Employment	2.5%	1.0%	5,340	1.4%	1.1%	6,350

All five regions of employment in the state are forecasted to see increased job growth through 2033, albeit at different rates. The Northwest and Southwest regions are expected to see the highest rate of annual job growth (1.5 percent and 1.2 percent annually) supported by growing populations and industries, including construction, retail, professional services, and hospitality.

The South-Central region, that includes Billings, is experiencing a decrease in mining and utility industry wages but is expected to see 0.9 percent annual growth, primarily due to demand in the health care, construction, and recreational industries.

The least populated Eastern region of the state has seen more volatility in the past, due to boom and bust cycles in oil field production (e.g. Bakken Oil Boom which peaked around 2012 to 2014), but is now stabilizing into a projected 0.4 percent annual growth rate with the North-Central region showing the same forecasted trend of 0.4 percent annually through 2033 (Figure 8¹⁴).¹⁵

Figure 8: Regional Employment Projected to 2033



Total job openings include new jobs (growth), exits (leaving the labor force), and transfers (a move between occupations). As previously mentioned, healthcare, construction and extraction, and IT occupational groups may not rank the highest in total openings but rank the highest in new job growth. The construction and extraction sectors are expected to see an 18 percent increase in job openings over the next decade, due to job growth alone. Skilled freight dependent trades, such as carpenters and electricians, are also included in the state's high paying occupations and are forecasted to have a combined 1,050 annual job openings through 2033.¹⁶

Figure 9 outlines the demand for major occupation groups in Montana between 2023 and 2033. While job growth continues a positive trend, available labor force continues to see challenges driven by an aging population and increased retirements. This will cause a tight labor market to persist in Montana.¹⁷

Figure 9: Annual Projected Occupational Demand by Major Occupation Group (2023 - 2033)²⁸

Rank	Occupation Group	Annual Openings				MT Median Wage
		New Jobs	Exits	Transfers	Total Openings	
1	Food Preparation and Serving Related	670	4,840	6,090	11,600	\$28,280
2	Office and Administrative Support	150	3,630	3,900	7,680	\$40,900
3	Sales and Related	320	3,240	3,860	7,430	\$36,520
4	Transportation and Material Moving	530	2,270	3,150	5,950	\$42,240
5	Construction and Extraction	800	1,450	2,120	4,370	\$56,960
6	Healthcare Support	480	1,620	1,810	3,900	\$36,410
7	Management	490	1,230	1,680	3,400	\$93,850
8	Building/Grounds Cleaning Maintenance	210	1,480	1,660	3,350	\$35,890
9	Personal Care and Service	200	1,030	1,630	2,870	\$31,160
10	Business and Financial Operations	360	940	1,450	2,750	\$64,290
11	Installation, Maintenance, and Repair	320	1,030	1,320	2,670	\$50,240
12	Educational Instruction and Library	140	1,280	1,240	2,650	\$48,950
13	Healthcare Practitioners and Technical	540	1,130	860	2,520	\$77,910
14	Production	190	950	1,300	2,440	\$44,720
15	Computer and Mathematical	240	460	780	1,480	\$79,990
16	Community and Social Service	180	440	560	1,180	\$46,040
17	Farming, Fishing, and Forestry	100	380	640	1,110	\$40,470
18	Arts, Design, Entertainment, Sports, and Media	100	410	570	1,080	\$45,980
19	Protective Service	60	460	520	1,030	\$52,350
20	Life, Physical, and Social Science	80	190	630	910	\$63,110
21	Architecture and Engineering	120	300	400	810	\$76,890
22	Legal	70	160	170	400	\$71,270
Total, All		6,350	28,920	36,320	71,590	\$45,690

Ranked fourth in terms of demand for total job openings, the Transportation and Material Moving occupational group is forecasted to see 5,950 annual openings (see above table). The trucking industry alone moves over half of the goods in Montana by value, resulting in an estimated \$48 billion in revenue in 2024. Given this role, heavy and tractor-trailer truck driver positions are forecasted to see 980 annual job openings, and rank among the higher paying jobs in the state (\$45,000 to \$65,000 annually).¹⁸

Freight railroads are a top mover of bulk goods. In Montana, freight railroads employed

2,697 people in 2022 and support major industries such as agriculture, energy extraction, and wood products.¹⁹ For every railroad job, 3.9 additional jobs in the manufacturing, logistics, and tech industries are created across the nation. For every dollar invested, two and a half dollars in economic activity are generated. The economic impact of freight rail is significant. Rail workers earn 40 percent more than the national average and supports jobs through supply chains and consumer spending.²⁰

Air cargo plays a critical role in the movement of goods, including high value precision instruments and pharmaceuticals. Employment information on aviation jobs at the state-level is very limited, however national trends show a growing demand for jobs in the industry that include pilots, aircraft crews, mechanics, air traffic controllers, airport workers, and more. Growing fleets and retirements are two major forces driving the demand for skilled workers. For example, 83 percent of aviation-related maintenance technicians, nationally, will retire over the next decade. By 2030, tens of thousands of pilots will reach their mandatory retirement age.²¹ Demand for air traffic controllers is also at an all-time high. Despite Montana only having eight primary-use commercial airports, there is a current need to fill 30 air traffic controller positions.²²

Pipeline is the top mode of transportation by weight in the state, transporting an estimated 43 percent of all commodities, including coal, petroleum, and gas, in 2024. Jobs in this industry include station and pump operators, valve installers, mechanics, pipe layers, engineers, and more. A potential major pipeline development in the state that could bring meaningful economic impact through the creation of jobs and revenue is a new pipeline being proposed by Bridger Pipeline Expansion. The proposed pipeline will be 36-inches in diameter and be over 600 miles long, from the Canadian border, through Montana to Wyoming. It is expected to carry around half a million of barrels of crude oil daily from Canada.²³

Recent efforts at the federal level in leasing, permitting, and taxation will encourage development of oil and gas on U.S. soil, while challenges in increased costs, uncertainties in geopolitical climates, and supply chains persist.²⁴ Overall, the nation's oil and gas industries are forecasted to see marginal growth in 2026. Given Montana's major involvement in energy extraction, it is poised to benefit from industry supportive national policies ensuring continued demand for a skilled labor force. In 2021, the oil and gas industry supported 56,910 jobs in the state (13,740 direct and 43,170 indirect). This equated to \$3.7 billion in labor income and \$7.5 billion in Montana's gross domestic product, or GDP.²⁵

3. Freight Economics and Montana's Top Commodities

Unless otherwise noted through reference or citation, the data, charts, and figures in this chapter were derived from the Bureau of Transportation Statistics' Freight Analysis Framework, version 5.7.1 (FAF5), published on August 15, 2025. FAF5 freight flow estimates are based on 2022 Commodity Flow Survey data for intermittent years between 2020 through 2050. This Plan evaluates 2024- and 2050-year data as provided by FAF5. Additionally, FAF5 forecasts the movements of 42 different commodities by mode (truck, rail, air, and pipeline), value, tonnage, and direction (within and outbound/inbound of a state). Commodity tonnage is reported in 1000 pound units, or kilotons (KTons), and value is reported in million dollars (Million \$).

Montana has a diverse economic landscape dominated by industries of real estate; natural resources, including gold, coal, and timber; manufacturing, and other services. As a neighbor to resource-rich south central Canada, the state plays a vital role in international trade and supply chain connectivity. On its northern border with Canada, it shares 14 border crossings.

In 2024, Montana's Gross Domestic Product (GDP) was an estimated \$76 billion, a \$24 billion increase since 2019, as reported in the previous Freight Plan. Finance and real estate contributed the most to Montana's GDP with an estimated \$14.8 billion while utilities contributed the least, at \$1.2 billion (Figure 10).

Figure 10: 2023 Montana GDP by Industry (Million \$)



Freight generating industries in Montana are primarily those that extract, manufacture, or heavily rely on the transport of materials and goods. These include manufacturing,

mining, agriculture, construction, and transportation/warehousing.²⁹ Mining may not have been the highest GDP, but in terms of employment and wages³⁰, it is the top industry in Montana while agriculture and farms encompass 60 percent of Montana's landscapes.

Top Montana Commodities

Montana freight systems are in part dominated by goods transported to and from areas of mining, extraction, and farming. Not only are these sectors major contributors of bulk goods into the supply chain, they are also highly dependent on equipment and machinery, thereby maintaining a demand for goods in the state. This is demonstrated in Figure 11 and Figure 12 (below) that displays Montana's top 5 commodities by value and weight. Three out of the top five by value are either oil/gas or mining related and include coal not elsewhere classified (n.e.c.), crude petroleum, and machinery. These top three commodities by value, represent 26 percent of freight in the state. Coal n.e.c. includes a diverse range of products, including briquettes, coal, ammonia, methanol, waxes, and more. The "Other" category in the following charts represents an aggregate of all other commodities (37) as provided in FAF5.

In 2024, the state's annual crude petroleum production increased for a third consecutive year to 74,000 barrels per day, which is the highest output level since 2015. Crude petroleum products are eventually refined into products such as gasoline, diesel, butane, propane, and asphalt.³¹

Four out of the top five commodities by weight are oil/gas related, with coal n.e.c. and crude petroleum representing 42 percent of freight in the state, by weight. Most of Montana's coal production comes from five mines in the southeastern part of the state, primarily located in the Powder River Basin.³² Gravel, Montana's smallest top five commodity, includes aggregates of limestone, granite, quartzite, sandstone, traprock, and sand.³³ These products are mostly used in construction activities.

Figure 11: 2024 Top Commodities by Value (Billion \$)

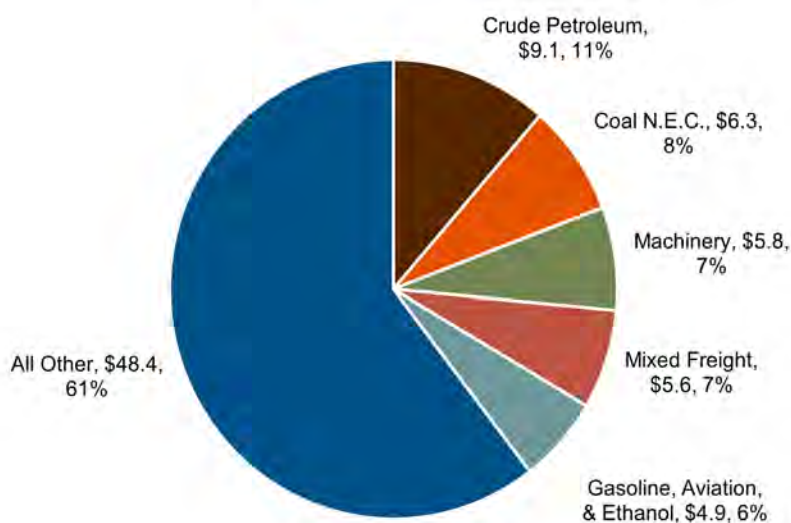
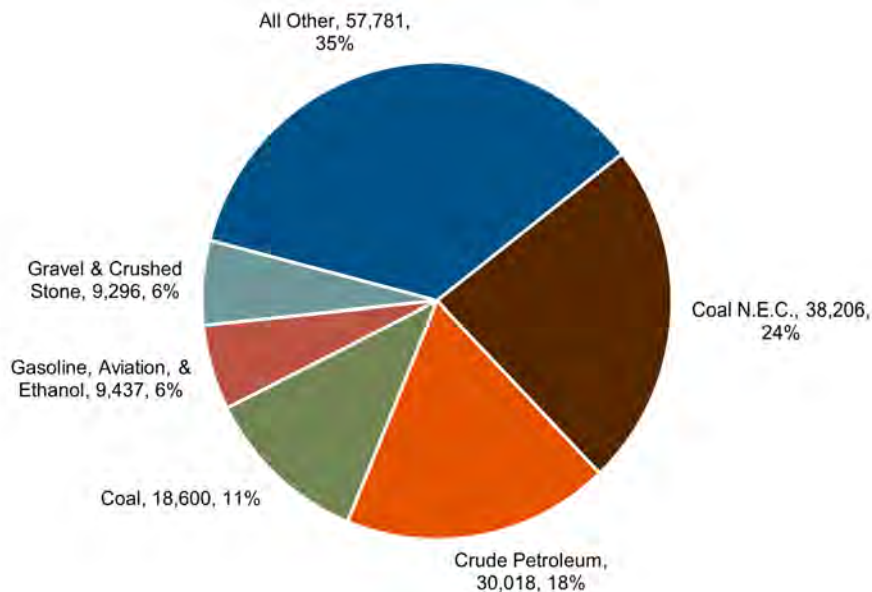


Figure 12: 2024 Top Commodities by Weight (KTons)



Major Freight Sectors and Supply Chains

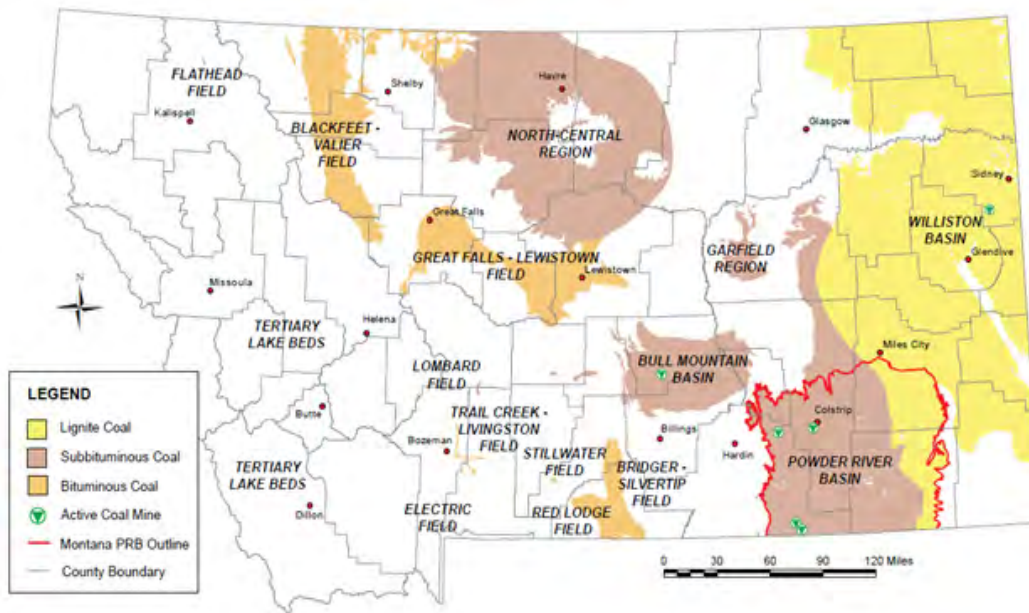
Three major sectors of freight (by weight) in Montana include the energy, agriculture, and construction industries. Each sector represents a unique area of the state and plays a critical role in the state's economy and transportation network. Combined, these sectors account for 94 percent of all commodities moved within the state and are dependent on Montana's (and the nation) supply chain network composed of roadways, pipelines, airways, and railroads. Without access to these modes, the supply chain may fail to provide necessary access for the efficient movement of goods. This section further discusses these top three sectors and the supply chains that support their movements.

Energy

Montana, for many years, has been among the top producers of coal in the U.S. The state is home to the largest recoverable coal reserve in the nation, representing approximately 30 percent of the U.S. total recoverable coal.

Outside of its exports, almost a third of Montana's coal is shipped to other states for electricity generation with the remainder of coal remaining in-state for electricity production.³⁴ The low-sulfur content of Montana's coal makes it a highly sought-after form of energy production as it burns cleaner than other forms of coal by releasing less sulfur-oxide. Figure 13 displays the coal mine locations throughout the state, including the Powder River Basin which is a major geologic basin of coal reserves.

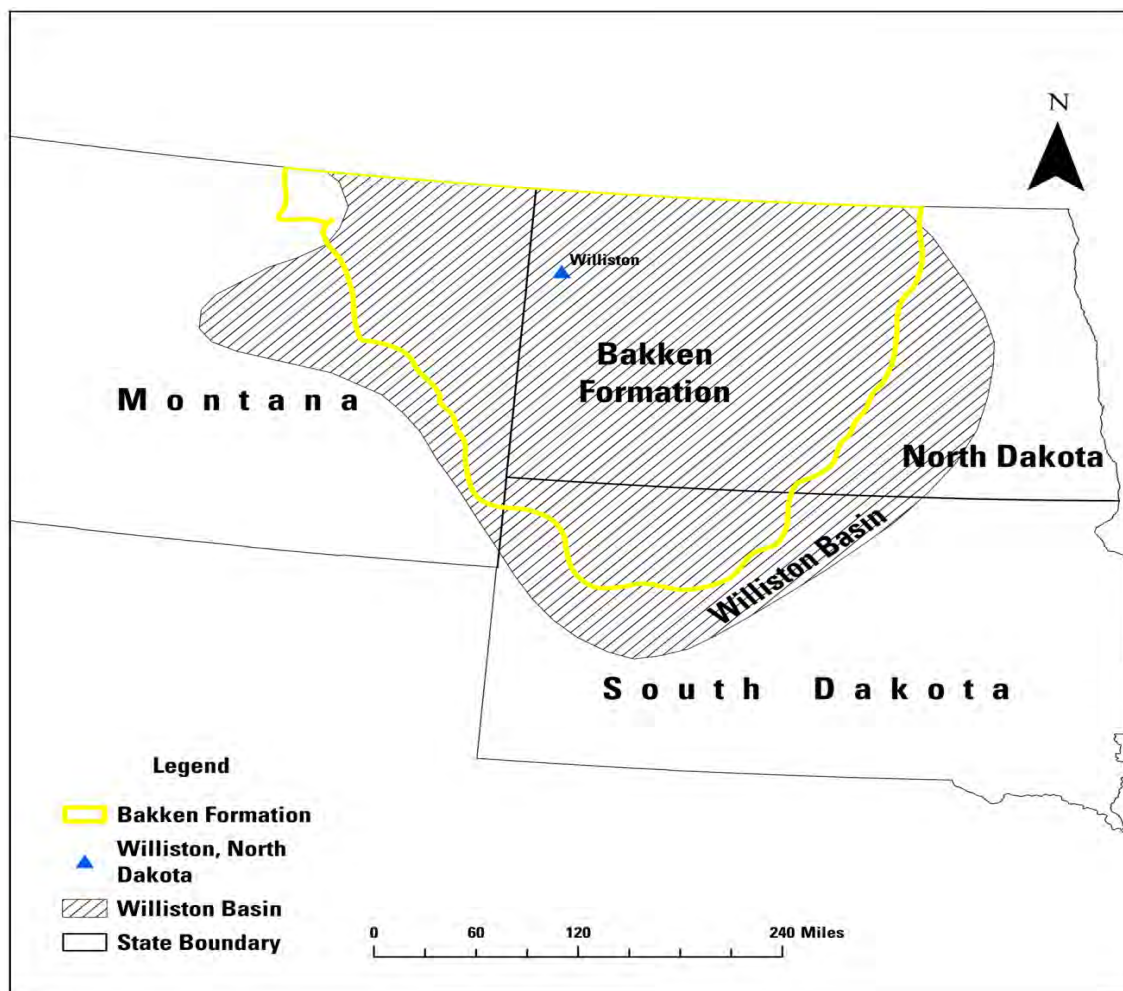
Figure 13: Coal Mining Areas in the State³⁵



As shown in Figure 14, most of Montana's oil production comes from the Bakken Formation in the northeastern part of the state along the border with North Dakota. Despite declines in oil production in the early 2000's, due to decreased demand and competition with North Dakota, Montana's petroleum production is now experiencing a year over year increase in production.

Montana has four oil refineries: three in the Billings area and one in Great Falls.³⁶ The refineries receive crude oil mainly from Canada and Wyoming and produce a wide range of refined products. Pipelines and railroads are used to ship crude oil to the refineries and to transport the facilities' refined products throughout Montana and to nearby states.³⁷

Figure 14: Bakken Formation and Montana Oil³⁸



The transportation sector in Montana consumes about two thirds of the petroleum in Montana. Nationally, Montana runs in the top 10 both for per capita annual miles traveled and per capita gasoline expenditures. This is due to the state's rural and large size which contributes to longer commutes and driving distances usually required for basic services. The second largest consumer of petroleum is the industrial sector, consuming one fifth of the state's petroleum, whereas the residential and commercial sectors combined account for approximately 14 percent of the state's petroleum consumption.

The Energy Supply Chain

Freight movements in Montana support coal, crude oil, refined fuels, and more. These commodities are essential for economic vitality, quality of life, and national security. The energy supply chain includes pipelines, rail, and highways, with pipelines being the dominant mode. Almost half of the energy movements in Montana remain within the state. By 2050, energy commodities in Montana are expected to increase by 19%. This increase is forecasted to be driven primarily by demand in crude petroleum and coal n.e.c.

**Energy
Commodities
accounted for
61% of tonnage
in Montana in
2024.**

Figure 15: Energy Commodity Supply Chain by Mode

Commodity	Truck	Rail	Pipeline	Air	Other or Multiple Modes
Coal	○	●			●
Crude Petroleum	○		●		
Fuel Oils	●	○	●		
Gasoline	○		●		○
Coal n.e.c.	○		●		○
Legend: ● Primary Modes (25% of tonnage or more) ○ Supporting Modes					

In addition to these commodities, cargo for wind farms, oil, gas, and coal extraction play an important role. These movements typically rely on rail and oversized trucking. Windmill components in particular require careful route planning due to their significant lengths (upwards of 200 feet) and overall weight.

Montana plays a key role in the nation's coal supply, with the largest recoverable coal reserves in the country. In 2024, Montana produced five percent of the U.S. coal and was the second largest coal exporter, after Wyoming. Primarily due to competition with natural gas and renewable energy sources, in-state coal production is forecasted to decline.³⁹

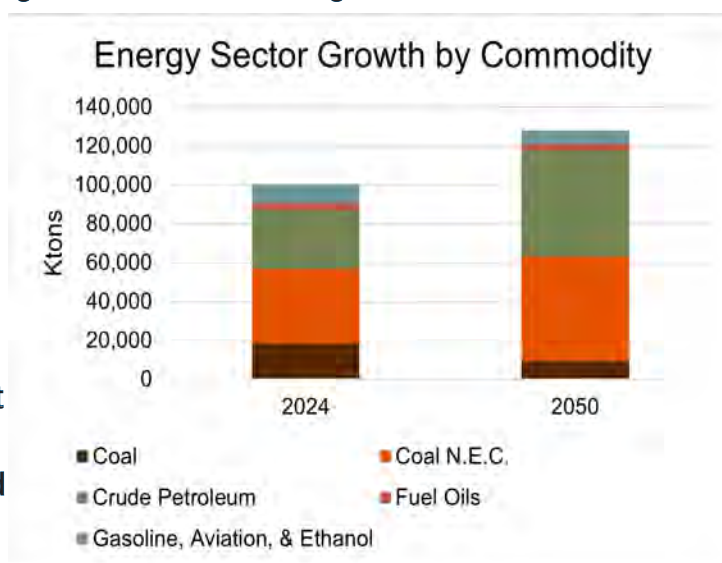
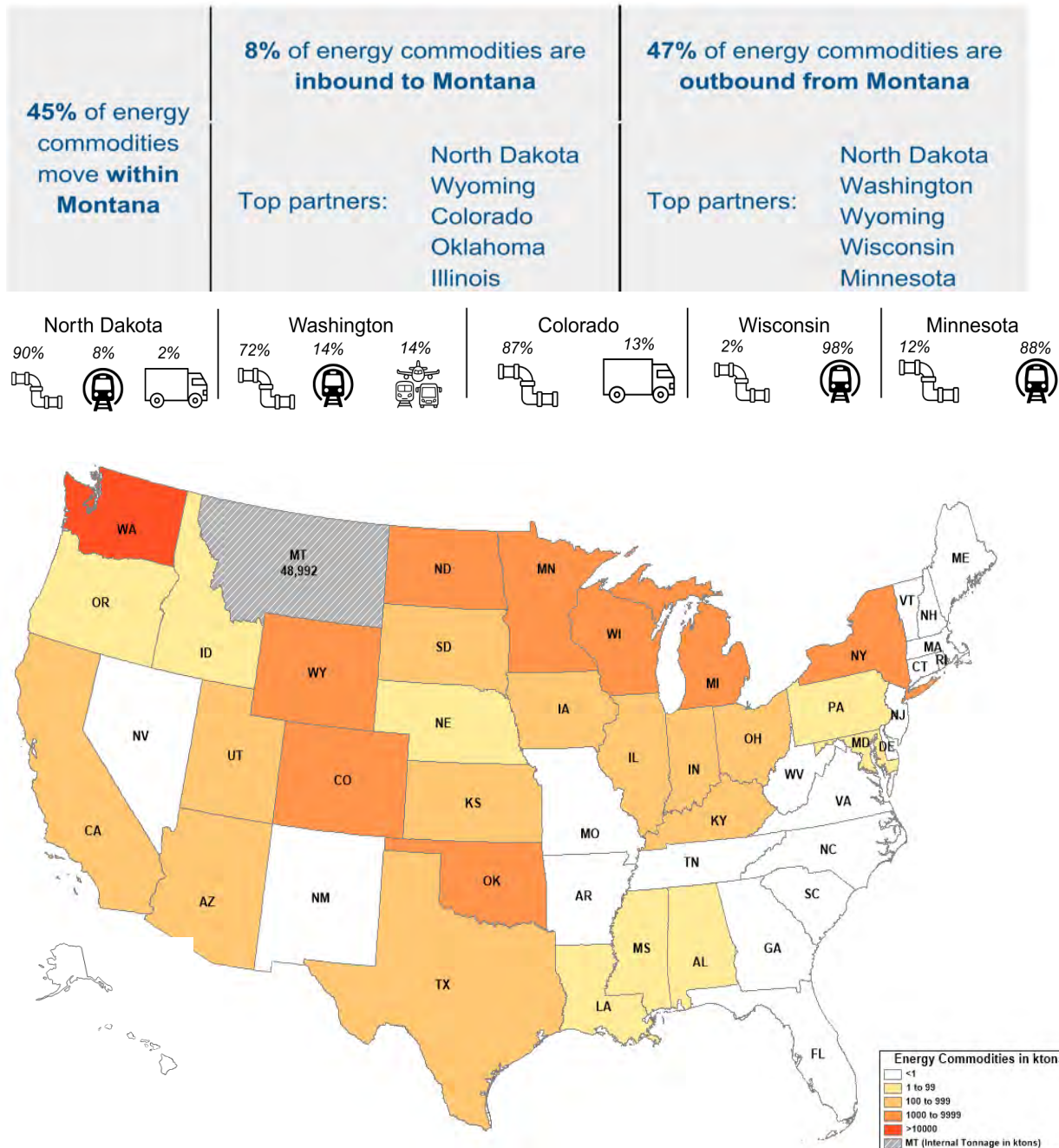


Figure 16 displays Montana's major domestic trade partners and the amount of energy-sector goods traded. The amount of trade, by weight, accounts for both directions (going to or coming from Montana). Pipeline, truck, and rail all play key roles in the supply chain.

Figure 16: Montana's Energy Sector Domestic Trade Partners



Agriculture

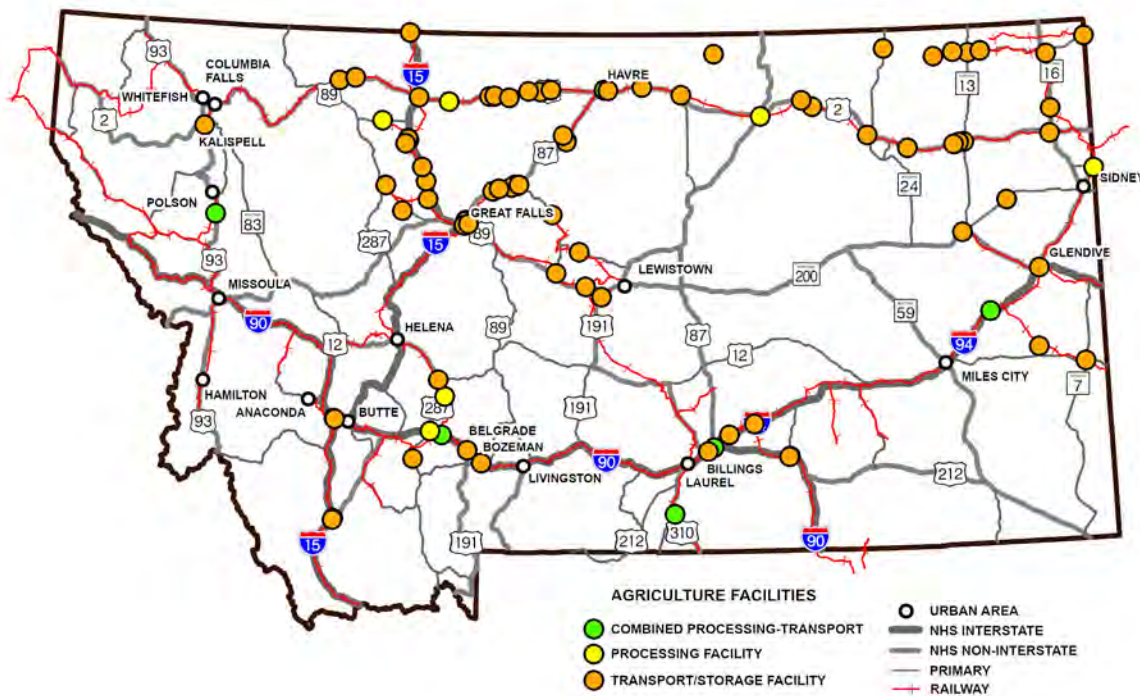
The agricultural sector in Montana plays an important role in the state's economy. In 2022, the total value of crop and animal production was \$4.5 billion, a 29 percent increase since 2017.⁴⁰ Approximately \$2 billion of this production is attributed to animal agriculture, with another \$2.5 billion due to crop production. Wheat is the largest crop measured by both acreage and value, contributing \$1 billion in production value.

Land devoted to farming and ranching comprises 57.4 million acres, approximately 60 percent of total acreage in Montana. The state has approximately 23,800 agricultural operations which is an 11.5 percent decrease since 2019. However, the average size of these operations increased by 12 percent and averaged 2,412 acres in 2022.⁴¹

In 2024, Montana ranked first in the nation for the production of lentils, chickpeas, and dry edible peas, which covered an expanse of 1.5 million acres, totaling \$404 million in value.⁴² These products generally move via truck from farms to shuttle facilities for shipments to west coast ports and other destinations. Montana livestock is transported almost exclusively by truck. Harvest times across the state are seasonal in nature, resulting in periods of increased truck traffic around agricultural operations, grain elevators, and loading facilities.

Shuttle facilities and grain elevators are critical infrastructure in the agricultural crop supply chain, as they are able to store and quickly distribute bulk crop products onto trucks and trains through the process of conveyors and elevators. Figure 17 displays locations of many facilities across the state that help move a myriad of crop products to both domestic and foreign markets. Such products include pulses, wheat, beans, grain, barley, fertilizers, seeds, animal feed, and more. Notice on the map that these facilities are located directly on major roadways, such as the interstates, and on rail lines. Many facilities have the ability to access main rail lines via rail spurs. This type of access is critical for the efficient movement of bulk products either by truck or rail. Also evident on the map is that more facilities are located in north central Montana and further east. This is due to the Rocky Mountains that cover the western portion of the state while the plains to the east are ideal for crops such as wheat, corn, and soybeans. Combined, Montana, Wyoming, Colorado, North Dakota, South Dakota, and Nebraska have 25 percent of the nation's cropland.⁴³

Figure 17: Montana Agricultural Crop Facility Locations



Agricultural transport and storage facilities store, process and distribute crop products as it relates to harvesting, marketing, and wholesale/retail trade. These facilities may also provide seed and fertilizer in bulk. They include shuttle facilities with grain elevators, conveyors, and silos which store and move products on site as well as process goods for transport either by truck or train. Shuttle facilities that move bulk products from truck to train are considered transload facilities. Processing facilities also include such equipment but are part of a larger facility that further process crop products into more refined products such as wheat into flour, barley into malt, safflower into oil, or grain into animal feed.



The Agricultural Supply Chain

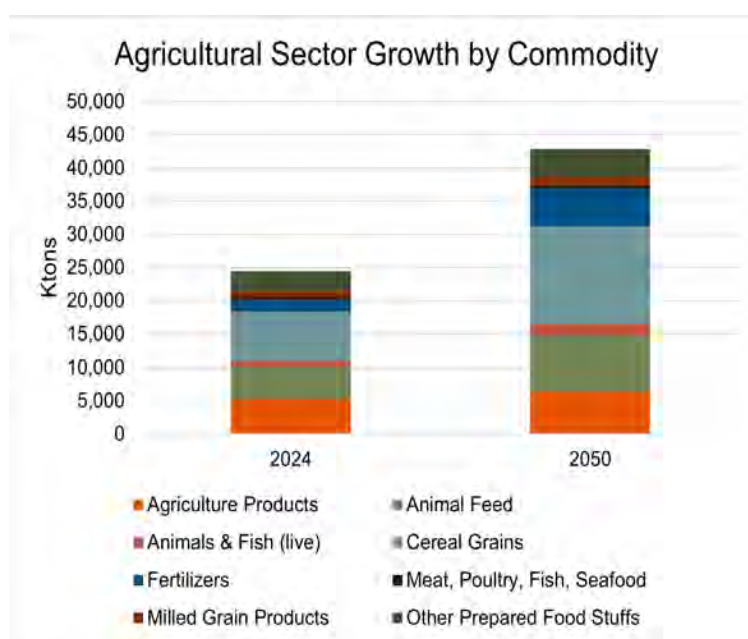
Freight movement in Montana supports major commodities such as grains, fertilizers, and animal feed. Highway modes are critical for the transport of these goods, moving nearly 71% of all agricultural and food products. Over half of agricultural commodity movements leave the state. By 2050, agriculture and food commodities in Montana are expected to increase by 33%. This increase will primarily be driven by growth in animal feed, fertilizers, and cereal grains.

Agriculture and food commodities accounted for **15% of tonnage** in Montana in 2024.

Figure 18: Montana Agricultural Commodity Supply Chain by Mode

Commodity	Truck	Rail	Pipeline	Air	Other or Multiple Modes
Animal Feed	●	○			
Cereal Grains	●	○			●
Fertilizers	●	●			
Live Animals/Fish	●				
Meat/Seafood	●				
Milled Grain Products	●	○			
Other Ag Products	●	○			○
Other Foodstuffs	●	○			○
Legend: ● Primary Modes (25% of tonnage or more) ○ Supporting Modes					

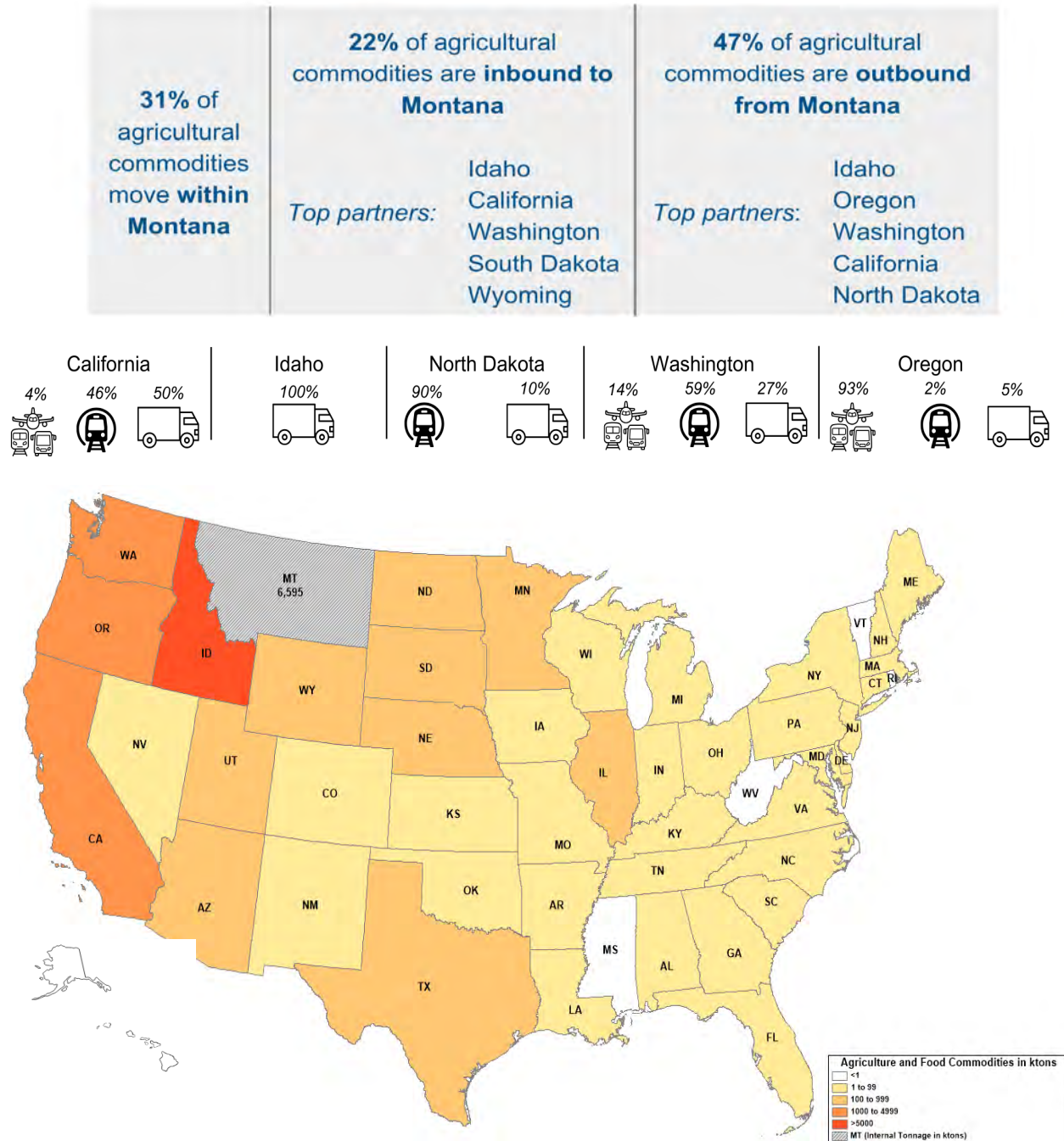
Agriculture is a top industry in the state of Montana. It ranks first in the production of lentils followed closely by wheat, barley, flaxseed, and safflower. Honey, beef calves, alfalfa hay, garbanzo beans, sheep and lambs, wool, and sugar beet production also ranks within the top ten of the nation.⁴⁴ In 2024, nearly 24,000 farms on approximately 58 million acres supported over 2 million cattle, 350 million bushels of wheat, and 198 million pounds of milk.⁴⁵ Versatile crops for Montana farmers, such as



dried peas, lentils, and chickpeas significantly increased from the previous year as they continue to be a nutrient rich food source for nations across the globe.⁴⁶

Figure 19 displays Montana's major domestic trade partners and the amount of agriculture-sector goods traded. The amount of trade, by weight, accounts for both directions (going to or coming from Montana). Trucks and rail are the key modes of transport, supporting this supply chain.

Figure 19: Montana's Agricultural Sector Trade Partners



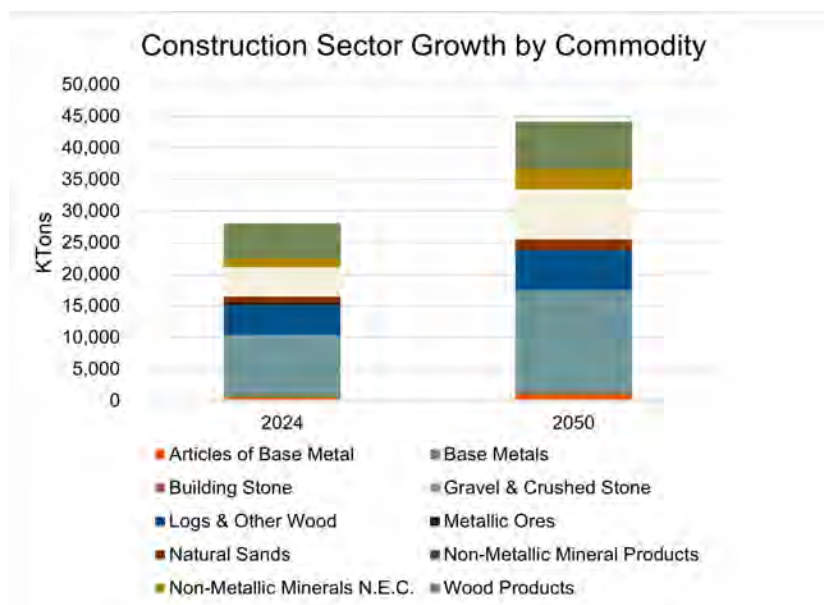
Construction

Montana's rich history of mineral and gemstone resources led to the creation of the Treasure State's nickname. The state's non-metallic minerals contribute greatly to the construction industry, including construction of residential, commercial, industrial, and transportation infrastructure. The U.S. Geological Survey

reported that 14.6 million metric tons of sand and gravel and 17.5 million metric tons of aggregates for construction were sold or used in Montana in 2023.⁴⁷ Together these commodities are estimated to be worth over \$400 million. In regard to the logging and wood product industry, Montana's nearly 20 million acres of timberland help to support a variety of businesses, including dimensional lumber manufacturers, furniture manufacturers, and plywood plants. Over half of the timber harvested in the state occurs in its forested Northwest portion. In 2022, the forest industry supported 8,346 direct jobs with collective earnings of nearly \$425 million which generated sales of \$688 million in forest products.⁴⁸

The Construction Supply Chain

Freight movements in Montana supports major construction dependent commodities such as aggregates, nonmetallic mineral products, wood products, and logs. These commodities are essential to support the construction of homes, commercial spaces, and transportation infrastructure. Over 60% of construction material movements in Montana remain within the state. By 2050, construction material commodities in Montana are expected to increase by 46 percent. This increase will be driven mostly by gravel, nonmetallic minerals, and logs.



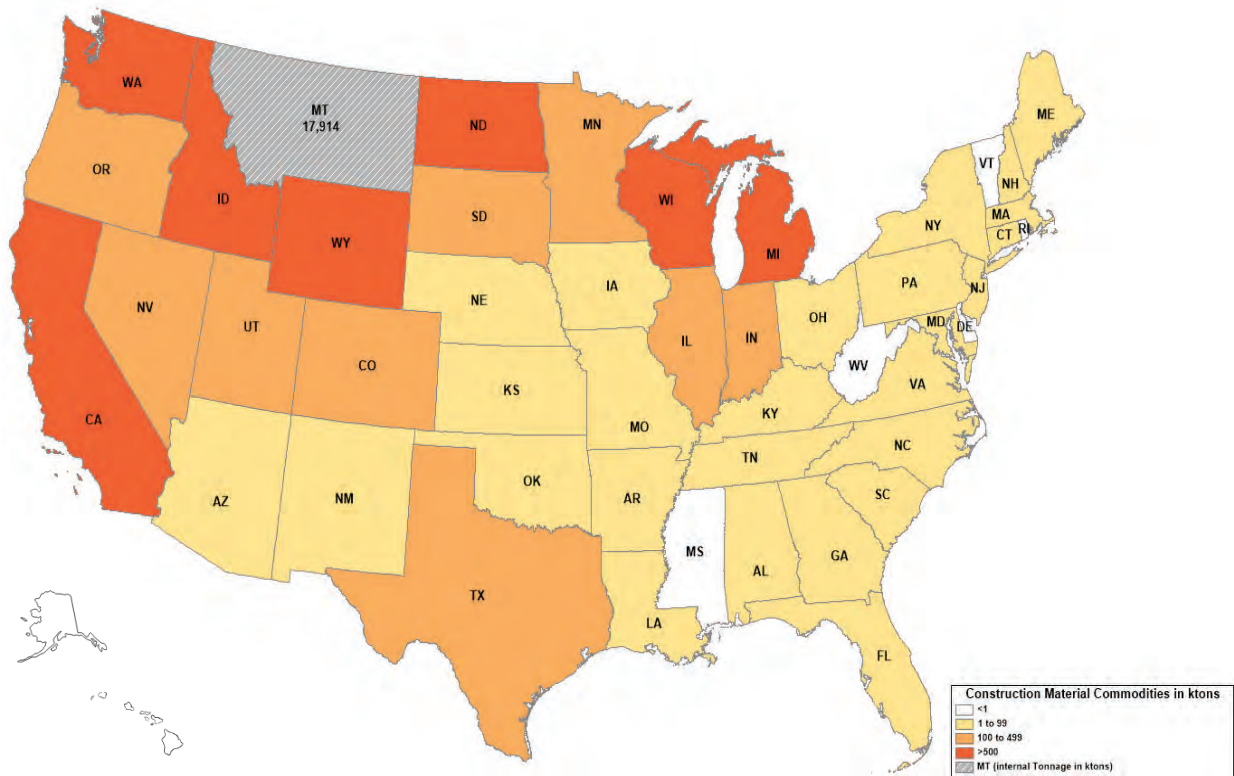
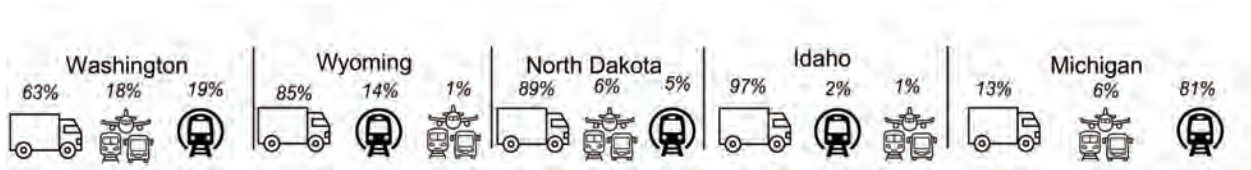
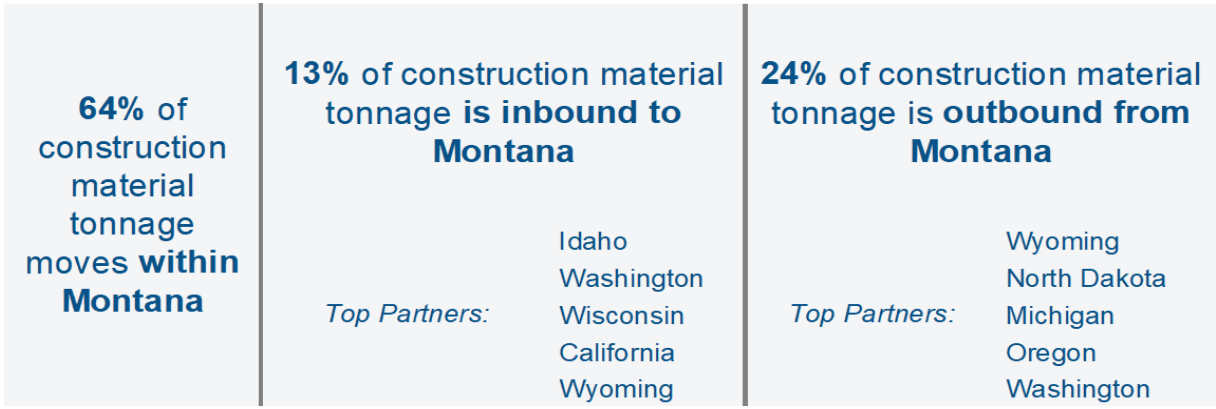
Construction material accounted for **17% of tonnage** in Montana in 2024.

