















ACRONYMS

Executive Su	Immary Acronyms
SRP	Statewide Rail Plan
WYDOT	Wyoming Department of Transportation
Chapter 1 A	cronyms
AAR	Association of American Railroads
AT&SF	Atchison, Topeka, and Santa Fe Railway
BN	Burlington Northern Railroad
BNSF	BNSF Railway
C&NW	Chicago and North Western Railway
C&S	Colorado and Southern Railway
CB&Q	Chicago, Burlington, and Quincy Railroad
DOTs	Departments of Transportation
FAST Act	Fixing America's Surface Transportation Act of 2015
FRA	Federal Railroad Administration
FRPR	Front Range Passenger Rail
GN	Great Northern Railway
MAP-21	Moving Ahead for Progress in the 21st Century
MPOs	Metropolitan Planning Organizations
NP	Northern Pacific Railway
PRIIA	Passenger Rail Investment and Improvement Act of 2008
SP&S	Spokane, Portland, and Seattle Railway
SRP	Statewide Rail Plan
SRRR	Swan Ranch Railroad
STB	Surface Transportation Board
UP	Union Pacific Railroad
WBC	Wyoming Business Council
WTC	Wyoming Transportation Commission
WYDOT	Wyoming Department of Transportation
Chapter 2 A	cronyms
AAR	Association of American Railroads
ARRA	American Recovery and Reinvestment Act
AASHTO	American Association of State Highway and Transportation Officials
BDW	Bighorn Divide & Wyoming Railroad
BNSF	BNSF Railway
BN	Burlington Northern Railroad
BRC	Business Council's Business Ready Community
BUILD Grant	Better Utilizing Investments to Leverage Development Grant
CAGR	compound annual growth rate

CP Canadian Pacific Railway







C&NW	Chicago & North Western Transportation Company
CB&Q	Chicago, Burlington & Quincy Railroad
C&S	Colorado & Southern Railway
CRISI	Consolidated Rail Infrastructure and Safety Improvements Program
DM&E	Dakota, Minnesota and Eastern Railroad
DM&E	Dakota, Minnesota, and Eastern Railway
EDA	Economic Development Administration
EIA	Energy Information Administration
EPA	United States Environmental Protection Agency
ESF	Emergency Support Function
FAF	Freight Analysis Framework
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FY	Fiscal Year
G&W	Genesee & Wyoming
HAZMAT	Hazardous Materials
INFRA Grant	Infrastructure for Rebuilding America Grant
LEDC	Laramie Economic Development Corporation
MRL	Montana Rail Link
PRIIA	Passenger Rail Investment and Improvement Act
PRB	Powder River Basin
PTC	Positive Train Control
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RCPE	Rapid City, Pierre & Eastern Railroad
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SOP	State Operations Plan
SP	Southern Pacific Railroad
STCC	Standard Transportation Commodity Code
STB	Surface Transportation Board
SRRR	Swan Ranch Railroad
STRACNET	Strategic Rail Corridor Network
TEU	Twenty-foot Equivalent Units
TIGER Grant	Transportation Investment Generating Economic Recovery Grant
TWC	Track Warrant Control
UP	Union Pacific Railroad
WCDC	Weston County Development Corporation
WYCO	Wyoming and Colorado Railroad
WYDOT	Wyoming Department of Transportation
WY OL	Wyoming Operation Lifesaver

Chapter 3 AcronymsBNSFBNSF RailwayBSPRABig Sky Passenger Rail AuthorityCR/PRCommuter Rail/Passenger Rail Feasibility StudyFASTFixing America's Surface Transportation





- FRA Federal Railroad Administration
- FRPR Front Range Passenger Rail
- FY Fiscal Year
- HSR High-Speed Rail Feasibility Study
- mph mile per hour
- NEPA National Environmental Policy Act
- PRII Passenger Rail Investment and Improvement Act of 2008
- RMRA Rocky Mountain Rail Authority
- SRP Statewide Rail Plan
- UP Union Pacific Railroad
- WYDOT Wyoming Department of Transportation

Chapter 4 Acronyms

BDW	Bighorn Divide and Wyoming Railroad
BNSF	BNSF Railway
PTC	Positive Train Control
RCPE	Rapid City, Pierre and Eastern Railroad
SRP	Statewide Rail Plan
SRRR	Swan Ranch Railroad
UP	Union Pacific Railroad
WYDOT	Wyoming Department of Transportation

Chapter 5 Acronyms

BNSF	BNSF Railway
FRA	Federal Railroad Administration
FY	Fiscal Year
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century
PRIIA	Passenger Rail Investment and Improvement Act of 2008
SDP	Service Development Plan
SRP	Statewide Rail Plan
STIP	State Transportation Improvement Program
STRACNET	Strategic Rail Corridor Network
UP	Union Pacific
WYDOT	Wyoming Department of Transportation

Chapter 6 Acronyms

SRP	Statewide Rail Plan
WYDOT	Wyoming Department of Transportation



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EXECUTIVE SUMMARY





ES1. INTRODUCTION

The Wyoming Department of Transportation (WYDOT) has developed this 2021 Statewide Rail Plan (SRP) to guide the state's rail freight and passenger transportation planning activities and project development plans over the next 20 years.