Figure 20: Construction Commodity Supply Chain by Mode

Commodity	Truck	Rail	Pipeline	Air	Other or Multiple Modes
Articles – Base Metal	●	○			
Base Metal	●	○			●
Building Stone	●				
Gravel	●	○			
Logs	●				
Natural Sands	●	●			
Nonmetal Mineral Products Prods.	●	○			
Nonmetallic Minerals	●	○			○
Wood Products	●	○			○
Legend: ● Primary Modes (25% of tonnage or more) ○ Supporting Modes					

Figure 21 displays Montana's major domestic trade partners and the amount of construction-sector goods traded. The amount of goods moved, by weight, accounts for both directions (going to or coming from Montana). Trucks and rail are the key modes of transport that support the construction-sector supply chain. While the majority of goods move within Montana, neighboring states, including North Dakota, Wyoming, and Idaho, also play key roles in the domestic movement of construction-sector goods. Other states that Montana receives goods from and ships goods to are Washington, Minnesota, and California. While the majority of trade with these states is domestic, 46 percent of construction-sector goods originating from California are imports shipped to Montana.

Figure 29: Montana's Construction Sector Trade Partners



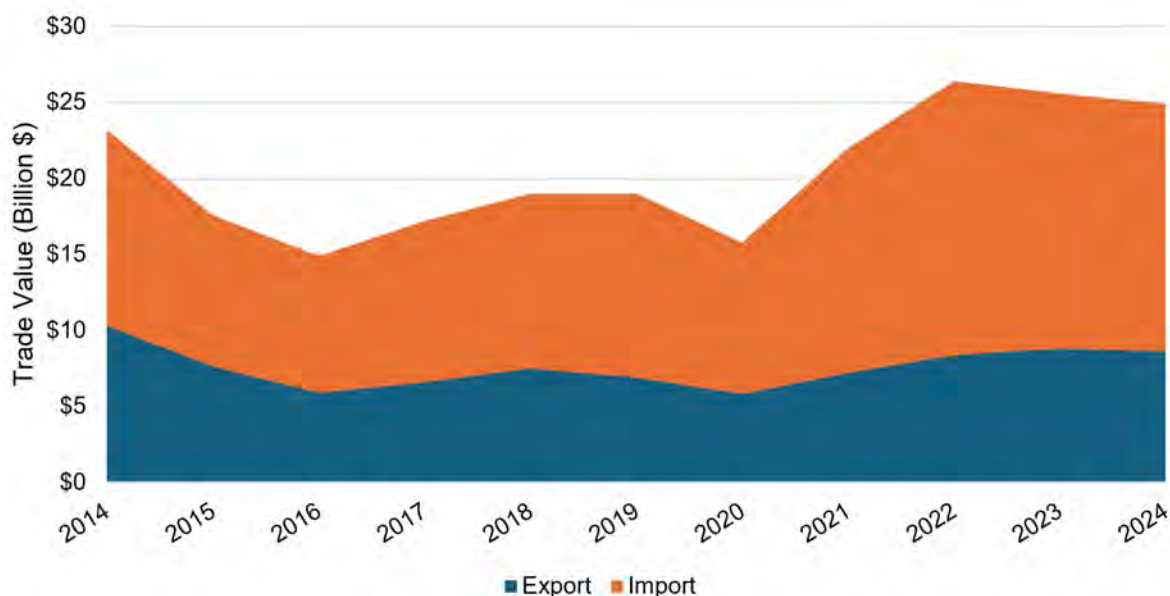
Freight Flows and International Trade

Trade is a vital part of Montana's economy. Exports support Montana's industries and GDP, while imports provide access to essential goods. Energy products (e.g. coal and petroleum), agriculture products (e.g. cattle and lentils), and vehicles (e.g. automobiles and aircraft) are examples of some of Montana's top imports and exports.

Montana as a Gateway

Montana's ports-of-entry handled \$24.8 billion in trade with its North America partners in 2024. From 2022 - 2024, Montana's imports/exports averaged above the pre-pandemic annual average (2014 - 2019) by almost 30 percent. Over the same time period, imports outpaced exports by double. The Bureau of Transportation Statistics (BTS) does not publish import weights for all modes; however it does provide value-based trade statistics. Figure 22 displays the value of freight goods imported and exported through a Montana land or air port-of-entry.⁴⁹ The figure demonstrates a significant rebound in international trade for the state, since 2020.

Figure 22: Historical Trend of North American Import and Export Value through Montana Ports (All Modes 2006 - 2024)



Exports from Montana

FHWA's freight data tabulation tool provides estimates of commodities exported from Montana to international markets, excluding through traffic exports from other states. Montana's top three exports by weight include coal, metallic ore, and other agricultural products.

In addition to coal, as the top export by weight, textiles/leather is the top export by value for the state.

Taking a closer look, coal comprised 49 percent of exports by weight, but only six percent by value. Other top value commodities typically include smaller, lightweight products such as pharmaceuticals. Figure 23 provides estimates of Montana's top export commodities by weight and value.

Figure 23: Montana's Top Exports by Weight and Value for 2024

Top Weight Exports	Thousand Tons	% of Total	Top Value Exports	Million Dollars	% of Total
Coal	1,824	49%	Textiles & Leather	643	30%
Metallic Ores	444	12%	Basic Chemicals	265	12%
Agriculture Products	299	8%	Agriculture Products	225	10%
Cereal Grains	240	6%	Machinery	213	10%
Non-Metallic Mineral Products	215	6%	Coal	131	6%
Non-Metallic Minerals N.E.C.	147	4%	Pharmaceutical Products	101	5%
Basic Chemicals	126	3%	Animals & Fish (live)	99	5%
Fuel Oils	99	3%	Non-Metallic Mineral Products	76	4%
Textiles & Leather	93	3%	Metallic Ores	73	3%
Animals & Fish (live)	65	2%	Fuel Oils	72	3%
All Other	168	5%	All Other	271	13%
Total	3,719	100%	Total	2,168	100%

Coal is used in a wide variety of industrial processes including power generation.

Metallic ores include copper and agricultural products include lentils. Textiles, a high value export for Montana, include woven fabrics, clothing, and leather products. Another high value export for the state is machinery. This commodity group includes aircraft and aircraft engines. Also, Montana holds a special niche for the manufacturing of machinery used to create semiconductors.⁵⁰

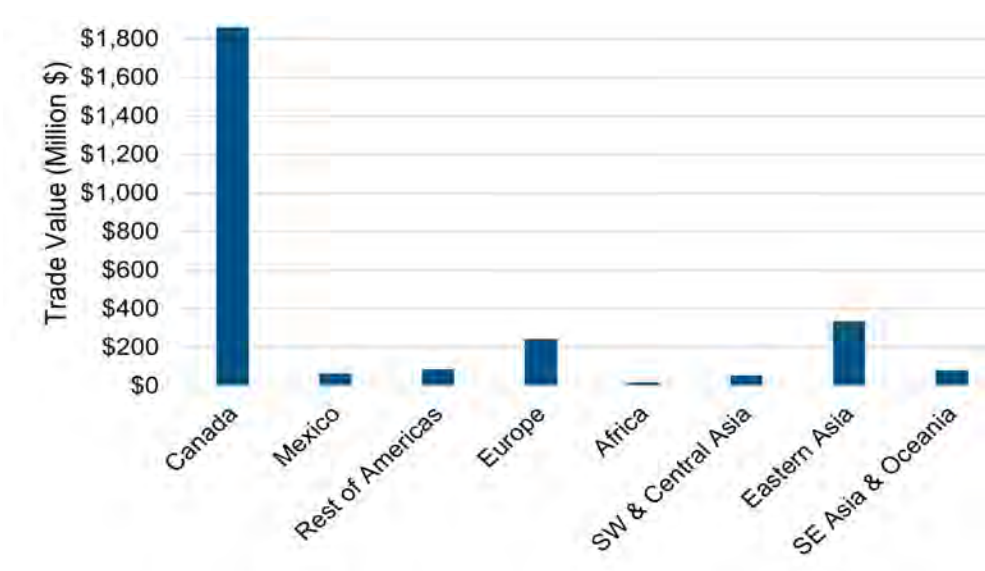
Canada is, by far, Montana's largest export market, comprising 68 percent of the estimated \$2.89 billion in

4 Million Tons
worth
\$2 Billion
Exported in 2024



exports for 2024. The remaining export markets are primarily accessed through ports in Washington state. FHWA's Freight Analysis Framework estimates that more than half of Montana's exports to countries other than Canada travel through the state of Washington. Exports to Eastern Asia come in second at 12 percent with all other countries dropping even lower. Figure 24 displays export markets by value in 2024.

Figure 24: 2024 Top Export Markets by Value



Imports to Montana

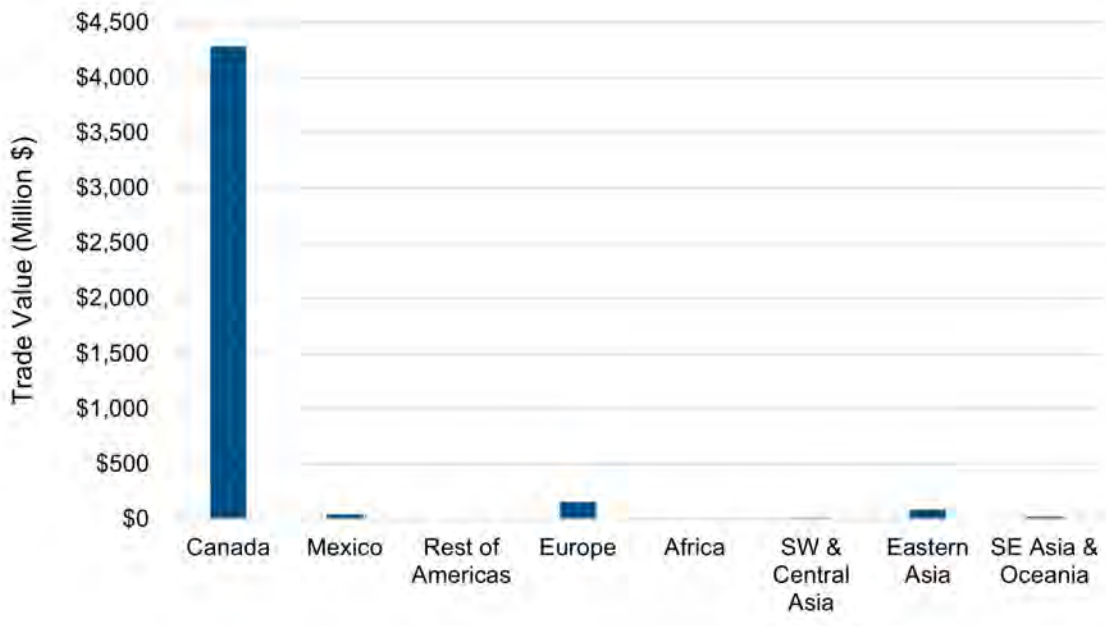
Energy products play a significant role in Montana imports. Crude petroleum, natural gas and other fossil products, and fertilizers are the top 3 import commodities by weight. Both by weight (85 percent) and value (66 percent), crude petroleum was the lead commodity in State imports. Some high-value manufactured products are also present, including machinery and other foodstuffs. Figure 25 provides estimates of the top import commodities to Montana by weight and value in 2024.

Figure 25: 2024 Top Import Commodities

Top Weight Imports	Thousand Tons	% of Total	Top Value Imports	Million Dollars	% of Total
Crude petroleum	10,599	85%	Crude petroleum	\$3,050	66%
Natural gas and other fossil products	452	4%	Other foodstuffs	\$215	5%
Fertilizers	364	3%	Mixed freight	\$176	4%
Other foodstuffs	275	2%	Machinery	\$123	3%
Wood prods.	249	2%	Wood prods.	\$112	2%
Basic chemicals	77	1%	Motorized vehicles	\$97	2%
Cereal grains	74	1%	Fertilizers	\$96	2%
Nonmetal min. prods.	62	1%	Natural gas and other fossil products	\$81	2%
Other ag prods.	40	0%	Motorized vehicles	\$52	1%
Articles-base metal	26	0%	Articles-base metal	\$40	1%
All Other	246	2%	All Other	\$577	12%
Total	12,464	100%	Total	\$4,619	100%

Consistent with exports, most of Montana’s 2024 imports by weight (>99 percent) entered the state through Canada. Imports from Europe and other markets entered the U.S. through gateways in Texas, Washington, and New Jersey before reaching end markets in Montana. Figure 26 displays Montana’s top import partners by value for 2024.

Figure 26: 2024 Top Montana Import Origins, by Value



Freight Transportation by Mode

Most freight in Montana is moved by four modes of travel: truck, rail, pipeline, and air. Figure 27 displays the mode split by the value of transported goods. In 2024, an estimated \$80 billion in goods were transported into and out of Montana. By value, trucking is the dominant form of freight transportation in the state, transporting an estimated \$48.3 billion of goods in 2024, followed by pipeline with over \$17 billion in goods. “Other” includes shipments that utilize multiple and unknown modes that usually involve trucking at some point, such as truck to rail intermodal transport.

Figure 27: 2024 Freight Movements by Mode and Value (Million \$)

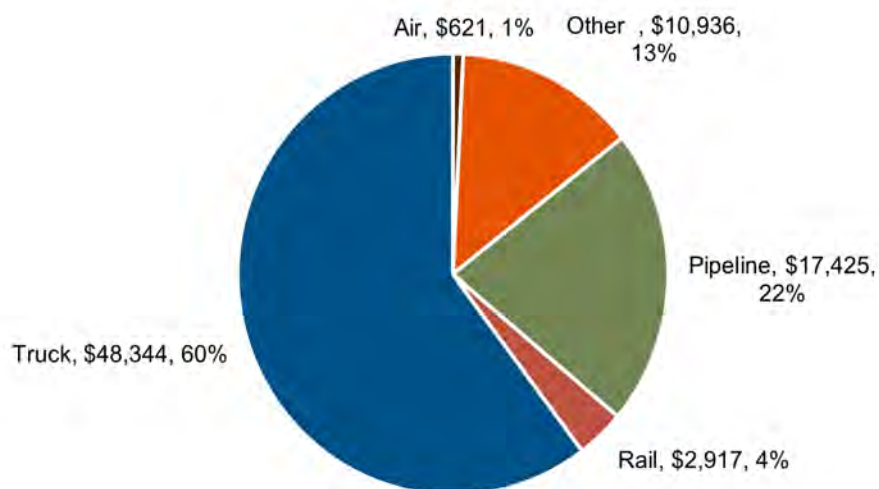


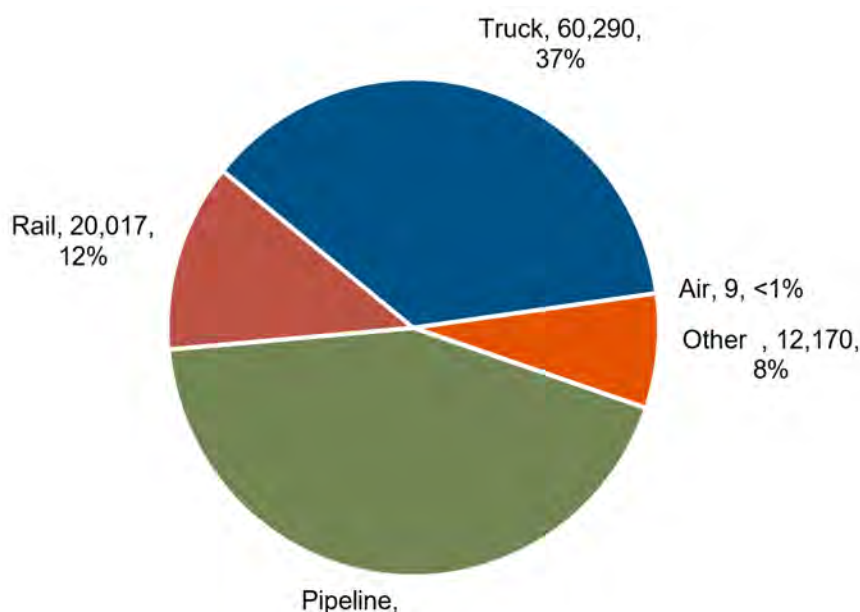
Figure 28 displays the average value per ton by mode. Despite air cargo only representing 1 percent of all freight movement by value and tonnage, it has the highest value per ton as it is often responsible for the transport of higher valued goods such as pharmaceuticals, electronics, precision instruments, and other manufactured products. Other modes, can include multiple modes (a combination of modes), such as a combination of air and truck, which also may contribute to the higher value per ton of goods moved by this category.

Figure 28: 2024 Value per Ton, by Mode

Mode	Value per Ton
Air	\$69,500
Other	\$900
Truck	\$800
Pipeline	\$250
Rail	\$150

Figure 29 displays the mode split by weight of transported goods. In 2024 approximately 163 million tons were transported into, out of, or within Montana. While pipeline and rail are large mover of bulk goods, such as coal, petroleum, and agricultural products, they typically move lower-value commodities, compared to air which often moves smaller volumes of higher value goods.

Figure 29: 2024 Freight Movements by Mode and Weight (KTons)



Montana's Highways

Highways and trucking are the backbone of the freight transportation network in Montana, moving 60 percent of freight by value and 36 percent by weight. The extent of Montana's highway system includes over 73,000 centerline miles with approximately 78 percent of the state's roadway mileage in jurisdictions designed as rural. Figure 30 displays Montana's centerline road mileage.

Figure 30: 2023 Centerline Road Mileage

Road Type	Total Miles
NHS Interstate	1,193
Non-Interstate	2,993
Primary	2,655
Secondary	4,494
Urban	426
State Highway	1,145
Local Roads	3,251
Local Roads	57,513
Total:	73,670

MDT's route mileage includes the NHS interstate and non-interstate, primary, secondary, urban, and state highways, totaling 12,908 miles or 18 percent of total road mileage in the state. Despite being less than a quarter of all centerline mileage in the state, these routes carried 76 percent of annual vehicle miles traveled in 2023 with upwards of 64 percent of commercial vehicle traffic occurring on Montana's interstates.⁵¹

Commodities Moved by Truck

Figure 31 and Figure 32 display the top commodities shipped via truck by weight and value. The most common commodities moved by weight and value include bulk products such as gravel and other nonmetal minerals, cereal grains, animal feed, and agricultural products. These commodities represent some of the largest industries in Montana, namely the extraction and agriculture industries. It's worth noting that gravel is the top commodity moved by truck but is not one of the most valuable commodities transported when considering value. The opposite is true for mixed freight and machinery, which are not top commodities by weight, but are the leading commodities transported by truck when measuring value. Mixed freight includes various types of products combined in a single shipment.

Figure 31: 2024 Top Truck Commodities by Weight (KTons)

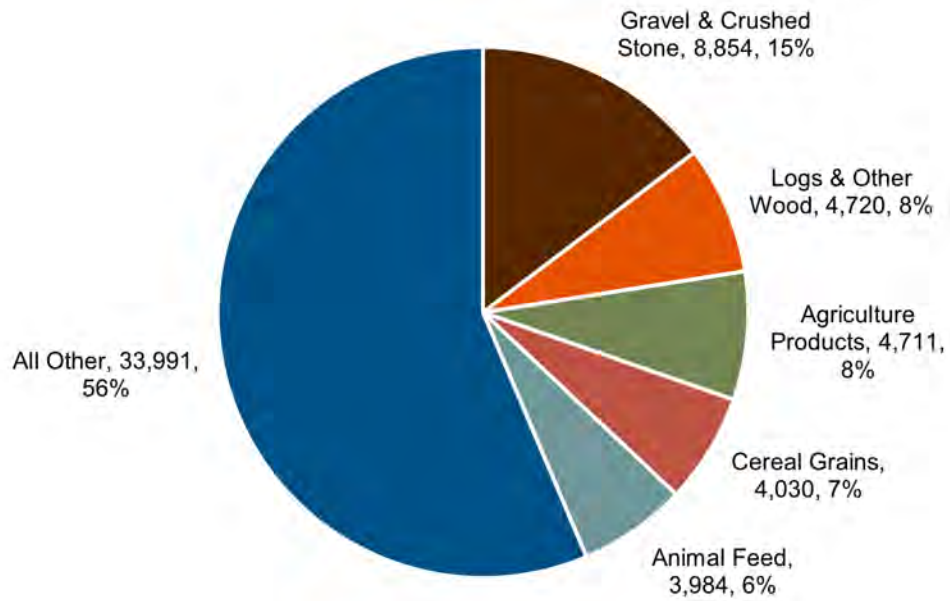


Figure 32: 2024 Top Truck Commodities by Value (Million \$)

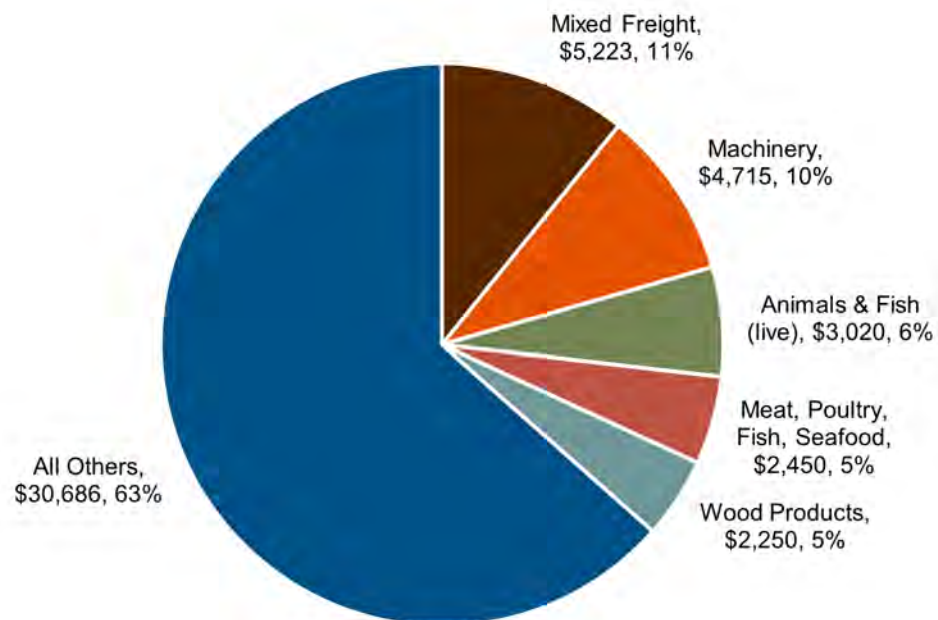
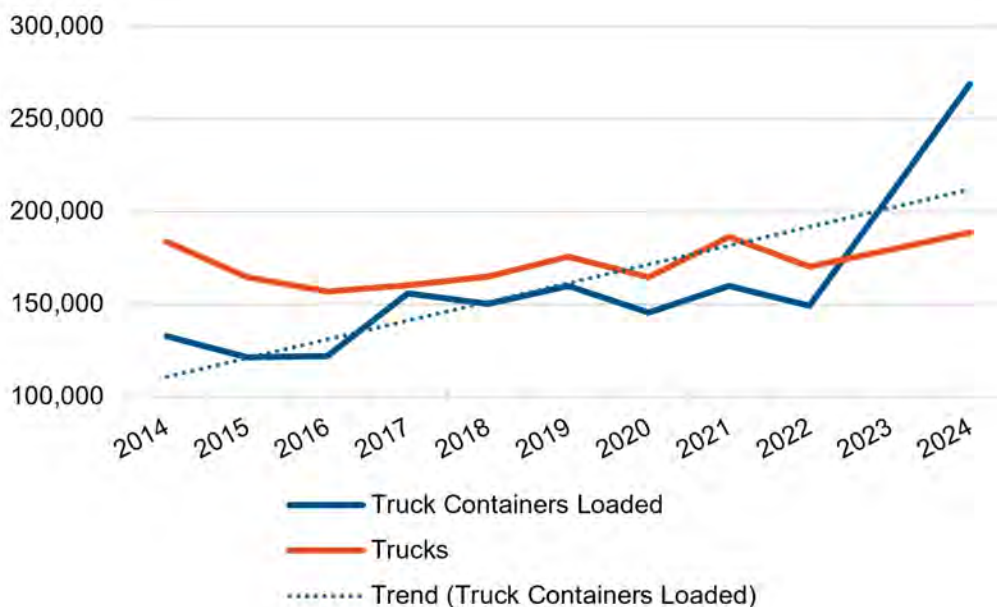


Figure 33 displays the number of trucks and loaded containers that entered Montana between 2014 and 2024.⁵² Since 2010, a positive trend in inbound loaded truck

containers has been in effect. Since 2022, the amount of loaded truck containers has significantly increased by 80 percent, noting an increase in trucks carrying loaded containers versus empty containers.

Figure 33: Montana Border Crossing Entry of Loaded Containers and Trucks (2010 - 2024)

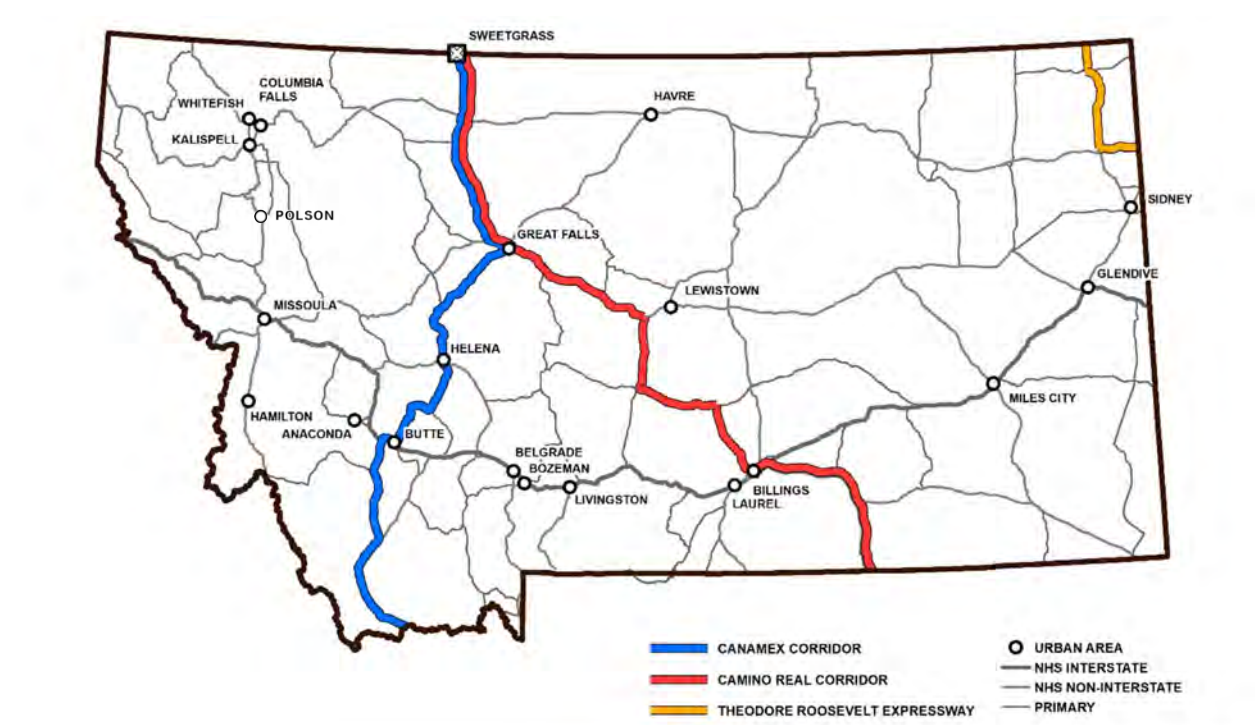


In 2024 commercial vehicles traveled approximately 3.66 million vehicle miles daily in Montana, representing a 2.24 percent increase in daily commercial vehicle miles traveled (DMVT) compared to 2023 which has continued a year over year increase since 2020.⁵³ The majority of commercial truck traffic occurred on interstate and non-interstate National Highway System (NHS) roads.

Designations of Montana's Transportation Network

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) led to the congressional designation of high priority corridors on the National Highway System (NHS). In Montana, this includes 3 corridors.⁵⁴ Shown in Figure 34 these corridors include the Canamex corridor, following I-15, the Camino Real corridor running north-south along I-90, US 87, and I-15, and the Theodore Roosevelt Expressway running along US 2 and Montana State Route 16 from North Dakota to the Canadian border.

Figure 34: Montana Federally Designated Corridors



The United States Department of Transportation (USDOT) published the Interim National Multimodal Freight Network (NMFN), in June 2016 as required under 49 U.S.C. §70103. The network addresses all modes of freight transportation, which in the case of Montana, includes highway and rail.⁵⁵ In 2024, the USDOT began the process for finalizing the NMFN. The network is yet to be finalized, however the USDOT has arrived at a draft NMFN which is shown in Figure 35 for Montana.

Figure 35: Draft National Multimodal Freight Network



The National Highway Freight Network (NHFN) strategically directs federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system. The NHFN includes the following roadway subsystems:

- **Primary Highway Freight System (PHFS):** This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data. In Montana, I-15 and I-90 are designated as interstates on the PHFS.
- **Other Interstate portions not on the PHFS:** These highways consist of the remaining portion of Interstate not included in the PHFS. These routes provide important continuity and access to freight transportation facilities. In Montana, this includes I-94.
- **Critical Rural Freight Corridors (CRFCs):** These are public roads in non-urban areas which provide access and connection to the PHFS and Interstates with other important ports, public transportation facilities, or other intermodal freight facilities.
- **Critical Urban Freight Corridors (CUFCs):** These are public roads in urban areas which provide access and connection to the PHFS and Interstates with other ports, public transportation facilities, or other intermodal transportation facilities.

Montana interstates included in the PHFS are I-90 and I-15. Due to limiting factors outlined in federal statute, I-94, was not included in the network. I-94 connects with I-90 east of Billings and terminates in Port Huron, Michigan. Within Montana, it is an essential route for the movement of goods and provides direct access to the Bakken Oil Field, agricultural facilities, and coal mines. To ensure full connectivity of Montana's interstates as well as connectivity with other states, MDT designated the entire I-94 route as a critical freight corridor. From mile marker 0 to 1.519, I-94 is designated as a CUFC and from mile marker 1.519 to the Montana-North Dakota boarder, it is designated as a CRFC.

Figure 36 shows the currently designated NHFN within the state. Designation of highways as part of the NHFN and PHFS is important for the allocation and use of NHFP funding for projects on interstates in Montana.

Figure 36: National Highway Freight Network in Montana



Montana Rail

Montana's rail network comprises over 3,000 miles of active track. Railroads are categorized by the Surface Transportation Board based on annual operating revenues, with Class I railroads generating the largest revenues (over \$1 billion annually).⁵⁶

The primary Class I railroad in Montana is BNSF Railway (BNSF). BNSF's network spans much of the western United States and provides connections to markets throughout the country. The east-west corridor through northern Montana (along U.S. Highway 2) runs from Seattle to Chicago, with service to intermodal facilities in Seattle, Spokane, St. Paul, and Chicago. The north-south route through central Montana (Sweet Grass to south of Laurel) connects the Sweet Grass border crossing in Canada to other intermodal facilities in larger metropolitan areas of the mountain west.

The other Class I railroad operating in Montana is Union Pacific Railroad (UP). UP's rail line crosses into Montana at Lima and travels to the Port of Montana, near Butte. Grain, beverages, automobiles, and lumber are just some of the commodities that UP transports on its line within the state.⁵⁷

Class II and III railroads provide regional and local connections. While these railroads may have lower volumes, they are a critical link for rail-dependent industries, providing bulk good access to markets. Up until January 1, 2024, Montana Rail Link (MRL), a class II railroad, was the second largest carrier in Montana, behind BNSF, operating and leasing nearly 900 miles of BNSF track. However, MRL terminated its lease early and handed operations back over to BNSF on January 1, 2024. Montana's rail network is shown in Figure 37, and active track miles by operator are in Figure 38.

Figure 37: Montana Rail System Operators

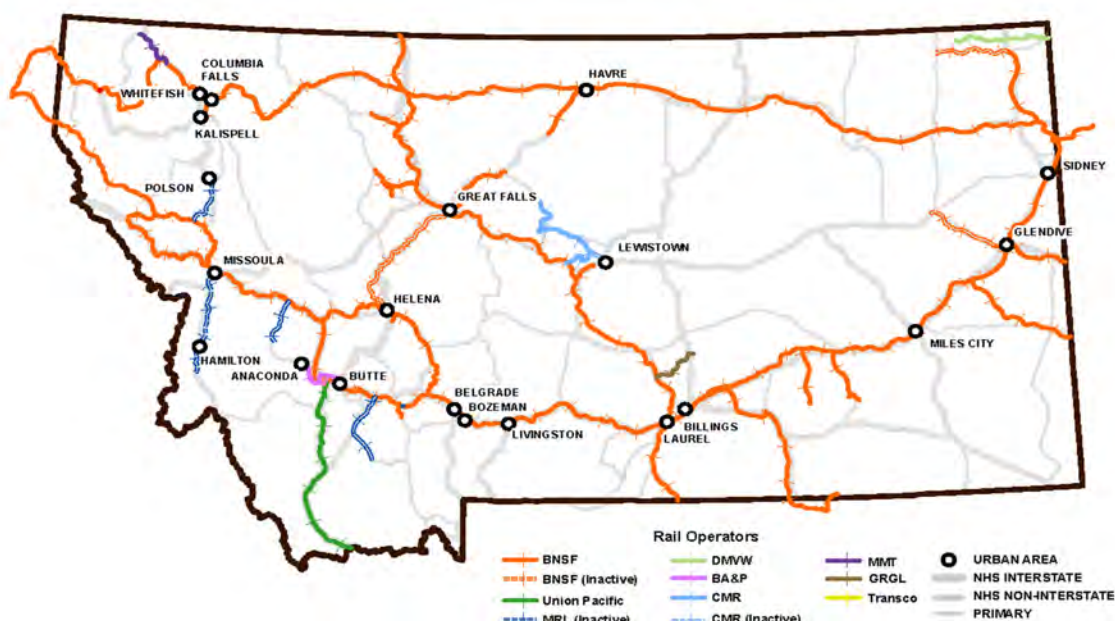


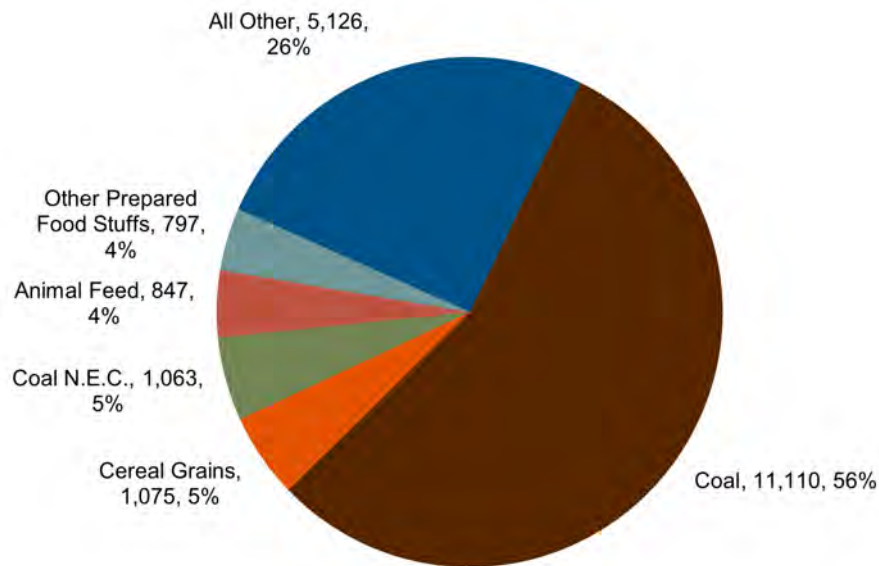
Figure 38: Montana Rail Operators and Active Track

Railroad	Length (Miles)
Class I	2,820
BNSF	2,695
Union Pacific Railroad (UP)	125
Class II	12
Dakota, Missouri Valley, and Western (DMVW)	12
Class III/Local Railroad	214
Butte, Anaconda and Pacific Railway (BAP)	63
Central Montana Rail (CM)	85
Global Rail Group (GRGL)	35
Mission Mountain Railroad (MMT)	27
Transco Railway Products (TRRZ)	4
Total Active	3,046

Commodities Moved by Rail

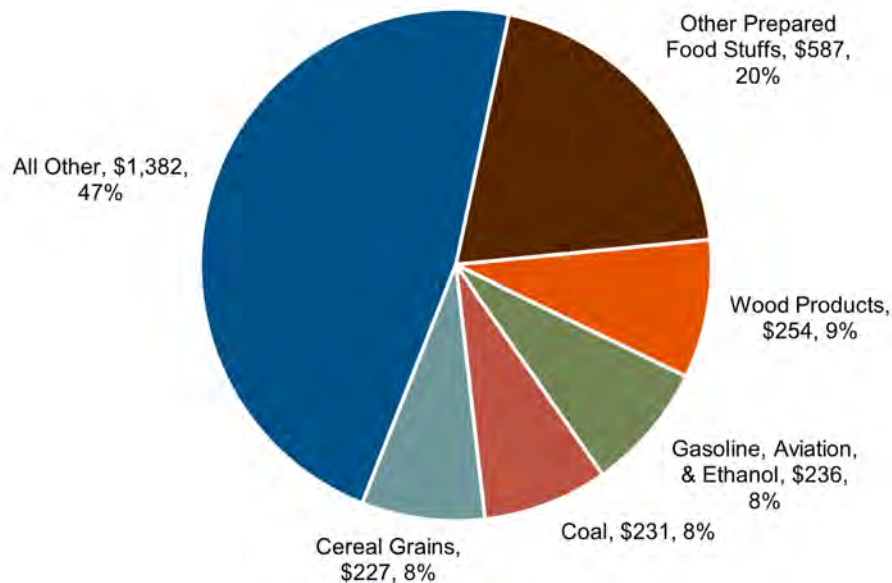
The primary commodity carried by rail in Montana is coal. In 2024, coal accounted for 56 percent of weight and eight percent of the value of freight moved by rail to, from, and within Montana. Cereal grains and coal n.e.c. took second and third for top commodities moved by rail (by weight). Animal feed and other prepared foodstuffs are also ranked in the top five commodities by weight for rail (Figure 39). These commodities continue to demonstrate Montana's active role in the production and use of agricultural, energy, and construction products and are typically a bulk commodity which is the type of freight often moved by rail.

Figure 39: 2024 Top Rail Commodities by Weight (KTons)



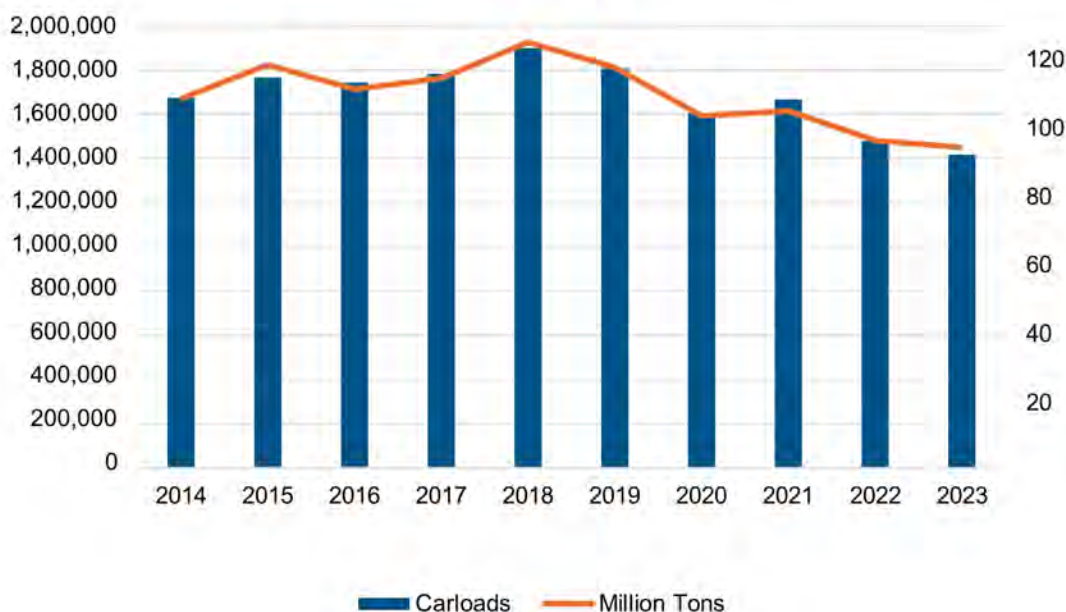
By value, additional types of freight ranked in the top five commodities moved by rail in Montana, such as foodstuffs. Other foodstuffs (e.g., oils, flours, or sugars) is the top commodity by value (Figure 40) with wood products (such as wood chips or timber) ranking in second place, followed by gasoline, aviation, and ethanol.

Figure 40: 2024 Top Rail Commodities by Value (Million \$)



Since 2012, the Surface Transportation Board has published carloads and rail tonnage moving to, from, and through each state. Figure 41 displays carloads and rail tonnage for Montana for years 2014 through 2023. Up until 2018, the trend in annual Montana carloads was positive, but since 2018, carloads and tonnage have declined by approximately 25 percent.

Figure 41: Montana Carloads and Rail Tonnage⁵⁸



The BNSF Sweet Grass rail subdivision extends to the Sweetgrass-Coutts border crossing at the northern end of the I-15 corridor, where it connects with Canadian Pacific Railroad (CP) to continue on to Canadian markets. The Sweetgrass port-of-entry is the only international rail crossing in Montana. Currently, at least one train per day, on average, enters the U.S. through Montana. Train entries into the U.S. through the port-of-entry have fluctuated around 350 and 450 trains per year, since 2014 (Figure 42). Overall, loaded container entries have experienced a positive trend, implying that more trains are carrying loaded versus empty containers across the border.