The SRP describes the state's existing rail network and rail-related social and economic impacts. It also describes the SRP process, Wyoming's rail vision and associated service objectives, identified and proposed short- and long-range capital improvements, studies, and recommended next steps to address the issues and goals identified by stakeholders.

The SRP is intended to meet the requirements established by the federal Passenger Rail Investment and Improvement Act of 2008, as amended by the Fixing America's Surface Transportation Act of 2015. It is also intended to formulate a state vision for railroad transportation in the long-range horizon (to the year 2045) and strategies to achieve that vision.

ES2. WYOMING'S RAIL SYSTEM

Wyoming's rail system plays an essential role in linking the state's shippers with markets throughout North America. The coal industry remains the leading high-volume rail shipper in the state. Because of the demand for coal from Wyoming's Powder River Basin, Wyoming originates more tons of freight by rail than any other state in the United States. In addition to coal, Wyoming has continually hosted large volume of transcontinental rail traffic between the Pacific Coast and the Midwest.

Wyoming's railroads historically offered extensive passenger service, but there have been no regularly scheduled passenger-rail services in Wyoming since Amtrak discontinued its *Pioneer* route across southern Wyoming in 1997.

A brief description of Wyoming's rail network is provided below.

FREIGHT-RAIL SYSTEM

The Wyoming freight-rail system is operated by two large Class I railroads, one Class II (regional) railroad, and two Class III (or short-line) railroads. The system consists of 1,750 route-miles, excluding trackage rights agreements between railroads. Several small industrial railroads own segments of track at mines and industrial sites in Wyoming but, due to their classification, the mileage of privately owned industrial track over which they operate is not included in the calculations for the state's rail network.

Nearly all rail in the state is owned by two Class I carriers: BNSF Railway and the Union Pacific Railroad. These railroads own a total of 1,727 route-miles. The Rapid City, Pierre & Eastern Railroad, a Class II carrier, owns 7 route-miles. The two short-line, or Class III, railroads operating in the state own the remaining 16 route-miles in Wyoming: Bighorn Divide & Western Railroad and Swan Ranch Railroad.

In 2018, Wyoming's freight railroads carried over 416 million tons of freight, or over 4.9 million rail cars loaded with various commodities which either originated and/or terminated within the state or traveled through the state. The leading commodity originating in Wyoming is coal, which makes up about 77 percent of rail-borne tons. Other significant commodities include soda ash, petroleum products, industrial sand, cement, and bentonite.

Total rail-freight flows in Wyoming are forecasted to decrease through 2045 at a compound annual growth rate of (-1.5) percent. The reason for the projected decrease in rail traffic is due to declining coal demand and production, which



would negatively impact originating and intrastate traffic volumes. Excluding coal, all other rail-freight flows in Wyoming are forecasted to increase through 2045 at a compound annual growth rate of 1.3 percent.

PASSENGER-RAIL SERVICE

Wyoming does not currently have long-distance, intercity, or commuter service provided by Amtrak or any other passenger-rail operator. No funding sources have been identified to implement passenger rail service in the near term. Wyoming actively supports efforts in neighboring states to develop and expand passenger rail service in the region.

ES3. RAIL IMPACTS

Rail service is critical to Wyoming's economy. Mining industries are the largest nongovernmental employers, and these industries depend on rail to move goods into and out of the state as efficiently as possible.

In addition to the direct employment benefits, the availability of rail transport provides cost and logistical advantages to Wyoming firms that enable businesses in the state to compete effectively in the global marketplace. The presence of freight rail service is especially important in rural areas where mining, agriculture, and local industries rely on freight shipping.

Railroads are about four times more fuel efficient than trucks on the basis of ton-miles transported. Since greenhouse gas emissions are directly related to fuel consumption, every ton-mile of freight moved by rail instead of by truck reduces greenhouse gases by up to 75 percent. The diversion of freight traffic to rail also increases the safety of Wyoming's highway system and reduces wear on highway infrastructure.