Figure 42: Montana Border Crossing Entry of Loaded Containers and Trains (2014 - 2024)

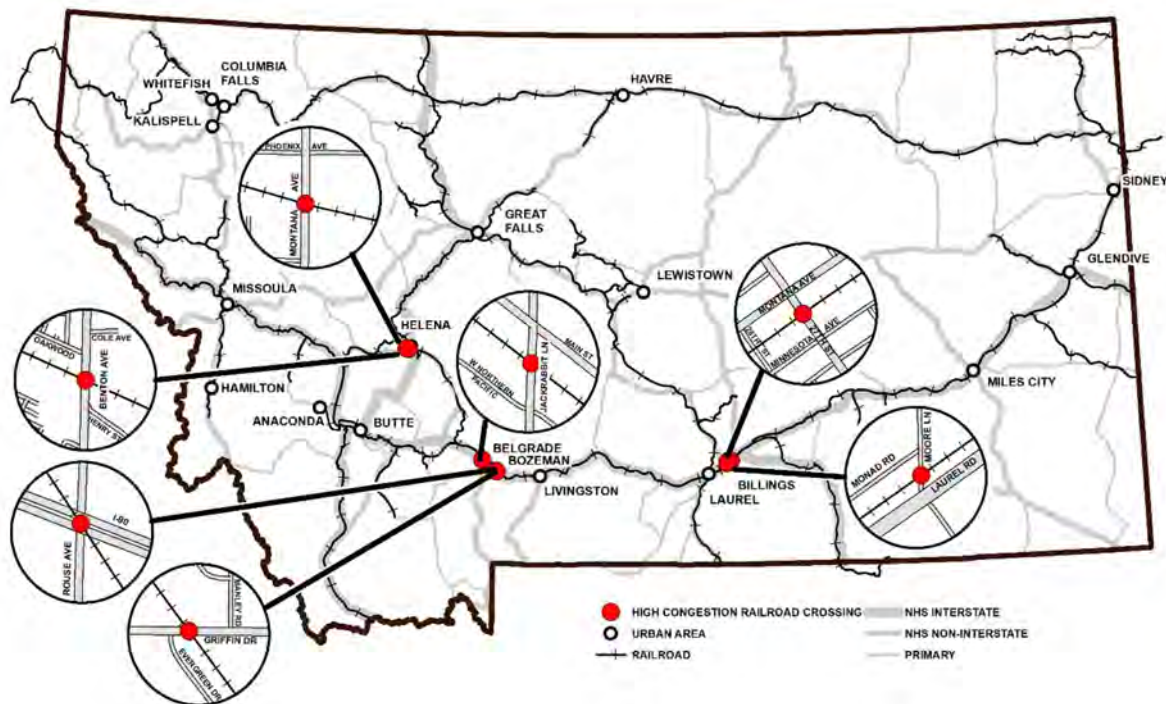


At-Grade Highway Rail Crossings

Train traffic at at-grade crossings can delay motor vehicles, including commercial vehicles. Such crossings can also as increase traffic safety risks, resulting in possible collisions between train equipment and roadway vehicles.

There are over 1,350 public at-grade crossings in Montana. In 2016, the Montana Rail Grade Separation Study identified the most active and congested at-grade rail crossings for the purposes of evaluating them for the feasibility of grade separation. The screening process involved analyzing vehicular and freight traffic, average train speed, and bridge clearance (if applicable) and identified 10 crossings which could benefit from grade separation.⁵⁹ Seven out of the ten at-grade crossings, which experience the most congestion are found in Billings, Bozeman, Belgrade, and Helena and are shown in Figure 43 below. The study may be 10 years old however it is still relevant in the identification of highly congested crossings within the state. In 2024, the City of Belgrade and MDT received a \$25 million federal grant, in part, for a grade separation project for the at-grade rail crossing on Jackrabbit Lane⁶⁰, which is included in the figure below.

Figure 43: Montana High Congestion Rail Crossings

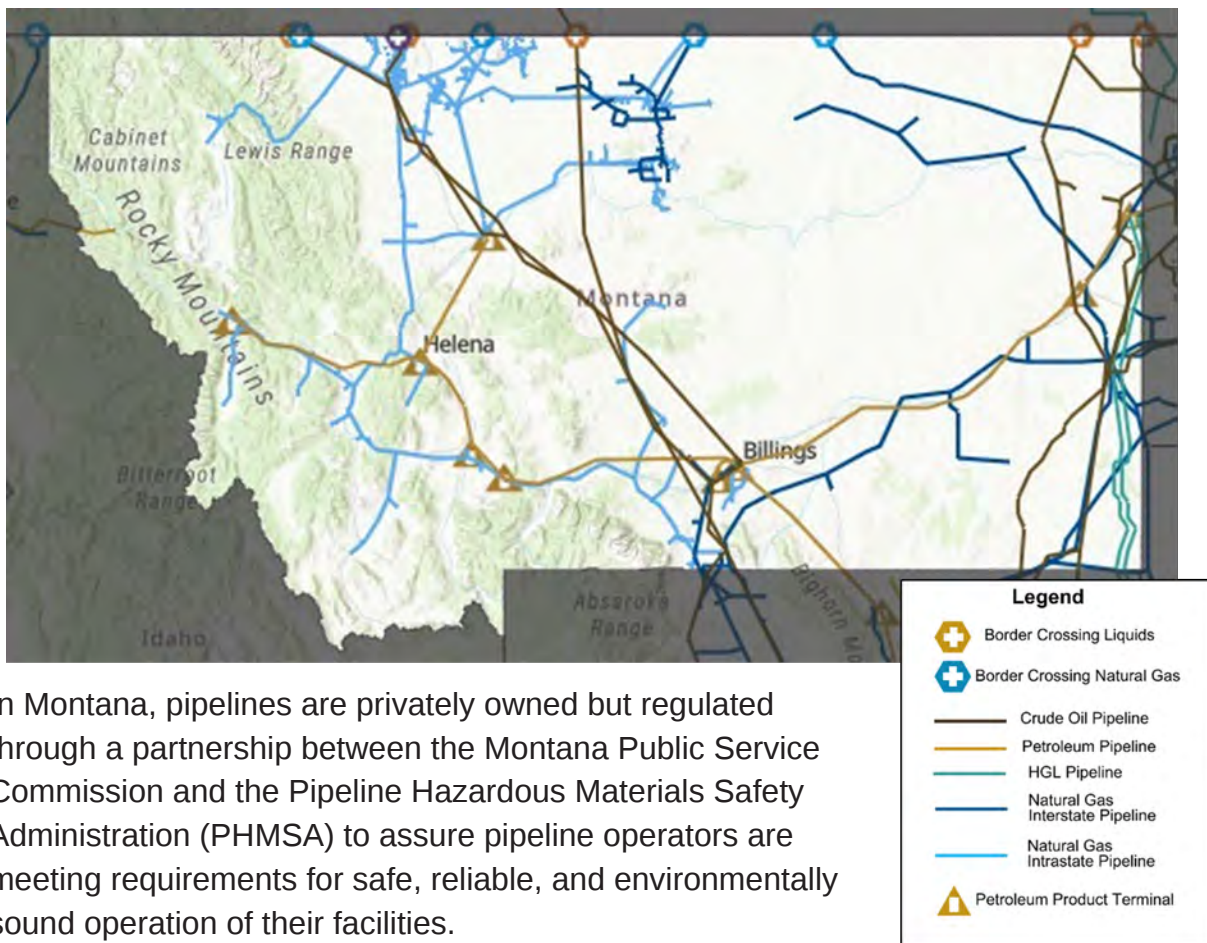


Montana Pipeline

Montana has 20,885 miles of pipeline that includes transmission, distribution, and gas gathering lines. Out of this total mileage, there is a 3,892 mile long network of gas transmission pipelines that move gas both intra- and interstate and 4,167 miles of hazardous liquid lines⁶¹, moving crude oil, carbon dioxide, highly volatile liquids, and refined petroleum products, such as gasoline, diesel, and kerosene.⁶² Natural gas pipelines are the largest component of the distribution network totaling 54 percent of the state's mileage. The Interstate Natural Gas' network in Montana also serves as a gateway from Canada and spans to the Central and Midwestern U.S., providing connections to markets throughout the country (Figure 44). Montana's pipeline points of entry/exit with Canada are located in Babb, Havre, Ports of Del Bonita and Morgan, Sweetgrass, and Whitlash.⁶³

In 2019, the U.S. Department of Agriculture's Forest Service issued a decision to remove part of the abandoned Yellowstone Pipeline through the Lolo National Forest, between Missoula and Thompson Falls.⁶⁴ At the time of the decision, local reporting indicated that rail service had replaced the pipeline.⁶⁵

Figure 44: Montana Pipeline System⁶⁶



In Montana, pipelines are privately owned but regulated through a partnership between the Montana Public Service Commission and the Pipeline Hazardous Materials Safety Administration (PHMSA) to assure pipeline operators are meeting requirements for safe, reliable, and environmentally sound operation of their facilities.

Figure 45 lists the pipeline companies operating major pipelines and miles of associated pipeline. Distribution pipelines which serve businesses and residences are not included in this data source. According to the inventory collected by the U.S. Energy Information Administration, Northwestern Energy Company operated 96 percent of Montana's major natural gas intrastate pipeline network while WBI Energy Transmission operated 82 percent of interstate natural gas pipeline in 2024.⁶⁷ Within the state, Carter, Fallon, and Glacier Counties include the highest amount of pipeline miles, collectively totaling nearly 1800 miles of natural gas and hazardous liquids (e.g. propane and butane) pipeline.⁶⁸

Figure 45: Montana Pipeline Operators and Commodities

Pipeline Operators by Commodity	Sum of Length (Miles)
Carbon Dioxide (CO2)	122
Denbury Green Pipeline-Montana, LLC	114
Greencore Pipeline Company, LLC	9
Crude Oil	2,634
Bridger Pipeline, LLC	602
Calumet Montana Refining, LLC	3
Pipeline Operators by Commodity	Sum of Length (Miles)
Double H	267
Express Holdings (USA), LLC	304
Front Range Pipeline, LLC	430
Hiland Crude, LLC	
MPLX LP	13
North Dakota Pipeline Company, LLC	64
Par Rocky Mountain Midstream, LLC	71
Phillips 66 Pipeline LLC	749
Plains Pipeline, L.P.	131
Red Butte Pipeline LLC	1
Highly Volatile Liquids	470
Hiland Partners Holdings, LLC	9
ONEOK NGL Pipeline, LLC	461
Refined Petroleum Products	940
Cenex Pipeline, LLC	362
Phillips 66 Pipeline LLC	578
Natural Gas: Intrastate	2,214
Havre Pipeline Company	69
Hiland Partners Holdings, LLC	9
Montana - Dakota Utilities	2
Northwestern Corporation	2,133
Natural Gas: Interstate	1,678
Black Hills Shoshone Pipeline, LLC	9
Colorado Interstate Gas Co.	8
Northern Border Pipeline Company	181
TransCanada Northern Border Inc.	97
WBI Energy Transmission, Inc.	1,383
Total	7,118

Commodities Moved by Pipeline

Most of the pipeline flows reported in FAF5 are domestic movements (59 percent), with more than half of domestic tonnage moving within Montana. Imports comprise

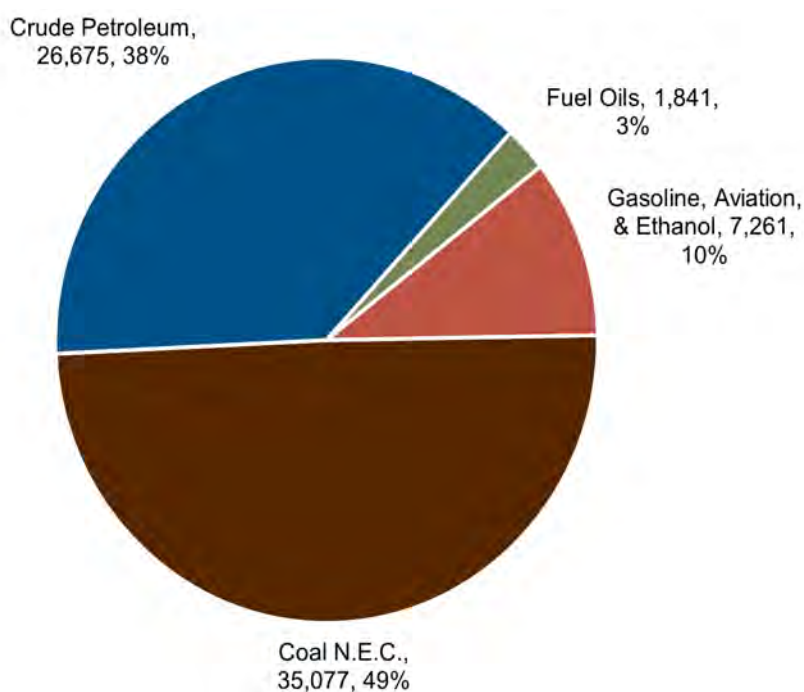
40 percent of pipeline tonnage flows. Exports hold a very small portion of the state's pipeline tonnage flow totaling less than 1 percent (Figure 46).

Figure 46: 2024 Pipeline Flows by Weight (KTons)

KTons by Direction	Domestic Only	Export	Import	Total
Inbound	5,936	100		6,036
Outbound	9,224		17,769	26,993
Within	26,913		10,912	37,825
Grand Total	42,073	100	28,681	70,854

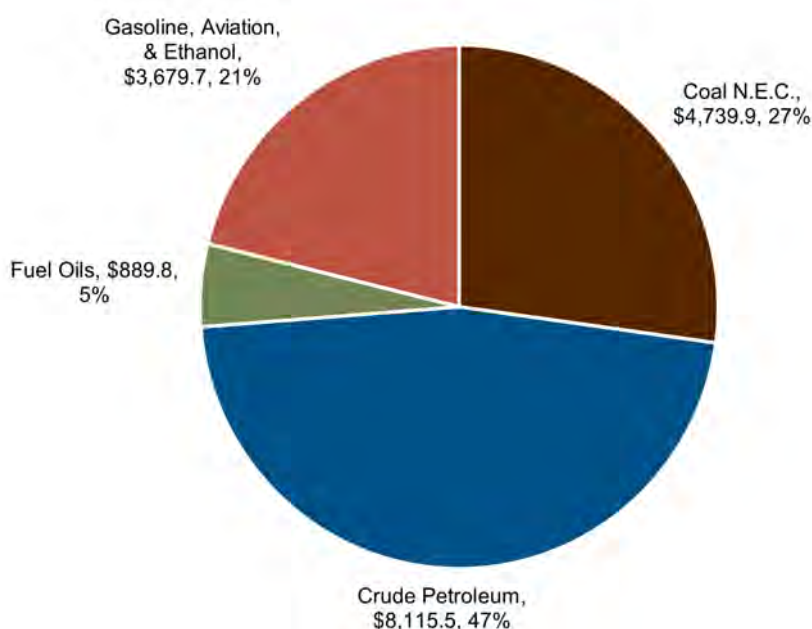
Pipelines move fluid commodities such as liquids, gases, and slurries. In Montana, Coal n.e.c. comprised almost half of pipeline commodities by weight, while crude petroleum was 38 percent. Other products moved by pipeline include gasoline, aviation, ethanol, and fuel oils. Figure 47 summarizes pipeline movements by weight for 2024. Water is also transported by pipeline, though this commodity is not captured in available databases. This movement is important for energy production as well as other industrial and residential land uses. It should be noted that Montana pipelines are estimated to move only move four commodity group products, unlike the other modes that can move dozens of commodity type products.

Figure 47: 2024 Pipeline Commodities by weight (KTons)



Although crude petroleum is second in total tonnage, it is first in value, comprising 47 percent of total value. Coal n.e.c. (which includes natural gas) and gasoline, aviation, and ethanol comprise an additional 48 percent, when combined. Fuel oils, such as bunker fuels and other heating fuels, comprise only 5 percent of the total value. Figure 48 summarize pipeline commodities by value.

Figure 48: 2024 Pipeline Commodities by Value (Million \$)



Montana Air

Montana's aviation network consists of 127 public-use airports including 8 primary commercial airports.⁶⁹ Fourteen of these public-use airports are owned and operated by MDT. Major commercial airports supporting the movement of freight in Montana include, 1) Billings Logan International Airport, 2) Great Falls International Airport, 3) Bozeman Yellowstone International Airport, 4) Glacier Park International Airport, and 5) Missoula International Airport. Figure 49 displays a map of Montana's Air service locations.

Figure 49: Montana Air Service Locations



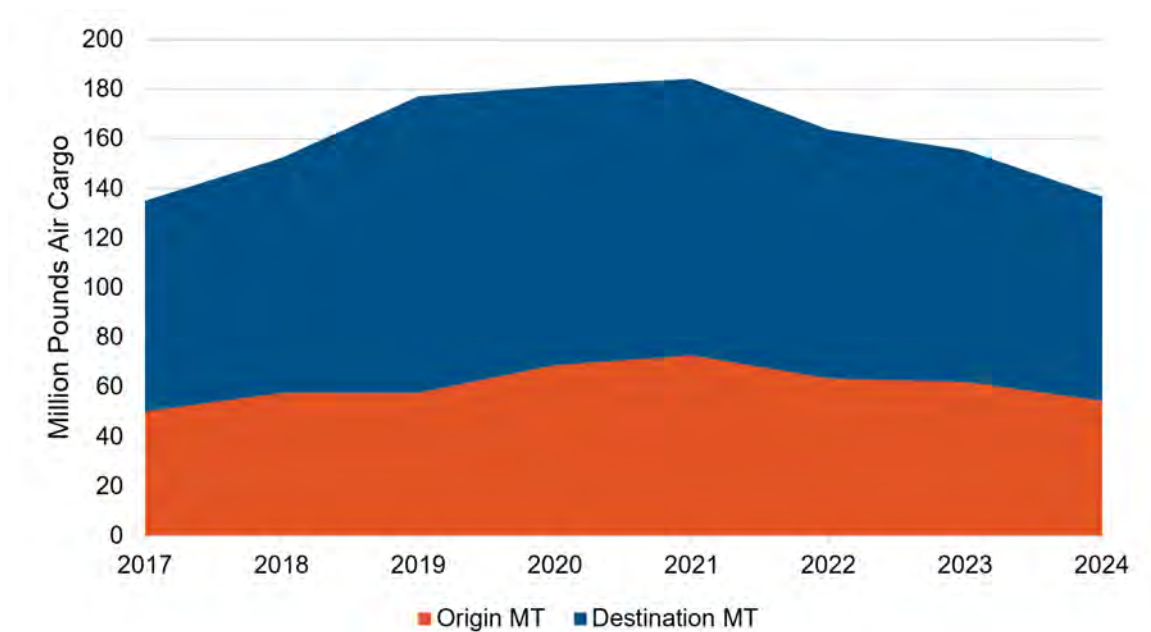
Most air cargo (90%) in the state was handled by the Billings-Logan and Great Falls International Airports, which collectively processed 61.5 tons of freight in 2024. Five additional airports in the state handled the remaining six percent of freight.⁷⁰ These totals include both inbound and outbound freight across 24,816 flights primarily with domestic destinations (Figure 50)⁷¹.

Figure 50: 2024 Freight Tonnage by Airport



Since 2017, population growth and e-commerce trends resulted in an overall positive trend in air cargo, especially between 2017 and 2021, when cargo increased by 31 percent (Figure 51). This upward trend may have partly been due to aviation companies quickly revising their business models from moving passengers to moving cargo, during the pandemic, to survive the financial impacts of the times. Given the important role air cargo plays in the global supply chain, especially for essential goods, airlines, such as United Airlines, pivoted towards cargo-only flights to maintain revenue streams. Once travel restrictions due to the pandemic began to lift, the demand for passenger air travel returned and airlines again had to adapt by reallocating aircraft back to passenger service.⁷² By 2024, the demand for air cargo returned to pre-pandemic levels.

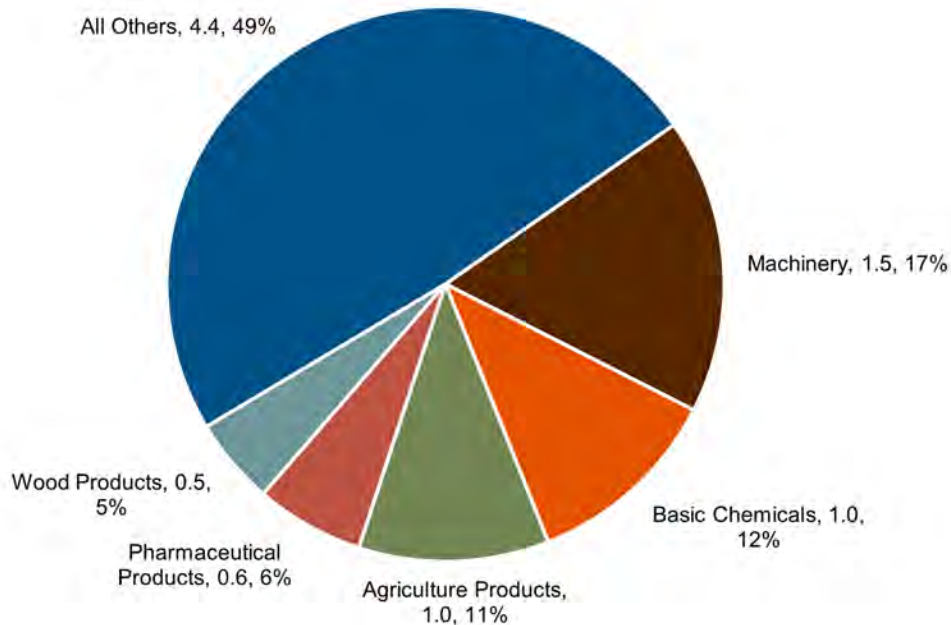
Figure 51: Growth in Montana Air Cargo (2017 - 2024)⁷³



Commodities Moved by Air

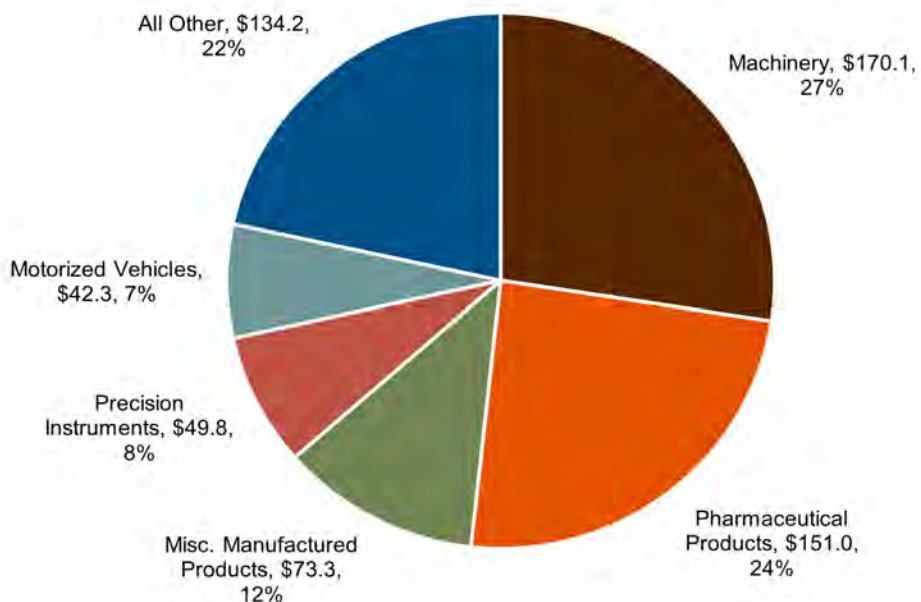
Air transportation is the fastest and most expensive mode, therefore air cargo is used for high-value or time-sensitive goods. In Montana, the top commodities by weight are machinery and basic chemicals with 17 percent and 12 percent of tonnage respectively. Chemical air-cargo can include substances used by the pharmaceuticals, agriculture, and energy industries.⁷⁴ Agriculture products, often those that are perishable and need speedy transit, and pharmaceuticals are other top air cargo commodities within the state (Figure 52). Like perishable agriculture products, pharmaceuticals are often time-sensitive and may require climate-controlled environments during transit, which air transport is effective at providing.

Figure 52: 2024 Top Air Commodities by Weight (KTons)



The top air cargo commodities by value in Montana include several of the top air cargo commodities by weight. Machinery, pharmaceuticals, and miscellaneous manufactured products each make up the largest share collectively, valued at 63 percent. Precision instruments and motorized vehicles which are also considered high-value goods are the remaining top commodities. Motorized vehicles can include agricultural and military equipment. Figure 53 summarizes the top air cargo commodities in Montana by value.

Figure 53: 2024 Top Air Commodities by Value (Million \$)



Montana's Freight Facilities

Intermodal, multimodal, and transload facilities are involved in the movement and transfer of goods from one mode to another, such as between highway, rail, and air. Transload facilities are especially critical to Montana's agriculture and energy industries that move bulk products from the field, to processing facilities, or to international and domestic markets. There are dozens of transload facilities across Montana that serve the agricultural sector by providing connections to truck and rail as well as other types of transload facilities that provide for the transfer of many different types of goods.

Transload facilities are very similar to intermodal/multimodal facilities in that products are transferred between different modes – except that with transloading, the products themselves are moved between modes rather than staying in the same container the whole way. For instance, bulk products, such as grain may be loaded onto a rail car via a conveyor or auger. Intermodal/multimodal facilities, on the other hand, move goods between modes but the goods themselves are not handled, they remain in the same container throughout the shipping journey. The difference between intermodal and multimodal shipping lies mostly in how a shipper contracts the movement of goods along the way. Intermodal shipping is serviced under separate contracts along different segments of the journey whereas multimodal shipping transports goods under a single contract for the entire journey.

Montana has several types of facilities that allow for the consolidation and transfer of goods between truck – rail or truck – plane. The state has two active port authorities which predominantly act as transload, distribution, and storage facilities. They are the Port of Montana, near Butte and the Port of Northern Montana in Shelby. Both port authorities provide connections to truck and rail. In Montana a local port authority is a governmental organization responsible for managing, operating, and developing ports and related transportation infrastructure. Their goal is to promote economic development and to provide for the safe and efficient handling of goods. They are established pursuant to Montana Code Annotated 7.14.11.

Imported and exported goods are moved through land ports of entry, such as Montana's border crossings with Canada and through its airports, of which several are designated as Foreign Trade Zones. Table 2 provides a brief inventory of these facilities. Annual tonnage of goods processed is provided pursuant to the U.S. Department of Transportation's Port Dashboard.⁷⁵ By definition, there are no commercial seaports or inland ports within the state that MDT is aware of and only two ports of entry processed over two million short tons of goods in 2024. These include the Port of Sweetgrass, Montana's largest and busiest land border crossing with Canada and Great Falls International Airport. Pipeline, rail, and trucks all cross at the Sweetgrass border crossing.

Table 2: Montana Land Ports of Entry and Airports

Facility	Type - Function	Location	2024 Throughput (Short Tons)
Roosville	U.S. Canada Land Port of Entry	Eureka	177,627
Piegan	U.S. Canada Land Port of Entry	Babb	32,609
Del Bonita	U.S. Canada Land Port of Entry	Cut Bank	1,033,592
Port of Sweetgrass	U.S. Canada Land Port of Entry	Sweetgrass	10,379,958
Whitlash	U.S. Canada Land Port of Entry	Whitlash	0
Wild Horse	U.S. Canada Land Port of Entry	Havre	8,454
Willow Creek	U.S. Canada Land Port of Entry	Havre	0
Turner	U.S. Canada Land Port of Entry	Turner	1,831
Morgan	U.S. Canada Land Port of Entry	Loring	not reported
Opheim	U.S. Canada Land Port of Entry	Opheim	483
Scobey	U.S. Canada Land Port of Entry	Scobey	2,524
Raymond	U.S. Canada Land Port of Entry	Raymond	681,482
Chief Mountain (seasonal)	U.S. Canada Land Port of Entry	Chief Mountain	0
Billings Logan International Airport	Airline and mail cargo	Billings	not reported
Great Falls International Airport	Airline, mail cargo, Foreign Trade Zone	Great Falls	4,219,242
Bert Mooney Airport	Airline and mail cargo	Butte	2
Glacier Park International Airport	Airline, mail cargo, international port of entry	Kalispell	11
Helena Regional Airport	Airline and mail cargo	Helena	not reported
Missoula International Airport	Airline and mail cargo	Missoula	not reported
Bozeman Yellowstone International Airport	Airline and mail cargo	Belgrade	not reported

BNSF continues to expand its rail and intermodal facilities across Montana to meet freight shipping needs. Since 2019, BNSF has been instrumental in locating 7 new or expanded facilities in the state, including the Oneok (natural gas service provider) expansion at Sidney, new loading capabilities for pulse crops at the CGI facility (pulse crop and grain processing facility) in Plentywood, and relocation and expansion of Gavilon (grain facility) in Huntley. BNSF also works to identify strategically located rail-served, privately-owned industrial sites that are ready for immediate customer development, saving shippers time and money. BNSF currently has major rail facilities in Forsyth, Glasgow, Glendive, Great Falls, Havre, Shelby, Whitefish, Butte, Garrison, Helena, Laurel, Livingston, and Missoula. The last four were acquired in 2024 when MRL ended its lease with BNSF.⁷⁶

Figure 54 displays a map that denotes BNSF's intermodal designated routes through the state and the rest of the nation. These intermodal rail routes service Montana's ports and transload facilities and are a component of the Strategic Rail Corridor Network and portions of the National Multimodal Freight Network.

Figure 54: BNSF Intermodal Route Map

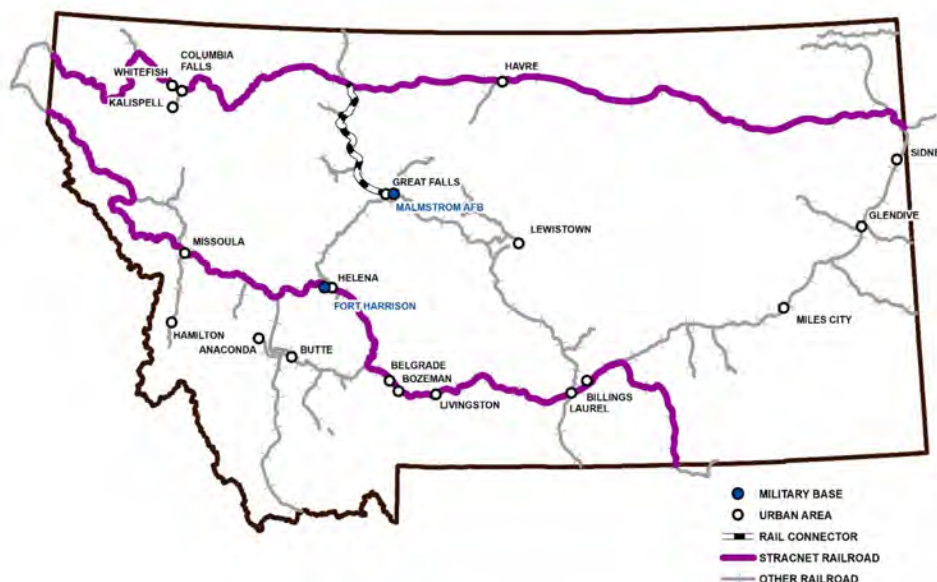


Military Freight in Montana

Similar to the National Multimodal Freight Network (NMFN), which consists of infrastructure of national and international significance, the United States Military has designated segments of the highway and rail systems as part of their strategic military networks. The Strategic Rail Corridor Network (STRACNET) and Strategic Highway Network (STRAHNET) are designations of critical rail and road infrastructure designed to meet the transportation needs for national defense.

Every five years, since the early 1990's, the STRACNET is reviewed and updated to ensure defense readiness of the civil rail system. The analysis is conducted by the Military Surface Deployment and Distribution Command Transportation Engineering Agency and the Federal Railroad Administration. Review of the STRACNET includes analysis of railroad maintenance condition, clearance for oversized shipments, weight-bearing capacity, and railroad safety compliance. This analysis also allows updates to reflect changes in military installations requiring rail service, over time. Montana has two military installations with connectivity to the STRACNET. This includes Malmstrom Air Force Base near Great Falls and Fort Harrison, in Helena.⁷⁷ Malmstrom Air Force Base (AFB) is the state's only active military base and Fort Harrison is the state's National Guard Headquarters, as well as a training facility and Veteran Affairs Hospital. Malmstrom AFB has a low-density rail connector, connecting it to the STRACNET north of the base. A low-density rail connector is a branch line where civil and defense rail traffic is less than 3 million gross tons per year.⁷⁸ Fort Harrison is situated directly on the southern STRACNET with a dedicated rail spur. The STRACNET in Montana is operated and owned by BNSF. Figure 55 displays a map of the STRACNET, including military bases and rail connectors within the state.

Figure 55: STRACNET Designation in Montana



The STRAHNET is a network of public highways essential for defense mobility and deployment. Collectively, there's over 60,000 miles of roadways within the STRAHNET across the U.S. The STRAHNET was included in the National Highway System (NHS) pursuant to the Intermodal Surface Transportation Efficiency Act of 1991 and the National Highway System Designation Act of 1995. The Military Surface Deployment and Distribution Command Transportation Engineering Agency identifies STRAHNET routes in coordination with the Federal Highway Administration (FHWA), state departments of transportation, military services and installations, and strategic seaports.

The STRAHNET in Montana includes the state's interstates and a portion of non-interstate NHS. Montana's military facilities with access to the STRAHNET include Malmstrom Air Force Base and Fort Harrison. Figure 56 displays a map of the STRAHNET in Montana.⁷⁹

Figure 56: STRAHNET Designation in Montana



Supporting the safe and efficient movement of military goods and personnel is a critical objective to MDT. Malmstrom Air Force Base (Malmstrom) has direct access to the STRAHNET, and the STRACNET, via a rail connector. It is also closely situated near Great Falls International Airport, which is a key component of the military transportation network as well as being the location of the Montana Air National Guard Facilities.⁸⁰

In 2022, Malmstrom employed over 4,000 active-duty members, almost 700 civilians, and is a driving force to the regional economy.⁸¹ In 2024, Malmstrom's economic impact, both direct and indirect, totaled over \$435 million.⁸²

Malmstrom AFB lies within the Great Falls MPO. They are an active member of the MPO's Technical Advisory Committee,⁸³ which also includes MDT, and participate in the periodic updates of the MPO's Long Range Transportation Plan (LRTP). The LRTP prioritizes the optimization of the transportation system for the base within the LRTP's objectives, ensuring that the base's freight and transportation needs continue to be met.

Malmstrom AFB is one of three air force bases in the nation that maintain and operate the Minuteman III intercontinental ballistic missile system.⁸⁴ Originally deployed in the 1970's, the Minuteman is a land based intercontinental ballistic missile part of the U.S. nuclear triad.⁸⁵ Collectively, there are 400 Minuteman missiles dispersed in silos that are connected to an underground launch control center and communications systems.⁸⁶

The U.S. Air Force is now in the process of modernizing the collective Minuteman missile system at the three bases which includes Malmstrom AFB. Called the Sentinel Missile Project (Project), it includes major upgrades and replacement of the aged Minuteman missile system with a LGM-35 Sentinel intercontinental ballistic missile system. Additional upgrades and renovations are also planned for launch facilities, missile alert facilities, communication systems, infrastructure, and technologies.⁸⁷ This is a major upgrade to the U.S.' nuclear defense system that will span years.

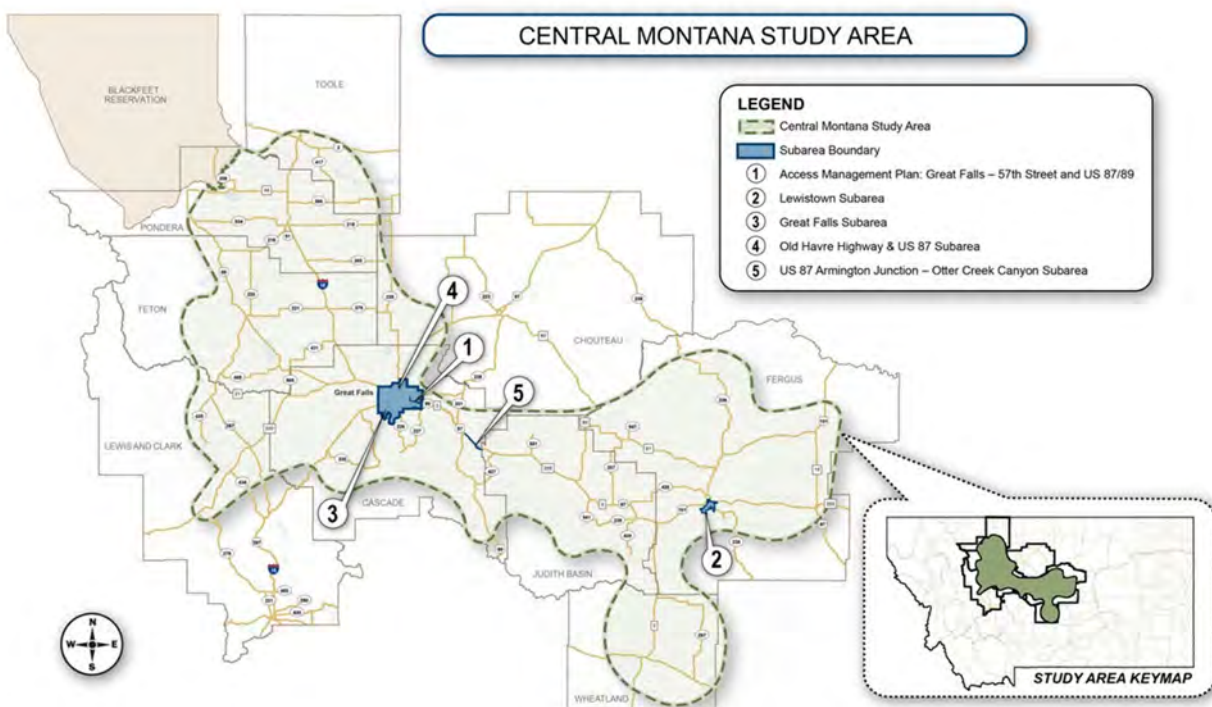
The Project will pose both near- and long-term transportation challenges. Increased congestion and bottlenecks, due to increased truck traffic are likely to occur in localized areas, impacting communities. Infrastructure resiliency is also a concern given the increases in freight traffic carrying oversize and overweight loads. Therefore, MDT, Great Falls, and the AFB are working to identify alternate route options to ensure resiliency of the road network and to maintain safety for the traveling public. A current challenge being addressed is the Project's work zone access to Interstate 15 (I15), which is not direct. Under current road access, military convoys and freight traffic will need to travel down 10th Avenue, from I15 to access the Project area. Tenth Avenue is a major thoroughfare through Great Falls, approximately five miles long with numerous traffic signals. During active construction, military convoys will be long and often contain oversize and overweight loads. These convoys have the potential to be a major disruption to local traffic and pose roadway safety and resiliency issues.⁸⁸ Secondly, after the Sentinel Project is complete, the long-term need for accessibility to the base and missile silos will continue for the purposes of maintenance and ensuring mission objectives.

In addition to the potential impacts of goods and personnel being transported to and from the Project site, the Project will also require an additional workforce, temporary workforce housing, and construction staging areas. Two workforce hubs, 50-60 acres in size around Lewiston and Great Falls are currently being proposed. These temporary communities will need to be carefully designed so as not to negatively impact the

transportation network. The hubs are anticipated to be active for three to five years while workers build and renovate missile alert and launch facilities, communication towers, and utilities.⁸⁹

Many transportation-based questions revolve around the Project as it relates to logistics, planning, and design that require further study. To help address these concerns, MDT, in collaboration with the military and multiple local, state, and federal agencies, is developing the Central Montana Transportation Study. The purpose of the study is to create a comprehensive management plan to respond to anticipated impacts from military activities and development within the region. In addition to this broad study, smaller areas of focus will study access management for impacted routes for Great Falls, Lewiston, Old Havre Highway and U.S. 87, and U.S. 87 Armington Junction to Otter Creek Canyon.⁹⁰ Figure 57 Displays a map of the overall study area and smaller focus areas. The study is scheduled to be completed in the fall of 2026.

Figure 57: Central Montana Study Area



To further support the efficient movement of military freight and road users, MDT and the Department of Defense formalized an agreement to replace 11 bridges in the Lewiston area as part of the Project. The replacement of these bridges will help address increased growth and support future military activities in the area.

4. Future Trends of Freight

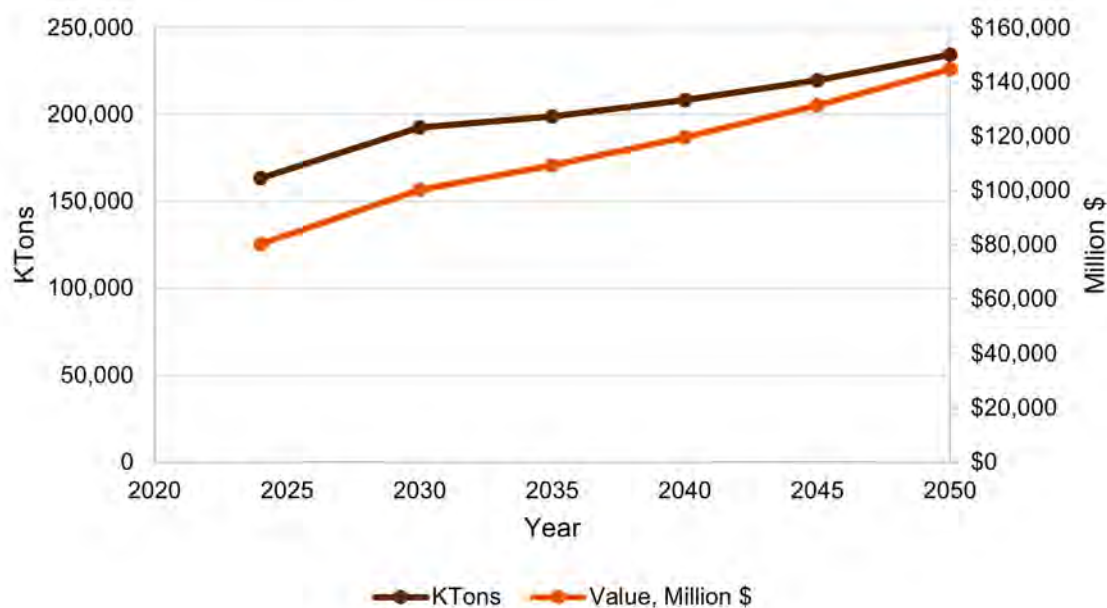
The freight industry has experienced significant challenges in recent years, including changes in shipper and consumer demand, inflation, workforce demands, recovery from the COVID-19 pandemic, and commodity level changes. This section describes the forecasted movements of freight in Montana based on commodity flow forecasts and anticipated freight trends.

Commodity Forecasts

The Freight Analysis Framework version 5.7.1 (FAF5) is the most current commodity flow database released by the FHWA at the time the Plan's update. FAF5 provides future estimates of commodities moved intermittently between 2020 and 2050. These forecasts are helpful in understanding how demand for commodities may change over time.

FAF5 data presented in Figure 58 reflects freight movements that originate, terminate, or remain within Montana. Total freight volume by weight in Montana is forecasted to grow by 43 percent between 2024 and 2050, from 163 million tons to 235 million tons. By monetary value, freight movements are projected to increase by 80 percent, from \$80 billion to \$145 billion.

Figure 58: Total Freight Value and Tonnage in Montana (2024 - 2050)



Freight by Direction

Information regarding origin and final destination is helpful when analyzing freight movements, and to assess general trends, such as weight and monetary value. According to FAF5 the total amount of transported freight, as well as its monetary value,

is forecasted to increase in Montana between 2024 and 2050 (Figure 59 and Figure 60). This trend is primarily dominated by crude petroleum, machinery, mixed freight, and miscellaneous manufactured products, which are considered high value goods.

The amount of tonnage moved within the state is forecasted to increase the most as well as remain the dominant direction in freight movements. Energy and construction products, such as coal, crude petroleum, and gravel are the main influences of this trend. Given that projections of Montana's population are forecasted to increase over time, greater demand in energy products and construction materials will be needed to support the growing population.

When considering the value of goods by direction, inbound freight is forecasted to increase the most between 2024 and 2050. This trend is primarily dominated by miscellaneous manufactured products, mixed freight, pharmaceuticals, and machinery. These four commodity groups represent 50 percent of total value for all goods in 2050.

Figure 59: Freight Tonnage by Direction (2024 - 2050)

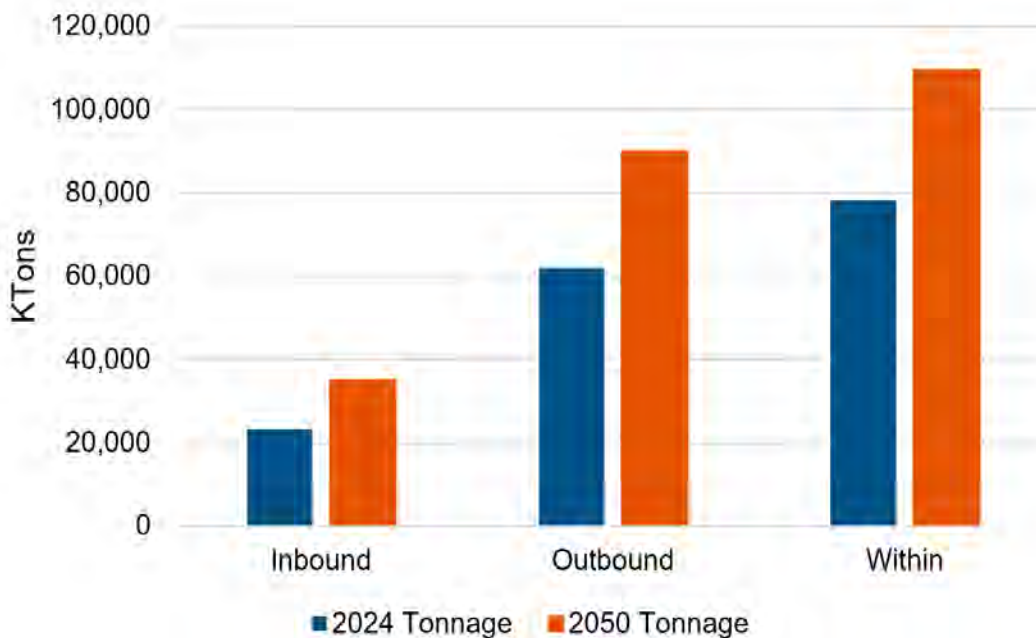
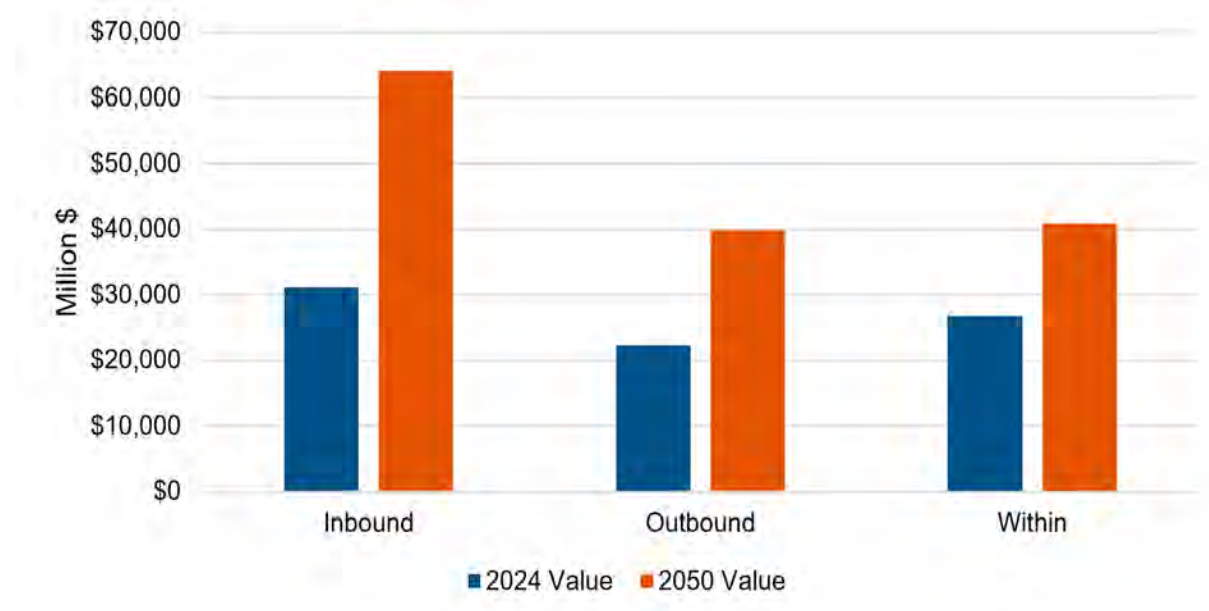


Figure 60: Freight Value by Direction (2024 - 2050)



Freight by Mode

Figure 61 shows the tons of freight by mode for the 2024 base year and the 2050 forecast year. The data shows that pipelines and trucks moved the greatest share of products by weight compared to other modes of transportation in Montana in 2024. By 2050, pipeline and trucking will continue to far outpace all other modes of transport. The portion of goods moved by air is too small to be reflected in the figure (8.9 KTons in 2024). The amount of goods moved by air is forecasted to slightly decrease by 2050 (to 8.5 KTons) as well as rail, which is forecasted to decline by an estimated three and a half percent. “Other” is forecasted to increase by 18 percent. Other modes reflect goods moved by unknown means or a combination of modes, such as air and truck.

Figure 61: Mode Share by Tonnage

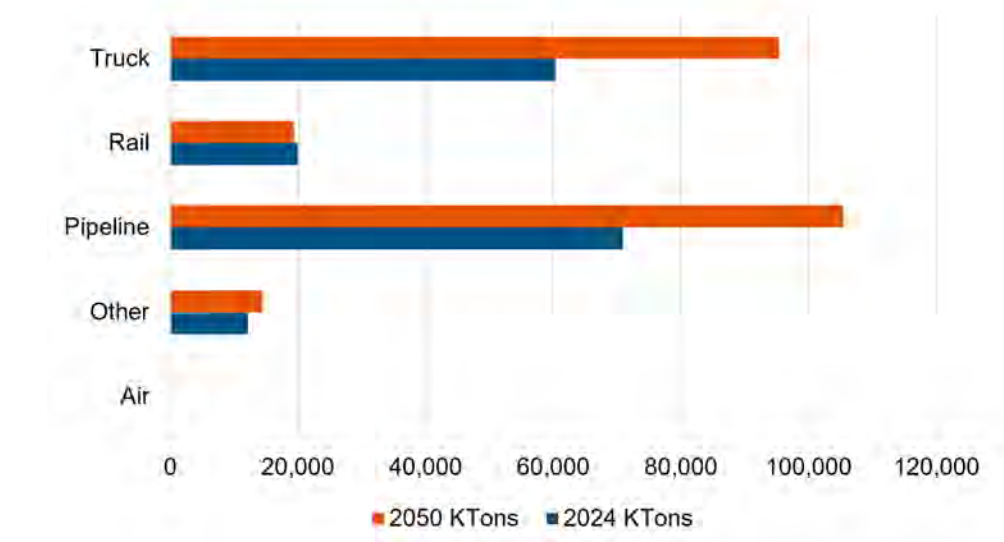
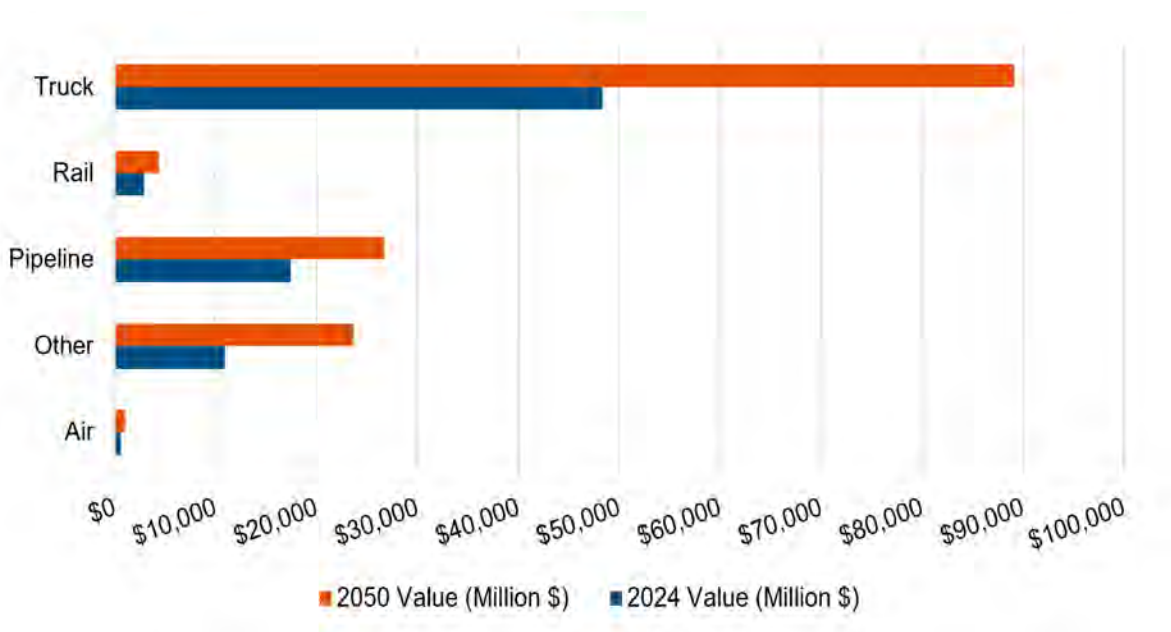


Figure 62 displays the monetary value of freight by mode for the 2024 base year and the 2050 forecast year. Every mode listed continues to show an increase in value by 2050. Trucking contributes to the greatest share of value, and is forecasted to increase by 84 percent, far outpacing all other modes in terms of share. While pipeline may be the lead mode, by weight, it takes second place to trucking when evaluated by value. “Other”, which includes multiple modes, mail, or movements not elsewhere classified, is also forecasted to more than double by 2050 while air, pipeline, and rail, are forecasted to increase by an average 54 percent by value.

Figure 62: Mode Share by Value



FHWA's Freight Analysis Framework provides forecast data on estimated truck flows for years 2022 and 2050. Based on this information, Figure 63 displays the FAF's forecasted change in commercial truck flows in Montana between 2022 and 2050.

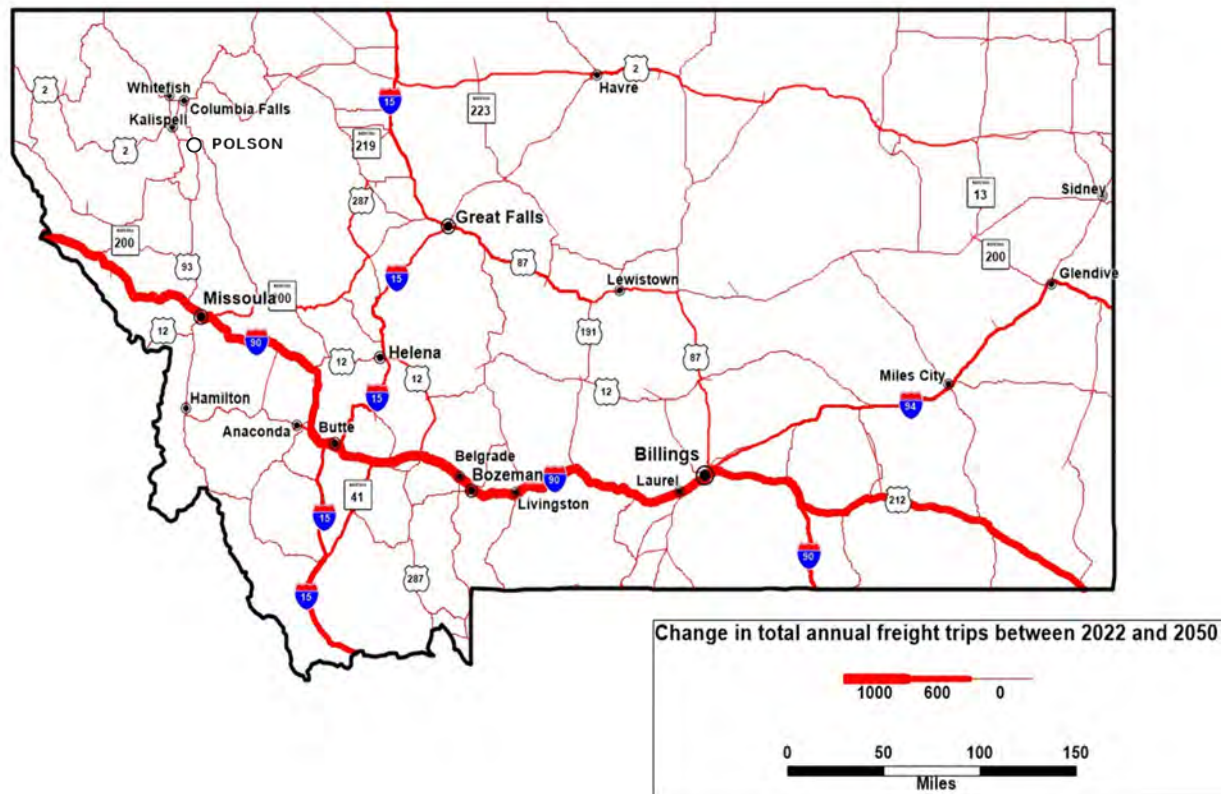
Consistent with current trends, I-90 will continue to remain the dominant route for truck movements in Montana as well as experience the largest increase in annual truck trips, by 2050. Interstate 90 is essential in connecting and moving goods to the major coastal ports, such as in Washington.

U.S. 212 is also forecasted to see a meaningful increase in commercial truck traffic through 2050. While not an interstate, it is part of the NHS. It is also a main route for tourism as it provides access to Yellowstone National Park and other recreational-based activities. To address increasing traffic demands and safety issues, MDT has implemented several projects along the roadway, including widening the shoulders, adding passing lanes, rumble strips, an additional weigh scale, and other safety features.

MDT continues to monitor needs on this highway as conditions evolve.

Other routes which demonstrate a modest increase are I-15, I-94, and US 2. Interstate 15 north leads to the Sweetgrass Border crossing into Canada, and I-94 provides the most direct route access to the ports and large industrial hubs in Minnesota. US 2 is a strategic highway, running east-west along the most northern portion of the state. This highway runs parallel to BNSF's rail line, on the Hi-Line.

Figure 63: Forecasted Change in Annual Commercial Truck Trips To, From, and Within Montana



Top Freight Commodities

Figure 64 displays the top 10 commodities (by weight) for Montana in 2050. Looking forward, these commodities are forecasted to remain in the top 10 in 2050, with coal n.e.c. and crude petroleum holding their ranks in first and second place. By 2050 gravel, cereal grains, animal feed, and nonmetallic mineral products are expected to maintain or advance in the rank, while the remaining commodities are forecasted to slightly decrease in rank.

Figure 64: Top Commodities by Tonnage and Change in Rank

Commodity	2050 Rank	Change in Rank From 2024	KTons 2024	KTons 2050
Crude Petroleum	1	↑1	30,018	54,540
Coal N.E.C.	2	↓1	38,206	53,863
Gravel & Crushed Stone	3	↑2	9,296	15,877
Cereal Grains	4	↑2	7,314	14,706
Coal	5	↓2	18,600	9,268
Animal Feed	6	↑3	4,875	8,258
Non-Metallic Mineral Products	7	↑4	4,582	7,943
Wood Products	8	↓1	5,502	7,417
Gasoline, Aviation, & Ethanol	9	↓5	9,437	6,814
Agriculture Products	10	↓2	5,191	6,454
All Others	-	-	30,318	49,363
Total			163,339	234,502

Figure 65 displays the top 10 commodity groups by value in 2050. Crude petroleum and machinery are expected to remain the top two commodities, contributing to an estimated \$29 billion in goods moved. Coal n.e.c., still a top value product in 2050 will slightly drop in rank by 2050. Most notably, pharmaceutical products move up in rank by a factor of 7, placing them in seventh place, by 2050.

Figure 65: Top Commodities by Value and Change in Rank

Commodity	2050 Rank	Change in Rank From 2024	Million \$ 2024	Million \$ 2050
Crude Petroleum	1	-	\$9,137	\$17,461
Machinery	2	↑1	\$5,847	\$11,953
Mixed Freight	3	↑1	\$5,551	\$10,637
Misc. Manufactured Products	4	↑3	\$3,371	\$10,244
Coal N.E.C.	5	↓3	\$6,325	\$9,605
Animals & Fish (live)	6	↑3	\$3,022	\$7,266
Pharmaceutical Products	7	↑7	\$2,430	\$6,223
Motorized Vehicles	8	↓2	\$3,662	\$6,187
Electronic & Electrical Equipment	9	↑2	\$2,911	\$5,939
Plastic & Rubber	10	↑6	\$1,765	\$4,189
All Others	-	-	\$36,223	\$55,117
Total			\$80,243	\$144,822

Fastest Growing Commodities

Out of the 42 commodity groups identified in FAF5, Figure 66 identifies the ten fastest growing commodities in Montana between 2024 and 2050 by weight. The majority of

the products support the expectation of an aging population in Montana as many of the goods are consumer and need driven. The percentage of Montanans over the age of 65 is forecasted to outpace those under 18 years of age, which also continues to support an increased need in pharmaceuticals.

The commodities below involve most of Montana's freight modes, including truck and rail for consumer and industrial products and air for lightweight and more valuable products such as pharmaceuticals and electronics. The fastest growing commodity by tonnage is also the fastest growing commodities by value (Figure 66 and Figure 67) which is miscellaneous manufactured products. Miscellaneous manufactured products includes a wide range of products from household goods, instruments, personal care products, and more.

Figure 66: Fastest Growing Commodities by Tonnage: 2024 - 2050

Commodity	KTons 2024	KTons 2050	% Growth
Misc. Manufactured Products	328	1,029	213%
Fertilizers	1,833	5,634	207%
Other Chemical Products	616	1,628	164%
Basic Chemicals	1,464	3,604	146%
Precision Instruments	15	37	146%
Pharmaceutical Products	18	43	140%
Building Stone	57	134	134%
Plastic & Rubber	451	1,034	129%
Electronic & Electrical Equipment	193	442	129%
Furniture	134	299	129%

Figure 67: Fastest Growing Commodities by Value: 2024 - 2050

Commodity	Million \$ 2024	Million \$ 2050	% Growth
Misc. Manufactured Products	3,371	10,244	204%
Other Chemical Products	1,387	3,763	171%
Fertilizers	732	1,982	171%
Pharmaceutical Products	2,430	6,223	156%
Animals & Fish (live)	3,022	7,266	140%
Basic Chemicals	1,291	3,069	138%
Plastic & Rubber	1,765	4,189	137%
Building Stone	28	65	132%
Furniture	846	1,828	116%
Transportation Equipment	386	829	115%

Evolving Trends in Freight

E-Commerce and Warehouse Automation

Economies and the demand for goods can fluctuate due to a myriad of pressures and technological evolutions. Since the pandemic, the demand for e-commerce and fast shipping options has set new expectations for consumers and allows them to access goods not otherwise available. Since 2024, Amazon continues to establish or plan for additional warehouses and delivery stations to meet increased demand in Montana to ensure fast shipping options. In 2026, Amazon opened two delivery facilities located in Great Falls and Kalispell. These facilities serve their local areas and complete the “last mile” leg of delivery.⁹¹ Popular vehicle choices for Amazon’s last mile delivery system include diesel- and gas-powered cargo vans.⁹² Gross vehicle weight ratings of cargo vans can range from 8,000 to 10,000 pounds and are a smaller option to some of the larger vehicle classes used for last mile delivery. E-commerce warehouses and delivery stations are often placed close to urban areas to ensure the expedient delivery of goods. While this may increase job opportunities and improve local economies, it can also bring with it increased traffic congestion and air pollution. In Amazon’s commitment to de-carbonizing its fleet, it has rolled out over 30,000 electric delivery vans across the nation, with the goal of having 100,000 electric delivery vans in operation by 2030.⁹³ Companies such as FedEx, DHL, UPS, and Walmart are also committed to replacing their fuel-based delivery vehicles with electric options by 2030 and 2040.⁹⁴

The impacts of e-commerce deliveries on urban roadway congestion can vary for each community and may be influenced by delivery methods, urban planning, and consumer behavior. In some instances, it can reduce vehicles on the road by consolidating goods delivery and reducing the need for individual trips to the store. On the other hand, it can result in increased vehicles on the road by introducing more delivery vehicles onto the network. The potential impact of e-commerce poses challenges that will need to be collaboratively addressed by local agencies, consumers, and shippers to find strategies that balance the benefits of e-commerce with mobility. Potential strategies include delivering to lockers located in centralized locations easily accessible to consumers, using cargo bikes and e-scooters with smaller footprints on urban roads and by consolidating packages onto a smaller number of delivery vehicles with larger capacities.⁹⁵

Based on feedback from Montana’s MPO’s on the increase in e-commerce deliveries and local freight distribution centers, there have been no known negative impacts to mobility, noise, or air quality. Land use patterns locate freight distribution centers strategically along interstate corridors thereby limiting impacts to the local transportation network.

To continue to meet customer needs, shippers have sought to maximize efficiency and

customer service while controlling or reducing costs. A new yet still experimental form of delivery is drone delivery. Drone delivery is becoming an increasingly popular form of goods movement, especially for light-weight local deliveries. Walmart and Amazon, in major urban areas across the nation, have begun to use drones to deliver goods in as little as 30 minutes. It's a fast and low-cost labor alternative. Due to Montana's widely rural landscape, it's likely that drone delivery will be slow to unfold, however major urban areas, such as Billings or Bozeman could, in the future, see such technologies at work. Urban areas are more compatible with drone deliveries due to their higher population densities and infrastructure. For Montana's more rural areas, innovations such as mobile collection points or partnering with local businesses as distribution centers for the delivery of goods are becoming popular logistical options.⁹⁶



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Warehouse automation is also quickly changing and adapting to meet logistical challenges. Robots are implemented to help with storage capacity and improve overall efficiency and are able to sort, stack, and pack goods. Such efforts can help to mitigate labor shortages in the goods movement sectors that were experienced during the pandemic and thereafter, however as times change, automation may displace jobs previously performed by humans and

cause future labor force issues. For instance, a study performed by SHRM in 2025 claims that 14 percent of jobs in the transportation/materials handling industries are at a high or very high risk of job displacement due to automation while jobs in the production of goods may be displaced up to 19 percent in the near term.⁹⁷ Fulfillment centers that are fully automated, called “dark warehouses”, are becoming increasingly popular to e-commerce and third party logistic firms. Dark warehouses use artificial intelligence, robotics, and predictive maintenance to reduce labor costs by up to 30 percent while increasing reliability and speed.

Logistics and Artificial Intelligence

Artificial Intelligence (AI) is the new hot topic encompassing many facets of life from the personal and social, to local and global industries. In the world of freight and goods movement, AI is quickly finding a role in the operation of autonomous vehicles, warehouse automation, customer service, and logistics. While many AI applications are still in the development stages, AI is already being implemented in many areas of freight shipping, particularly in logistics. Freight logistics is the process of planning, executing, and managing of goods storage from their place of origin to their final destination.

While AI is not fully independent, and does require human oversight, it has begun to find a place in dealing with routine tasks, promising efficient, accurate, and friendly user experience for customers. For example, AI can help to provide customer quotes, carrier sourcing (where voice and email agents interact directly with carriers), claims management, and billing.

AI ensures instant interactions and personalized customer service. AI is claimed to reduce waiting times for customers and the need for manual reporting. It is also expected that AI will be able to guide more strategic decisions by analyzing large volumes of shipping data instantly. AI will have the ability to recommend route changes, suggest alternative carriers, and identify cost saving opportunities. Freight and logistics decisions that may have taken days or weeks will be made in minutes, allowing for adaptive supply chains.⁹⁸

Tariffs and Economic Uncertainty

Tariffs, enacted in 2025, which increased by an average of six times in the first half of 2025,⁹⁹ have caused ripple effects throughout the economy and supply chains.

Coupling these actions with already growing economic uncertainty and supply chain disruptions, shippers now face additional logistical challenges. These challenges can result in longer lead times, decreased carrier performance, and source adjusting, adding to the pressures of improving planning accuracy and resiliency to supply chain disruptions.¹⁰⁰

Shippers are also faced with identifying solutions to mitigate the increased costs imposed by tariffs and supply chain pressures. As an example, Home Depot is a leading retailer of wood products within the nation with the majority of their lumber sourced from the Pacific Northwest and Canada. Additional lumber sources include Europe, South America, and Asia.¹⁰¹ Wood products, both by weight and value, are one of Montana's top 10 commodities. Wood products are also an essential commodity to one of the state's top industries, construction. In order to address the increased prices of lumber and other products that they sell, Home Depot announced that they plan to maintain pricing in the near and medium term. The corporation claims they are able to do this due to their supply chain diversification, scale, and partnerships with their suppliers.¹⁰² This is an example of supply chain resiliency and effective logistical planning.

Commercial Vehicle Automation and Truck Platooning

MDT is working on positioning itself as a resource and authority for the state in preparation for the emergence of truck platooning technology that will impact transportation infrastructure and systems in Montana. Rapidly evolving transportation technologies, including truck platoons across infrastructure, vehicles, and systems, indicate a greater shift to intelligent infrastructure, interconnected vehicles, and

autonomous driving. Projections indicate that by 2050 a gradual, yet significant adoption of automated driving systems could represent 50% of the national vehicle fleet. While implementing truck platooning provides several potential advantages benefiting surface transportation, the trucking industry, and overall economic growth, it also introduces a host of new challenges for MDT to navigate.

The U.S. Department of Transportation (USDOT) is also preparing for a new era of innovations in the transportation world. To help facilitate safety in the future of automated transportation, such as autonomous vehicles, USDOT has developed the Automated Vehicles Comprehensive Plan.

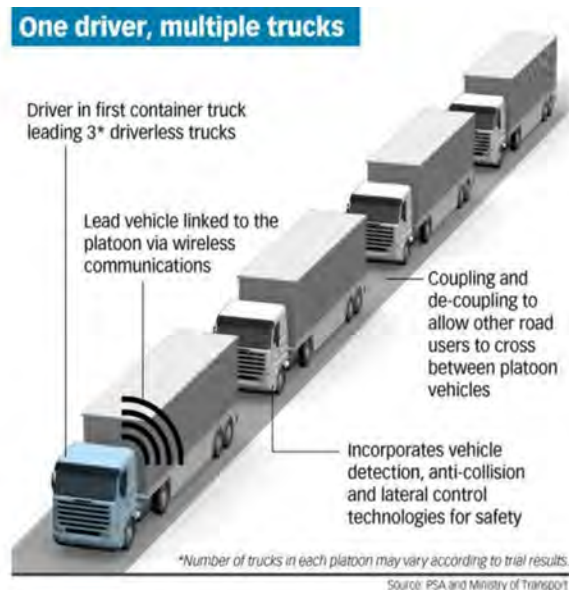
The Plan establishes 3 goals to help prepare for automated driving systems, which are collaboration and transparency, modernize the regulatory environment, and prepare the transportation system. The USDOT has also updated the Manual on Uniform Traffic Control Devices (August 29, 2025) to reflect advances in traffic control device technology and to lay the foundation for supporting future automated driving systems.

Alternative Fuel Vehicles

Vehicle Electrification

Vehicle electrification is the process of powering vehicles using electricity instead of conventional sources such as gasoline and diesel. While this technology is currently more prevalent in passenger vehicles, early adopters have begun to use electric powered freight trucks. Companies, such as Volvo Trucks, Daimler (Freightliner), and Tesla have developed electric semi and box trucks for commercial use. Length of haul varies based on trailer size and the weight of the cargo. As an example, Volvo's box truck version advertises a range of 150 miles on a single charge, with the ability to charge to 80 percent capacity in 70 minutes.¹⁰³

Electric freight vehicles pose potential benefits both to the environment and to public health. However, they will also need to overcome several challenges if they are to become a viable alternative to petroleum based fueled vehicles in Montana. Adverse winter weather, subfreezing temperatures, and mountain passes will all require



additional demand on the batteries, thereby reducing vehicle range. According to an American Automobile Association study, using an electric vehicle's heater when it is 20 degrees outside can reduce the range by 41 percent.¹⁰⁴ Cold ambient temperatures also increase the rate of time batteries need to be charged. For instance, at 77 degrees, a fast charge will charge a battery to 80 percent in 30 minutes however at 32 degrees, the battery will only be charged to 52 percent.¹⁰⁵ Shorter driving ranges will require high driver confidence that they will be able to find and use charging locations, as well as accounting for the time to charge in daily movements. Given current technologies, electric freight trucks are more suitable for an urban environment versus long haul trips, as well as for drayage operations (transport of goods over a short distance) and on-site operations at intermodal facilities.

Train Electrification

The technology for fully electrified freight rail operations continues to expand and become more readily available. Some systems rely on electric power supplied through overhead catenary systems (overhead power lines used to supply electricity to a locomotive), while others use "dual-mode" combinations to propel trains where catenaries are unavailable. The electric operation of trains using stationary power sources is common across the globe; however, the capital costs in doing so are high and may be cost prohibitive. Thus, in the United States, the focus is on technologies that are less capital intensive. Among the alternative energy sources that exhibit the most potential to achieve meaningful technical and economic feasibility are batteries and hydrogen fuel cells.¹⁰⁶

Hydrogen Fuel Cells

Electric vehicle technology has led the passenger market for alternative fuels and power for years. However, hydrogen fuel cell technology is emerging as an option in the zero-emissions vehicle arena for trucks and trains that require large heavy batteries and long charging times. Hydrogen cell equipment development has focused on reducing vehicle weight and the retrofitting of existing vehicles to make the technology more accessible and affordable. Range, power, investment in charging or fueling locations, and technological advances will all influence the future market share of battery and hydrogen fuel cell freight vehicles.¹⁰⁷

5. Laws and Policy Regarding Freight

MDT's goal of improving the safety, security, efficiency, and resiliency of freight transportation is guided by freight specific laws at the state and federal level, as well as through MDT policies and performance measures. The following sections highlight the most relevant of these to MDT's freight planning efforts.

Federal Laws and Policy

National Freight Strategic Plan

The 2026 National Freight Strategic Plan (NFSP) outlines the federal vision and goals for the National Multimodal Freight Network (NMFN). The NFSP guides multimodal federal freight policy, programs, and investments. It also supports state, local, tribal, and private sector efforts to improve freight movements across the nation. Strategic goals identified in the NFSP are:

- A safe freight system: Reduce or eliminate serious injuries and fatalities of the freight system;
- An efficient freight system: Improve system reliability and streamline government regulation;
- A secure freight system: Ensure the integrity of our Nation's supply chains in support of national defense and economic prosperity;
- A resilient freight system: Reduce risks to the freight system and improve our response approaches;
- An innovative freight system: Modernize freight infrastructure and foster game changing technologies; and
- A capable freight workforce: Build a skilled workforce for the 21st Century and improve quality of life.

As with the previous NFSP, MDT continues to ensure continued compatibility with the goals outlined in the 2026 NFSP, including the prioritization of safety, efficiency, resiliency, security, and innovation.

Federal Laws and Programs

The FAST Act, signed into law December 4, 2015, recognized the need to improve the condition and performance of the National Highway Freight Network (NHFN) and to ensure goods are transported safely, reliably, and efficiently. To support these goals, the FAST Act created the National Highway Freight Program (NHFP). The NHFP outlines the goals specific to maintaining the NHFN (23 U.S.C. 167), which is the nation's most critical interstates for freight transportation. These goals include:

- Investing in infrastructure and operational improvements on the nation's highways;
- Improving the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas;
- Improving the state of good repair of the NHFN;
- Using innovation and advanced technology to improve the safety, efficiency, and reliability of the NHFN;
- Improving the flexibility and productivity of the NHFN;
- Improving the flexibility of states to support multi-state corridor planning and the creation of multi-state organizations to increase the ability of states to address highway freight connectivity; and
- Reducing the environmental impacts of freight movement on the NHFN.

In addition, the NHFP makes funds available to states for projects that help meet the goals described above. To be eligible for these funds and to participate in the NHFP, states are required to develop and maintain state freight plans.

Under the current federal transportation authorization bill, the Infrastructure Investment and Jobs Act (IIJA, November 15, 2021) was built on the existing foundation of freight policy and goals described in the FAST Act. IIJA promulgated further additions and requirements for freight plans as well as an emphasis for states to commit to the practice of ensuring reliability or redundancy on freight transportation systems. Additionally, IIJA increased the frequency of freight plan updates from every five years to every four and adjusted the planning horizon from five years to eight years.

Federal law also requires state departments of transportation to report on the reliability of the NHS. This is directed through federal performance measures identified in 23 CFR Chapter 1, E and F, Part 490. Reliability specific to freight movements (aka Truck Travel Time Reliability) is measured and reported for the interstates and overall network reliability is reported for both interstate and non-interstate NHS. MDT reports on these measures to the Federal Highway Administration biennially and must demonstrate achievement towards meeting the state established targets for reliability.¹⁰⁸

Montana Codes and Rules

Various state codes and rules govern freight-related transportation activities within Montana. The following includes pertinent statutes and administrative rules. However, others may apply that are not included here.

Montana's Constitution

Montana's Constitution, Article VIII, Part VIII, Section 6 requires that revenue from gross vehicle weight (GVW) fees, excise and license taxes on gasoline, fuel, and other energy sources be used solely for:

- Payment of obligations incurred for construction, reconstruction, repair, operation, and maintenance of public highways, streets, roads, and bridges;
- Payment of county, city, and town obligations on streets, roads, and bridges; and
- Enforcement of highway safety, driver education, tourist promotion, and administrative collection costs.¹⁰⁹

Administrative Rules of Montana (ARM)

MDT's Motor Carrier Services (MCS) is charged with protecting the highway network and ensuring safety for users through uniform regulations of the commercial motor carrier industry. MCS enforces all state and federal commercial motor carrier laws, rules, regulations, and works closely with the Federal Motor Carrier Safety Administration. MCS is responsible for commercial motor vehicle (CMV) and driver safety and oversize/overweight permit programs. MCS operates under the Administrative Rules of Montana (ARM) contained in Chapter 18. As with MCA 61-10, ARM 18.8 specifically addresses the requirements placed upon CMV carriers to lawfully operate in Montana.¹¹⁰

These rules are designed to improve safety for commercial motor vehicles and overall mobility on Montana highways.

Public Service Commission

While MDT is not subject to the Public Service Commission (PSC), the PSC is a state agency that plays a vital role in the safe operation of two major freight transportation modes within the state: rail and pipeline. Pursuant to MCA Title 69, the PSC cooperates with the Federal Railroad Administration in the enforcement of federal laws established for rail safety. These efforts include the inspection of railroad equipment and audits of safety-related records to ensure compliance with state and federal laws.

The PSC also participates in the federal Pipeline Safety Program, to ensure safe construction, operation, and maintenance of intrastate gas pipelines in Montana. Activities include pipeline field inspections and desk audits.¹¹¹ Pursuant to MCA, the PSC also has the authority to establish/enforce rates for the gathering, transporting, loading, and delivering of crude petroleum, coal, or carbon dioxide within the state.

TranPlanMT, Montana's Long Range Transportation Plan (LRTP)

MDTs federally required (23 CFR Part 450.216) long-range transportation plan, TranPlanMT, defines MDT's policy direction for operating, preserving, and improving Montana's transportation system. Originally adopted in 1995 as TranPlan21 and most recently updated in 2017, this long-range plan is an essential component of a continuing statewide planning process focused on implementing strategies and actions.

TranPlanMT provides MDT with an opportunity to work with stakeholders and the public to identify and achieve transportation goals. TranPlanMT reflects input from the public, MDT staff, transportation stakeholders, local and tribal governments, resource agencies, and others around the state that guide efforts to plan Montana's transportation future effectively and efficiently. The plan identifies goals and strategies for a 20-year future time frame, with safety as the overarching goal.¹¹²

The Montana Freight Plan must be, and is, in alignment with TranPlanMT in the overall support of freight movements within the state. The following sections describe TranPlanMT goals and policy areas as they relate to the efficient and safe movement of freight.

Safety

Safety is central to MDT's guiding mission. MDT actively emphasizes safety through its programs and coordinates efforts with partners in education, enforcement, engineering, and emergency medical response. MDT maintains a focus on enabling all users to safely access Montana's transportation system. While not specific to freight, MDT's vision of zero fatalities and zero serious injuries on Montana's roadways includes all modes and users of the transportation system. Analysis conducted for this freight plan includes crashes involving trucks, as well as at-grade crossing concerns.

System Preservation and Maintenance

MDT employs a risk-based asset management approach to monitor performance and develop an optimal investment plan that ensures "like" conditions throughout the state. Using this asset management approach and a "Right Treatment at the Right Time" philosophy prioritizes investments and system preservation.

Mobility and Economic Vitality

Facilitating the movement of people and goods and recognizing the importance of economic vitality are important. A well-maintained transportation network for all modes allows people, goods, and services to move more efficiently and safely, thereby supporting critical supply chains and reducing transportation costs. Montana's economy

is closely tied to transportation because of the lengthy distances between population centers within the state and to even farther markets.

Together, trucking and rail modes carry about half of all freight tonnage within the state. These modes are critical to ensuring freight is adequately and efficiently moved throughout Montana and the nation. MDT regularly monitors and studies freight commodities and travel patterns and considers effects to freight modes as investments are being made to the transportation network. MDT will continue to enhance the freight network with targeted investments in infrastructure and operational improvements to highways such as highway and bridge preservation, congestion reduction, improved safety and reliability.

Accessibility and Connectivity

MDT's goal is to preserve access to the transportation system and connectivity within and between modes. On a project-by-project basis, MDT evaluates the needs of all users and modes within the project, using a context-sensitive approach appropriate for the area and the community. From a freight perspective, access and connectivity can mean connections between producers and markets, and access to larger markets.

Environmental Stewardship

MDT works to optimize planning and design decisions by balancing transportation needs with responsible, cost-effective stewardship of the environment. This process involves regulatory compliance with the intent to incorporate environmental sensitivity and sustainability as integral aspects of project decisions and design. The practice of environmental stewardship also has the capability to improve the safety of both road users and wildlife by incorporating projects that reduce wildlife – vehicle collisions such as wildlife crossings and friendly fencing.

Business Operation and Maintenance

It is vital that MDT develop and implement a long-range multimodal transportation program that addresses Montana's statewide transportation needs to maximize the use of federal funds while ensuring a cost-effective, efficient, and safe transportation system that also supports the movement of freight. To do this, MDT strives to recruit and retain a qualified workforce. MDT also exercises sound financial management to ensure matching funds for the federal aid program and adequate state funding for system maintenance and operations. All of this must be done while ensuring compliance with rules and regulations.

Montana's State Freight Plan

Montana's State Freight Plan itself includes policies and priorities regarding freight movements. These priorities are outlined as goals and strategies found within this document and are consistent with national multimodal freight policy, addressing safety, system preservation and maintenance, reliability, resiliency, and environmental stewardship.

6. MDT's Ability to Meet National Multimodal Freight Policy

The Montana Freight Plan serves as the guiding document for freight-related efforts in the state by providing a review of current trends, forecasted future/emerging trends, and outlining freight goals and strategies. This chapter describes many of MDT's efforts that demonstrate how the state is meeting national multimodal freight policy as defined in 49 U.S.C. §70101(b). The goals of the national multimodal freight policy are identified in Figure 68 and seek to improve the national multimodal freight network through multiple mechanisms.

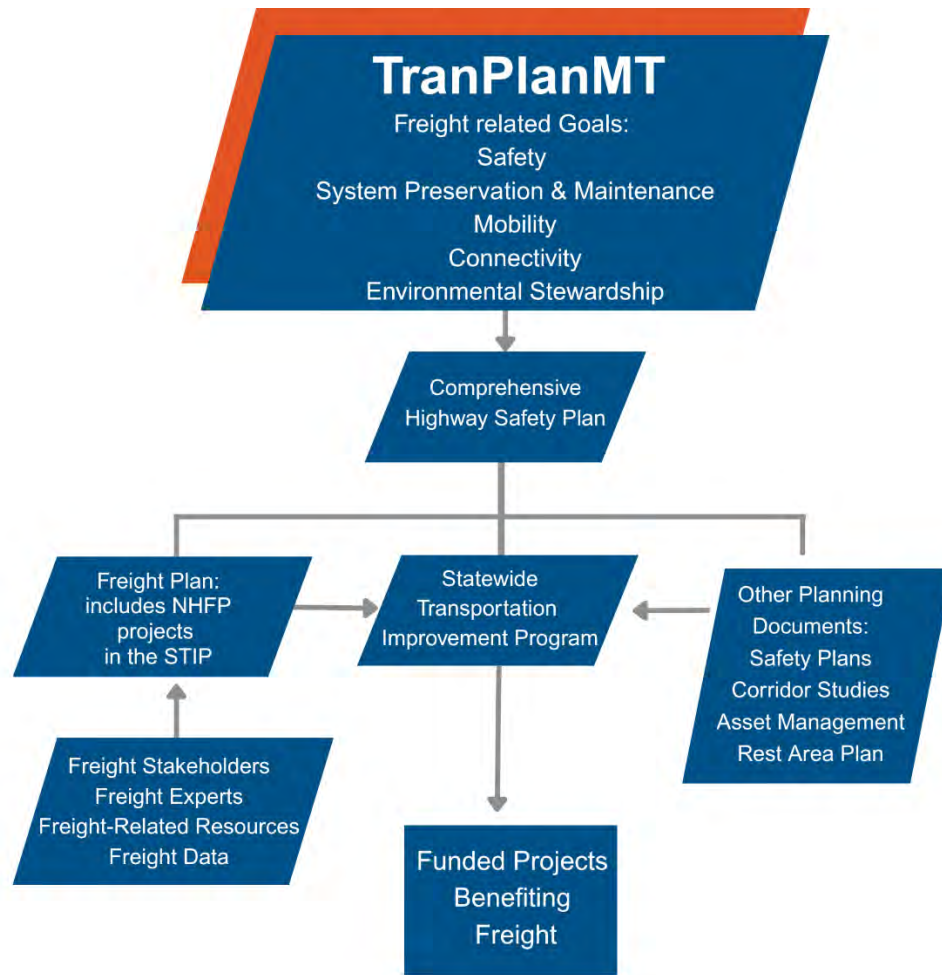
Figure 68: Goals of the National Multimodal Freight Network in 49 U.S.C. §70101

Identify infrastructure improvements, policies, and operational innovations that strengthen, reduce congestion, and increase productivity on the NMFN.
Improve the safety, security, efficiency, and resiliency of multimodal freight transportation.
Achieve and maintain a state of good repair on the NMFN.
Use innovation and advanced technology to improve the safety, efficiency, and reliability of the NMFN.
Improve the economic efficiency and productivity of the NMFN.
Improve the reliability of freight transportation.
Improve the short- and long-distance movement of goods.
Improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address multimodal freight connectivity.
Reduce the adverse environmental impacts of freight movement on the NMFN.
Pursue the goals described in this subsection in a manner that is not burdensome to State and local governments.

TranPlanMT is MDT's primary long range multimodal transportation policy plan that guides investment decisions and supports many NMFN goals. It is the over-arching long-range transportation policy for operating, preserving, and improving Montana's transportation system that guides MDT decisions related to the investment of transportation funds. Additionally, TranPlanMT identifies goals and strategies related to freight activities which the Freight Plan supports and is consistent with. Figure 69

displays a chart outlining the relationship of MDT's various planning documents, guided by TranPlanMT.

Figure 69: TranPlanMT's Overarching Relationship with the Freight Plan and Other MDT Efforts



Subject-specific plans and programs, developed and implemented by MDT, also align with the goals of freight in TranPlanMT and national multimodal freight policy. The following discussion describes these efforts and how freight is integrated into MDT's planning efforts.

Safety

Safety for the traveling public and freight operators is a top priority for MDT and requires the implementation of several plans and programs. Outside of the key role that the following plans and programs play in enhancing safety, several of these efforts also

contribute to system reliability, resiliency, efficiency, preservation of the existing network, and multi-state coordination which are all goals of national multimodal freight policy.

Montana Comprehensive Highway Safety Plan (CHSP)

Pursuant to 23 CFR 924.9 and 23 U.S.C. 148(a)(13), states are required to complete a Strategic Highway Safety Plan (SHSP) to receive federal highway safety funding through the Highway Safety Improvement Program (HSIP). The SHSP identifies statewide highway safety problems and analyzes opportunities to address them.

In Montana, the SHSP is referred to as the Montana Comprehensive Highway Safety Plan (CHSP). The CHSP was initially developed in 2006 and is updated every five years, most recently in 2025.

The CHSP's overarching principle is to promote the Vision Zero goal through collaboration and communication with all stakeholders to normalize a safe traffic culture to include driver behavior and safe roads.¹¹³

The objectives of the CHSP are to:

- Establish quantifiable safety-related goals, objectives, and performance measures relevant to travel on Montana's highways;
- Address issues at all levels of jurisdiction with specific attention to local and tribal entities;
- Establish a mechanism for interagency coordination and develop the necessary partnering processes;
- Identify candidate safety strategies and evaluate their potential benefits, costs, and ability to attain performance objectives;
- Establish specific, measurable, achievable, relevant, and time bound action items to meet safety goals and objectives; and
- Develop a strategic implementation plan, including action items for deployment in MDT's plans and programs as well as by other partnering agencies with roles in highway safety.

While the vision for Montana's CHSP is Vision Zero: zero fatalities and zero serious injuries on all public roadways, the CHSP uses an interim goal to track progress in reducing fatalities and serious injuries. The CHSP interim goal is to reduce fatal and serious injuries from 984 in 2023 to 729 by 2030. In 2023, Montana experienced 208 fatalities and 776 serious injuries (984 total)¹¹⁴. While fatalities decreased by 3, serious injuries increased by 44 as reported in the 2022 Freight Plan (previous plan reported 212 fatalities and 730 serious injuries in 2020).

Commercial Vehicle Safety Plan (CVSP)

The CVSP complements the CHSP and relates more directly to commercial vehicles and freight. It outlines the state's objectives, strategies, activities, and performance measures required in federal code. The CVSP is developed by MDT's Motor Carrier Service (MCS) and is submitted to the Federal Motor Carrier Safety Administration (FMCSA) for comments and approval. The plan enables funding for the operation of Montana's Motor Carrier Safety Assistance Program (MCSAP). MCS operations continue to have a positive effect on commercial motor vehicle (CMV) crash reduction goals, specifically through conducting CMV inspections in accordance with national standards, carrier safety audits, and carrier educational programs. Montana's CMV crash data set reflects a downward trend over the course of a 16-year period which continues to reflect the success of this safety program.¹¹⁵

Motor Carrier Safety Assistance Program (MCSAP)

The MCSAP is designed to reduce CMV-involved crashes, fatalities, and injuries through the implementation of effective CMV safety programs. The MCSAP is administered as a cooperative effort between MCS, Montana Highway Patrol (MHP), and FMCSA.¹¹⁶ The MCSAP team conducts inspections of commercial vehicles, compliance reviews and safety audits with carriers, responds to request for data reviews, enforces state and federal commercial vehicle-related laws, provides commercial driver/vehicle education, and more.