ES4. RAIL PLAN DEVELOPMENT PROCESS

The SRP was developed under the authority and guidance of the Systems Planning and Railroads section of WYDOT. The Systems Planning and Railroads section is responsible for rail planning in the state and also assists with various rail-related functions including highway-rail at-grade crossing improvements, support for grade separation projects, and the development of this SRP.

To provide a medium for public review, the draft SRP was posted to the WYDOT website (<u>www.dot.state.wy.us</u>) prior to finalization of the SRP.

All railroads operating in Wyoming were contacted to solicit information regarding their operations, current or upcoming projects, and challenges facing the industry. Similar interviews were conducted with a variety of shippers (customers) in Wyoming who make use of the rail network for their freight transportation needs.

A stakeholder outreach meeting was held virtually on October 28, 2020, to educate stakeholders regarding the SRP process, obtain input for developing a Rail Vision, and provide a forum for discussing specific rail issues in the state. Participants included representatives from the railroads, representatives of state and local agencies, and other interested parties.



A public survey was conducted online between September 30 and December 11, 2020, to solicit input from members of the public. The survey was shared on the SRP project website as well as through posts on WYDOT's Facebook page. A total of 185 individual responses were received.

ES5. KEY STAKEHOLDER INPUT ON RAIL ISSUES, CHALLENGES, AND **OPPORTUNITIES**

Various themes were identified from the comments received through the public survey. Among these are:

- Interest in intercity passenger rail service to connect cities in Wyoming with each other and with adjacent states. •
- Identification of rail as a safer travel alternative to highways during winter weather conditions. .
- Interest in highway-rail grade crossing safety and grade separation of crossings where frequent or lengthy delays . to motorists and pedestrians are common.
- Interest in use of local labor for capital improvement projects.
- Interest in preservation of railroad employment opportunities. •

Passenger rail stakeholders reported an interest in establishing intercity services to connect cities in Wyoming and to provide an alternate means of transportation to neighboring states and metropolitan areas.

Overall, stakeholders and the general public expressed understanding and appreciation of the value and potential of the state's freight-rail operations and the potential for passenger-rail services.

ES6. WYOMING'S RAIL VISION AND SERVICE OBJECTIVES

WYDOT has developed the following vision statement for rail transportation in the state:

The future Wyoming rail system will provide safe, efficient, and reliable mobility for people and goods. In addition, it will contribute to a more balanced transportation system, economic growth, and energy conservation. The state's rail infrastructure will continue to provide transportation efficiency, cost effectiveness, accessibility, capacity, and intermodal connectivity to meet freight transportation demand. To further this vision, the state will continue to support the business council and economic development associations in planning rail service improvements.

Rail service objectives aligned with the Rail Vision were developed based on the rail-related benefits, issues, and obstacles that had been identified. These objectives are described below.

FREIGHT-RAIL OBJECTIVES

- Encourage economic development in Wyoming through investments in the rail system; for example, improved access to the national rail network via new industrial spurs and intermodal facilities that promote interconnectivity with truck transportation.
- Support the interchange of Class I rail traffic in the state, as applicable. •
- Minimize crashes, injuries, and fatalities at highway-rail grade crossings in Wyoming through safety improvements, crossing consolidation, and grade separations.



PASSENGER-RAIL OBJECTIVES

- Participate in the Colorado Front Range Passenger Rail planning study and monitor new passenger rail planning efforts in Montana that could set the stage for the future development of potential passenger rail service in the region.
- Continue outreach to stakeholders.
- Encourage multimodal integration.
- Support the identification of funding strategies for passenger-rail initiatives, as applicable.

ES7. PROPOSED CAPITAL INVESTMENT PROGRAMS AND FUTURE STUDIES

Wyoming's role in identifying and prioritizing freight and passenger rail service and infrastructure projects and the benefits of each is limited for the following reasons: (1) the State of Wyoming may not currently obligate any state aid or debt in the construction of any rail system, as per the Wyoming state constitution; (2) the state's Class I freight railroads are under no obligation to report potential improvements and capital project priorities for their networks or divulge the schedule and capital costs associated with such projects; and (3) no passenger-rail services exist or are anticipated for short-term implementation in Wyoming.

In the interim, WYDOT has developed a Wyoming Rail Project Inventory, prioritizing rail service and infrastructure projects for short-term (4 years) and long-term (20 years) implementation in Wyoming and identifying the potential conceptual capital cost of each project. This Wyoming Rail Project Inventory has been assembled with inputs from the SRP stakeholder outreach process and through coordination with the Wyoming Business Council and other economic development groups to identify projects for potential implementation in the near term that are in concert with the State's rail vision. This project inventory is presented in Chapter 5, Wyoming's Rail Service and Investment Program.