Railway-Highway Crossing Safety Programs

MDT's HSIP program includes the Railway-Highway Crossing Program (RHCP). Both of these programs are implemented pursuant to federal code and are data driven. Their purpose is to identify safety improvements to the public road system.¹¹⁷ While neither program is specifically focused on safety improvements for freight, both include freight-related safety issues in their respective evaluations, which ultimately lead to safety improvements. Both HSIP and RHCP generate safety enhancements across the state that benefit all modes. Examples of freight related safety improvements generated by these programs include active warning devices at rail crossings, over-height detection systems, and curve speed warnings targeted at larger vehicles.

Montana Rest Area Plan (Truck Parking)

MDT's Rest Area Plan represents a commitment to preserve and enhance the existing public rest area facility system. The plan considers state-maintained rest areas, truck parking areas, and a small number of city park rest areas. The Rest Area Plan conducts a thorough analysis of existing state-maintained rest and truck parking areas and includes an:

1. Inventory of services provided at each location;
2. The number of truck and passenger vehicle parking spaces at each location;
3. An assessment of parking space demand at each location; and
4. Forecasted future demand for passenger and truck parking spaces at each location.

The Montana Rest Area Plan addresses public rest area demands and needs and recommends approximately one hour of travel time between rest areas, which is consistent with American Association of State Highway Transportation Officials (AASHTO) guidelines. All National Highway System (NHS) and Primary System routes, and select Secondary System routes, were also included in the study, with corridor segment endpoints defined at rest areas, truck parking areas, and urban areas. An analysis distance of 70 miles was used to approximate one hour of travel time on the NHS Non-Interstate and Primary systems, and 80 miles was used to approximate one-hour travel time on the Interstate system.

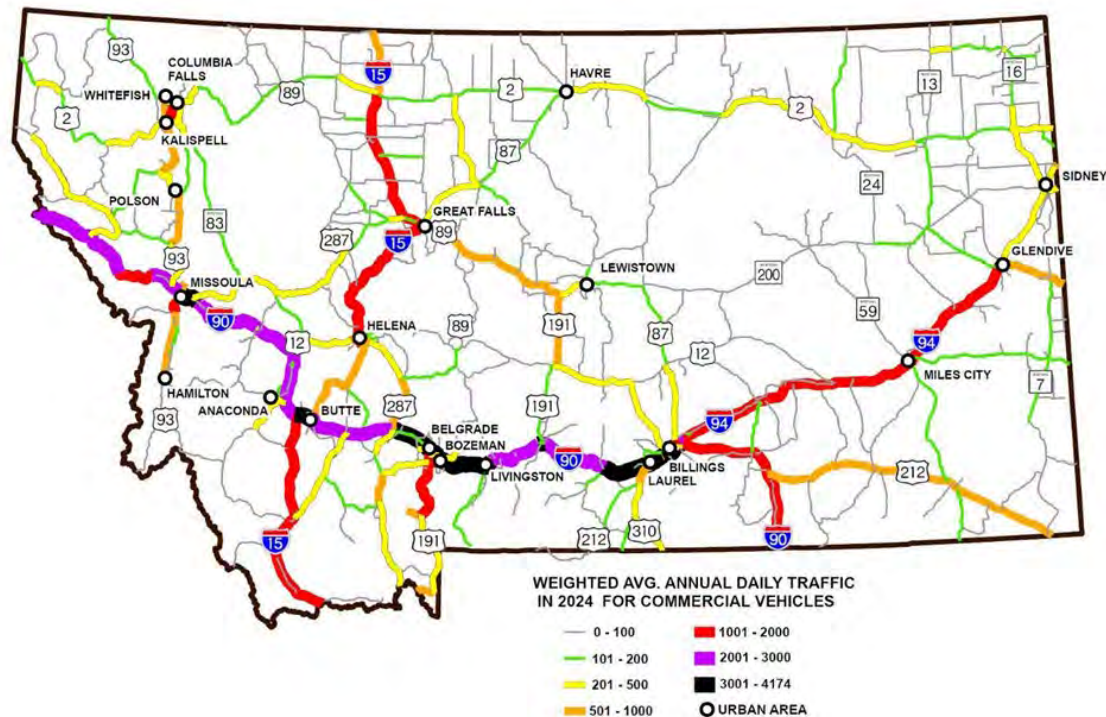
In an initial spacing scenario, all public statewide rest areas and parking facilities were considered, including nearby out-of-state rest areas. Locations of private truck stops were not considered. Analysis results are intended to assist MDT in identifying potential locations for new rest areas and locations where services may need to be modified. Since the 2019 update to the appendices in the Rest Area Plan, several locations have seen changes. For instance, the Bozeman Rest Area was closed (2023) and relocated north of Three Forks (2024). It's now called the Headwaters Rest Area. The east and west Hardin Rest Areas were reconstructed (2024-2025), including additional truck and passenger vehicle stalls. Several other rest areas throughout the state also underwent major rehabilitation in 2024 and 2025.

In the update to the Montana Rest Area Plan, MDT invited private and public stakeholders to participate and to provide comments. Additionally, the MDT Statewide Rest Area Prioritization Plan Committee meets regularly to discuss and advance the progress and priority of rest area projects and topics that affect rest area strategy. The committee employs an asset management approach to decision making and is driven by defined objectives and credible data from systematic assessments to justify investment decisions. This process allows MDT to develop an optimal investment plan and measure progress toward strategic transportation system goals.¹¹⁸ Ultimately, however, funding is prioritized to rest areas and truck stops on roadways with a higher order and/or volume of commercial vehicles such as Montana's interstates, I-15, I-90, and I-94, to work with existing funding constraints,. Figure 70 displays average daily commercial truck traffic in the state. Note how commercial traffic volumes are the

greatest on the interstates. The interstates are critical corridors for the movement of goods, both for the state and the nation.

MDT anticipates updating its Rest Area Plan in the next two to three years. To review the current plan in its entirety, including detailed site evaluations and amenities, go to <https://www.mdt.mt.gov/pubinvolve/restareaplan/>.

Figure 70: 2024 Average Annual Daily Commercial Truck Traffic



Asset Management Programs and Project Implementation

Effectively managing assets, with constrained resources, is essential and requires a performance based, data driven approach. For instance, how and when pavement projects are determined, across approximately 13,000 centerline miles of MDT maintained roads in Montana requires a systematic approach that maximizes the use of resources while ensuring a reliable and safe transportation network statewide. MDT's asset management programs and plans support many multimodal freight goals including safety, resiliency, preservation and maintenance, environmental stewardship, efficiency, and operational improvements.

Performance Programming Process (Px3)

As part of the asset management approach, MDT uses a performance-based funding allocation process known as Px3 to determine how to allocate Montana's limited transportation resources. The Px3 process helps MDT optimize its spending to maintain and improve pavement and bridges on the state's National Highway System (NHS), and Primary Highway System (Primary System).

The goals of Px3 align with TranPlanMT which include goals for system preservation and maintenance, mobility and economic vitality, accessibility, and connectivity. Goals in Px3 address pavement condition, bridge condition, and highway safety.

Px3 is influenced by federal laws that establish national performance measure requirements that are meant to address pavement and bridge conditions as well as travel time reliability and freight movements.¹¹⁹

Transportation Asset Management Plan (TAMP)

MDT's TAMP outlines a formal process for identifying, assessing, and prioritizing risks to Montana's surface transportation infrastructure for the purpose of effectively managing assets. The TAMP is a risk-based asset management plan that is based on statewide policy and planning goals, including Px3 and supports the achievement of short-term performance targets.¹²⁰

Statewide Transportation Improvement Program (STIP)

The STIP is developed in accordance with the requirements identified in 23 U.S.C. §135 through a coordinated effort of MDT, state and federal agencies, local and tribal governments, metropolitan planning organizations, public agencies, transportation providers, citizens, and other interested parties. The STIP identifies highway, rail, aeronautic, and other multi-modal improvements to preserve, renovate, and improve Montana's transportation system.

Projects in the STIP are developed via nominations from MDT Districts and program managers. Nominations are prioritized and ranked by surface condition, rideability, traffic safety, and geometrics consistent with strategies identified in MDT's asset management program. The STIP supports policy goals established in TranPlanMT and includes freight-related investment and improvement projects, including those in the state's National Highway Freight Program.¹²¹

Studies and Planning Efforts

Studies are an important first step in understanding project areas in greater detail, as well as identifying issues and/or possible solutions. It also allows the public and stakeholders to participate in the planning process. Studies and corridor planning

address multimodal freight goals by identifying options to improve safety, resiliency, operational improvements, and/or reductions in adverse environmental impacts in project areas.

Corridor Planning

MDT conducts corridor planning studies to determine cost-effective solutions to address transportation needs along a corridor. This process provides a means for early and continuous involvement of appropriate agencies, stakeholders, and the public. Studies generally contain the following elements: issue identification, documentation of existing conditions, environmental analysis, traffic forecasts, development of needs and objectives, and a list of short-, mid-, and long-term improvement options. MDT uses the *Montana Business Process to link Planning Studies, National Environmental Policy Act, and Montana Environmental Policy Act Reviews* to guide the corridor planning process.

2016 Montana Rail Grade Separation Study

In 2016, MDT completed a rail grade separation study to review at-grade and grade-separated railroad crossings. The study utilized a data-driven evaluation process to identify a list of at-grade and grade-separated railroad crossings and potential feasible improvements, while identifying 10 priority locations.¹²²

The evaluation process included a two-tiered screening and selection process to identify a final list of crossings. A databased methodology was used to identify these locations from a total of more than 5,200 at-grade crossings and more than 400 grade-separated crossings throughout the state. For each of the final ten at-grade crossings, potential grade-separated alternatives were identified, and conceptual plans, planning-level cost estimates, and benefit-cost analyses were developed. Potential improvements were also identified for selected grade-separated crossings.

Two of the top priority at-grade crossings identified in the study have since received further attention. In Belgrade, the Jackrabbit Lane at-grade crossing received a federal grant in 2024 for major upgrades including grade separation. In 2025, the City of Helena received a federal grant to conduct a feasibility study for grade separation at the Montana Avenue rail crossing.

Summary of MDT Efforts and National Multimodal Freight Policy

Figure 71 provides a visual summary of the topics discussed above and how MDT's efforts support National Multimodal Freight Network (NMFN) goals, as identified in 49 U.S.C. §70101(b). Each dark blue dot represents a direct connection between MDT's policies, plans, or programs that support each NMFN goal and the light blue dots represent indirect support. Example of indirect support is how MDT's management of

assets, let's say through the STIP, may identify a project for funding that also includes an innovative technology component or that addresses an environmental need. Note that NMFN goals have been abbreviated to fit the figure.

Figure 71: MDT Policies, Plans, and Strategies that Support National Multimodal Freight Goals

Goals of the NMFN	MDT Policies, Plans, & Strategies				
	Asset Management • TAMP • STIP • NHFP • Px3	Policy • TranPlanMT • CHSP • CVSP • Freight Plan	Planning & Programs • Corridor Planning • Rest Area Plan • Traffic Safety • MCSP	Regulatory • Laws on Freight • NPM Reliability • NPM Bridge & Pavement • NEPA/MEPA	Coordination • Local (e.g. MPO's & Tribes) • Regional (States) • Federal
Identify Infrastructure Improvements, Policies, & Operational Innovations	●	●	●		●
Improve Safety, Security, Efficiency & Resiliency of Multimodal Freight Transport	●	●	●	●	●
Achieve & Maintain a State of Good Repair	●	●	●	●	●
Use Innovative & Advanced Technologies	●	●	●		●
Improve Economic Efficiency & Productivity	●	●	●	●	●
Improve Reliability of Freight Transportation	●	●	●	●	●
Improve Short- & Long-Distance Movement of Goods	●	●	●	●	●
Support Multi-State Corridor Planning		●	●		●
Reduce Adverse Environment Impacts of Freight	●	●	●	●	●

7. Coordination

MDT routinely works with various agencies and organizations to advance the safe and efficient movement of freight. Coordination, at the local, regional, and national level is critical in ensuring system connectivity and efficiency along the transportation network. While not all-inclusive, this chapter highlights some of the many coordination efforts that MDT staff participate in as they relate to freight.

Multistate Planning and Coordination

Coordinating with neighboring states plays an important role in addressing regional challenges, promoting network connectivity and reliability across state lines, and sharing institutional knowledge with peers. MDT staff collaborate with other states by 1) routinely participating in multistate freight planning committees, 2) coordinating efforts at border crossings and through motor carrier service activities (e.g. licensing program for CMV's), 3) peer to peer networking at state level, 4) participating in American Association of State Highway Transportation Officials, and 5) including neighboring states as stakeholders in state plan development, such as the State Freight Plan. Such efforts support national multimodal freight goals as they relate to safety, network reliability, and coordination.

Federal Coordination

Both from a statutory and cooperative standpoint, it is critical that MDT coordinates its efforts with the federal agencies it works with. For instance, MDT planning staff works closely with the Federal Highway Administration to ensure compliance with its freight and safety programs, including updates to federally required plans and the reporting on national performance measures. MDT's Motor Carrier Services coordinates with the Federal Motor Carriers Safety Administration and the Federal Highway Administration in the implementation of commercial motor vehicle laws and programs, ranging from permitting, registration, licensing, enforcement, and safety education.

Private Sector Plans

MDT's Systems Impact Action Process (SIAP) coordinates the review and assessment of impacts resulting from projects initiated by private developers and others. The review process aims to provide private developers with a single point of contact for requesting access to the state's highway system while also protecting taxpayers' investment in a safe and efficient transportation system.

SIAP's coordinated review allows for the identification of adverse transportation impacts early in the planning and review phases. With SIAP, MDT and local government agencies concurrently review projects to provide a more complete review of the

proposal and coordinate efforts in addressing impacts. Once impacts are identified, the developer must implement approved mitigation measures to minimize effects on the transportation system. Mitigation measures are established as conditions a developer must meet before permits are issued. Projects that may substantially impact the transportation system through increased traffic, traffic delays, safety, etc., are included. Freight-related examples include, but are not limited to:

- Railroad at-grade and grade-separated crossings;
- Pipelines;
- Major developments; and
- Oversize vehicle transportation projects requiring ground-disturbing road or utility improvements.

Local Governments

MDT works closely with communities across the state to develop long-range transportation plans (LRTP). Billings, Great Falls, and Missoula have historically been designated as Montana's Metropolitan Planning Organizations or MPOs. Per the 2020 decennial census, two more MPO's were designated in the state. They are the Greater Helena Area MPO and the Gallatin Valley MPO. These five MPO's represent urban areas with populations of at least 50,000. MPOs are required to develop long-range transportation plans outlining specific strategies and projects to address identified needs within the MPO boundary. Non-metropolitan communities may also elect to develop an LRTP to identify and address transportation needs based on public input and technical analysis.

In accordance with federal requirements each MPO is required to develop an LRTP that, among other goals, directly or indirectly supports the safe and efficient movement of freight. Figure 72, below, provides a list of freight-related goals contained in the respective LRTPs. Due to timing conflicts, the Greater Area Helena and Gallatin Valley MPO's first LRTP will not be finalized until after the completion of the Freight Plan and are therefore not included in the table.

Figure 72: Montana MPO Long Range Transportation Plans

MPO / Document	Year LRTP Updated	LRTP Freight Related Goals
Missoula Connect 2050 Long Range Transportation Plan	2025	Improve safety and promote health to enhance quality of life.
		Advance sustainability and community resilience to protect natural resources and address climate change.
		Expand mobility choices to improve efficiency and accessibility for people and goods.
		Maintain assets and invest strategically to boost economic vitality.
Billings Urban Area Long Range Transportation Plan	2023	Develop a safer transportation system for all users.
		Optimize, preserve, and enhance the existing transportation system to adapt with climate change, protect the natural environment, and promote a healthy and sustainable community.
		Provide transportation facilities to support the local economy and connect the Billings planning area to local, regional, and national commerce.
Great Falls Great Falls Area Long Range Transportation Plan	2024	Preserve and maintain the existing transportation system.
		Improve the accessibility and connectivity of an equitable multimodal transportation system for all users.
		Improve the reliability of the transportation system for the efficient movement of people and goods.
		Provide a safe, secure, and resilient transportation system.
		Promote consistency between transportation improvements, land use, growth, and development to enhance the economic vitality of the community.
		Develop and deliver transportation projects in a manner that reduces project costs, promotes jobs and the economy, and eliminates delays.

MDT works closely with local governments and communities to mitigate freight-related impacts and to inform the selection of freight-related investments. Within the five MPOs, all federal aid eligible projects must be included in their respective Transportation Improvement Program (TIP). Any MDT proposed freight-related investments within the MPO boundaries must be included in both the Statewide Transportation Improvement program (STIP) and TIP.

Additionally, MDT coordinates with local governments to mitigate impacts to communities resulting from freight activities. Examples include the installation of specialized hardware that allows signage and signal poles to be removed or rotated by

oversize load movers, allowing loads to move through a community with greater efficiency. These freight-related investments minimize the disruption to traffic flows within the community.

Tribal Coordination

Montana has seven Tribal reservations, representing twelve tribes. When appropriate, MDT consults and coordinates with Tribal representatives for MDT highway projects or issues that may occur on or near Tribal lands. For MDT policy or program issues affecting Tribes, coordination involves MDT leadership.¹²³

North/West Passage Corridor

In February 2002, state representatives from Idaho, Minnesota, Montana, North Dakota, South Dakota, Washington, Wisconsin, and Wyoming met to develop a program to help states along I-90 and I-94 coordinate the development, deployment, and integration of ITS projects. The vision of the North/West Passage Corridor is to focus on developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state borders.

Western Border Working Group

The Western Border Working Group (WBWG) was established in the spring of 2015 and was originally called the Inland Border Working Group. WBWG includes Manitoba Infrastructure and Transportation, Saskatchewan Ministry of Highways and Infrastructure, Alberta Transportation, British Columbia Ministry of Transportation and Infrastructure, Minnesota Department of Transportation, North Dakota Department of Transportation, MDT, Idaho Transportation Department, and Washington State Department of Transportation. The WBWG was established to foster communication and information sharing among jurisdictions and discuss western perspectives related to bi-national border transportation planning issues. WBWG participates directly with the Canada-United States Transportation Border Working Group (TBWG).

Special Transportation Authorities

Montana is home to two major port authorities active in the transloading of goods. The Port of Northern Montana located in Shelby, is a 120-acre multimodal facility providing direct access to the BNSF mainline, Interstate 15 (I-15) and U.S. Highway 2. The facility offers a range of services including consolidation, distribution, and transloading facilities.

The Port of Montana near Butte provides access to BNSF and Union Pacific railroads as well as access to I-90 and I-15. The Port of Montana offers transload, distribution, and warehoused/storage services.

MDT has no direct regulatory authority over port facilities unless the ports propose infrastructure improvements that impact state-maintained highway facilities. In the past, MDT has supported port efforts in obtaining federal discretionary funding to complete needed intermodal improvements through the Montana Essential Freight Rail Loan Program.

Montana Trucking Association

The Montana Trucking Association (MTA) is comprised of over 300 companies representing trucking companies, passenger carriers, garbage haulers, and construction and excavating companies plus others.¹²⁴ MTA is a key stakeholder, during MDT's evaluation of infrastructure improvements that may impact the freight industry and was invited to participate in stakeholder activities, during the development of the Montana Freight Plan.

Montana's State Freight Plan

Robust engagement with stakeholders is essential to updating the Freight Plan. Such stakeholders include individuals from the pipeline, aviation, rail, and trucking industries. Major freight sectors represented include coal, oil, agriculture, and others. Government agencies include local, state, federal, and military. The input and perspectives provided by Montana's freight communities help to identify critical concerns and challenges across the network, while subject matter experts provide knowledge and information necessary to address such concerns. Engagement efforts included numerous email blasts to a list serve of freight stakeholders, a press release, workshops, an online survey, and dedicated one-on-one phone calls with numerous freight associations across the state. In general, MDT's stakeholder engagement process provided a direct opportunity for over 3,000 individuals to participate and provide feedback on the Plan's update. In addition to this, the draft Plan was made available for public comment.

8. Innovative Technologies

Intelligent transportation Systems (ITS) are a form of innovative or advanced technologies and services that support modes of transport and traffic management. The primary goals of ITS are safety, mobility/efficiency, and sustainability. These systems assist travelers to be better informed and to make a safer, more efficient, use of the transportation network. Examples of ITS include, but are not limited to:

- Technologies used for calling emergency services when a crash occurs;
- Advanced traffic management systems: Traffic signal synchronization ensures maximum flow of vehicles.
- Safety Systems: Technologies that include red-light cameras, wrong-way driving alerts, and school zone speed management.
- Intelligent Freight Transport Systems: Weigh-in-motion sensors and electronic clearance for commercial vehicles.
- Advanced traveler information systems: Real time data such as traffic updates, route planning, and road conditions helping travelers make informed decisions.

In considering the future of ITS, the possible incorporation of artificial intelligence (AI) has revealed increased opportunities for enhancing traffic efficiency and safety. This is in part due to AI's ability to quickly process vast amounts of data, manage information, and allow for real-time decision-making. Despite the apparent pros, significant issues arise with the use of AI, such as data quality, security, public acceptability, and privacy concerns.¹²⁵ Incorporating AI into Montana's ITS structure is just beginning and is still being explored. For instance, the Truck Parking Information Management System cameras used to detect trucks parked in rest area stalls need to "learn" how to detect vehicles under certain conditions to ensure accurate reporting of stall occupancy.

Under MDT leadership, the Montana Statewide Regional Intelligent Transportation Systems Architecture was prepared and most recently updated in 2021. The main goal of this statewide architecture is to guide the implementation of ITS in Montana and coordinate funding, deployment, information sharing, and operations of ITS. The main ITS focus areas for MDT include enhanced traveler safety; accurate and timely traveler information; coordinated incident management; effective maintenance of the roadway system; efficient commercial vehicle operations; and integrated data management.¹²⁶ This chapter highlights some of the many innovative and ITS technologies implemented by MDT.

Credentials, Permitting, and Vehicle Clearance

MDT MCS streamlines its permitting and vehicle safety programs by using automated programs including the electronic, Audit, Registration, Tax (ePART) system, eTRIPS, weigh station bypass systems, ramp screening technologies, roadside safety inspection concepts, Truck Parking Availability Information System (TPAIS), and Axion Systems.

The ePART system is used to issue International Registration Plan (IRP) vehicle registrations, International Fuel Tax Agreement (IFTA), fuel licensing/ tax returns, and audit functions mandated by the IRP and IFTA plans. ePART is available online for qualifying motor carriers and third-party providers to issue credentials online at any time of day.¹²⁷ The ability to process multiple transactions online in this manner has reduced the time for permitting from up to four hours down to mere minutes, saving time for all parties involved.¹²⁸

The eTRIPS system is used to issue oversize overweight (OS/OW) permits. As well as review, approve, and manage permits for vehicles and loads that exceed standard legal size and/or weight limits. The system helps provide the following:

- **Regulatory Compliance.** Ensures carriers meet state and federal rules and regulations including size and weight thresholds, routing restrictions, weight limitations on posted structures, and other safety requirements.
- **Route Analysis and District Approval.** eTRIPS helps assist in identifying safe, approved routes based on bridge review, road and pavement analysis, construction projects, and other constraints.
- **Infrastructure Protection.** Help to eliminate or minimize damage to roads and bridges through Bridge Review, evaluating load impacts and restricting or conditioning permits when necessary.
- **Safety.** The system applies restrictions/conditions such as pilot vehicle requirements, travel time restrictions, and signage requirements to reduce risk to the traveling public.
- **Data Collection and Analysis.** Captures data on load movements, permit volumes, heavily traveled routes, and other trends to help in planning and policy development.
- **Interagency Coordination.** Interfaces/Integrates with bridge offices, district staff, and enforcement.
- **Infrastructure Insights:** Offers insights into freight corridors, bottlenecks, and infrastructure limitations to assist in planning and other priorities.
- **Customer Interaction.** Provides an online system for carriers to apply, manage, and self-issue permits within certain thresholds.

Weigh Station Bypass Systems

PrePass Safety Alliance, (formerly HELP, Inc.) which Montana has been a member of since 1997, is a public/private partnership of electronic weigh station bypass and screening systems. PrePass uses Automatic Vehicle Identification to identify enrolled vehicles pre-cleared for safety and credentials. Montana's PrePass system also integrates weigh-in-motion (WIM) systems to weigh trucks for compliance as part of the bypass screening criteria. Deployment of these technologies improves weigh station operations through more efficient freight movements for compliant vehicles, while providing law enforcement officers with the ability to focus on vehicles that are not compliant. Montana currently employs PrePass at ten locations that are compatible with the app and/or transponder and an additional four locations that only work with the PrePass app.¹²⁹ Like ePART, PrePass saves commercial truck drivers a significant amount of time and resources. According to PrePass, for every weigh station bypassed there is a savings of a half-gallon of fuel, a time savings of up to seven minutes, and reduced costs up to ten dollars and sixty-five cents.¹³⁰

Drivewyze, a privately operated ITS service, is in operation throughout Montana and provides additional weigh station bypass capabilities for trucks, utilizing the platform. Drivewyze allows trucks to bypass weigh stations at 15 locations by automatically assessing the vehicle's safety record, weight, and credentials. If a truck can demonstrate that it complies, then the vehicle can bypass the weigh station. This can save time and money for the driver as well as reduce congestion and delays at weigh stations.¹³¹

Ramp Screening Technologies and Roadside Safety Inspection Technology

Montana deploys ramp screening technologies at its most congested weigh stations to improve freight mobility. Ramp screening systems include license plate and USDOT number readers, Optical Character Recognition (OCR) software, and driver compliance cameras, using a consolidated safety and credentials database to provide results immediately. This allows officers to focus on vehicles and drivers most likely to have safety and/or credentialing issues. It also allows for more efficient freight movements while improving overall safety.

More specifically, MCS implements the following technology at various weigh stations across the State of Montana:

- **Automated License Plate / USDOT Number Readers:** High-speed cameras at weigh station entries scan plates and USDOT numbers, correlating vehicle data against carrier safety profiles.

- **Electronic Logging Device (ELD) Check:** Officers inspect Hours of Service (HOS) logs, engine hours, GPS records, and electronic logging device (ELD) diagnostics during inspections. Data is displayed in inspection-grade format and can be transferred via USB/Bluetooth.
- **Tire Compliance Systems:** On-road sensors detect missing, flat, underinflated, or mismatched tires in real-time (up to 100 mph). Data is integrated with weigh-in-motion (WIM) and e-screening systems. The system identifies tire anomalies and alerts operators to flag vehicles for inspection.
- **Driver Compliance Systems:** Some newer screening sites incorporate computer-vision cameras that detect if a driver is wearing their seat belt. Cameras will also flag non-compliant situations for inspection and capture images for enforcement review. This improves enforcement of commercial motor vehicles without the need to stop them.
- **Weigh-In-Motion (WIM):** WIM sensors are embedded in roadways and allow commercial motor vehicles to be weighed at highway speeds. WIM checks for axle weight, gross vehicle weight, weight distribution, and any irregularities. If the vehicle subscribes to a bypass system and is overweight or has inconsistencies, it will be directed to enter the weigh station.
- **Kistler WIM Data Loggers:** MDT is upgrading all WIM data loggers to Kistler units to improve data accuracy and accessibility. This processed WIM data enables MCS Enforcement Officers to quickly identify commercial vehicles that may require further roadside weighing with portable scales.

Axon Systems

Axon's body-worn and in-car video systems provide reliable tools that support safety, documentation, and situational awareness during freight inspections and enforcement activities. Body-worn cameras capture real-time audio and video, while Axon's in-car system adds high-resolution dual-view recording, automated license plate recognition, and real-time connectivity to support efficient roadside operations.

Axon also offers fixed automatic license plate recognition (ALPR) units that extend vehicle-identification capabilities at ports of entry and on high-traffic freight corridors. All data and video are integrated into a unified evidence platform with embedded privacy and ethical safeguards.

Together, these technologies enhance operational efficiency, improve documentation accuracy, and support coordinated enforcement across Montana's freight network.

Future Projects and Technology

U.S. 212 is one of the state's most heavily traveled non-interstate NHS routes, by commercial vehicles. A MCS Virtual Weigh Station on U.S. 212 near Busby will include a scale deck, pedestal with tether, traffic lights, digital weight display, DOT number cameras, license plate reader, weigh-in-motion, tire anomaly system, and driver compliance imaging. This system is already in place at several staffed facilities throughout Montana and is proven technology. This technology will allow enforcement to identify speed, direction of travel, and safety concerns while working in and around the weigh station. It will also provide important data that will identify when and where to assign enforcement officers to address commercial motor vehicle safety concerns.

Purchasing and Installing WIMs across the State

MCS allows commercial motor vehicles to bypass open weigh stations on a subscription program providing certain safety thresholds are met and the vehicles' weight is collected through a weigh-in-motion (WIM) system embedded in the road surface. Bypass systems improve the efficient movement of freight and reduce unnecessary delays and idling, thereby reducing tailpipe emissions from commercial vehicles. Adding WIM's at 11 locations will also improve consistency across all of Montana weigh stations and promote the safety of the traveling public and Montana's transportation infrastructure.

Truck Parking Availability Information System (TPAIS)

To help drivers plan their trips efficiently and identify available parking locations in advance, MDT has begun the implementation of Truck Parking Availability Information Systems (TPAIS) at multiple MDT rest areas. TPAIS provides real-time truck parking availability at seven I-90 corridor rest areas - Columbus eastbound and westbound, Greycliff eastbound and westbound, Headwaters, and Homestake eastbound and westbound. Collectively, this includes 166 commercial motor vehicle parking stalls. The system is displayed via electronic roadside signs, MDT's 511 platform, in-cab displays, and the Drivewyze app. Funded by a \$1 million FMCSA High-Priority IT Deployment grant, the system uses space-sensor data to direct drivers to safe, compliant parking options. This will reduce roadside stops and illegal parking, improve HOS adherence, reduce tailpipe emissions from idling, and enhance safety and efficiency across Montana's freight network.

Road Condition Information and Route Planning

MDT publishes, maintains, and provides both fixed and variable information about route conditions for freight passage. Travelers use a variety of means to receive traveler information for MDT's highway system, both pre-trip and enroute.

Online Traveler Services Information

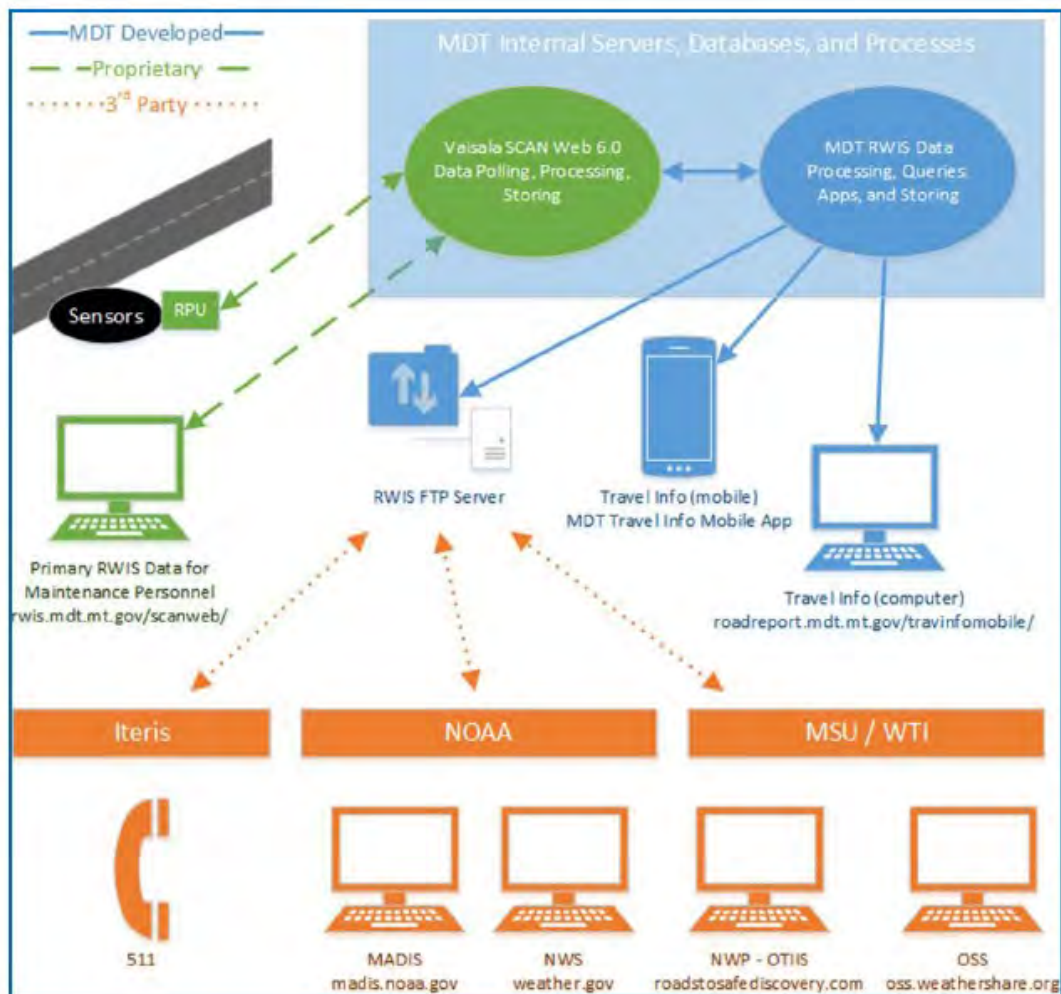
MDT's travel information system, *511 Know Before you Go*, provides travelers with timely roadway information. Traveler information is accessible via a digital application where individuals can view road conditions, incidents, road work, restrictions, rest areas, cameras, message signs, and weather. The web-and app-based application also provides real time imagery from roadway webcams as well as dash mounted snowplow cameras. While snowplows are in operation, the camera captures images approximately every half mile, which are then made available to the public via MDT's website and mobile app. Traveler information includes the following:

- 511 toll-free phone system;
- Traveler information website;
- Mobile app;
- Over 100 Road Weather Information System (RWIS)/cameras statewide;
- Highway Advisory Radios (HAR);
- Permanent and portable variable message signs; and
- Snowplow cameras.



MDT's RWIS system is a road weather station that collects and disseminates atmospheric information to the end users. The core sensor setup, at virtually all MDT's RWIS sites, includes an air temperature and humidity sensor, wind speed and direction sensor, in-pavement sensor, subsurface temperature sensor, precipitation occurrence sensor, and a camera. Some sites contain even more atmospheric type sensors. Figure 73 shows the overall RWIS system architecture from road sensor to end users.¹³²

Figure 73: RWIS System Architecture



MDT's 511 website and mobile applications are widely used and help travelers determine conditions based on firsthand observations and technological applications to help travelers plan accordingly.

MDT's 511 also has a phone service that provides route specific regional reports, facility information, and surrounding state access.

Construction and Work Zone Planning

MDT's Work Zone Safety and Mobility Policy provides mechanisms to improve safety for department employees, construction workers, and the public while improving the mobility on the road network. The policy uses best management practices by minimizing or reducing impacts before they occur. During the project pre-construction phase, a project-specific Transportation Management Plan (TMP) is developed to address demand management, corridor/network management, construction zone safety management, and traffic/incident management. One goal of the TMP is to recognize

impacts of construction activities on freight activities and mitigate those impacts when feasible.¹³³

Emergency Response

Maintaining and restoring transportation routes caused by destructive events is crucial. MDT has procedures in place to respond to such events. In coordination with other Montana state agencies, MDT participates in the following plans to ensure swift and efficient emergency response:

- MDT Emergency Operations and Disaster Plan: http://mdtinfo.mdt.mt.gov/maint/docs/des_manual/mdt_emergency_disaster_plan.pdf
- Montana Emergency Response Framework (MERF): The MERF is the main coordinating policy document for emergency response by Montana state government.
- Emergency Vehicle Management – Transportation Injury Mapping System, getting to the scene, maps for routing, detouring for incidents, flagging at emergency zones, and traffic control; and
- Disaster Response and Evacuation: des.mt.gov.

Road System Enhancements

MDT has undertaken studies and installed technologies, including ITS features, which benefit overall system safety and operations, including the movements of freight.

Real-Time Traffic Control

MDT uses several traffic control technologies including visibility sensors in key areas to warn vehicles of reduced visibility and associated route impacts (detour/closure), wind sensors are also used to determine when high-profile vehicles should be required to detour or reroute.

Active Intersection Warning Devices

These vehicle-activated devices give drivers additional information to assist in collision avoidance. MDT has installed several active warning devices at un-signalized intersections to warn motorists of crossing traffic or the need to stop ahead. Each system uses a location-specific design to address the unique crash trends of the intersection.

Warning Flashers

MDT regularly installs advance warning flashers at high-speed signalized intersections. These installations consist of a “Be Prepared to Stop When Flashing” sign and advance warning beacons that are interconnected to traffic signals and provide motorists with a warning that the green indication is about to terminate. These are particularly useful for heavy vehicles that require longer stopping distances.

Signal Synchronization

Proper traffic signal timing promotes safe and efficient traffic flow. A well-timed traffic signal system can reduce fuel consumption and emissions, eliminate unnecessary stops and delays, and increase safety.

9. Needs, Goals, and Strategies

Key Freight Concerns

MDT actively engaged external freight stakeholders and led a technical advisory committee (TAC) of MDT and FHWA subject matter experts which contributed to Plan development. Topics that were discussed were those related to the movement of freight, whether it be planning, logistics, road management, or the actual movement of goods. Key concerns that arose from discussions with these individuals are highlighted below. A detailed assessment of stakeholder engagement efforts, including comments received and survey results is provided in Appendix B.

Infrastructure

- Outdated bridges were identified as a top priority, noting load limited bridges forced trucks to reroute, which could add hundreds of miles.
- Lack of truck parking near mountain passes to allow for safe parking for truckers, during winter closures, was identified as a concern.
- Some areas of MDT maintained roadways are facing the end of their service life and need repair, including pavement, culverts, retaining walls, and rock slopes.
- Stakeholders and the TAC expressed concerns with significant funding challenges, including uncertainties at the federal level (on how this may affect future federal aid highway funding), and securing the minimum state match to leverage federal dollars. Additionally, funding for activities such as weigh station screening and other technologies is becoming increasingly challenging.

Since 2014, highway construction costs have increased by about 42 percent (through 2023) with the consumer price index going up 31 percent over the same period. Part of the reasons for these increased costs are due to supply chain disruptions and high energy prices. These types of pressures have increased the costs of construction projects while MDT's year-over-year revenue has remained flat. To ensure MDT meets its match requirements for federal aid funding in the future, MDT will need an additional \$55 million in annual state revenue to keep the state's highways at the current maintenance level. ¹³⁴

Safety

Safety for commercial truck drivers and for all users of the transportation network in Montana is a priority for MDT. Figure 74 shows the density of commercial vehicle crashes in Montana that occurred between 2020 and 2024 (2024 data is preliminary). Over this timespan Montana experienced 6,082 crashes involving commercial vehicles,

of which 98 were fatal¹³⁵. The maps demonstrate that highest crash densities occurred in counties that contain major population centers. Approximately 33 percent of all commercial vehicle-involved crashes occurred in one of the following counties¹³⁶:

- Gallatin County
- Yellowstone County
- Mineral County
- Missoula County
- Flathead County

In addition to crashes occurring predominantly in urban areas, weather conditions and animals on the roadway contributed to a combined average of 23 percent of all crashes.¹³⁷

Figure 74: Montana Commercial Vehicle-Involved Crashes: Total Incidents (2020-2024)

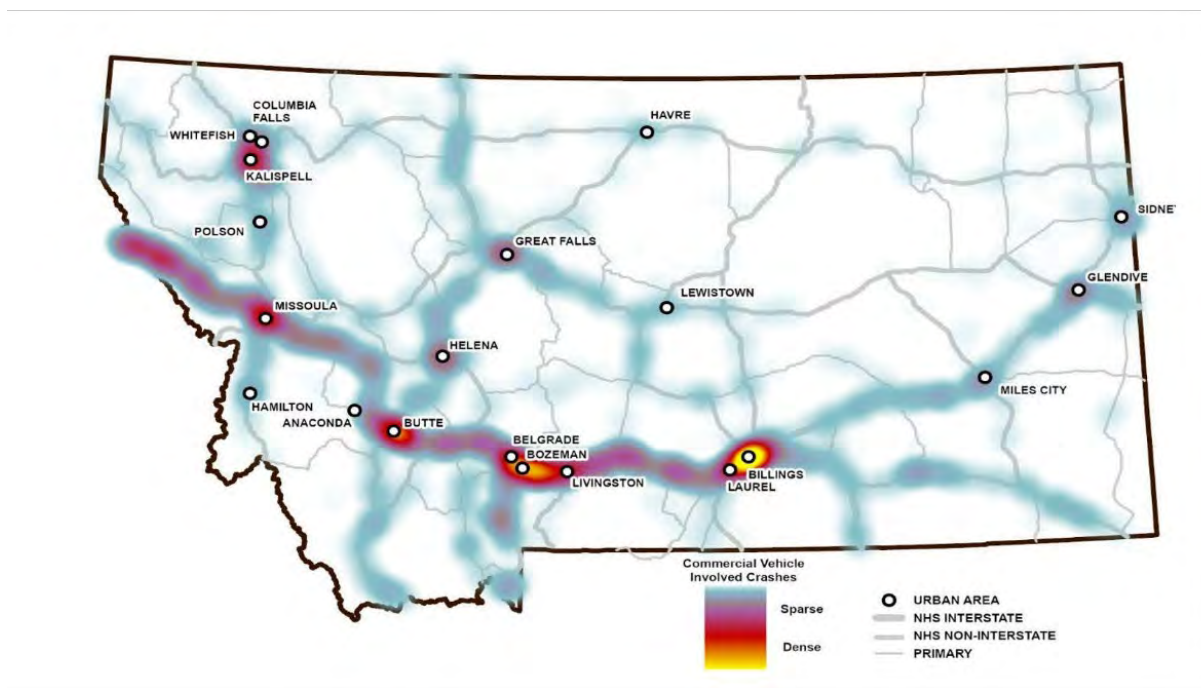
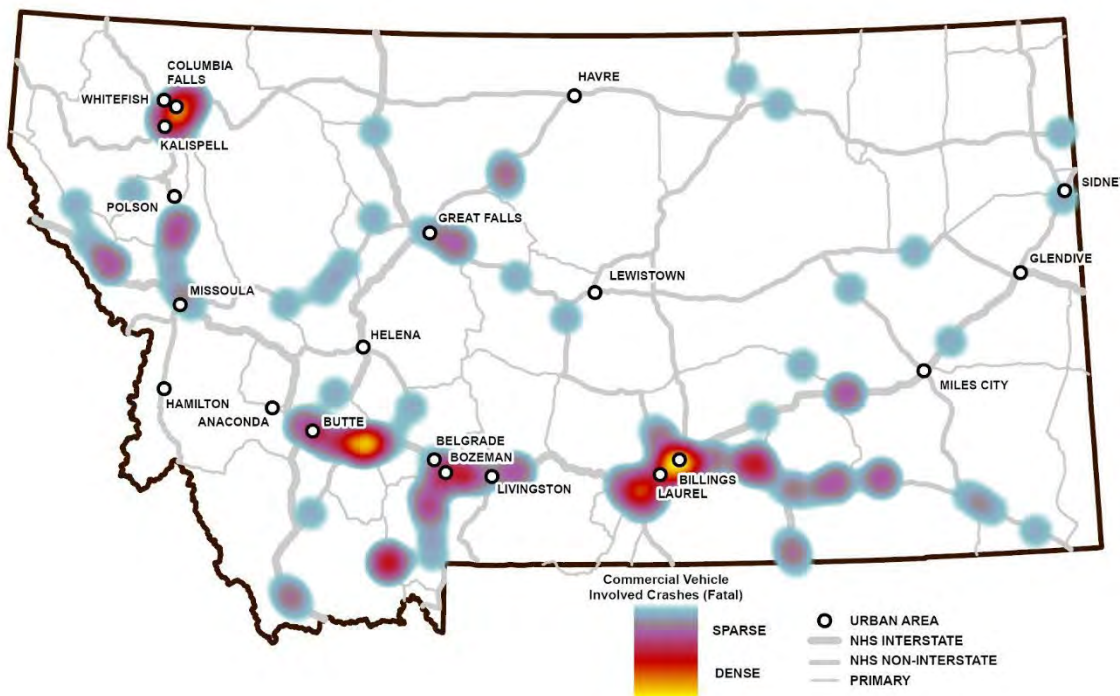


Figure 75 displays the density of commercial vehicle-involved crashes resulting in a fatal incident. The highest densities of fatal crashes (approximately 46 percent) are found on major interstates, including I-90, I-15, I-94. Approximately 4 percent (265) of commercial vehicle-involved crashes resulted in fatal or serious injuries between 2020 and 2024. This percentage has declined by approximately 1 percent from the previous 5-year period.¹³⁸

Figure 75: Montana Commercial Vehicle-Involved Crashes - Fatal Incidents (2020 - 2024)



Safety concerns noted by the TAC include challenges posed by foreign or out-of-state commercial truck drivers in which there is a language barrier or issues with a driver's skills or licensing. Language barriers can interfere with a driver's ability to read road signs or to effectively communicate with law enforcement or Motor Carrier Safety staff. Limited experience can catch drivers off guard who are unfamiliar with traveling through Montana's mountain passes and winter weather landscape which can result in major safety risks or freight delays. For instance, not being equipped with truck tire chains when conditions require them can result in a truck being forced to stop, reroute, or worst case, causing a vehicular incident.