ES8. STATE RAIL PLAN RECOMMENDATIONS AND NEXT STEPS

Based on the input received from stakeholders and the public during the preparation of the Wyoming SRP, WYDOT will work toward the following initiatives:

- Continue to promote and enhance rail safety through public awareness, coordination with railroads, and infrastructure improvements.
- Provide advocacy for rail shippers, encouraging multimodal cooperation and collaboration between shippers and railroads.
- Continue to work with neighboring states on freight- and passenger-rail initiatives that benefit the region.
- Support the study of new intercity passenger rail initiatives that could enhance mobility options for Wyoming.



ES9. SUMMARY

The State of Wyoming has undertaken a comprehensive study of its freight rail network and has identified key issues and opportunities through a wide-ranging rail stakeholder and public outreach process. The SRP serves to document this information and establish a direction for rail planning and project development into the future while meeting the federal requirements to qualify the State for any future federal rail funding.

The development of the SRP would not have been possible without the participation of rail stakeholders and others concerned about a safe and efficient rail transportation network in the state that promotes economic vitality. WYDOT wishes to express its appreciation to those individuals and parties who participated in this effort.













CHAPTER 1

The Role of Rail in Wyoming's Statewide Transportation System







1.1 INTRODUCTION

The Wyoming Department of Transportation (WYDOT) developed this 2021 Wyoming Statewide Rail Plan (SRP) for the State of Wyoming to comply with the federal Passenger Rail Investment and Improvement Act of 2008 (PRIIA), as amended by the Fixing America's Surface Transportation Act of 2015 (FAST Act). The SRP is intended to formulate a state vision for railroad transportation in the long-range horizon, to the year 2045, and strategies to achieve that vision. With this purpose in mind, the SRP was developed with extensive public participation and involvement by the state's railroads and rail users.

In 2008, the United States Congress passed PRIIA with the expressed intent of improving passenger rail service in the United States. PRIIA requires that any state seeking federal assistance for either passenger or freight improvements has an updated SRP. PRIIA further stipulated the minimum content of the SRP as codified in Public Law 110-432.

The SRP meets the requirements set forth in PRIIA and public law, as well as the final *State Rail Plan Guidance* provided by the Federal Railroad Administration (FRA) in September 2013.

This chapter illustrates the historic, current, and proposed future role of rail in Wyoming's multimodal transportation system, and describes how the state is organized to provide governmental, legal, and financial support to Wyoming's rail transportation system to support economic development and safety improvements.

1.2 A HISTORY OF RAIL

Railroads have been a major force in the development of the United States and have provided the basis for perpetual economic vitality. Wyoming in particular has witnessed the positive economic impacts resulting from the presence of rail service throughout its history. Many cities and towns in the state owe their very existence to the railroads. In 1867, the Union Pacific Railroad (UP) laid the first rails in Wyoming when it constructed its portion of the first transcontinental railroad between Omaha, Nebraska, and Northern California. With the transcontinental railroad came promises of prosperity, opportunity, and a nation spanning coast to coast. Numerous railroad companies soon followed, bringing this versatile mode of transportation to the virtually uninhabited and unexplored Wyoming Territory.

When it first reached the Wyoming Territory, UP was constructing a line westward through the southern part of the state to take advantage of the low crossing of the Continental Divide, thus avoiding a more mountainous route through some of the more established and potentially more lucrative settlements in neighboring Colorado. As a result of UP bypassing the city of Denver, Colorado, the citizens of Denver funded the construction of their own railroad, the Denver Pacific Railway and Telegraph Company (Denver Pacific), to connect with the UP at Cheyenne.¹ The Denver Pacific would then be operated by UP and absorbed into its system.

Meanwhile, the Colorado Central Railroad based in Golden, Colorado, wished to connect Golden and nearby mountain mining districts to the rail system. After connecting to the Denver Pacific at Denver, the Colorado Central went on to

¹ Forest, Kenton (1981) Denver's Railroads: The Story of Union Station and the Railroads of Denver



construct its own line northward in phases through Boulder, Longmont, and Fort Collins, Colorado, along the Front Range, ultimately reaching Cheyenne, Wyoming.

To the north, the Fremont, Elkhorn, and Missouri Valley Railroad entered Wyoming from the east along the Niobrara River, reaching Douglas and Casper, Wyoming. This line was ultimately was absorbed into the Chicago and North Western Railway (C&NW) and extended to Lander, Wyoming.