Other identified safety concerns include impacts to safety during times of increased seasonal traffic, vehicle-wildlife collisions, limited law enforcement patrolling roadways, impaired drivers, and weather-related crashes. According to MDT's 2025 Comprehensive Highway Safety Plan Fact Sheet for large vehicles (all vehicles over 10,000-pound gross vehicle weight rating which includes vans, recreational vehicles, as well as commercial trucks) impaired driving was a leading factor in 20 percent of fatalities and serious injuries.

Upon review and consideration of stakeholder concerns and MDT priorities, Figure 76 outlines three core needs as they relate to the safe and efficient movement of freight

across Montana’s roadways. These core freight system needs were identified while keeping alignment with the 2026 National Freight Strategic Plan, national freight policy, and TranPlanMT. In general, MDT has identified priority needs that include commercial vehicle safety, infrastructure condition, and freight mobility and reliability of the network. Consistent with the 2022 Plan, they continue to be top priorities for MDT and stakeholders. These needs, which are in alignment with federal priorities for freight, helped guide the development of the goals.

Figure 76: Needs Identified in the Development of the 2026 Freight Plan

<i>Core Needs Identified</i>
✓ Commercial Vehicle Safety
✓ Infrastructure Condition
✓ Freight Mobility and Reliability

MDT Freight Goals and Strategies

While needs identify inherent gaps, goals provide a measurable path towards progress. Establishing goals brings clarity by defining expected outcomes and how they will be achieved. Figure 77 outlines MDT’s key goals that are seeking to address Montana’s freight needs. A discussion on the strategies and actions being employed to address these goals, are further discussed in this chapter.

Figure 77: Montana Freight Plan Goals



Commercial Motor Vehicle Safety

Commercial motor vehicle safety, as well as safety for the traveling public, is the number one priority for MDT. Montana experienced 6,082 crashes involving commercial vehicles between 2020 and 2024, which included 98 fatalities. MDT addresses roadway safety strategies and goals in its Comprehensive Highway Safety Plan (CHSP) and Commercial Vehicle Safety Plan (CVSP). While the CHSP is inclusive of all road users, it's still very relevant to commercial motor vehicles.

Strategies in the CHSP are broken down into four emphasis areas: Safe Road Users, Safe Speeds/Safe Vehicles, Emergency Response-Post Crash Care, Safe Roads. Strategies focus, in part, on addressing¹³⁹:

- Enhance awareness and responsibility of human behavior related to speeding; fatigued or distracted driving; impaired driving; and unrestrained vehicle occupants;
- Increased enforcement of traffic laws; and
- Improved data collection and accessibility for planning and engineering activities.

In addition to these programmatic and data driven approaches that help reduce crashes and fatalities, MDT uses location-specific interventions to alert drivers to roadway hazards and to improve commercial vehicle inspections. MDT deployment-based strategies include:

- Active warning devices at intersections, locations prone to queuing, and low bridges provide drivers with increased awareness of traffic conditions and allow the driver to begin reacting before an obstruction or hazard can be seen. Each of these interventions is particularly helpful for commercial vehicle drivers due to the longer stopping distance, higher center of gravity, and rollover susceptibility.
- Commercial vehicle inspections improve compliance with safety requirements and MDT is increasingly using technology to improve the efficiency and efficacy of inspections.
- Utilization of pre-screening programs, PrePass and DriveWyze, allows inspection staff to focus inspection time on carriers with previous safety violations in addition to random inspections of program participants, while carriers with a positive safety record may receive a signal to bypass the inspection.
- Deployed 360SmartView technologies improve screening by implementing license plate recognition, seat belt usage detection, distracted driver detection, tire anomaly and infrared brake inspection, hub and tire screening, and over-height detection. Better identification of driver and vehicle violations improves safety for the traveling public.

Inadequate commercial driver qualifications can pose significant safety risks as well as delay the movement of freight on the road network. Truck drivers, particularly from out-of-state, can often be found unprepared for Montana's winter weather on mountain passes by not having truck chains, which is required by state law from October 1 through April 30, for vehicles over 26,000 GVW. This can catch drivers off guard thereby causing an incident, rerouting, or waiting out the storm. Either way, the risk of a crash, unauthorized roadside parking, and freight delays may result. MDT dedicates itself to providing up-to-date road weather information to help the traveling public and

commercial drivers make informed decisions when planning their trips. These innovative technologies and resources are discussed in detail in the Innovative Technologies chapter.

It's a safety imperative that commercial truck drivers be able to read and understand road signs and driving laws proficiently enough to not be a risk to themselves and others. This is why Montana's Motor Vehicle Division requires commercial driver license tests be performed in English. At the federal level, Federal Executive Order 14224 (May 20, 2025) rescinds previous federal policy that conflicted with existing federal regulations requiring commercial truck drivers to speak, read, and understand English proficiently. The Order designates English as the official language of the United States and outlines requirements for commercial truck drivers. When MDT's Motor Carrier Service enforcement officers conduct commercial vehicle driver interviews, they are required to communicate in English to determine whether the driver is compliant with proficiency requirements. If they are not compliant, then the driver is placed out of service.¹⁴⁰ Conducting inspections in English helps to determine whether a driver understands motor vehicle laws and is able to communicate key information with law enforcement officers.

To ensure compliance, MDT's Motor Carrier Service's Enforcement Bureau conducted 103,200 commercial motor vehicle inspections from 2023 through 2025. Out of these inspections, 7,282 commercial drivers were taken out of service for issues such as hours-of-service violations, insufficient driver credentials, or drug/alcohol impairment.¹⁴¹

Rest Area and Truck Parking

Rest areas and truck parking play a vital role in moving freight across the state. These areas provide safe stopping opportunities along Montana's highways, for resting, sleeping, eating, or using a mobile device. Additionally, it gives drivers a safe place to stop, during extreme weather and road closures. While there are many private and publicly maintained rest areas, MDT maintains 64 public rest areas with 2,174 total parking spaces (all vehicle types) of which 822 are truck parking spaces. For a detailed inventory of Montana's public truck parking locations, including basic features and amenities, see Appendix C.

As the trucking industry adjusts to a growing economy and changing federal regulations, the need for truck parking continues to increase. Pursuant to federal law, truck drivers are required to stop driving after a certain number of hours due to the federal hours of service (HOS) requirements. These requirements often result in drivers searching for parking at predictable time intervals. This puts a strain on key freight corridors that have insufficient truck parking relative to demand. When drivers cannot find spaces at designated truck parking areas, they are faced with:

- Parking in unauthorized and unsafe locations, such as abandoned parking lots or on freeway shoulders that put personal safety of the driver and the public at risk, or
- Continuing to drive, which puts a driver at risk of being cited for driving past the maximum allowable hours of service or driving while fatigued.

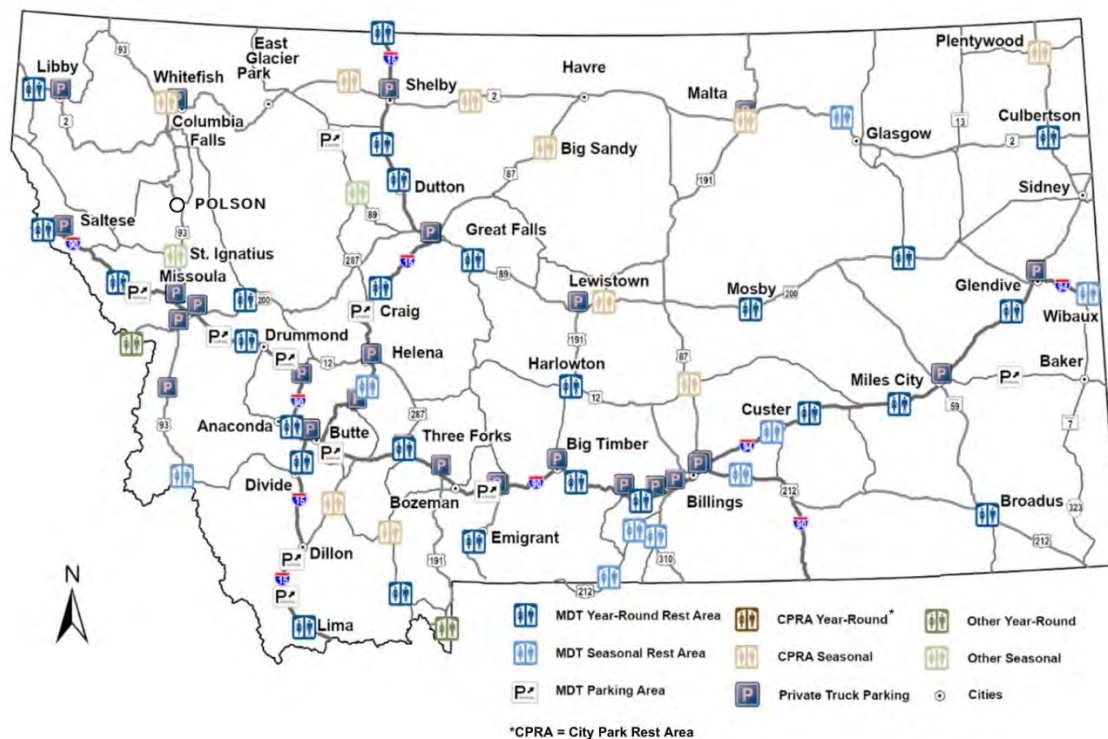
Together with the private sector and other stakeholders, MDT is working to address the needs of truck parking and rest areas.

Lack of sufficient truck parking is a national safety and stakeholder concern. To address this issue Section 1401 of the Moving Ahead for Progress in the 21st Century Act (MAP-21) introduced “Jason’s Law”, which required a national survey of truck parking availability and developed metrics to understand shortages. Based on the survey conducted in 2014 Montana had the highest number of public truck parking spaces per 100,000 miles of daily truck vehicle miles traveled in the nation (~170 spaces/100,000 miles of daily truck vehicle miles traveled.)¹⁴². Based on an updated survey, conducted in 2019, Montana continued to rank in the top 5 states with the most spaces, with over 110 truck parking spaces per 100,000 daily truck vehicle miles traveled.¹⁴³ A third Jason’s Law survey, which MDT participated in, was conducted in early 2026, however the results were not available prior to this Plan’s update.

MDT can only address public rest stop and truck parking facility needs. However, when evaluating both private and public options for truck parking, the level of service within the state improves even more. Where there may be gaps or increased demand for public truck and rest stops, private truck stops help to fill the gap (and vice versa).

Figure 78 below, displays a map that includes all known private and public rest areas and truck stops. Private truck stops can offer amenities that public rest areas can’t, such as refueling services, retail goods, truck electrification, showers, Wi-Fi, laundry, ATM, and more. Because private truck stops are for profit businesses, private industry will be strategic in locating them in areas identified as having the greatest need. While details on the amenities and available truck parking at private truck stops is more challenging to acquire, MDT estimates that there are 34 private truck stops in the state with either striped or unstriped truck parking spaces, totaling 1,946 spaces in all. When combined with the number of truck parking spaces found at public rest stops, the total is 2,768. For an inventory of private truck stops, including the estimated number of parking spaces and amenities, see Appendix C.

Figure 78: Map of Public and Private Rest Stops and Truck Stops Within the State (2025)^{144, 145}



Montana does not have any major freight generators or origin – destination pairs that are intermodal facilities or sea/inland ports, that are loading and unloading thousands of transportation containers daily. Because of this, Montana does not experience the impacts of illegal truck parking in and around such facilities. There have also been no known reports or concerns noted by freight stakeholders as to challenges with truck parking in and around the state’s smaller transload facilities, including its port authorities. According to FHWA’s NextGen NHTS OD Data Portal¹⁴⁶, less than half of one percent of truck trips beginning and ending within the state are over 300 miles long, which means the need for in-state commercial drivers to stop at a rest area pursuant to HOS requirements is negligible. The implication of this is that the primary users of MDT maintained truck stops in Montana are CMVs passing through with destinations and origins outside of the state.

MDT maintained truck stops rarely exceed 75 percent capacity. Despite this, needs still exist. During the development of this plan and in consultation with Motor Carrier Services, stakeholders and MDT subject matter experts identified truck parking as a continuing challenge in certain parts of the state, in particular, mountain pass areas. While this is an intermittent weather-dependent issue, access to safe parking areas during inclement conditions is paramount. When snowstorms close routes on mountain

passes or when adverse weather causes dangerous conditions for commercial motor vehicles (CMV), CMV's can be stranded until conditions improve. This can result in unauthorized parking which can pose safety concerns for all travelers. An additional challenge that mountain passes pose when considering future rest areas is the lack of usable or accessible land and water. Mountain passes are dominated by steep terrain, primarily traveling through wide swaths of national forests that simply cannot accommodate projects such as a rest area. This is where innovative technologies can play an effective role for the traveling public. MDT's 511 Traveler Information provides digital public access to roadway weather conditions, cameras, notifications, and restrictions.

Truck parking needs in the state will continue to evolve. To address these needs, MDT implements the following strategies:

- Emphasize rest area preservation to extend the service life of existing facilities and utility systems and identify improvements to meet parking and building demands.¹⁴⁷
- Assess and consider updates to existing rest area facilities or additions to facilities in corridor studies, when appropriate.
- When conducting a corridor study on the interstate, MDT may include freight stakeholders in the public process to help identify truck parking needs and issues, when appropriate.
- Seek to implement the use of a parking availability system, such as TPAIS, to notify drivers in advance of available truck parking spaces at rest areas, through the pursuit of discretionary opportunities.¹⁴⁸
- Consider rest area or related innovative technology projects along the Primary Highway Freight System (PHFS) to help address freight needs through MDT's National Highway Freight Program.

As previously mentioned in the Innovative Technologies section, MDT is now implementing TPAIS systems at seven truck parking locations to help drivers efficiently find places to park. More locations may be added, pending MDT is awarded future grants for deployment. The goals of implementing TPAIS are to improve safety, by ensuring commercial drivers get the required rest they need, to reduce illegal truck parking, and to minimize tailpipe emissions, such as CO₂ from unnecessary travel while looking for places to park.

System Preservation and Maintenance

Maintaining transportation infrastructure that is safe and reliable is imperative to all who travel on Montana's roadways. Maintaining a state of good repair and applying the right

treatment at the right time principals help MDT manage its assets effectively. Pavement and bridge conditions are two major assets across the network that MDT is committed to maintaining.

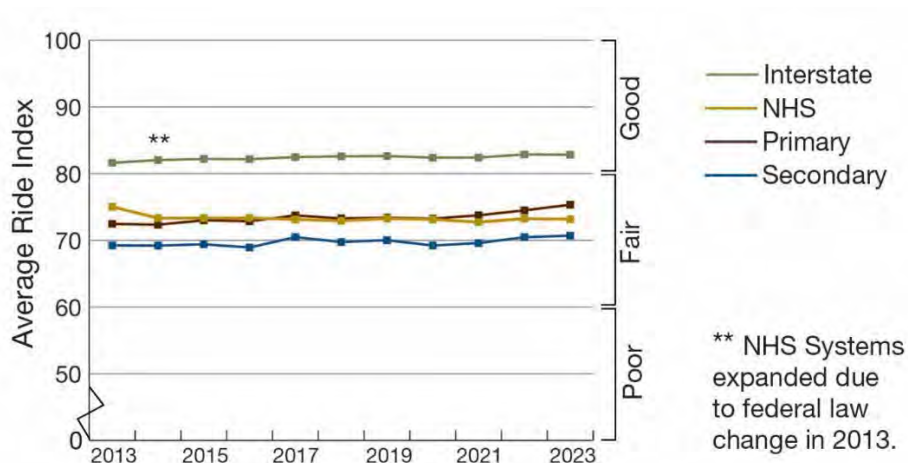
Pavement Condition

There are over 73,600 center lane miles open to public travel in Montana with over 13 billion annual vehicle miles travelled (in 2023). The NHS and Primary highway systems represent approximately 17 percent of all centerline road mileage within the state but carry almost 84 percent of all vehicular traffic.¹⁴⁹ Pavement condition is therefore a key factor in the efficient and safe movement of freight. If pavements are not properly managed, then poor pavement conditions can slow travel, cause delays or incidents, or potentially damage vehicles and goods in transit.

Pavement Condition and Ride Index

MDT collects data on pavement quality to understand and track the condition of roadways across the state. MDT uses several metrics to evaluate pavement conditions, including Ride Index (RI), which is a measure of perceived ride smoothness. It is calculated by converting the International Roughness Index (IRI) in inches per mile on a scale from zero to one hundred. MDT assigns either a poor, fair, or good level as shown in Figure 79. MDT has a performance goal of maintaining an Average Ride Index Condition Rating in the fair to good range with less than 3 percent of roadway miles in poor condition.¹⁵⁰

Figure 79: Montana Pavement Ride Index



Data is collected by MDT by using vehicles equipped with a road profiling system, lasers, and 3D cameras. The Pavement Management System (PvMS) provides methods to analyze multiple data types. Examples of pavement conditions are shown in

Figure 80. Figure 81 shows the condition of roads in Montana by system, expressed as a percentage of centerline miles.

Figure 80: Montana Pavement Ride Index Examples

Good



Visible traffic wear with low severity cracking and minimal rutting

Fair



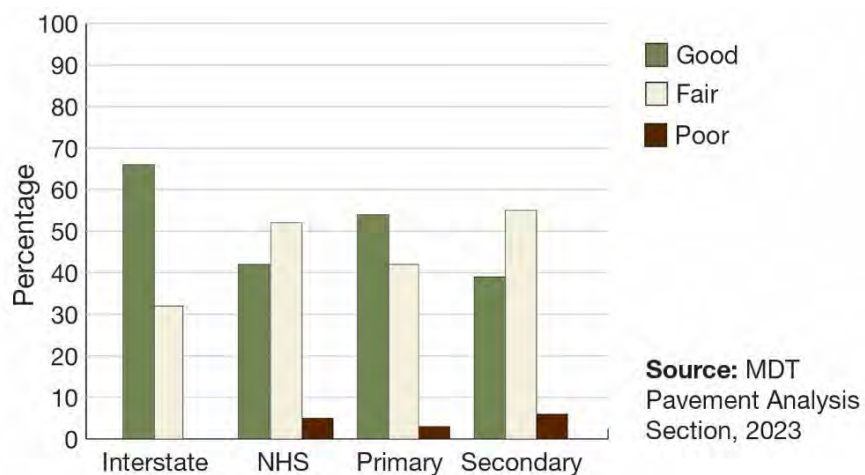
Moderate cracking in extent and severity, slight rutting and aggregate loss

Poor



Prevalent cracking in extent and severity, heavy rutting, patching

Figure 81: 2023 Montana Pavement Condition



To ensure MDT meets its goal for the management of pavement condition, MDT implements the following strategies:¹⁵¹

- Preservation of the existing system. This approach provides the right treatment at the right time. This active approach manages pavements using cost-effective treatments. Activities include crack seal, seal and cover, rut fill, mill/fill, overlay, micro-surfacing, cold-in-place recycle, diamond grind, dowel bar retrofits, and hot-in-place recycle treatments.
- Pavement Management: Collect and analyze different surface attributes (e.g. rut, ride, cracking) annually. This data is used to support prioritizing preservation needs and determining the right treatment at the right time.
- Funding set-asides: MDT funding set asides are dedicated to pavement preservation projects in MDT's 5-year Tentative Construction Plan.
- Safety and other improvements. Maintaining pavement conditions to ensure safety for the traveling public. Activities related to safety include rut-fill, High Friction Surface Treatment, and concrete diamond grind.

Heavy Vehicles and Road Deterioration

MDT utilizes a comprehensive pavement management system to identify and prioritize pavement improvement projects. The weight of heavy commercial vehicles compared to passenger vehicles has exponentially greater impacts on pavement performance and can decrease the roadway's useful service life. As modern commercial vehicle designs continue to change and heavier loads become more common, road deterioration from heavy trucks will need to be addressed.

One way to address road deterioration from heavier loads, such as commercial vehicles, is to construct or reconstruct roadways with greater structural capacities or add additional capacity to existing roads. Roadways targeted for additional structural capacity are NHS routes, which experience the highest truck volumes and vehicle weights. For instance, the minimum thickness of flexible pavement on interstates (6 inches minimum) is more than what would be applied on non-interstate road systems. Additional agents might also be added to the pavement to make it stiffer and more resilient to the wear and tear of heavier vehicle loads.

When designing pavements for NHS routes, the highest reliability factor is used in the methodology for determining pavement design. The reliability factor is a means of incorporating some degree of certainty into the design process to ensure that the pavement will last through the design life and accounts for variations in both traffic and performance prediction.¹⁵²

Bridges and Commercial Motor Vehicles

The reliability of Montana's roads is tied to Montana's bridges, since almost every road in Montana has at least one bridge. There are over 4,400 bridges¹⁵³ in Montana, some

of which can be a “choke point” for commercial vehicles, especially those that are carrying over-sized or over-weight (OS/OW) loads. A bridge with a load, height, or width limit has the potential to require a route detour and/or require the need for a load permit to ensure safety of the vehicle and driver as well as the structural integrity of the bridge.

Most of Montana’s legacy bridges, built around the mid to early twentieth century, are nearing their useful service life (70 years) and were also not designed for today’s types of truck loads and designs. Additionally, anti-icing applications on roadways and bridge decks can lead to corrosion in steel reinforcement and deteriorate concrete over time. Due to these factors, Montana’s older bridges require additional maintenance and are often load limited and/or are unable to accommodate modern and larger vehicle designs. As a result, OS/OW loads may need to acquire load permits which can lead to further delays and safety issues on the road. Therefore, MDT recognizes the need for effective strategies to address Montana’s aging bridges. Strategies currently being implemented are identified below:

- Bridge Structure Management System (BrM): Montana’s BrM is used to track and report system-wide conditions and perform analysis that support bridge function decisions.¹⁵⁴ The BrM seeks to:
 - o Protect safety of the traveling public by identifying bridges with limited capacities and determining safe posting limits.
 - o Help in the prioritization of rehabilitation or replacement projects.
 - o Assist in overweight vehicle permit review.
 - o Satisfy federal requirements that require all bridges in the National Bridge Inventory (NBI) to be load rated and restricted, if necessary.
- Bridge Load Posting Program: This program helps to ensure public safety while protecting bridge integrity and longevity by limiting vehicles of a certain weight to prevent bridge overload and damage.¹⁵⁵
- New Bridge Designs: New bridge designs provide for higher load rating compared to older bridge designs. This approach reduces the amount of possible damage that heavy loads may cause as well as increase reliability and efficiency of the network by accommodating much heavier loads and by reducing the need for vehicle detours.
- Dynamic Message Signs: Proactively incorporating technology can improve safety for all road users. Signs with messages directed to heavy trucks can be implemented to reroute them if there is an upcoming bridge that cannot accommodate the truck’s width/weight/height. This may occur during high wind events when trucks need to be rerouted to ensure safe travel.

- **Accelerated Bridge Construction (ABC):** Considering ABC, when feasible, can help to accelerate bridge construction in critically time sensitive situations, such as when detours are not possible, and the road is fully closed to all traffic. Restoring service, as soon as possible, in this situation is very important. ABC is effective because it uses pre-cast and pre-formed bridge components. This allows for much quicker bridge construction due to less construction needing to be done on sight. As a result, service can be restored more quickly.¹⁵⁶
- **Bridge Bundling:** Bridge bundling is a tactic that combines multiple bridge projects into a single project to ensure efficiency and to address multiple bridge needs in a single effort.

System Reliability

A reliable transportation network and efficient movement of freight is critical in ensuring economic competitiveness and safety of all transportation users. MDT and the state are therefore committed to enhancing reliability for freight and the overall transportation network.

Freight mobility issues occur when travel is halted, impeded, or congested and can be either recurring or non-recurring. Recurring restrictions routinely and/or predictably restrict the free flow of freight by any mode. Non-recurring sources of mobility issues are random in nature. To understand highway facilities with freight mobility issues in Montana, it is important to consider whether the issues are recurring or non-recurring, as outlined in Figure 82 below.

Figure 82: Sources of Highway Freight Mobility Issues

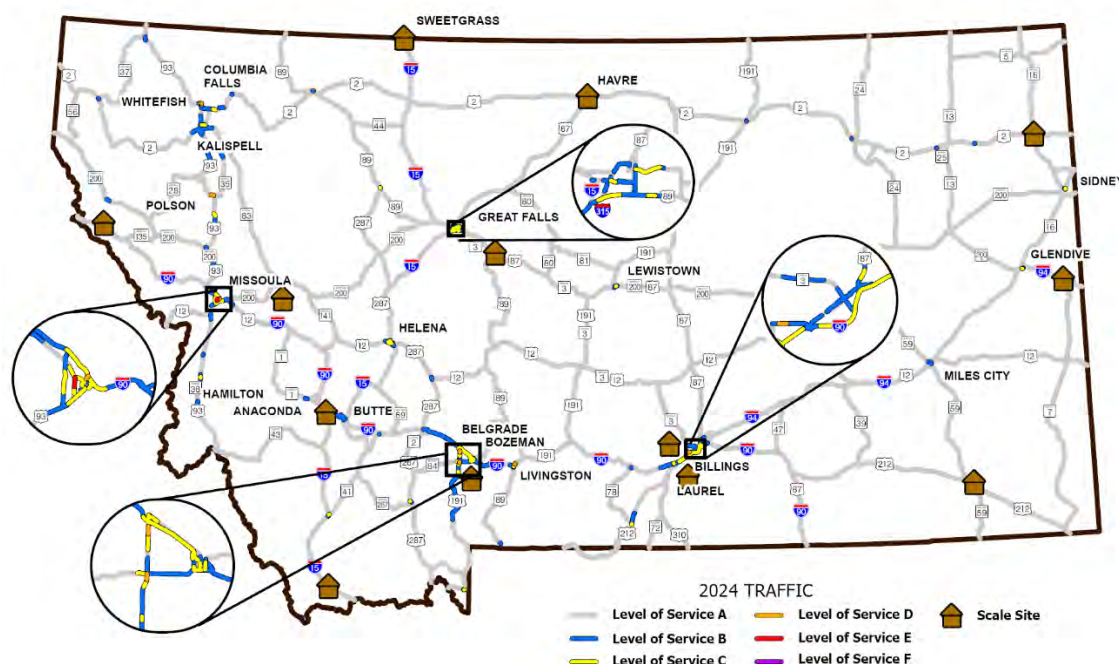
Sources of Highway Freight Mobility Issues	
Recurring	• Limited physical capacity (e.g., bottlenecks) • Poorly functioning traffic signals • Seasonal agriculture harvests • Seasonal tourism • Manufacturing facilities • At-grade rail crossings
Non-Recurring	• Work zones • Inclement weather • Special events • Oversized loads • Infrastructure failure • Wildfires, flooding, and other natural phenomenon

All highway facilities in Montana are exposed to non-recurring freight mobility issues, although some areas are more susceptible than others. Acts of nature such as extreme weather and wildfires are common and happen at relatively unpredictable times and locations throughout Montana. Other non-recurring events tend to occur in specific areas, for example, traffic congestion after a concert in Billings. Few areas in Montana are considered to have significant freight mobility issues. Recurring freight mobility issues occur in areas with physical limitations and are generally associated with small areas of insufficient capacity or areas that experience large increases in seasonal traffic.

One way that MDT identifies areas of recurring delay and congestion is by calculating a level of service (LOS) index based on the Highway Capacity Manual (HCM). LOS measures the quality of motor vehicle traffic service and is reported on a scale of A to F, with A being free-flow traffic and F being severe congestion. MDT establishes LOS targets by functional classification. The target LOS for the Interstate System is LOS B. Principal arterials (NHS non-Interstate) and minor arterials have a target LOS of C.¹⁵⁷

Figure 83 shows areas of LOS on the NHS and Primary Highway Systems. Areas with freight mobility issues are highlighted. As observed, the areas which experience a decreased LOS are primarily located within heavily populated urban centers, such as Billings, Bozeman, Missoula, and Great Falls, where capacity struggles to keep up with roadway demands.

Figure 83: Montana Roadway Level of Service (2024)



Strategies that Address Recurring Congestion

MDT employs various methods and strategies to minimize recurring congestion and delay, including design and capacity considerations, PrePass, international border crossing agreements, traffic planning, and permitting. In addition, bottlenecks can cause freight mobility issues, contribute to air pollution, and decrease the reliability of the road network in certain areas. Bottlenecks are categorized into three areas: infrastructure, institutional, and financial.

Strategies to address infrastructure bottlenecks include:

- Reducing congestion to improve performance of the transportation system by investing in projects that add capacity or reduce delay;
- Improving safety, security, and resiliency of the transportation system;
- Facilitating intermodal connectivity;
- Identifying major trade gateways, multimodal freight networks and corridors, and working with freight stakeholders and partners to improve mobility in these areas; and
- Supporting research and promoting adoption of new technologies and best practices that improve reliability.

Strategies to address institutional bottlenecks include:

- Streamlining project planning, review, prioritization, permitting, and approval;
- Fostering multijurisdictional, multimodal collaboration and solutions;
- Facilitating coordination between public and private stakeholders;
- Improving data sources and modelling; and
- Succession planning for the transportation workforce.

Strategies to alleviate financial bottlenecks include:

- Ensuring maximum utilization of federal funding programs;
- Exploring other funding sources including federal discretionary grant opportunities; and
- Exploring public-private partnerships.

Strategies that Address Non-Recurring Congestion

Non-recurring congestion that causes delays are caused by random events such as traffic incidents, construction, special events, acts of nature, and oversized loads. While the timing and occurrence of these causes may be unpredictable, measures must be in place to respond to such events to alleviate freight mobility issues associated with state owned highways.

Impacts to the transportation network, caused by weather and other natural events can cause disruptions in freight movements, thereby decreasing network reliability and resiliency. Such disruptions, depending on how severe, pose a threat to safe freight movements and economic vitality.

Strategies used by MDT to help address types of common non-recurring congestion are identified in Figure 84 below.

Figure 84: MDT Strategies for Addressing Incidents that Cause Non-Recurring Congestion

Incident Type	Strategy
Crashes and Incidents	When requested by the Montana Highway Patrol, MDT assists with traffic control until the investigation is complete, and the roadway is cleared.
	MDT maintains an Emergency Operations and Disaster Plan. This plan outlines the procedures to follow in times of emergency to efficiently restore transportation movements.
Winter Storms/Extreme Weather	Implementation of a Winter Maintenance Service Guidelines which establishes priorities between maintenance areas.
	Employing appropriate numbers of maintenance personnel available for clearing snow and ice from roadways.
	Applications of de-icing agents and sand where appropriate.
Infrastructure Failure	When infrastructure fails (e.g., due to rock falls, floods, and fires), MDT initiates an incident management team to establish a detour followed by a second team to quickly implement repairs.
Wildfires/Flooding	Debris removal on or near impacted roadways.
	MDT ensures that evacuation routes are safe, and that critical route information is communicated to the proper authorities and to the public.
Oversized/Overweight Loads	An online permitting system for oversized and overweight loads reduces delay in obtaining permits.
	Maps and information on load posted bridges and trip planning resources are made available online, for individuals planning their routes.
Construction and Maintenance	MDT implements a Work Zone Safety & Mobility Toolbox for MDT and MDT contractors to be utilized, during all phases of a project.

The Innovative Technologies Chapter identifies a myriad of technological tools and applications for communicating essential route and road information to the traveling public, which includes freight operators. In addition to the strategies discussed above, these technologies are just as important in communicating information that can offer proactive means for avoiding delays, detours, road closures, and unsafe traveling conditions along Montana's roadways.

Rail Freight Mobility

Data on locations of specific railroad bottlenecks and mobility issues for Montana's rail operators is proprietary information and is therefore unavailable. MDT also does not receive funding for the maintenance and operation of railroads within the state.

Geographical obstructions and limitations do exist however and can include mountain passes, tunnels, and snow sheds. For Montana, these exist mostly in the western part of the state. Extreme weather can also impact train movements. Prior to winter, BNSF implements their Winter Action Plan. This plan ensures that the necessary resources and procedures are in place to address extreme winter weather. The three areas the plan focuses on include safety, service, and efficiency. In addition to these efforts, BNSF encourages their customers to sign up for service advisories and provides a 1-800 number for railroad emergencies.¹⁵⁸

BNSF also implements a Speed Restriction Policy for initiating temporary speed restrictions. Speed restrictions may be implemented in times of track damage, repair, maintenance, or in periods of cold or hot temperatures. Because temporary speed restrictions delay the movement of freight, they are done only when railroad safety requires it.¹⁵⁹ Though speed restrictions may cause temporary delays, they ultimately promote safety and long-term reliability of the rail network.

Montana's railroad operators are continually investing in rail infrastructure investments such as positive train control technology, grade crossing maintenance and improvements, technology, and equipment. Beyond their own financial investments, BNSF continues to partner with public agencies to pursue federal grant opportunities to improve their overall rail network. For example, a project awarded to Amtrak, in 2023, through the Federal-State Partnership for Intercity Passenger Rail Program located near Malta includes a series of track upgrades to reduce bottlenecks and delay caused by freight and passenger train traffic.¹⁶⁰ Additional federal grants are currently being pursued by Amtrak to reduce delay on the Hi-Line by implementing track upgrades that will reduce passenger-freight rail conflicts. The Cities of Belgrade and Helena have also received grants for at-grade separation projects in coordination with BNSF, the track owner and operator (Helena received a planning grant to study the feasibility of a grade separation project and Belgrade received a capital grant for a grade separation project.).

To expedite economic development and to support growing demand for industrial customer shipping locations, BNSF implements their Certified Site Program. This program could be considered a means in addressing "economic bottlenecks" that may delay the efficient development and service of rail-based industrial sites. The Certified Site Program is designed to support BNSF's broader initiative to develop rail served business parks across their network. To receive BNSF Certified Site accreditation

means that a site has been reviewed by an industry expert and is determined to meet the criteria BNSF requires for rail service. Certification can reduce development and construction times, costs, and risks of rail-served sites, thereby ensuring a level of reliability of rail service for businesses looking to invest.¹⁶¹ There are several BNSF Certified Sites in Montana, including the Fort Peck Tribal Industrial Park in Poplar, AgriTech Park in Great Falls, Lincoln County Port Authority in Libby, and Port of Northern Montana in Shelby.

Mitigating Delay Caused by Freight

Based on the LOS analysis presented earlier and consultation with freight stakeholders and MDT district personnel, congestion and delay directly caused by freight movement is minimal in Montana. While not considered significant by most standards, the following are sources of recurring congestion and delay caused by freight movements in the state and mitigation strategies.

Harvest/Natural Resources

Cyclical surges in freight movements associated with industries such as agriculture, timber, and mining cause congestion and delay at transloading and processing facilities. This congestion is generally limited to non-NHS routes. Mitigation strategies that are the responsibility of private entities include:

- Construction of additional truck parking and storage facilities on private property;
- Extension of operating hours; and
- Partnering with rail service providers to ensure availability of equipment.

Weigh Scales

Freight traffic at weigh scales infrequently causes congestion and delay. This delay can be both before and after the scale location and is caused by overcrowding of trucks going into the scale and the speed differential after the scale as trucks merge into traffic. Mitigation strategies to address delays at weigh stations include the installation of bypass systems, such as PrePass or Drivewyze. These systems reduce the number of trucks utilizing the scale facility. Bypass systems allow qualified motor carriers to comply with safety, weight, and credential requirements while traveling at highway speeds, eliminating the need to stop at designated weigh stations and ports-of-entry. This strategy improves safety by reducing congestion around inspection facilities and enables state inspection and law enforcement teams to focus efforts on carriers and trucks that demand more attention. This method also improves air quality by reducing emissions from idling trucks.

International Border Crossings

Delay is sometimes present at U.S./Canada border crossings, although this delay is not always attributed to freight movements. Passenger vehicles make up a large percentage of traffic leaving the U.S. Operational strategies to alleviate delay are implemented by U.S. Customs and Border Protection. MDT partners with authorities in both the U.S. and Canada to optimize port of entry highway facilities. Freight and resource efficiencies are realized by a joint weigh station agreement between Montana and Alberta. Montana has joint weigh station operational agreements in bordering states, as well, that include Idaho and Wyoming.

At-Grade Railroad Crossings

Train traffic can cause congestion and delays when vehicles must wait for trains to pass at highway-rail crossings. The 2016 Montana Rail Grade Separation Study identified grade separation solutions that may be feasible for railroad crossings in Billings, Bozeman, and Helena. Additionally, five grade-separated crossings were identified for further investigation due to vertical or horizontal clearance and/or roadway geometry issues. The results of this study have helped MDT and other public agencies determine if improvements at these locations are viable and cost effective.

Environmental Stewardship and Strategies that Reduce Freight Impacts on the Environment

As earlier identified in this chapter, it is a goal of Montana's Freight Plan to practice environmental stewardship, seeking to minimize negative impacts of commercial vehicles on communities, wildlife and climate, through its own programs or in collaboration with other agencies, and to meet state and federal environmental laws. Discussed below are some of the strategies and practices that MDT uses to achieve these goals.

Air Pollution

Overall, Montana is fortunate to experience relatively good air quality. Montana's urban areas, located in air basins, however, can experience decreases in good air quality due to human activities that result in the combustion of fossil and biomass fuels (e.g., home heating, vehicles, and commercial/industrial activities). When these activities occur under a strong weather inversion, air pollutants can get trapped and require additional efforts by public agencies to address. Public agencies may employ regulatory or incentive-based efforts to improve air quality.

To address climate change, several of Montana's cities have adopted climate action plans or other local climate initiatives. These cities include Missoula, Bozeman, Helena, and Red Lodge. Climate action plans outline efforts and strategies to reduce

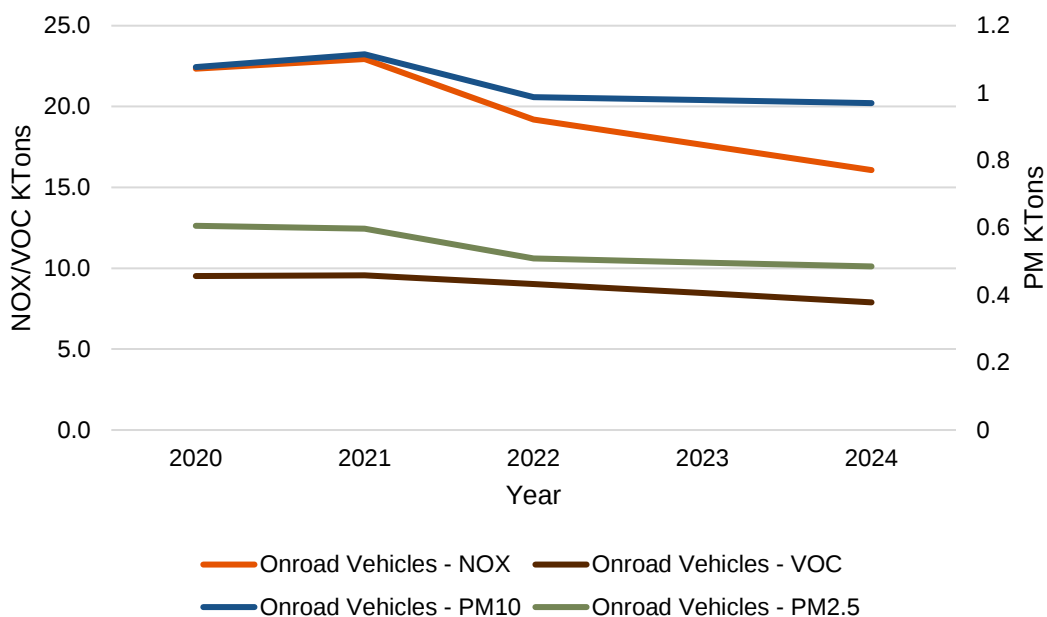
greenhouse gases (GHG) and may include both regulatory and voluntary efforts of its citizens and businesses. Montana's Department of Environmental Quality is creating the Big Sky Emissions Reduction Roadmap. The roadmap is designed to identify voluntary actions to reduce greenhouse gas emissions and other harmful air pollutants within the state.¹⁶²

To address federal requirements in the Carbon Reduction Program (23 U.S.C. 175), MDT finalized a Carbon Reduction Strategy in 2023 that outlines projects and strategies to reduce transportation emissions. Federal funding is provided through this program to reduce transportation emissions from single occupant vehicle trips, to promote travel by alternative fuel transportation modes, and to implement lower emission construction practices.¹⁶³

Statewide, in 2023, Montana contributed an estimated 0.6 percent (29.4 million metric tons) of energy-related GHG's to the national GHG inventory. Out of all the states and the District of Columbia, Montana ranked within the ten least states that contributed to the national GHG inventory.¹⁶⁴ This percentage includes GHGs generated from the transportation, industrial, residential, electric power, and commercial sectors.

Criteria pollutants known to have an adverse impact on public health and the environment include particulate matter (PM), volatile organic compounds (VOC), and nitrogen oxides (NOX). Since 2020, estimated emissions of these pollutants from on-road mobile sources have continued to decline statewide, despite increases in annual vehicle miles traveled, according to the U.S. Environmental Protection Agency (EPA) (Figure 85).

Figure 85: Statewide Trend in NOX & PM Emissions from On-Road Vehicles¹⁶⁵



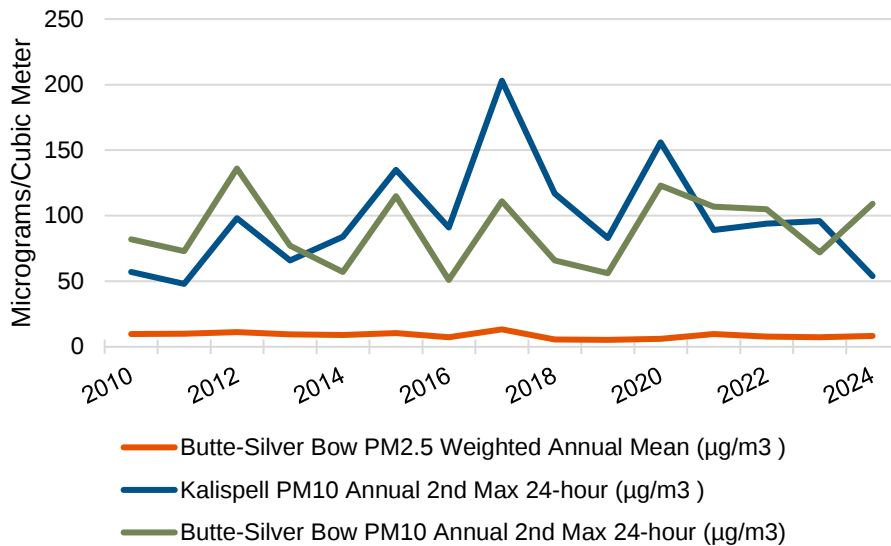
When combined under the right atmospheric conditions, tailpipe emissions of NOX and VOC can create ground-level ozone. Particulate matter (PM), especially PM 2.5 (particulate matter 2.5 microns and smaller), is associated with adverse respiratory and cardiovascular health effects and can cause respiratory related illnesses. While high concentrations of ground-level ozone can cause damage to organic tissues in plants and crops. Montana currently has no areas designated nonattainment for ozone under the National Ambient Air Quality Standards (NAAQS) with only a handful of localized areas designated non-attainment for PM10 (particulate matter 10 microns in size and smaller).¹⁶⁶ Overall, it is estimated that in 2024, 13.5 percent of all aggregated criteria pollutant emissions¹ came from on-road vehicles, in Montana. Other top source categories in the state for criteria pollutant emissions include prescribed fires and off-highway vehicles.

Montana has a limited network of ambient air quality monitors, with only a few cities having either a PM or ozone monitor that has data reported to the EPA.

Figure 86 displays particulate matter (PM10 and PM2.5) for two Montana cities that have emissions data reported to the EPA. This data is not designed to demonstrate attainment/nonattainment with National Ambient Air Quality Standards (NAAQS) but allows for a reference in observing trends over time at the local level. The data in the figure shows wide variability in PM10 which is likely due to wildfire events that can significantly impact air quality. 2017 was a particularly challenging year of wildfires for the state, exacerbated by drought and smoke from other major burning fires to the west.¹⁶⁷ Other major sources of PM can include smoke from residential wood heating and industrial petroleum fuel combustion. PM measured by air quality monitors can also be impacted by air basins, geographic landscapes that form a “bowl”, such as mountains that surround a valley. Air basins can trap pollutants, especially during periods of strong weather inversions.

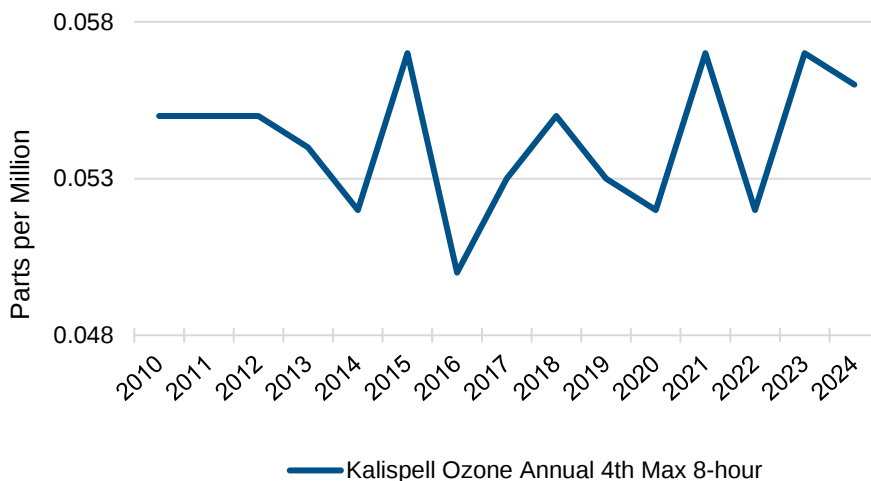
¹ Criteria pollutants include nitrogen oxides, reactive organic gases, particulate matter 10 and 2.5, sulfur dioxide, black carbon, ammonia, carbon monoxide, and organic carbon.

Figure 86: Trends in PM10 and PM 2.5, by City¹⁶⁸



The City of Kalispell, in the Northwest part of the state, is the only city in Montana that has ozone data reported to the EPA. While not designed to demonstrate attainment/nonattainment, parts per million (ppm). Figure 87 displays the average trend in ozone for the city, which has remained relatively stable. For reference, the applicable NAAQS for ozone is 0.070 parts per million (ppm).

Figure 87: Trends in Ozone for Kalispell, MT¹⁶⁹



The state treats its air quality very seriously, wanting to preserve and ensure a healthy natural environment. While sources, such as automobiles, trains, planes, and off-highway vehicles are federally regulated sources and wildfires are an act of nature, Montana works hard to help reduce or mitigate anthropogenic sources of air pollution

from vehicles and its transportation infrastructure through various programs. A highlighted list of MDT strategies that work to address air pollution include:

- Cooperate with state and regional planning partners to address air pollution through air quality programs and the environment review process.
- Assist planning partners in meeting conformity requirements for areas designated as maintenance areas for criteria pollutants.
- Prioritize projects for funding in the NHFP that help to minimize vehicle congestion and delay.
- Implement innovative technologies that improve freight traffic flow that result in the reduction of commercial vehicle idling, unnecessary truck start/stopping, and delays.

Below is a more detailed discussion on efforts that incorporate the strategies identified above.

Cooperating with State and Regional Planning Partners to Reduce Air Pollution

Given the many sources of air pollution in the state, addressing air quality issues requires a coordinated effort with many local and regional jurisdictions. MDT's air quality programs consider and evaluate project specific, local, and regional impacts on air quality. The following sections outline MDT's involvement in these efforts.

- **Congestion Mitigation Air Quality Program:** MDT implements the Congestion Mitigation and Air Quality (CMAQ) Improvement program. This program is a way for MDT to meet transportation conformity regulations and supports surface transportation projects and other related efforts that contribute to air quality improvements and provide congestion relief. While some CMAQ funds provided to the state of Montana are prioritized to Missoula due to its PM10 maintenance designation under the Clean Air Act, MDT has the flexibility to prioritize the remainder of CMAQ funds to statewide projects that provide the greatest benefits in addressing air quality or congestion issues.

MDT continues to work on its interactive air quality planning process that considers air pollution reductions and transportation needs at the same time. Ongoing coordination between MDT, Department of Environmental Quality, and local and regional planners can help develop cost effective transportation strategies to meet conformity requirements; help establish criterion to prioritize CMAQ funds; and ensure that emissions inventories, emissions budgets, and transportation control measures are appropriate and consistent with the transportation vision of a particular area/region.

- Department of Environmental Quality's Big Sky Emissions Reduction Roadmap (Roadmap):** Department of Environmental Quality (DEQ) has been working on creating an emissions reduction roadmap for the state, in collaboration with MDT and other partners and stakeholders. This roadmap is a comprehensive air pollution reduction plan that identifies areas of investment for the voluntary reduction of air pollution in many sectors of the state. These sectors include land management, agriculture, transportation, power and energy, and waste. According to the roadmap, combustion of fossil fuels in the transportation sector accounts for an estimated 8 million metric tons of greenhouse gas (GHG) emissions annually, or 15 percent of the total baseline GHG emissions in 2019.

Roadmap strategies to address transportation-related emissions include providing grant funding for the conversion of private and public fleets to cleaner alternatives. Vehicle types identified for these conversions include school buses, transit buses, refuse vehicles, switcher train engines, and light duty commercial vehicles. The roadmap claims a potential reduction of 0.077 million metric tons in GHG's by 2050 if implemented.¹⁷⁰ Although not calculated by the Road map, the replacement of older fleet vehicles with cleaner burning more fuel-efficient vehicles will also reduce criteria (e.g. particulate matter, reactive organic gases, carbon monoxide) and toxic pollutants (e.g. diesel particulate matter and aromatic hydrocarbons) that contribute to local and regional air pollution. These local air pollutants have the potential to cause adverse public health impacts such as respiratory issues and increased cancer risk.

Corridor Planning and Studies

MDT conducts corridor planning studies to identify solutions that address transportation needs along a corridor or in a particular location(s). Local government and stakeholder representatives are invited to assist in identifying corridor issues and concerns, environmental impacts, potentially affected resources, and a range of options to improve transportation safety and operations.

Corridor studies and plans can be an effective resource at identifying solutions for challenges or needs on the transportation network, such as evaluating locations that experience impeding freight and vehicle movements. Such a study was conducted in 2016 and is called the 2016 Rail Grade Separation Study.

MDT's rail grade separation study reviewed at grade highway-rail crossings, in part, to identify Montana's most busy crossings and to provide potential options for improvement, such as grade separation. At grade highway-rail crossings that experience a lot of vehicle traffic have the potential to cause significant vehicular delays. The study, which utilized a data-driven evaluation process (e.g., number of daily trains, VMT, duration the crossing is closed per train crossing, emissions generated from

vehicle delay and idling, and etc.) identified a list of at grade highway-rail crossings and potential feasible improvements, to improve traffic flow.¹⁷¹ In the evaluation of this one crossing, if a grade separation project was done, it would result in 4.7 tons of reduced criteria pollutants and 535 short tons of carbon dioxide equivalent over the project life, by eliminating vehicle idling. Out of these totals, an average of 95% of the emission reductions would result from the avoided idling of commercial vehicles at the grade crossing.

Analyzing Air Quality Impacts of MDT Proposed Transportation Projects

Air quality impacts from MDT projects must be evaluated and addressed pursuant to federal and state environmental review requirements. Chapter 42 (Air Quality Impacts and Transportation Conformity) of MDT's Environmental Manual provides this guidance. The manual outlines procedures for evaluating, analyzing, and documenting air quality impacts of proposed MDT projects to ensure compliance with federal and state environmental review requirements and air quality laws, regulations, and policies. It also outlines guidance for addressing conformity of proposed transportation projects with state air quality implementation plans.

State Grants to Reduce Emissions from Freight Moving Vehicles and Equipment

The Montana Department of Environmental Quality (DEQ) was designated by the Governor to administer funds allocated to Montana from the Volkswagen Environmental Mitigation Trust for State Beneficiaries ("State Mitigation Trust").¹⁷² According to the Trust, the funds are to be used to undertake actions to reduce nitrogen oxide (NOx) emissions, from mobile sources in Montana. Nitrogen oxides are a main contributor to the formation of ground level ozone which can cause health related impacts to humans as well as other biological organisms, including plants and animals. Eligible actions, under the Trust, to reduce NOx, include engine and vehicle replacements or repowers, idle reduction technologies, and exhaust controls. Eligible vehicles and equipment include:

- Large heavy duty local freight trucks (Class 8);
- School, shuttle, and transit buses (Class 4-8);
- Freight switcher locomotives;
- Ferries and tugs (engine replacement only);
- Medium heavy duty local freight trucks;
- Airport Ground Support Equipment (all-electric replacement only);
- Forklifts with a lift capacity greater than 8,000 pounds and port cargo handling equipment;

- Light Duty Zero Emission Vehicle Supply Equipment—charging stations; and
- Actions available to states under the Diesel Emissions Reduction Act funding.

Prioritizing Projects in the NHFP that Reduce Congestion and Vehicle Delay

The National Highway Freight Program (NHFP) makes funds available for transportation projects along the National Highway Freight Network (NHFN). The goal of the program is to promote the safe and efficient movement of freight. Freight that can move efficiently across the freight network will generate less tailpipe emissions compared to freight that is forced to slow down or idle due to traffic congestion or bottlenecks. Idling commercial diesel vehicles have the potential to generate exponentially higher amounts of criteria pollutants, toxic pollutants, and greenhouse gases versus passenger vehicles that have much smaller combustion engines. Therefore, when evaluating MDT projects for NHFP funding, projects that address congestion and delay or improve efficiencies at weigh stations shall receive extra consideration in the review process.

Innovative Technologies that Improve Freight Flow

As discussed in greater detail in Chapter five, innovative technologies can promote the efficient movement of freight and commercial vehicles. Freight that moves efficiently experiences less delays. Idling and stop/start actions from commercial vehicles contribute to air pollution that can be avoided. Therefore, MDT's ability to streamline weigh station and border crossing processes with innovative technologies is an ongoing effort. These efforts include automating electronic load permits, audits, registration, weigh station bypass systems, ramp screening technologies, and roadside safety inspections concepts. All these technologies help to reduce commercial motor vehicle delays and idling that contribute to increased levels of air pollution.

Traffic management, using intelligent transportation systems, is an effective way to improve the movement of freight and avoid unnecessary delays, which has a positive impact on air quality. An example of this is synchronized traffic lights that ensure the maximum flow of vehicles.

Noise Pollution

During the rapid expansion of the Interstate highway system and other roadways in the 20th century, communities began to recognize highway traffic and construction noise as an important environmental impact worth evaluating. As part of the general environmental review process associated with all projects, MDT or its consultants are required to evaluate whether the project needs a noise analysis, and if it does, whether predicted noise levels could result in traffic noise impacts. For federal-aid projects, if noise impacts are identified then the consideration of reasonable and feasible noise abatement measures are required.¹⁷³

Measures and strategies to help reduce noise pollution include:

- Acquisition of property to serve as a buffer zone to protect developed areas from the impact of traffic noise.
- Implement traffic management measures including, but not limited to, traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.
- Use of alternative pavement types to reduce roadway noise.
- Acoustic and engineering considerations when developing a project. For instance, topography, access, drainage, safety, other noise sources, may be evaluated to determine if a substantial noise reduction can be achieved.

If project design modifications are not feasible or cannot provide the necessary noise mitigation, MDT will consider noise abatement in the form of a noise barrier (wall or earth berm) within the highway project's right-of-way or easements.

Stormwater Runoff

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like roads and highways prevent stormwater from naturally absorbing into the ground. Stormwater and flood waters can pick up debris, chemicals, dirt, and other pollutants caused by freight transport and vehicles, and flow into a storm sewer system or directly into a lake, stream, river, wetland, or aquatic resource.

To protect Montana's surface water resources, MDT implements a statewide Storm Water Management Program (SWMP) in multiple urban areas. MDT's SWMP describes the program elements and associated best management practices to comply with applicable storm water regulations. This program is intended to reduce the discharge of pollutants from the transportation infrastructure into local surface waters. Components of this program include:¹⁷⁴

- Public education to raise awareness of behaviors and activities that impact storm water and to motivate action to reduce pollution;
- Strategies to involve key target audiences in the development and implementation of the SWMP;
- Detection and elimination of illicit (i.e., unauthorized) discharges;
- Reduction of pollutant runoff from construction activities;
- Control of storm water runoff from new development and redevelopment projects; and

- Implementation of an operation and maintenance program, including training, that prevents or reduces pollutant runoff from MDT operations.

Wildlife and Wildlife Habitat

Efforts to assess MDT's environmental stewardship goals identified in TranPlanMT are achieved through the Biennial Report process. The goals outlined in TranPlanMT address the impacts of freight transportation on wildlife and the environment, collectively with all road users. During the most recent Biennial Report process, MDT's environmental stewardship focus areas and accomplishments included:¹⁷⁵

- The development of a new Wildlife Accommodation Process for evaluation and identification of wildlife friendly features and accommodations on projects. Incorporating wildlife accommodations on projects to address human safety and wildlife connectivity concerns.
- A Memorandum of Agreement with Montana Fish Wildlife & Parks to formalize the working relationship to protect Montana's citizens and wildlife.
- Created a Montana Wildlife and Transportation Partnership in association with Montana Fish Wildlife & Parks and Montanans for Safe Wildlife Passage to collaboratively address wildlife and transportation issues in Montana.
- Reuse and recycle construction materials by providing materials such as timber stringers, asphalt millings, guard rail, and aluminum sign sheeting to other agencies.
- Continued development of aquatic mitigation and purchase of credits to support project delivery.
- Greater emphasis on contextual design methodology to balance design standards and environmental sensitivity.

Needs included in this Freight Plan were also identified in TranPlanMT's biennial report. Based on past accomplishments and current needs in the environmental stewardship area, MDT identified the following strategies and goals:

- Continue to expand public involvement efforts to increase engagement and awareness of MDT projects and business practices.
- Continue coordination and communication with resource and regulatory agencies.
- Continue to look for opportunities to create efficiencies in environmental processes.

- Develop an umbrella agreement with the US Army Corps of Engineers for creation and management of aquatic mitigation banks, used to offset impacts to aquatic resources.
- Continue coordination with the Montana Contractors Association to improve environmental compliance during construction activities.
- Revise MDT geometric design standards and methodology to allow for greater flexibility for contextual design.

These focus areas will continue to advance Montana's Freight Plan goals of balancing the development of transportation infrastructure and freight activity with the need to mitigate impacts on wildlife and the environment.

Public Outreach – Wildlife Friendly Fencing

MDT ensures continued sensitivity to wildlife by working to minimize the conflict between wildlife movements and the traveling public by distributing informational materials to landowners to promote the use of wildlife friendly fencing along highway rights-of-way and elsewhere. Wildlife friendly fencing can reduce the number of animal/vehicle conflicts by reducing the chance of wildlife being trapped in the right-of-way (ROW) and the time that animals spend in the ROW. Based on the design of wildlife friendly fencing, it also reduces the number of injuries or fatalities during attempts by wildlife to cross over or under the fence and allows wildlife more freedom of movement.¹⁷⁶

Accommodating Wildlife Through Design

Below are strategies that MDT incorporates into the transportation infrastructure design process where appropriate and when feasible¹⁷⁷:

- Longer bridges allow room for wildlife passage underneath;
- Animal detection systems with signage along wildlife corridors;
- Designing culvert size for targeted species;
- Tree and brush clearing along highway zones;
- Wildlife exclusion fencing; and
- Wildlife crossing structures.

Compliance with State and Federal Environmental Policy

There are numerous federal, state, and tribal environmental laws that affect and shape MDT's decisions. The National Environmental Policy Act (NEPA) and Montana Environmental Policy Act (MEPA) are procedural laws that provide a framework for

addressing various applicable environmental statutes, regulations, policies, rules, executive orders, and agreements. NEPA and MEPA set the tone for MDT's environmental processes by recognizing the need for systematic, interdisciplinary planning and decision-making that considers all environmental factors for federal and state actions that could significantly affect the quality of the human and natural environment. NEPA and MEPA provide processes for sound decision-making based on thorough environmental analysis and public disclosure and review.

The guiding principles of NEPA and MEPA have been incorporated into MDT's transportation planning and project development process, as well as maintenance and operations of the state transportation system.

Network Resiliency

Resiliency means the capacity or the ability to quickly overcome difficulties. In reference to the transportation network, this means the ability to quickly overcome adverse conditions which may be brought about by weather and natural phenomenon, such as extreme winter weather, flooding, land/rockslides, high winds, and wildfires. Working to maintain a resilient transportation network seeks to ensure safe traveling conditions and reliability within the network itself.

Weather and Natural Phenomenon

Montana is not a stranger to extreme changes in climatic conditions and natural phenomena that can compromise the state's surface transportation network. In winter, it is not uncommon for Montana to experience plunging frigid temperatures well into the minus thirties and snow squalls. Warm chinooks can quickly melt snowpacks, causing winter-time flooding. Spring snowmelts can result in ice dams on rivers and flooding in lower areas of terrain and extreme wind events. Reaching 70 miles per hour can often cause perilous wildfire conditions not just in summer but even in winter months when dry grass and low humidity values persist.

Coupled with Montana's potential for extreme weather is the state's diverse and varying landscape which boasts 67 distinct mountain ranges¹⁷⁸. To the east of the Rocky Mountains lie the sprawling and vast Great Plains. Winds sweep down the eastern slopes of the Rockies over the plains, often making for a dry and arid climate. Covered

***Safety and Resiliency** of the transportation network are goals of this freight plan. Effective planning, innovative technologies, system maintenance, designing state facilities to be more durable, and quickly responding to extreme weather events that compromise the network are some of the strategies that MDT employs to keep freight operators and the traveling public moving safely and efficiently.*

in sage brush and prairie grasses, the plains are particularly vulnerable to fast moving and devastating wildfires caused by lightning or other bio- and anthropogenic means.

Because of Montana's diverse natural environment, MDT and the state are therefore committed to enhancing reliability for freight and the overall transportation network by responding in an effective manner to restore service to affected areas as soon as possible.

Clearing snow and preventing ice on the roadways require equipment staging and a substantial seasonal labor force to operate equipment. Frost heaving in the spring, which causes roads to sag, makes roads extremely vulnerable to deterioration. Sagging soil can cause road surfaces to flex and distort, possibly leading to cracking. In this instance, MDT or local road authorities may temporarily limit loads on such roads until ground conditions improve enough to sustain heavier vehicles.



Extreme flooding and wildfires can destroy roads and bridges, and/or result in temporary to long-term closures and detours. Agricultural practices can result in increased dust or dust storms which can close rural roads or reduce visibility. In some instances, severe flooding from excessive rainfall and/or snow melt can cause significant damage to bridges or undercut roadways. The ability to quickly respond to such events as well as effectively communicate alternate route options is essential to freight operators. The Innovative Technologies section of this Plan highlight these efforts by MDT. Truck parking facilities and rest areas also play an essential role when drivers are forced to delay their movements due to adverse weather conditions.

With numerous areas of mountainous terrain, the potential for rock slopes to negatively impact MDT roadways is a constant concern for MDT. Therefore, MDT has implemented a Rockfall Asset Management Program to guide decision making to address this concern. In 2005, 10,800 center-line miles were screened for potential rockfall sites, and rockfall history and behavior information was gathered for many sites.¹⁷⁹ The initial study was updated in 2017, using an updated asset management-based approach to assist MDT in managing these sites.

For incidents that require an emergency response, MDT follows its *Emergency Operations and Disaster Plan* to effectively restore transportation to a road or network¹⁸⁰. This plan defines the process and procedures, roles, and responsibilities by which MDT and other coordinating agencies work to effectively restore the transportation network. It outlines an effective process for responding to natural

disasters such as earthquakes, floods, blizzards, fires, avalanches, and landslides as well as manmade incidents.

In extreme cases, if it is apparent that a disaster declaration is necessary to assist in the recovery of an impacted area, then the state or tribal government may contact the Federal Emergency Management Agency (FEMA) Regional Office and request a joint Federal, State/Tribal Preliminary Damage Assessment (PDA). If the PDA demonstrates that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the state, the affected local governments, or tribal government then supplemental federal assistance may be deemed necessary.¹⁸¹

Strategies that promote network resiliency:

- Respond quickly to emergency road and highway situations.
- Design new facilities for durability and longer life cycles using state-of-the-art materials and methods.
- Perform winter maintenance activities to provide consistent levels of service and enable wintertime mobility.
- Accelerate bridge construction and repairs in critically time sensitive situations, such as when detours are not possible, and the road is fully closed to all traffic.
- Implement innovative technologies which help the traveling public to avoid dangerous traveling conditions and to provide alternative route options.

Performance Measures

States establish targets (or goals) for areas of performance (e.g., safety, reliability, pavement, and bridge) and are a way to measure the progress with meeting goals and ensuring compliance with federal law. There are several performances criteria that MDT is required to address through many of its transportation programs.

These performance measures work to address the overall performance of the highway system and are therefore pertinent to the safe, efficient, and reliable movement of freight. Below is a discussion on performance measures broken down by focus area.

Transportation Safety Performance Goals

Under the CHSP, MDT annually leads transportation safety partners and stakeholders in discussions on safety performance of the highway system, including evaluations of safety performance measures required under federal law. The CHSP also establishes the target-setting methodology for national performance measures. Pursuant to Title 23 Section 490.207 of the Code of Federal Regulations (23 CFR 490.207), the five federally required safety performance measures include the number of fatalities, fatality

rate, number of serious injuries, serious injury rate, and number of non-motorized fatalities and serious injuries. The safety performance annual reduction targets for the next five years (2026 – 2030) of the 2025 CHSP are:¹⁸²

- Fatalities: 8;
- Fatality Rate: 0.056 fatalities per 100 million vehicle miles traveled (VMT);
- Serious Injuries: 29;
- Serious Injury Rate: 0.210 serious injuries per 100 million VMT; and
- Non-Motorized Fatalities & Serious Injuries: 2.

Commercial Motor Vehicle Safety Performance Goals

MDT's Motor Carrier Service Division prepares the CVSP. The 2025 CVSP identifies annual crash reduction goals for commercial vehicles. For 2022, the CVSP established a crash reduction goal of 1.42 large truck fatal crashes per 100 million VMT. The crash rate presented in the CVSP fluctuates year-to-year due to a relatively small number of large truck-involved fatalities (fewer than 30 per year); however, the linear trend from 2000 through 2022 shows a declining crash rate.¹⁸³

Reliability Performance Measures on the NHS

MDT is not only required to maintain a reliable freight network but is also committed to the effort. Part of this effort requires MDT to participate in the biennial reporting of federal performance targets that include overall system performance and freight reliability on the NHS (23 CFR 490). These targets are established for two- and four-year intervals, to ensure that system reliability and truck travel time reliability (TTTR) are met. As demonstrated in Figure 88, the state's interstate experienced an overall reliability of 99.8 percent in 2022 and a TTTR of 1.26. Federal code identifies a TTTR of less than 1.50 as reliable (Generally speaking, 1.50 is a ratio that compares longer travel times to an average travel time. The closer these values are to each other, the closer they get to 1.0. A value of 1.0 would mean 100% reliable). These metrics demonstrate that the state is meeting and exceeding its targets for reliability across Montana's NHS.

Figure 88: Freight Performance Targets and 2022 – 2025 Performance

Performance Measure	2-Year Target	2-Year Performance	4-Year Target	4-Year Performance*
Percent of Person-Miles Traveled on the Interstate That Are Reliable	98.0%	99.8%	98.0%	TBD
Percent of Person-Miles Traveled on the non-Interstate NHS That Are Reliable	N/A	91.3%	80.0%	TBD
Truck Travel Time Reliability Index	1.30	1.26	1.30	TBD

*As of the date of this plan, 4-year performance measures have not yet been reported and data is still pending.

Federal Reporting of Performance Measures for Pavement and Bridges

Pursuant to the Code of Federal Regulations, states are required to establish and report on performance targets for pavement and bridges both on interstate and non-interstate NHS (23 CFR 490.105). To ensure pavement condition goals on the NHS are achieved, MDT is federally required to report on its progress of performance measures, in part biennially and in whole every 4-years (23 CFR 490.107). Performance measures for pavement that MDT is required to report on, including state-set targets, are listed in Figure 89:

Figure 89: Performance Measures for State-Wide Pavements

Performance Goals for State-Wide Pavement	2-Year Target	4-Year Target
The percentage of pavements on the interstate in good condition for the 2022-2025 Performance Period.	50%	35%
The percentage of pavements on the interstate in poor condition for the 2022-2025 Performance Period.	2%	2%
The percentage of pavements on the non-interstate NHS in good condition for the 2022-2025 Performance Period.	40%	30%
The percentage of pavements on the non-interstate NHS in poor condition for the 2022-2025 Performance Period.	3%	3%

Along with reporting on performance of state-wide pavement condition, MDT is federally required to report on its progress of performance for bridge condition on the interstates, in part biennially and in whole every 4-years (23 CFR 490.107). Performance measures for bridges that MDT is required to report on, including state-set targets, are listed in Figure 90. In 2026, MDT will be reporting on its 2-year and 4-year performance for pavement and bridges and be establishing new targets for the next reporting period for 2026 – 2029.

Figure 90: Performance Goals for State-Wide Bridges

Performance Goals for Statewide Bridges	2-Year Target	4-Year Target
The percentage of deck area of bridges on the NHS classified in good condition for the 2022-2025 Performance Period.	16%	17%
The percentage of deck area of bridges on the NHS classified in poor condition for the 2022-2025 Performance Period.	9%	8%

Asset Management - Px3 Performance Measures

Performance measures are integral to MDT's annual Performance Programming Process (Px3) project selections. Px3 is a performance-based asset management strategy, seeking to ensure that MDT efficiently spends its money on long-term transportation infrastructure investments that achieve established performance goals.

Pavement condition is a key consideration for efficient and safe movement of freight. Heavy vehicles introduce excessive wear on the highway network, especially in contexts not originally designed to accommodate large or heavy vehicles. Poor pavement conditions can slow travel, cause delays or incidents, and damage vehicles and goods in transit. MDT collects pavement condition data annually and uses a Pavement Management System (PvMS) to manage condition data and analyze trends that support statewide strategic priorities. MDT defines specific pavement goals through Px3.

MDT uses the performance measures and targets displayed in Figure 91 to help guide these investment decisions. Approximately 70 percent of MDT's capital funding is allocated via Px3 with the remaining funding distributed according to program-specific requirements.¹⁸⁴ When establishing performance measures and targets, it is important to consider freight movements, both to ensure efficiency and resiliency within the network itself.

Figure 91: Px3 Performance Measures

Goal Area	Objective	Measure	Target
Pavement	• Preserve highway pavement condition at existing or higher levels in the interstate, NHS, and primary systems • No significant difference in ride condition between MDT Districts	• Ride Index • % Interstate pavement in good/poor condition • % NHS pavement in good/poor condition	• Interstate – Maintain current ride index • NHS - improve current ride index • Primary system - maintain current ride index (if possible)
Bridge	Maintain or improve the condition of the bridges on the NHS	• % Of NHS bridge deck area in good condition • % of NHS bridge deck area in poor condition	• Increase the % of good NHS bridges • Decrease the % of poor NHS bridges
Safety	Improve safety of the state's highway system	• Number of fatalities • Number of serious injuries	Reduce the number of fatalities and serious injuries by half, by 2030.

10. National Highway Freight Program

The National Highway Freight Program (NHFP) funds projects that support the efficient movement of freight on the National Highway Freight Network (NHFN). Montana's eligible portion of NHFN occurs on the Primary Highway Freight System (PHFS) and the state's designated critical rural and urban freight corridors. Combined, these designations include Interstates I-15, I-90, and I-94.

Goals of the NHFP include:

- To invest in infrastructure improvements and to implement operational improvements on the highways of the United States;
- To improve the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas;
- To improve the state of good repair of the NHFN;
- To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NHFN;
- To improve the efficiency and productivity of the NHFN;
- To improve the flexibility of states to support multi-state corridor planning and the creation of multi-state organizations to increase the ability of states to address highway freight connectivity; and
- To reduce the environmental impacts of freight movement on the NHFN.

The PHFS is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data. In Montana, I-15 and I-90 are designated as interstates on the PHFS.

Critical Rural Freight Corridors (CRFCs) are public roads in **non-urban** areas which provide access and connection to the PHFS and non-PHFS interstates. In 2023, Montana designated one CRFC along I-94 from mile marker 1.519 to the Montana-North Dakota border. The designation makes it possible for MDT to consider projects for NHFP funding on this part of the route.

Similar to CRFC's, critical urban freight corridors (CUFCs) are public roads in **urban** areas which provide access and connection to the PHFS and non-PHFS interstates. In 2023, Montana designated one CUFC, along I-94, within the Billings MPO. This designation along with the CRFC designation on this route makes the entire length of I-94 eligible for participation in the NHFP.

Because Montana's interstates provide critical accessibility and connectivity within and outside of the state, designating I-94 as a critical rural and urban freight corridor ensures all of Montana's interstates are eligible for participation in the NHFP. I-94 is part of the NHFN, the Draft National Multimodal Freight Network, and the Strategic Highway Network, a critical

component of the federally designated network essential to transporting military goods. Ensuring I-94 is eligible for participation in the state's NHFP further supports National Multimodal Freight Policy (49 U.S.C. 70101(b)) and the goals described in 23 U.S.C. 167.

Eligibility requirements for NHFP funds are outlined in 23 U.S.C. §167 and 49 U.S.C. §70202. In addition to meeting eligibility requirements found in federal code, projects must also be identified in a Freight Investment Plan, which is a component of a freight plan, to receive funding.

Currently, NHFP funds are a key source of federal funding and allow for an increase in project investments that support national multimodal freight policy, including but not limited to bridge condition, increased interstate capacity, safety, and preservation projects that ensure freight reliability. Additionally, all projects must be deemed fundable—given anticipated NHFP apportionment and obligations.

Through the FAST Act, Montana received approximately \$65 million in funds for federal fiscal years (FFY) 2016 through 2020. Through IIJA, Montana's apportionment of funds was approximately \$74 million for FFY's 2022 through 2026 and average out to \$14.8 million a year, after federal set asides. MDT anticipates that continued funding for the NHFP will be included in the next federal transportation authorization bill scheduled to be in effect by the end of September 2026. Non-federal matching funds are expected to be paid with Highway State Special Revenue Funds.

Freight Investment Plan and Priority Projects

To ensure that national multimodal freight policy and NHFP goals are prioritized, and that funding is effectively obligated to projects, MDT numerically ranks and scores eligible projects. Scoring is based on the number of national multimodal freight goals and NHFP eligibility criteria that each project meets. The more criteria that a project meets, the higher the score. Additional considerations may be given to projects which address key freight needs and that need NHFP funding to be viable.

MDT Goals/Criteria by which projects are scored include:

1. Increases Capacity and Reduces Bottlenecks;
2. Increases Safety;
3. Improves Operational Issues;
4. Bridge Preservation/Rehabilitation;
5. Improves Connectivity;
6. Improves Access; and
7. Increases System Reliability.

Figure 92 provides a brief overview of the priority projects that have been identified for NHFP funding within the Freight Investment Plan.

Figure 92: NHFP Priority Project Overview

FFY	Priority Project	Interstate	Brief Description	NHFP Criteria Met
2027	BBP - Johnson Lane Interchange	I-90	Reconstruct existing I-90 Johnson Lane interchange, including interstate bridge and ramps.	- Increases capacity/reduces bottlenecks - Improves connectivity - Increases safety - Improves operational issues - Increases system reliability - Decreases air pollution
2027	Gore Hill Interchange – GTF	I-15	Bridge replacement, roundabout, realignment of frontage road, and addition of climbing lanes.	- Bridge preservation/rehabilitation - Improves operational issues - Increases capacity/reduces bottlenecks - Increases safety - Improves connectivity - Increases system reliability
2028	Cardwell West	I-90	Major rehabilitation, including pavement preservation, replacement of 2 culverts, guardrails, rumble strips, upgraded signage, and cattleguards.	- Increases safety - Improves operational issues - Increases system reliability
2029	Culvert Rehab – Glendive Area	I-94	Rehabilitate or replace 5 large culverts.	- Increases safety - Improves operational issues of deteriorating culverts - Increases system reliability
2029	I-15 Culverts- Vaughn	I-15	Rehabilitate large culverts.	- Improves operational issues - Increases system reliability
2030	Crow Agency – Garryowen	I-90	Pavement preservation. Milling, overlaying, and full width seal and cover, replace guardrail, upgrade signage, and re-cut rumble strips.	- Improves safety - Improves operational issues - Increases system reliability
2031	Taft-Saltese	I-90	Major reconstruction. Removal of roadway and replacement with concrete, signage upgrade, guardrail, barrier rail, drainage improvements, wildlife crossing evaluation, and bridge deck repair.	- Bridge preservation/rehabilitation - Increases safety - Improves operational issues - Increases system reliability

Appendix A includes Montana's Freight Investment Plan (FIP) for federal fiscal years 2027 through 2031. The FIP includes funding obligations for Priority Projects and sources of

nonfederal match. The FIP also includes Alternate Projects if unanticipated funding were to become available. This might occur, for instance, if a project that was approved for NHFP funds were to be delayed, came in significantly under budget, or additional federal funding became available (e.g. a project received a federal grant). Alternative Projects were evaluated and scored under the same criteria as Priority Projects and meet fiscal constraints, yet other factors, such as a project's timing or a lower ranking score, may have kept it from being prioritized for funding.

Appendix A: Montana's Freight Investment Plan (2027 – 2031)

2026 Freight Investment Plan (In Millions) National Highway Freight Program Funds - Montana						
Estimated NHFP Apportionment		Proposed Project Year				
		FFY 2027	FFY 2028	FFY 2029	FFY 2030	FFY 2031
Prior Year Federal Carry-Over		\$8.9	\$8.9	\$8.9	\$10.4	\$12.4
Federal Annual Apportionment ¹		\$15.5	\$16.0	\$16.5	\$17.0	\$17.5
Transfer In/Out)						
Total Federal Apportionment Available		\$24.4	\$24.9	\$25.4	\$27.4	\$29.9
Proposed Federal Obligations		\$15.5	\$16.0	\$15.0	\$15.0	\$15.0
Ending Federal Apportionment Balance		\$8.9	\$8.9	\$10.4	\$12.4	\$14.9
Estimated NHFP Project Obligations ² for Priority Projects	District	FFY 2027	FFY 2028	FFY 2029	FFY 2030	FFY 2031
BBP - Johnson Lane Intch, UPN 419907 (Est. Total Cost: \$56, NHFP State Match: \$0.3)	D5	\$3.0				
Crow Agency-Garryowen, UPN 10065 (Est. Total Cost \$11.7, NHFP State Match: \$1.3) ²	D5				\$15.0	
Culvert Rehab - Glendive Area UPN 10526 (Est. Total Cost \$11.8, NHFP State Match: \$1.0)	D4			\$10.7		
Culvert Rehab - Miles City Area, UPN 10525 (Est. Total Cost \$5), NHFP State Match: \$0.4	D4			\$4.3		
Cardwell-West, UPN 10003-002 (Est. Total Cost: \$40, NHFP State Match: \$1.3)	D2	\$12.5	\$2.5			
I-15 Culverts-Vaughn Area, UPN 10309-001 (Est. Total Cost \$5, NHFP State Match: \$0.4)	D3		\$4.5			
Gore Hill Interchange - GTF ³ , UPN 9345 (Est. Total Cost \$34.4, NHFP State Match \$0.8), UPN 9345	D3		\$9.0			
Taft - Saltese, UPN 10210 ⁴ (Est. Total Cost \$100.6, NHFP State Match: \$1.3)	D1					\$15.0
Alternate Projects ⁵		Tentative Project Year (FFY)				
Little Bighorn R - Crow Agency, UPN 9990 (Est. Total Cost: \$34)	D5	2028 - 2029				
Baker Interchange - Northeast, UPN 10810 (Est. Total Cost \$35)	D4	2030 - 2034				
I-90 EB Scale - Ramsay, UPN 8797 (Est. Total Cost: \$8.2)	D2	2030 - 2034				

¹ Totals are estimates and are based on previous year apportionment amounts.

² Project costs and funding obligations are estimates and subject to change. If a project's cost comes in below the obligation amount, or is reduced by other means, NHFP funds will be reduced accordingly. Standard nonfederal match for NHFP funds is 8.76% and is calculated in the FIP based on the NHFP obligation amount listed for the project.

³ The NHFP obligation amount for Gore Hill Interchange GTF, was reduced from \$13.1 million (2024 FIP) to \$8 million due to the project receiving a federal grant.

⁴ Due to project costs, Taft-Saltese may be split into smaller projects.

⁵ Eligible projects to be considered for NHFP funding if funding becomes available. A minimum nonfederal match of 8.76% will be applied based on the NHFP funding amount.

Appendix B: Stakeholder and Public Involvement Summary

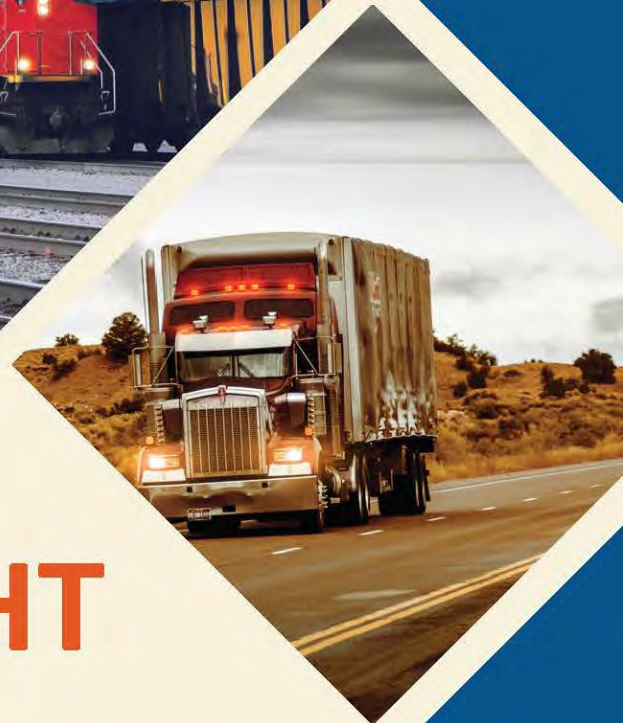
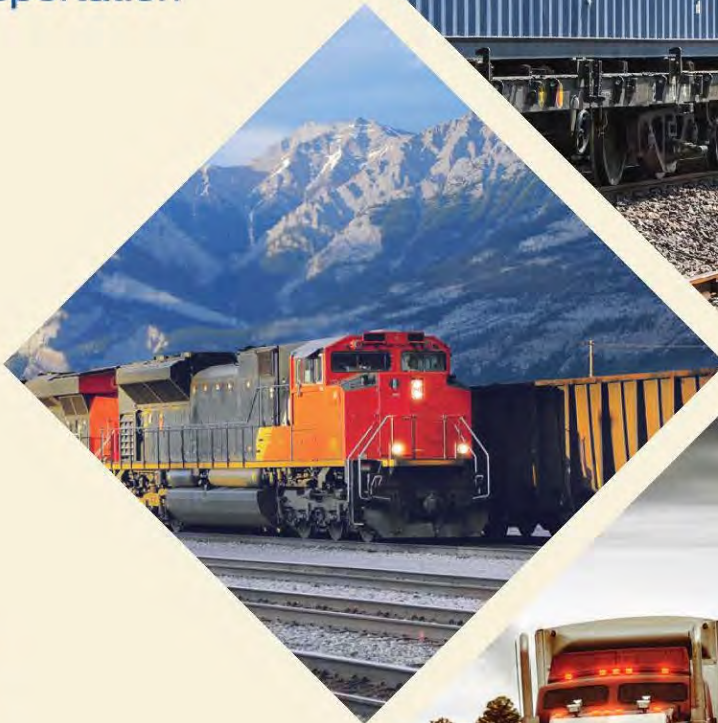


MONTANA

Department of Transportation

2025 MONTANA STATE FREIGHT PLAN

STAKEHOLDER AND PUBLIC INVOLVEMENT SUMMARY



January 6, 2026

Prepared for:



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Purpose

The Montana Department of Transportation (MDT) is updating the 2022 Montana State Freight Plan (Plan) to meet federal requirements under 49 U.S.C. 70202. The Freight Plan update is required to occur every four years and ensures Montana remains eligible for National Highway Freight Program (NHFP) funding.

The Freight Plan describes freight's role in the state's economy, identifies key freight infrastructure and system issues, and recommends strategies. It guides freight-related transportation investment decisions and highlights projects to improve system performance and to support Montana's long-term economic vitality. MDT is leading this effort with support from a team of planning and engineering professionals.

The Freight Plan update provides engagement opportunities with freight stakeholders to better understand freight-related concerns and challenges. The planning process for the Freight Plan is illustrated in the figure below.



This memo outlines four key engagement activities completed in conjunction with the Freight Plan update from July 2025 through November 2025:

- Targeted outreach to freight-related associations;
- MDT Technical Advisory Committee (TAC) meeting with internal MDT subject matter experts;
- A virtual Freight Plan Stakeholder workshop with external industry partners; and
- An online Stakeholder Freight Survey open to external industry partners

Robust engagement with stakeholders is essential to the Freight Plan's update. The input and perspectives provided by Montana's freight community will help the project team identify critical issues and challenges and strategies to help address them.

Targeted Outreach

Targeted outreach was conducted as part of a deliberate effort to strengthen relationships with associations, representing a broad range of freight-related sectors. The intent was to broaden the project's reach by engaging association memberships and creating additional opportunities for stakeholders to complete the survey and contribute valuable data to the Freight Plan. These relationships will remain beneficial for future MDT outreach efforts, including the next Freight Plan update. Identified associations should be engaged early in the planning process to support meaningful and informed stakeholder input.

As part of this effort, sixteen statewide freight-related associations were contacted in which the project team received responses from over half. Working relationships were established with nine industry and trade associations representing critical freight stakeholders across coal, agriculture, trucking, and pipeline sectors.

In addition to the 121 external stakeholders on the distribution list, this targeted outreach extended stakeholder engagement to more than 3,220 additional members who received an invitation to participate in the survey.



MDT TAC Meeting

On September 4, 2025, MDT hosted a hybrid meeting to gather input from MDT and Federal Highway Administration (FHWA) subject matter experts that form the Technical Advisory Committee (TAC). The TAC plays a critical role in developing the Freight Plan, providing expertise and guidance throughout the process. Areas of MDT and FHWA represented at the meeting included:

- Geotech & Pavement Bureau
- Maintenance Division
- Statewide Planning & Modal Operations
- FHWA
- Bridge Bureau
- Motor Carrier Services
- Motor Carrier Safety Assistance Program

- Traffic & Safety Engineering Bureau
- MDT Districts

The TAC meeting began with a presentation outlining the purpose of the Freight Plan, its connection to federal funding, and its current goals. The group discussion guided participants in identifying key issues related to each major Freight Plan goal: infrastructure condition, safety, funding, and environmental stewardship. TAC members were asked to highlight their primary areas of concern and offer examples or strategies to address them. The following summarizes the TAC's feedback.

Identified Infrastructure Challenges:

- Outdated bridges were identified as a top concern, noting that weight-restricted structures often force trucks to reroute.
- Lack of adequate truck parking in certain parts of the state, particularly in mountain passes during winter closures.
- Persistent need to address deteriorating infrastructure, including pavement, culverts, retaining walls, and rock slopes, which are reaching the end of their design life.

Identified Safety Challenges:

- Safety concerns associated with commercial driver qualifications, including licensing requirements, driver training, and language barriers were identified.
- Enforcement challenges and the need for increased highway patrol presence in certain parts of the state whereas recent successes of enhanced enforcement efforts along Highways 2 and 12 were noted.
- Seasonal traffic surges, impaired driving, and weather-related crashes were identified as ongoing issues affecting safety.

Identified Funding Challenges:

- Significant funding constraints, including uncertainty in federal funding, challenges in meeting state match requirements for competitive grants, and steep increases in project costs.
- Rising and often unsustainable costs are associated with maintaining technology systems, such as weigh station screening technologies.

Identified Environmental Stewardship Challenges:

- Wildlife collisions, noting these incidents are likely underreported by commercial truck drivers.
- Improved management of weather-related events which can disrupt freight movement and pose ongoing challenges to system reliability were noted.

Identified Technology and Innovation Challenges:

- The importance of continued investment in freight-related technologies, including weigh station pre-screening systems, tire anomaly detection, and driver compliance monitoring tools were highlighted.
- Tools such as the “Free Pass” system, an electronic weigh station bypass program, help streamline operations but require consistent funding to maintain and further advance these capabilities.

MDT Virtual Freight Plan Stakeholder Workshop

On September 24, 2025, MDT hosted a virtual Freight Plan Stakeholder Workshop to share information about the Freight Plan update and gather input from agency and modal partners involved in freight across Montana. The Workshop provided a focused opportunity for external stakeholders to share their perspectives on current and future freight needs, ensuring the plan reflects on-the-ground challenges and opportunities. Seven attendees from various freight-related sectors and industries participated in the workshop, representing the following areas:

- Metropolitan planning organizations;
- Neighboring state departments of transportation;
- Trucking industry; and
- Aviation industry

The Workshop opened with a presentation that introduced the purpose and goals of the Freight Plan and reviewed the national and state policies that shape its direction.

The group discussion focused on an Areas of Concern matrix that helped participants identify key issues related to infrastructure condition, safety, funding, coordination, and other emerging concerns. Attendees were asked to share their primary issues and provide examples or strategies for addressing them. The following summarizes their feedback.

Identified Infrastructure Challenges:

- Insufficient camera coverage for real-time condition monitoring.
- Challenges with intersection design for freight movements, in some urban areas, may necessitate updated intersection and lane design standards.
- Rapid population growth has increased congestion on roads in some urban areas which may be further impacted by geographic constraints.

Identified Safety Challenges:

- Conflicts between commercial motor vehicles and passenger vehicles.

- Wildlife collisions and seasonal traffic spikes.
- Lack of passing lanes on key corridors, such as U.S. 212.
- Shortages of rest areas and truck parking in some parts of the state.