To connect Cheyenne to the northern areas of Wyoming, the Cheyenne and Northern Railway was formed. Cheyenne and Northern built northward from Cheyenne to Wendover, Wyoming.² UP gained control of this line and extended it to Orin, Wyoming, to connect with the C&NW.

Colorado Central, Cheyenne and Northern, and a number of other lines that eventually had come under UP control within Colorado and Wyoming would soon be consolidated to form the independent Colorado and Southern Railway (C&S). Shortly thereafter, C&S was acquired by and became a subsidiary of the Chicago, Burlington, and Quincy Railroad (CB&Q).

The CB&Q itself constructed two major lines across Wyoming. One of the routes entered the northeastern part of the state near Newcastle, continuing on to Gillette and Sheridan, and ultimately reaching a connection with the Northern Pacific Railroad (NP) near Billings, Montana. A branch to Cody, Wyoming, was also built, often hosting passenger trains with tourists bound for Yellowstone National Park. The second major route came later, following the CB&Q's acquisition of the C&S.³ This second route linked the NP at Laurel, Montana, to the C&S at Orin, Wyoming, via the scenic Wind River Canyon, passing through towns such as Lovell, Greybull, Worland, Thermopolis, Casper, and Douglas, Wyoming. Lastly, a connection was completed between Wendover and Guernsey, Wyoming, where the CB&Q had previously constructed a branch line up the North Platte Valley from Northport, Nebraska. This short segment, known as the Wendover Cutoff, was a challenging feat of engineering due to the need to construct numerous tunnels.⁴

The scheduled daily passenger service on the CB&Q lines in Wyoming ceased by the late 1960s when the United States Postal Service ended the haulage of mail on these trains.⁵ Passenger service through southern Wyoming on the UP; however, would be transferred to Amtrak and continue operation from 1971 to 1983 and again for a brief period between 1991 and 1997. At the time of writing, there are not any regularly scheduled passenger rail services in Wyoming.

In 1970, the CB&Q merged with the Great Northern (GN), Northern Pacific (NP), and Spokane, Portland, and Seattle (SP&S) railroads to comprise the Burlington Northern Railroad (BN), forming a network stretching from the Pacific Northwest to the Gulf Coast of Texas, crossing the Great Plains and the upper Midwest.

² History Colorado, *Cheyenne & Northern Railway*. Retrieved from:

https://www.historycolorado.org/sites/default/files/media/document/2019/cheyenne_northern_railway_Mss.793.pdf ³ Nickerson, Gregory (2014) The Burlington Route: Wyoming's Second Transcontinental Railroad. Retrieved from:

https://www.wyohistory.org/encyclopedia/burlington-route-wyomings-second-transcontinental-railroad

⁴ The Historical Marker Database, *The Guernsey-Wendover Cutoff*. Retrieved from: <u>https://www.hmdb.org/m.asp?m=98423</u> ⁵ Wyoming Department of Transportation (2008) *Passenger Rail Feasibility Study*. Retrieved from:

http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Planning/Passenger%20Rail%20Interim%20Report.pdf



In 1979, BN completed construction of a new line in Wyoming between Gillette and Orin.⁶ This would come to be known as the Orin Line and it was built solely to access the rich coal deposits of the Powder River Basin. The coal from this area became the principal source of rail traffic originating in Wyoming.

The final major rail line constructed in Wyoming was a connection built by C&NW between an existing UP branch line at Joyce, Nebraska, and the southern end of the Powder River Basin at Shawnee Junction near Orin, Wyoming, utilizing and repurposing parts of the former Fremont, Elkhorn, and Missouri Valley line along the Niobrara River. Completed in 1984, this gave C&NW and UP access to the Powder River Basin coal, fostering competition with the BN.⁷ The BN's Orin Line then became jointly owned by BN and the UP/C&NW partnership. In 1995, UP acquired and merged the C&NW into its system.

In 1996, BN merged with the Atchison, Topeka, and Santa Fe Railway (AT&SF) to form the Burlington Northern Santa Fe (BNSF). BNSF later rebranded itself as BNSF Railway. In 2010, BNSF was acquired by Berkshire Hathaway, led by investor Warren Buffett.

Today, UP and BNSF are the two major (Class I) railroad companies serving Wyoming and the vast expanse of the western United States.

In 2011, Wyoming once again saw new railroad construction as the Swan Ranch Railroad (SRRR) was built to serve the Swan Ranch Industrial Park near Cheyenne. SRRR connects to both UP and BNSF while serving a variety of shippers with modern transload facilities.

Railroad-building in Wyoming often preceded settlement, played an integral role in the development of the vast Wyoming territory, and provided a necessary link to neighboring states and commercial centers. In addition to the major lines mentioned above, numerous branch lines were built to access new sources of traffic. The state had 1,931 miles of rail by 1920 and peaked at 2,065 miles in 1995. Extraction and forwarding of Wyoming's vast inland natural resources would never have been efficient or economically feasible without rail transportation.

Unlike the rail systems in most other states, the 153-year-old Wyoming rail system has not experienced considerable rationalization or consolidation. In fact, it has seen considerable growth during the last 50 years. In 2017, more freight originated in Wyoming (343.7 million tons) than in any other state in the United States, according to the Association of American Railroads (AAR).⁸ Wyoming ranks 34th nationally in total rail-miles and is served by two Class I railroads (large, national carriers), one Class II (regional carrier), and two Class III (short-line) railroads. Wyoming hosts a substantial railroad workforce whose wages ranked 27th in the industry nationally during 2017.



⁶ RT&S, *BNSF employees celebrate Orin Line's 30-year anniversary*, December 7, 2009. Retrieved from: <u>https://www.rtands.com/news/bnsf-employees-celebrate-orin-lines-30-year-anniversary/</u>

⁷ Union Pacific Marks Silver Anniversary of Its First Southern Powder River Basin Coal Train, August 17, 2009. Retrieved from: https://www.uprr.com/newsinfo/releases/service/2009/0817_silver.shtml

⁸ Association of American Railroads, *State Rankings*, 2017. Retrieved from: <u>https://www.aar.org/wp-content/uploads/2019/05/AAR-State-Rankings-2017.pdf</u>



Freight-rail systems and services are profiled and described in detail in Chapter 2, Wyoming's Existing Rail System. There are currently no long-distance, intercity, or commuter passenger-rail operations in the state.

In addition to the rail system's historic role in moving goods to domestic and international markets and fueling nationwide power generation through coal movements for decades, the rail freight system is expected to play a leading role in making Wyoming a leader in emerging energy resource sectors.

1.3 WYOMING'S GOALS FOR THE STATEWIDE MULTIMODAL TRANSPORTATION SYSTEM

1.3.1 GOALS FOR THE MULTIMODAL TRANSPORTATION SYSTEM

The Wyoming SRP is part of WYDOT's ongoing efforts to execute its statewide transportation planning efforts and to fulfill its departmental goals, as follows:

- Ensure a vibrant, safe, and competent workforce
- Acquire and responsibly manage resources
- Provide safe, reliable, and effective transportation systems
- Provide essential public safety services and effective communication systems
- Create and enhance partnerships with transportation stakeholders
- Encourage and support innovation
- Preserve our history and heritage

1.3.2 STATE RAIL PLAN PURPOSE

The Wyoming SRP was developed with extensive participation from public and private stakeholders not only to meet the federal mandate for rail capital funding eligibility but also to establish the rail system's role in Wyoming. Other goals of this effort are to create a long-range vision for rail transportation in the state and to set a direction to ensure that rail not only continues to perform its current role but is capable of providing safer and more efficient and cost-effective movement of people and goods. Furthermore, it will be used as an instrument to fuel future transportation and economic initiatives in the state.

1.3.3 STATE RAIL PLANNING BACKGROUND

Included in PRIIA was a reauthorization of Amtrak and appropriation of funds for Amtrak and individual States to improve passenger-rail service, operations, and facilities. PRIIA required that each State develop an SRP consistent with new requirements before applying for capital grants authorized in PRIIA and the High-Speed Intercity Passenger Rail (HSIPR) Program. The requirements set forth in Section 303 of PRIIA have been scoped further by subsequent procedural guidance and presentation of a standardized format by the FRA in August 2012 and September 2013.

A Wyoming SRP was developed by WYDOT in 2004 following previous federal requirements, primarily for the purpose of identifying and analyzing passenger- and freight-rail services in the state and to demonstrate the role of rail services in Wyoming's diverse transportation network. An updated SRP was developed in 2014 and finalized in 2015.