Identified Funding Challenges:

- Limited eligible maintenance funding.
- Rapidly rising equipment and construction costs, such as snowplows doubling in price over the past five years.
- Persistent difficulty in retaining skilled labor, particularly snowplow operators.
- Funding challenges within the aviation sector following the loss of key United States Postal Service contracts.

Identified Coordination and Communication Challenges:

- Limited coordination among states, particularly Montana, South Dakota, and Idaho, for oversize load notifications and interstate closures.
- Delayed road and weather updates within the 511MT system (Montana's traveler information system which provides real-time road conditions to the public).
- Inconsistent information in the 511MT system.
- Lack of regional data sharing.
- Fragmented truck parking data between public and private sources.

Identified Future Challenges:

- New technologies such as truck platooning, automation, and artificial intelligence applications will require consistent legislation and economic incentives.
- The effects of population growth on urban congestion in places like Missoula are outpacing infrastructure capacity.

Identified Strategic Themes:

Across all discussion areas, several themes emerged:

- Real-time data is foundational to both safety and freight efficiency.
- Multi-state collaboration particularly around closures, data sharing, and oversize-load coordination remains a major gap.
- Safety improvements and truck parking continue to be high priorities.
- Funding limitations and workforce shortages threaten the implementation of needed solutions.
- Proactive planning to prepare for automation, urban growth, and evolving freight logistics.

Stakeholder Freight Survey

An online opinion survey was distributed to a curated list of external stakeholders from September 9, 2025, through December 12, 2025. The survey initially reached 121 freight stakeholders across military, aviation, local governments, freight associations, shippers/carriers, railroads, and ports. A total of 18 responses were received, representing a 15% response rate. The following section highlights key findings from the survey.

- Respondents represent a variety of roles in Montana's freight-related industries, with the largest groups being transportation planning (33%) and truck driving operators (28%).
- Primary industry respondents include agriculture (39%), energy production (33%), and construction (33%)¹.
- The most significant factors impacting safe and efficient freight movement are infrastructure condition and extreme weather, each cited by 67% of respondents.
- 39% believe there are sufficient truck parking and rest areas, while 28% do not.
- 50% of respondents gave MDT a rating of 3 out of 5 for their coordination with local agencies.
- Satisfaction with MDT's efforts to maintain highways is generally positive, with 55% of ratings being a 4 or better.
- The most common roadways used for freight include I-90 (67%), I-15 (50%), and I-94 (44%).

Appendix A includes a complete summary of survey responses.

Next Steps

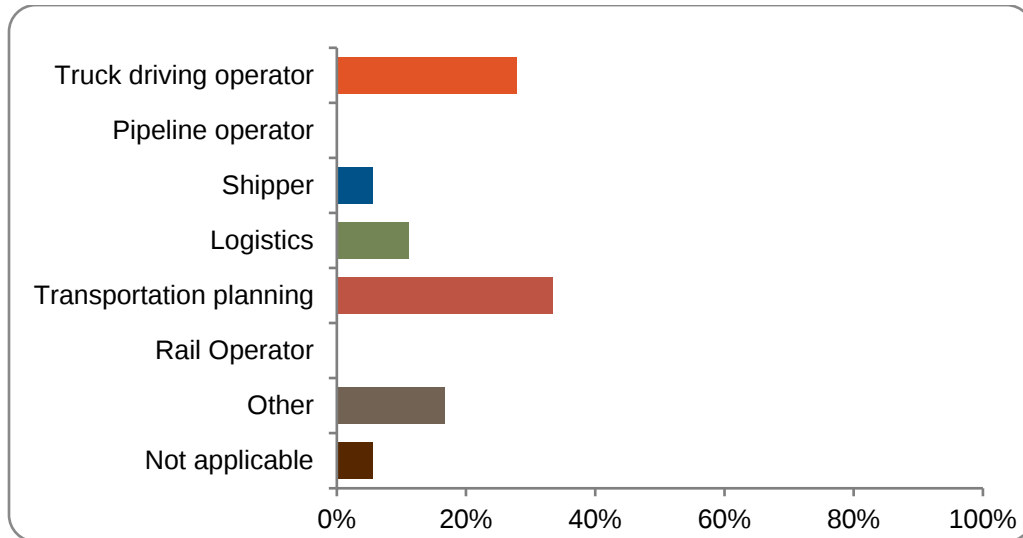
Interested parties are able to follow progress of the Freight Plan update by visiting MDT's website at <https://www.mdt.mt.gov/freightplan/2026-update.aspx>.

Public comments can also be made on the Plan's webpage at <https://www.mdt.mt.gov/contact/comment-form.aspx> or by emailing Heather Kuklo, Transportation Planner, at hkuklo@mt.gov. Comments are currently being accepted with a draft Plan anticipated to be available for public review and comment in Fall 2026.

¹ The percentage of industry respondents adds up to over 100% because some respondents represent more than one industry and marked more than one box in their response.

Appendix A: Survey Responses

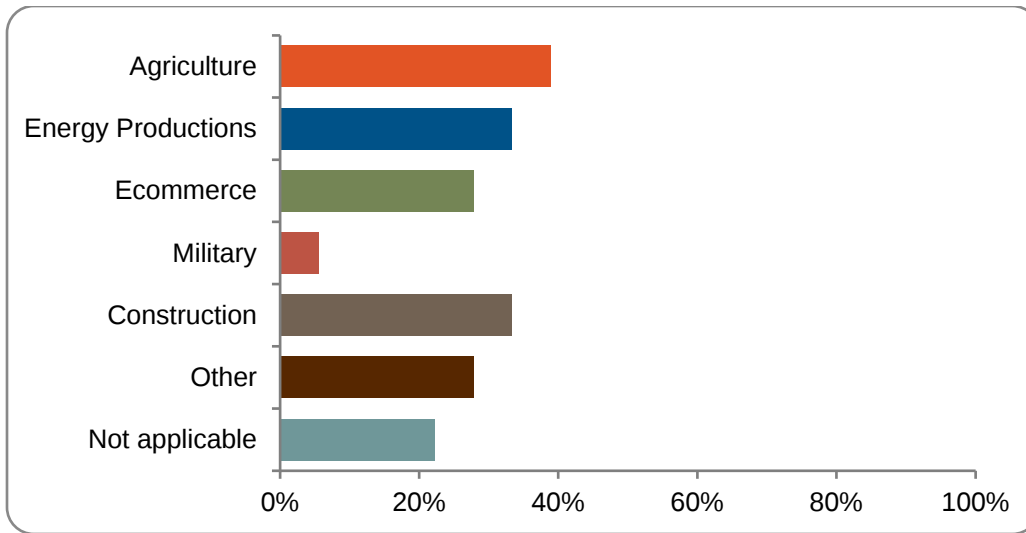
Q1: What is your agency's role in the movement of freight in Montana?



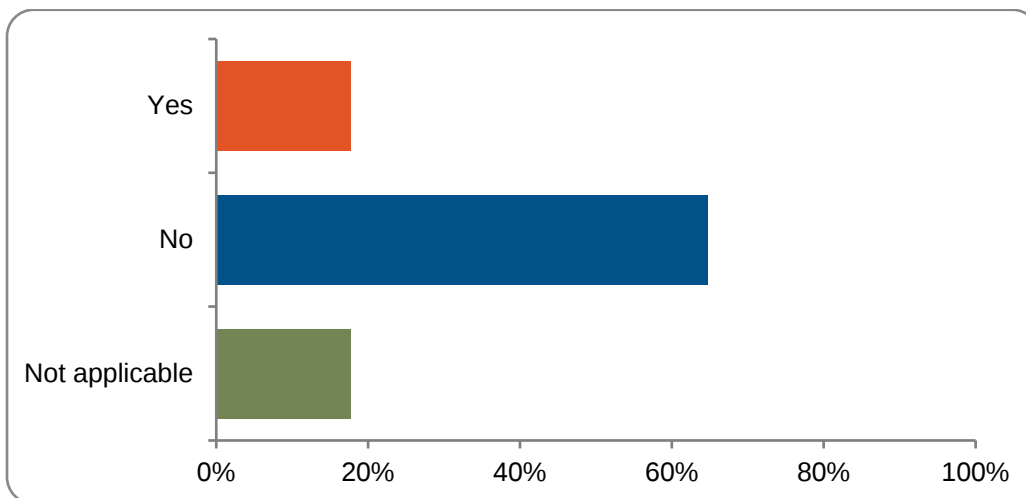
If Other (Please Specify):

- The Montana Petroleum Association is a member-based advocacy organization that represents aspects of the oil and gas industry in Montana from development and production, transportation, and associated service providers. Our members use the Montana transportation system. We are pleased to offer our thoughts on freight policy.
- Rail and truck transportation, and rail service within our industrial park.
- As a member of the South Dakota Department of Transportation, my agency's role lies in partnerships with adjacent states in moving freight during winter storm or flood events that impact interstate routes and disrupt freight flows, thereby minimizing impacts.

Q2: What primary industries benefit from your services? Select all that apply.



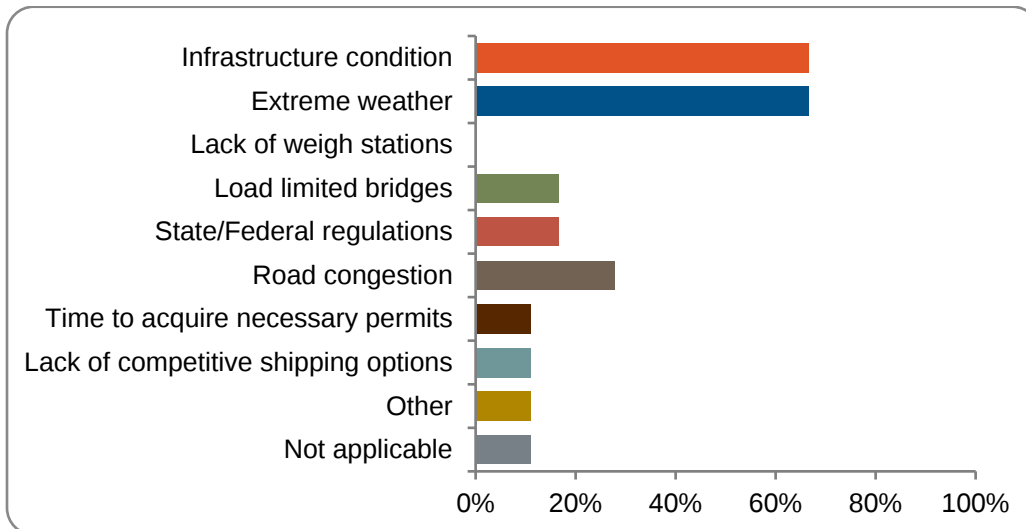
Q3: Does your agency participate in transloading or intermodal shipping activities?



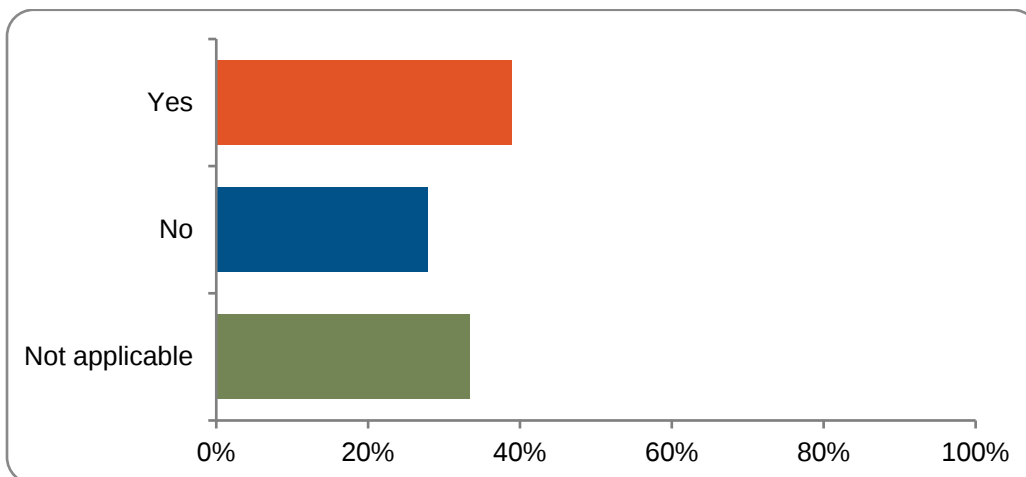
If yes, what are some major challenges that you might experience:

- We have members who have used transload facilities in the past. The facility in Shelby has worked well for them.
- Additional rail capacity is always a challenge for us.

Q4: What do you feel most impacts the safe and efficient movement of freight in Montana? (Select up to three)



Q5: Do you feel that there are sufficient truck parking and rest areas in Montana?



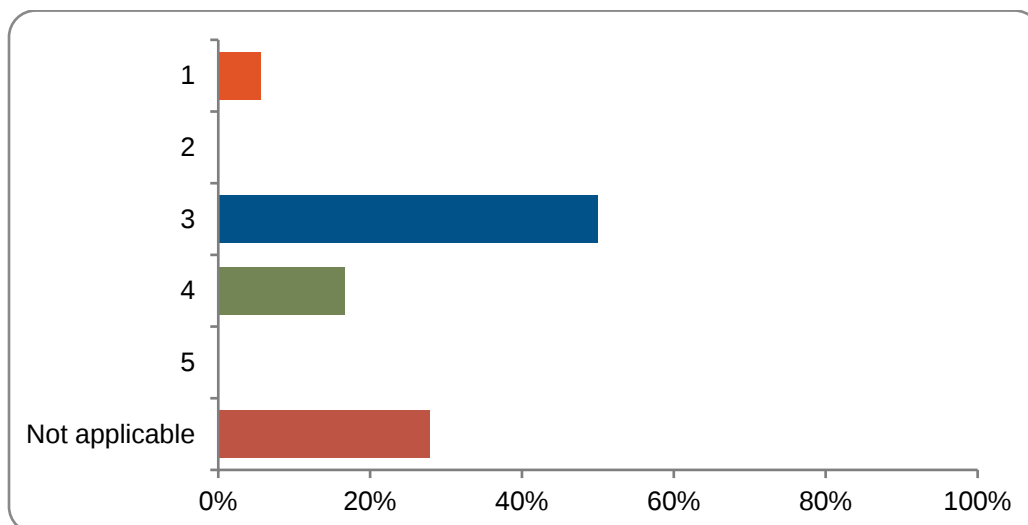
If no, please share specific recommendations on where you feel additional truck parking and parking and rest areas are needed:

- Not sure. Based on hearsay only, they need more according to drivers in Montana.
- Need more truck parking across the state. Limited truck parking when roads are closed. The 2- lane roads see a lot of truck traffic and there is no truck parking available.
- Over-the-road drivers have to use electronic logging devices and when they are out of time, they are done. They need clean and safe parking to get their breaks.

Keep all rest areas open year-around. Keep parking areas plowed and write citations to individuals that litter.

- Truck parking in the Bozeman area is limited. Since the 19th Avenue rest area has shifted to private control, no public rest stops exist directly before Bozeman Pass. Current options are Three Forks and the Pilot in Belgrade; the next designated stop is in Columbus, with only informal parking between. This is a safety risk. Please consider assessing barriers to adding capacity.
- The interstate system is well supplied. However, the secondary highway system needs improvement.

Q6: On a scale of 1 to 5, how do you rate Montana Department of Transportation's (MDT's) coordination efforts with local transportation agencies? (Please rate on 1-5 scale. 1 is the worst and 5 is the best)

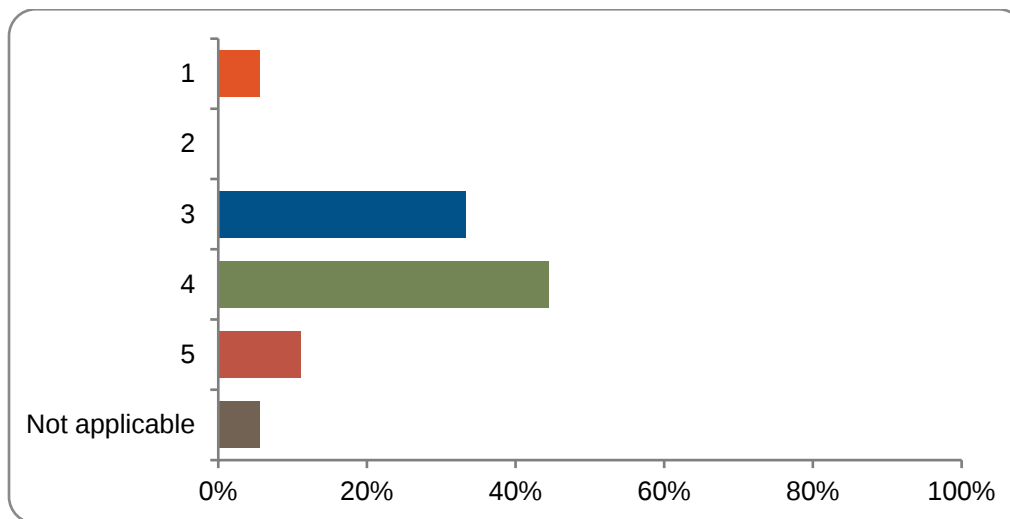


Q7: What major policy changes at the state or federal level do you feel need to occur to improve the safe and efficient movement of goods in Montana?

- Additional free training on safety for drivers and loads.
- Enforcement of state and federal laws.
- More 3- or 4-lane spots for passing on 2-lanes as well as minimizing construction zones (If contractors are doing work in an area why have it down to 35 mph on an interstate for 20 miles?).
- The state needs a well-maintained safe highway network. If you have to raise fuel taxes, then do it. As long as the increase benefits the roadway and not added staff in the Manning Building.
- Review the bridge analysis that is required for some oversize and overweight loads in Montana. Maintain the existing level of height restricted highways in Montana.

- Investment in rural intermodal capacity, cold storage, and middle-mile infrastructure for food and agriculture supply chains.
- English proficiency should be a requirement to drive commercial vehicles in Montana.
- In South Dakota, I've heard from the trucking industry that varying load limits can cause issues for shippers, though the complaints are aimed at Minnesota and not Montana. It was suggested that neighboring states should mirror one another.
- Need to better coordinate size of freight vehicles on local/regional streets, particularly in urban areas. We are increasingly facing challenges between safe street design and truck access, so reducing the size of freight trucks within urban areas would be very helpful. Change standards for how trucks are accommodated.
- Better communication with the public on winter road conditions and accidents. More road crews for snowplows and sanders. Fine drivers for not following chain up laws.
- Work on aging bridges.
- MDT needs to provide better access to CDL testing. Federal enforcement of CDL and operational safety needs to be improved.

Q8: How satisfied are you with MDT's efforts to maintain a safe and efficient highway network? Please rate on 1-5 scale. 1 is the worst and 5 is the best.

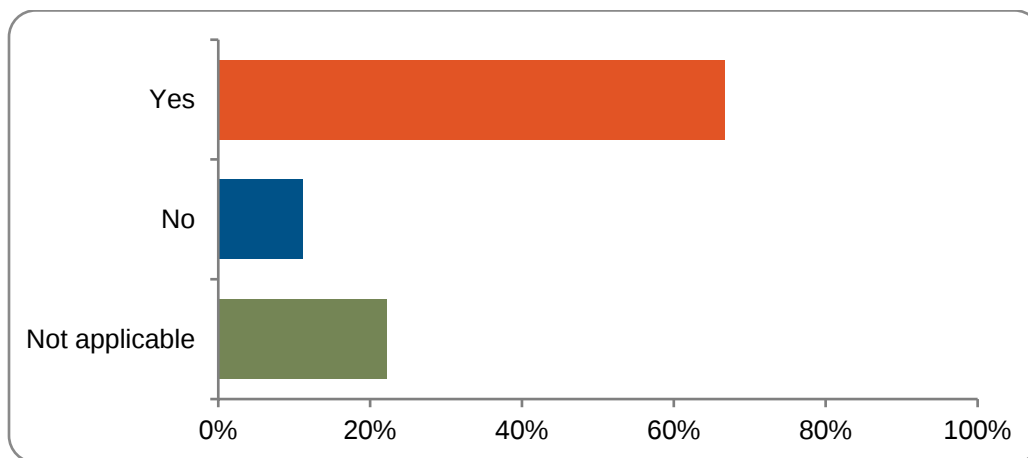


Q9: What types of infrastructure or technology improvements would most benefit your agency's operations?

- Better quality of the roads and enforcement of speed limits.
- More passing lanes, better winter road maintenance.
- Continued improvement of 511MT app and real-time conditions.

- The oversize and overweight permit process is very good and works well for most permitting needs. However, there are times when the bridge analysis process is cumbersome and results in delays. There have been instances where delay is measured in days, which is difficult for some members. For the most part this issue applies to what are referred to as super loads. There are times when certain machinery is reduced as much as possible but still has problems. Also, we know that many of Montana's highways include those parts of the Interstate system that have height restrictions which require routing that is often circuitous. We know there is interest in providing crossings for various wildlife and urge the department to avoid height restrictions on existing routes that are without or with only very limited height restrictions.
- I think a common technology for 511MT would be a great service. Improved real-time communications across state lines.
- Not sure.
- More pre-pass scales.
- Any information on improvements to move freight through our state, establishment of intermodal facilities, significant improvements to road infrastructure, addition of high & wide corridors is of interest. This helps with business attraction efforts.
- Highway maintenance.

Q10: Are there seasonal or weather-related challenges that impact your agency's freight operations?

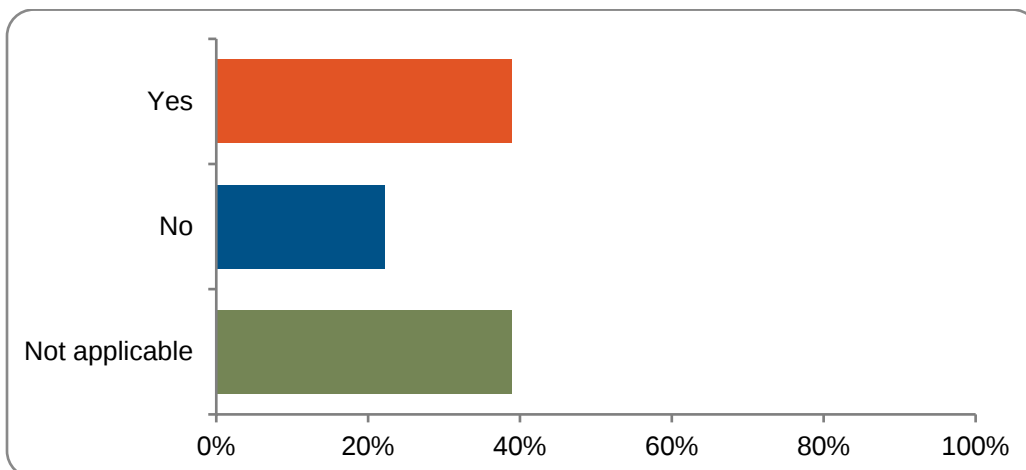


If yes (Please Specify):

- Snow and Wind.
- Extreme weather events, including high winds and below zero cold.
- Just the usual roads in Montana, some rest areas close during the winter season.
- Weather and more snow plowing operations.

- Winter road closures or severe driving conditions.
- We need the highways open in order for us to service our customers and keep the shelves stocked. MDT may need to pay more for plow drivers and if the union barks about higher pay in areas such as Bozeman, take them to task. Let the public know why we don't have enough drivers.
- Weather can always impact operations, but MDT does a great job dealing with weather, keeping routes open and as safe as possible. Sometimes routes are incumbered with weight restrictions necessary to protect the roadway. We understand that and appreciate the effort you make to limit those applications as much as possible. Finally, we know that there has been considerable effort to replace older bridges on many highways across the state over the last several years. This effort will improve transportation efficiency and safety. MPA appreciates those efforts.
- Road and pass closures due to snow and ice.
- There has been a decline in the prompt response of snowplows. MDT does not spend the amount of time snow plowing (or perhaps a lack of manpower, or maybe it's the lack of knowledgeable manpower). In our area, the plows were always out prior to working hours for both plowing and sanding and on stormy days they would be out multiple times a day. Now, there are times when they have not cleared the highways by the time the workday starts.
- Responding to and preparing for winter weather events are a top state agency priority.
- Adverse driving conditions, and tourists are not prepared for mountain driving.
- Winter weather will always present challenges to truck transportation.

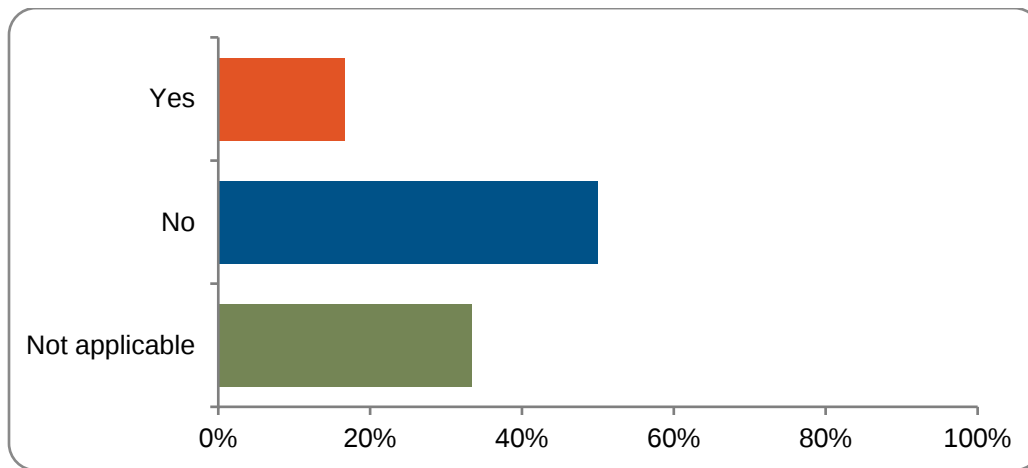
Q11: Do you operate or coordinate freight activities across Montana state lines?



If yes, please explain:

- Just knowing different regulations by State.
- Winter roads, states are not working with each other on road construction areas and are scheduling them at different times. Sixty-plus miles of road construction at very reduced speeds.
- Varying weight limits and road conditions.
- We do, but other than items previously mentioned we have no further comments.
- Weight differences and permit differences between the states. Idaho and Utah are both 129,000-pound max states. Montana is 132,000 pounds. Wyoming is 117,000 pounds.
- There is a lack of resources to inform us about hauling overweight loads across state lines. Each state has their own bridge law limits for loads over 80,000 pounds.
- Shortage of Montana based goods to support transportation.

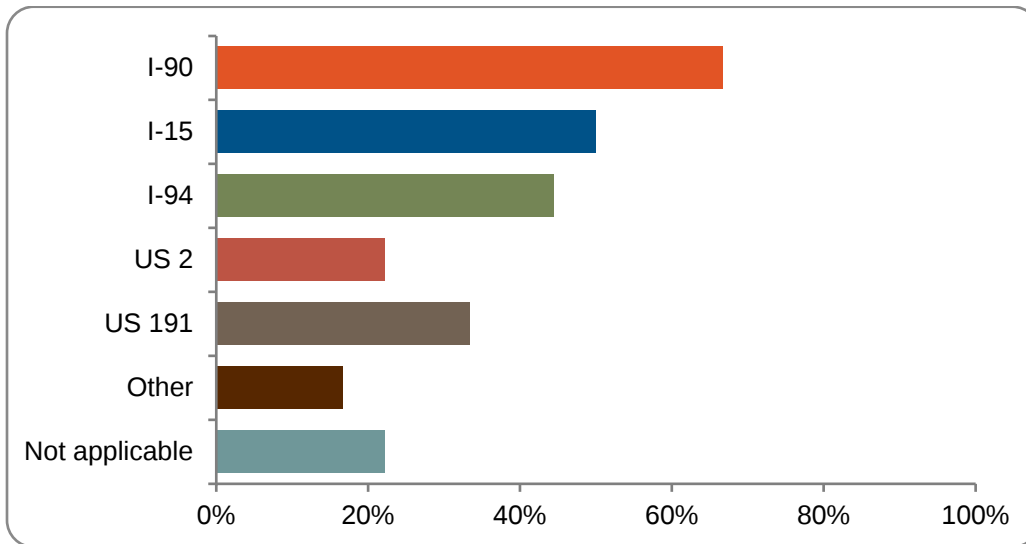
Q12: Do you support initiatives that promote truck platooning and autonomous commercial vehicles?



If yes, please explain:

- Montana doesn't have the right conditions during the winter months for this to be viable.
- Reduced labor costs and fuel consumption, and enhanced safety.
- Anything that makes it safer.
- I believe there was an industry and legislative effort pushed back in 2017-2019, but do not have any information to share on best practices or success.
- New technologies are an opportunity for our industry to become more efficient and safer.

**Q13: What roadways does your agency use the most when transporting freight?
(Select all that apply)**



Appendix C: Inventory of Public and Private Truck Parking

Inventory of MDT Maintained Public Truck Parking and Rest Areas										
#	NHS Rest Stop Name	Highway Route Number	County	Latitude	Longitude	Total Parking (All Vehicle Types) Spaces	# of CMV Parking Spaces	Parking Hours	Max # of Hours a Truck Can Park	Average Max User Capacity
1	Anaconda Rest Area	I-90	Deer Lodge	46.092956	-112.807652	44	15	12AM to 12 AM	12	50%
2	Armington Junction Rest Area	US-87	Cascade	47.349643	-110.896205	27	12	12AM to 12 AM	12	50%
3	Bad Route Rest Area	I-94	Dawson	46.899284	-105.018488	53	15	12AM to 12 AM	12	50%
4	Bearmouth EB Rest Area	I-90	Granite	46.703755	-113.338418	70	17	12AM to 12 AM	12	75%
5	Bearmouth WB Rest Area	I-90	Granite	46.702827	-113.346065	72	21	12AM to 12 AM	12	50%
6	Bridger Rest Area	US-310	Carbon	45.337927	-108.916164	19	5	12AM to 12 AM	12	25%
7	Broadus Rest Area	US-212	Powder River	45.42179	-105.397038	26	15	12AM to 12 AM	12	50%
8	Clearwater Rest Area	MT-200	Missoula	47.002649	-113.369483	40	13	12AM to 12 AM	12	25%
9	Columbus EB Rest Area	I-90	Stillwater	45.598238	-109.065061	64	29	12AM to 12 AM	12	50%
10	Columbus WB Rest Area	I-90	Stillwater	45.600492	-109.066466	67	35	12AM to 12 AM	12	50%
11	Conrad Rest Area	I-15	Pondera	48.181483	-111.931095	52	18	12AM to 12 AM	12	25%
12	Culbertson Rest Area	US-2	Roosevelt	48.14818	-104.504808	36	11	12AM to 12 AM	12	50%
13	Custer EB Rest Area	I-94	Yellowstone	46.063491	-107.710321	27	10	12AM to 12 AM	12	25%
14	Custer WB Rest Area	I-94	Yellowstone	46.08994	-107.660155	30	11	12AM to 12 AM	12	25%
15	Dearborn NB Rest Area	I-15	Lewis & Clark	47.131161	-111.901253	47	25	12AM to 12 AM	12	25%
16	Dearborn SB Rest Area	I-15	Lewis & Clark	47.131934	-111.900903	47	25	12AM to 12 AM	12	25%
17	Dena Mora EB Rest Area	I-90	Mineral	47.419696	-115.629279	39	15	12AM to 12 AM	12	75%
18	Dena Mora WB Rest Area	I-90	Mineral	47.41956	-115.625026	41	16	12AM to 12 AM	12	75%
19	Divide NB Rest Area	I-15	Silver Bow	45.835205	-112.683548	31	11	12AM to 12 AM	12	50%
20	Divide SB Rest Area	I-15	Silver Bow	45.836558	-112.68608	31	11	12AM to 12 AM	12	50%
21	Emigrant Rest Area	US-89	Park	45.295493	-110.835056	29	7	12AM to 12 AM	12	50%
22	Flowing Wells Rest Area	MT-200	Garfield	47.325356	-106.170927	14	6	12AM to 12 AM	12	50%
23	Greycliff EB Rest Area	I-90	Sweet Grass	45.734601	-109.75778	77	24	12AM to 12 AM	12	50%
24	Greycliff WB Rest Area	I-90	Sweet Grass	45.736018	-109.757397	56	21	12AM to 12 AM	12	50%
25	Hardin EB Rest Area	I-90	Big Horn	45.780349	-108.000411	49	27	12AM to 12 AM	12	50%
26	Hardin WB Rest Area	I-90	Big Horn	45.782359	-108.002777	49	27	12AM to 12 AM	12	50%
27	Harlowton Rest Area	US-12	Wheatland	46.435799	-109.814331	41	16	12AM to 12 AM	12	25%
28	Hathaway EB Rest Area	I-94	Rosebud	46.261189	-106.279593	28	12	12AM to 12 AM	12	25%
29	Hathaway WB Rest Area	I-94	Rosebud	46.268988	-106.30615	23	11	12AM to 12 AM	12	25%
30	Headwaters Rest Area	US-287	Broadwater	45.92512	-111.59899	57	35	12AM to 12 AM	12	25%
31	Hysham EB Rest Area	I-94	Treasure	46.218138	-107.250061	38	21	12AM to 12 AM	12	25%
32	Hysham WB Rest Area	I-94	Treasure	46.219491	-107.250791	41	22	12AM to 12 AM	12	25%
33	Jefferson City NB Rest Area	I-15	Jefferson	46.406735	-112.013168	21	8	12AM to 12 AM	12	25%
34	Jefferson City SB Rest Area	I-15	Jefferson	46.415896	-112.006356	14	4	12AM to 12 AM	12	50%

Continued: Inventory of MDT Maintained Public Truck Parking and Rest Areas										
#	NHS Rest Stop Name	Highway Route Number	County	Latitude	Longitude	Total Parking (All Vehicle Types) Spaces	# of CMV Parking Spaces	Parking Hours	Max # of Hours a Truck Can Park	Average Max User Capacity
35	Lima Rest Area	I-15	Beaverhead	44.631203	-112.589463	51	19	12AM to 12 AM	12	25%
36	Lost Trail Rest Area	US-93	Ravalli	45.693668	-113.949973	29	6	12AM to 12 AM	12	25%
37	Mosby Rest Area	MT-200	Petroleum	46.989999	-107.860685	17	6	12AM to 12 AM	12	50%
38	Quartz Flat EB Rest Area	I-90	Mineral	47.076295	-114.767064	59	30	12AM to 12 AM	12	50%
39	Quartz Flats WB Rest Area	I-90	Mineral	47.074273	-114.765644	49	24	12AM to 12 AM	12	50%
40	Raynolds Pass Rest Area	US-287	Madison	44.90157	-111.59322	21	8	12AM to 12 AM	12	50%
41	Roberts Rest Area	US-212	Carbon	45.38452	-109.13927	13	3	12AM to 12 AM	12	25%
42	Sweet Grass Rest Area	I-15	Toole	48.993057	-111.961014	23	7	12AM to 12 AM	12	50%
43	Teton NB Rest Area	I-15	Teton	47.925188	-111.73057	29	9	12AM to 12 AM	12	25%
44	Teton SB Rest Area	I-15	Teton	47.92484	-111.735076	32	10	12AM to 12 AM	12	25%
45	Troy Rest Area	US-2	Lincoln	48.436505	-115.850609	38	12	12AM to 12 AM	12	25%
46	Vandalia Rest Area	US-2	Valley	48.370513	-106.793506	19	3	12AM to 12 AM	12	25%
47	Wibaux Rest Area	I-94	Wibaux	46.990414	-104.178353	37	8	12AM to 12 AM	12	50%
48	Alberton EB Parking Area	I-90	Mineral	47.012578	-114.542681	22	5	12AM to 12 AM	12	50%
49	Alberton WB Parking Area	I-90	Mineral	47.020745	-114.520055	11	2	12AM to 12 AM	12	50%
50	Barretts Parking Area	I-15	Beaverhead	45.12562	-112.746834	11	2	12AM to 12 AM	12	50%
51	Dupuyer Parking Area	US-89	Pondera	48.19857	-112.50701	12	3	12AM to 12 AM	12	25%
52	Gold Creek EB Parking Area	I-90	Powell	46.561641	-112.885405	31	11	12AM to 12 AM	12	25%
53	Gold Creek WB Parking Area	I-90	Powell	46.585492	-112.906183	30	11	12AM to 12 AM	12	50%
54	Homestake Pass EB Parking Area	I-90	Jefferson	45.914841	-112.377107	27	10	12AM to 12 AM	12	50%
55	Homestake Pass WB Parking Area	I-90	Jefferson	45.915483	-112.377145	26	10	12AM to 12 AM	12	50%
56	Livingston Parking Area	I-90	Park	45.660903	-110.700433	33	13	12AM to 12 AM	12	50%
57	Locate Parking Area	US-12	Custer	46.42039	-105.07426	10	2	12AM to 12 AM	12	25%
58	Lyons Creek NB Parking Area	I-15	Lewis & Clark	46.952238	-112.109274	14	2	12AM to 12 AM	12	50%
59	Lyons Creek SB Parking Area	I-15	Lewis & Clark	46.954519	-112.10704	14	2	12AM to 12 AM	12	50%
60	Red Rocks NB Parking Area	I-15	Beaverhead	44.85332	-112.795344	23	9	12AM to 12 AM	12	50%
61	Red Rocks SB Parking Area	I-15	Beaverhead	44.852278	-112.796417	19	7	12AM to 12 AM	12	50%
62	Rock Creek EB Parking Area	I-90	Granite	46.726458	-113.637989	24	6	12AM to 12 AM	12	50%
63	Rock Creek WB Parking Area	I-90	Granite	46.727112	-113.635988	23	6	12AM to 12 AM	12	50%
64	Vista Point Parking Area	US-212	Carbon	45.043166	-109.407085	27	5	12AM to 12 AM	12	25%
Total						2174	822			

Inventory of Private Truck Stops in Montana										
Name	City	Nearest Highway	Hours of Operation	Striped Truck Parking Spaces	Unstriped Spaces	Convenience Store	Restaurants	Mechanical Service	Truck Wash	Scales
Town Pump Food Store	Big Timber	I-90, US-191	24 Hours	0	5	Yes				
Town Pump Food Store	Billings	I-90, US-87, US-212	24 Hours	0	8	Yes	Yes			
Town Pump Food Stores	Hamilton	US-93	24 Hours	0	10	Yes				
Yellowstone Travel Plaza	Livingston	I-90, US-191	24 Hours	0	15					
Eddies Corner	Moore	US-87, US-191	5:30AM - 11PM	0	16	Yes				
Westside Self Service	Malta	US-2, US-191	5AM - 12AM	0	20	Yes				
Town Pump	Boulder	I-15	24 Hours	0	25	Yes				
Town Pump	Livingston	I-90, US-89, US-191	24 Hours	0	25	Yes				
Pilot Flying J	Belgrade	I-90	24 Hours	0	30	Yes				
Town Pump	Libby	US-2	24 Hours	0	30	Yes				
Exxon	Haugan	I-90	24 Hours	0	30	Yes	Yes			
Town Pump	Columbia Falls	US-2	24 Hours	0	40	Yes				
Flying J DLR - Broadway	Hardin	I-90, US-87, US-212	24 Hours	0	45	Yes	Yes			
I-90 Auto-Truck Plaza	Deer Lodge	I-90	24 Hours	0	55	Yes	Yes			
Pilot Flying J	Miles City	I-94, US-12	24 Hours	0	66	Yes			Yes	
Town Pump	Three Forks	I-90, US-287	24 Hours	0	73	Yes	Yes			Yes
Town Pump	Columbus	I-90	24 Hours	0	76	Yes	Yes			
Town Pump	Butte	I-15	24 Hours	0	115	Yes	Yes			Yes
Town Pump	Lolo	US-12, US-93	24 Hours	3	20	Yes	Yes			
Exxon	Shelby	I-15, US-2	24 Hours	12	8	Yes				
Pilot Flying J	Missoula	I-90, US-12	24 Hours	18	61	Yes	Yes			Yes
ZIP TRIP	Park City	I-90	24 Hours	19	12	Yes				
Travel Centers Of America - Pelican Laurel	Laurel	I-90, US-212	24 Hours	27	25	Yes				
Trail Star Truck Stop	Glendive	I-94	24 Hours	29	15	Yes				
Zip Trip	Miles City	I-94, US-12	24 Hours	30	5	Yes				
Flying J Travel Plaza	Belgrade	I-90	24 Hours	55	23	Yes	Yes			Yes
Muralt's Travel Plaza	Missoula	I-90, US-93	24 Hours	55	38	Yes	Yes	Yes		Yes
Flying J Travel Plaza	Great Falls	I-15	24 Hours	74	0	Yes	Yes			
Pilot Travel Center - Town Pump	Great Falls	I-15	24 Hours	85	15	Yes	Yes			Yes
Town Pump Flying J Truck Stop	Billings	I-90, US-87, US-212	24 Hours	95	10	Yes				
TA Travel Center	Missoula	I-90, US-93	24 Hours	106	15	Yes	Yes	Yes		Yes
Pilot Travel Centers	Billings	I-90, US-87, US-212	24 Hours	107	27	Yes	Yes			Yes
Town Pump - Flying J Travel Center	Missoula	I-90, US-93	24 Hours	108	20	Yes	Yes			Yes
Town Pump	Butte	I-15	24 Hours	120	25	Yes				

Information in this table is an estimate and is provided by American Truck Parking, which is a resource provided by University of California, Berkeley. <http://www.americantruckparking.com/about-us>

Appendix D: List of Abbreviations and Acronyms

ABC	Accelerated Bridge Construction
AFB	Air Force Base
AGSL	Alder Gulch Short Line Railroad
ARM	Administrative Rules of Montana
ATA	American Trucking Association
AV	Autonomous Vehicle
BAP	Butte, Anaconda and Pacific Railroad
BBER	Bureau of Business and Economic Research
BNSF	BNSF Railway
BrM	Bridge Structure Management System
CAV	Connected and Autonomous Vehicle
CHSP	Comprehensive Highway Safety Plan
CMAQ	Congestion, Mitigation, Air Quality
CMV	Commercial Motor Vehicle
CP	Canadian Pacific Railroad
CRFC	Critical Rural Freight Corridors
CUFC	Critical Urban Freight Corridors
CVSP	Commercial Vehicle Safety Plan
DEQ	Montana Department of Environmental Quality
DLI	Montana Department of Labor and Industry
DMVT	Daily Vehicle Miles Traveled
DMVW	Dakota, Missouri Valley, and Western
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAF	Freight Analysis Framework
FAST	Fixing America's Surface Transportation Act
FEMA	Federal Emergency Management Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
GHG	Greenhouse Gas
GDP	Gross Domestic Product
GNC	Great Northern Corridor
GRGL	Global Rail Group
GVWR	Gross Vehicle Weight Rating
HOS	Hours of Service
HSIP	Highway Safety Improvement Program
I-15	Interstate 15
I-90	Interstate 90
I-94	Interstate 94
IIJA	Infrastructure Investment and Jobs Act

IRI	International Roughness Index
ISTEA	Intermodal Surface Transportation Efficiency Act
ITD	Innovative Technology Deployment
LCPA	Lincoln County Port Authority
LOS	Level of Service
LRTP	Long Range Transportation Plan
MCA	Montana Code Annotated
MCS	Motor Carrier Services
MCSAP	Motor Carrier Safety Assistance Program
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MHP	Montana Highway Patrol
MMT	Mission Mountain Railroad
MPO	Metropolitan Planning Organization
MRL	Montana Rail Link
MS4	Small Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MTA	Montana Trucking Association
NAFTA	North American Free Trade Agreement
NEC	Not Elsewhere Classified
NEPA	National Environmental Policy Act
NHFN	National Highway Freight Network
NHFP	National Highway Freight Program
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NMFM	Interim National Multimodal Freight Network
NOx	Nitrogen Oxides
OS/OW	Oversize / Overweight
PHFS	Primary Highway Freight System
PDA	Preliminary Damage Assessment
PHMSA	Pipeline Hazardous Materials Safety Administration
PM	Port of Montana
PNM	Port of Northern Montana
PRB	Powder River Basin
PvMS	Pavement Management System
Px3	Performance Programming Process
RHGCP	Rail Highway Grade Crossing Program
RI	Ride Index
ROW	Right-of-Way
SAFETEA	Safe, Accountable, Flexible, Efficient Transportation Equity Act
SIAP	Systems Impact Action Process

SFY	State Fiscal Year
SHSP	Strategic Highway Safety Plan
STRACNET	Strategic Rail Corridor Network
STRAHNET	Strategic Highway Network
TAMP	Transportation Asset Management Plan
TAPCO	Traffic and Parking Control Company
TBWG	Transportation Border Working Group
TEA-21	Transportation Equity Act for the 21st Century
TEDDY	The Electric Driverless Demonstration in Yellowstone
TIP	Transportation Improvement Program
TRRZ	Transco Railway Products
TRQ	Tariff Rate Quota
TTTR	Truck Travel Time Reliability
U.S.C	United States Code
UAV	Unmanned Aerial Vehicle
UP	Union Pacific Railroad
US 212	United States Highway 212
US 87	United States Highway 87
US 93	United States Highway 93
USDOT	United States Department of Transportation
USMCA	U.S.-Mexico-Canada Agreement
VMT	Vehicle Miles Traveled
WBWG	Western Border Working Group
WSFC	Western States Freight Coalition

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