The SRP requirements set forth by PRIIA must minimally address the following components to be deemed compliant and be subject to approval by FRA:



- An inventory of the existing overall rail transportation system and rail services and facilities within the state and an analysis of the role of rail transportation within the State's surface transportation system.
- A review of all rail lines within the State, including all freight rail lines, intercity passenger rail lines, commuter rail lines, and proposed high-speed rail corridors and significant rail line segments not currently in service.
 - \circ \hfill i. Contain an illustration of the State's entire rail system to include:
 - (1) The operating carrier or carriers,
 - (2) Location of freight, intercity passenger, high- speed, and commuter rail service, and
 - (3) Rail rights-of-way that have been preserved for potential reactivation;
 - ii. Contain most recent available data on freight rail tonnage originated and terminated within the State by major commodity;
 - o iii. Contain information on the use of passenger and freight rail facilities.
- A Statement of the State's passenger rail service objectives, including minimum service levels, for rail transportation routes.
- A general analysis of rail's transportation, economic, and environmental impacts in the State, including congestion mitigation, trade and economic development, air quality, land use, energy-use, and community impacts.
- A long-range rail investment program for current and future freight and passenger infrastructure in the State that meets the requirements of subsection (b) [of this section "Long-Range Service and Investment Program"].
- A statement of public financing issues for rail projects and service in the State, including a list of current and prospective public capital and operating funding resources, public subsidies, State taxation, and other financial policies relating to rail infrastructure development.
- An identification of rail infrastructure issues within the State that reflects consultation with all relevant stakeholders.
- A review of the major passenger and freight intermodal connections and facilities within the State, including seaports and Marine Highway routes, and prioritized options to maximize service integration and efficiency between rail and other modes of transportation within the State.
- A review of publicly funded projects within the State to improve rail transportation safety and security, including all major projects funded under Section 130 of Title 23.
- A performance evaluation of passenger rail services operating in the State, including possible improvements in those services and a description of strategies to achieve those improvements.
- A compilation of studies and reports on high-speed rail corridor development within the State not included in a previous plan under this subchapter, and a plan for funding any recommended development of such corridors in the State.
- A statement that the State is in compliance with Title 49 United States Code Section 22102 as follows:



A State is eligible to receive financial assistance under this chapter only when the State complies with regulations the Secretary of Transportation prescribes under this chapter and the Secretary decides that:

(1) the State has an adequate plan for rail transportation in the State and
a suitable process for updating, revising, and modifying the plan;
(2) the State plan is administered or coordinated by a designated State
authority and provides for a fair distribution of resources;
(3) the State authority –

a. is authorized to develop, promote, supervise, and support safe, adequate, and efficient rail transportation;

b. employs or will employ sufficient qualified and trained personnel;

c. maintains or will maintain adequate programs of investigation, research, promotion, and development with opportunity for public participation; and

d. is designated and directed to take all practicable steps (by itself or with other State authorities) to improve rail transportation safety and reduce energy use and pollution related to transportation.

(4) the State has ensured that it maintains or will maintain adequate procedures for financial control, accounting, and performance evaluation for the proper use of assistance provided by the United States Government.

This document, which was developed by WYDOT, meets the requirements set forth in legislation and public laws and is intended to serve as a resource for state, regional, and local planning. The SRP represents a compendium of recent passenger- and freight-rail studies supplemented by additional analysis and investigation necessary to meet federal requirements.

In addition to meeting the federal requirements listed above, the intent of the SRP is to establish a state vision that describes policies and strategies for enhancing rail service for public benefit in the future and to identify methods to achieve that vision.

The 2021 Wyoming SRP updates the 2015 Wyoming SRP and takes into account lessons learned and the methodology, approaches, and best practices used by other states in the creation of PRIIA-compliant rail plans. To be compliant with the guidance set forth by FRA, the SRP includes an explanation and analysis of the public benefits of passenger- and freight-rail service and how it fits into the context of an overall transportation system. The SRP also identifies a long-range investment program for present and future infrastructure requirements to sustain the demand for a safe, efficient, and cost-effective rail service in the state.

1.3.3.1 WYOMING'S INVOLVEMENT IN MULTI-STATE RAIL PLANNING

The rail network and the flow of passengers and freight do not stop at state boundaries. In Wyoming's case in particular, the state is a major pipeline for sustaining interstate commerce from across the nation. Therefore, it is essential that rail planning authorities and entities in Wyoming coordinate their planning efforts with the state governments of the adjacent states of Colorado, Nebraska, South Dakota, Montana, Idaho, and Utah when applicable to identify synergies and opportunities to coordinate mutually beneficial transportation initiatives. WYDOT is committed to maintaining this spirit of



multi-state collaboration with other state Departments of Transportation (DOTs) and local planning agencies and, for this reason, WYDOT will share its SRP with neighboring states for input.

1.3.4 WYOMING STATEWIDE RAIL PLAN CONTENT

The Wyoming SRP includes six chapters and two supplementary appendices. The document is organized as follows:

- Chapter 1 The Role of Rail in Wyoming's Statewide Transportation System
- Chapter 2 Wyoming's Existing Rail System
- Chapter 3 Proposed Passenger-Rail Improvements and Investments
- Chapter 4 Proposed Freight-Rail Improvements and Investments
- Chapter 5 Wyoming's Rail Service and Investment Program
- Chapter 6 Coordination and Review

1.4 RAIL TRANSPORTATION'S ROLE IN THE STATE TRANSPORTATION SYSTEM

The railroads play an integral role in Wyoming's multimodal transportation system and are a safe and efficient transportation option that together form a network spanning nearly all of North America. The railroads provide heightened economic competition and viability, improved access for communities, and local employment opportunities. Passenger-rail service does not presently exist in Wyoming; however, developing such a network in the future could strengthen and integrate the intermodal transportation system, create new mobility options and connections for the traveling public, and spawn economic development through station area planning and downtown revitalization efforts.

Freight and passenger rail transportation have attributes that enable them to move large volumes of goods and people efficiently, economically, and safely. However, trips made by rail may require longer overall travel times or perhaps a transfer to another mode to complete a door-to-door journey. Continued reliance on and further demand for trucks to transport freight, as well as air and auto travel to accommodate passenger trips, can lead to negative impacts and a decline in livability due to increased congestion, road wear, depletion of natural resources, and additional safety and environmental concerns. Shifting freight and passenger travel demand to rail can help mitigate the impacts of other modes. Rail can also be made more competitive when velocity is improved through capacity expansion or other infrastructure upgrades.

1.5 INSTITUTIONAL STRUCTURE OF WYOMING'S STATE RAIL PROGRAM

WYDOT has regulatory oversight and conducts rail planning in the state as a component of WYDOT's overall transportation-planning process. This practice is guided by WYDOT's mission and philosophy statement and by its transportation goals and outcome measurements.

1.5.1 WYDOT MISSION STATEMENT

"Provide a safe, high quality, and efficient transportation system."



1.5.2 WYDOT GOALS

- 1. Keep People Safe on the State Transportation System
- 2. Serve Our Customers
- 3. Take Care of All Physical Aspects of the State Transportation System

WYDOT has created a detailed planning process that includes regular updates to the Statewide Long-Range Transportation Plan in order to achieve its mission and goals. Transportation planning is conducted in a manner consistent with the total goals of WYDOT and the specific mobility and economic objectives of relevant political jurisdictions. The planning process accounts for the resources available to the State and other stakeholders. Current and forecasted economic bases for transportation modes and projects under consideration will dictate the scope of technical options that might be considered to address specific mobility challenges.

Rail mode planning is unique in that rail infrastructure is privately held and does not receive direct investments from the state government. The Wyoming state constitution prohibits state funds from being spent on rail construction and improvements. Therefore, the creation of the SRP reflects a public-private collaboration involving input from the state's railroads, rail freight shippers, public-sector agencies such as metropolitan planning organizations, and myriad state, county, city, and tribal agencies.

1.5.3 WYDOT'S RAIL ORGANIZATION AND ROLES

As provided for by legislative act, the Wyoming Transportation Commission (WTC) governs the activities of the WYDOT.⁹ The WTC consists of seven member commissioners appointed by the governor and approved by the state senate. Each commissioner serves a 6-year term and represents one of seven districts, an arrangement that provides balanced input from stakeholders statewide. Meetings are typically held on a monthly basis to review transportation policies and projects.

Freight and rail planning and policy, oversight of rail funding, and technical assistance are provided by WYDOT's Systems Planning and Railroads Section, which is headquartered in Cheyenne. **Figure 1-1** illustrates WYDOT's current organizational structure.



⁹ Wyoming Statute 24-2-101



Figure 1-1: WYDOT Organization Chart



Source: WYDOT

1.5.4 WYOMING LEGISLATIVE RAIL AUTHORITY

The primary responsibility for the oversight of rail planning and policy and project development in the state rests with WYDOT. It has authority to open and close public highway-rail grade crossings and to review, challenge, and mitigate rail abandonments, as described below. The state's funding framework and eligibility for rail project funding, which are outside of the legislative authority granted to WYDOT for regulatory cases, are discussed later in this chapter.

1.5.4.1 RAIL CROSSINGS

The State of Wyoming has a statutory obligation in matters concerning highway-rail grade crossings. WYDOT Rules and Regulations are based on Wyoming statute authority. These rules and regulations are posted on the WYDOT website and include Chapter 1, Rail-Highway Crossings, and Chapter 2, Rail-Highway Grade Separations. Chapter 1 includes procedures for establishing or closing at-grade crossings, standards for new at-grade crossings, cost allocation, and other relevant information. Chapter 2 includes procedures for establishing or closing grade-separation crossings. Further discussion regarding WYDOT's role in the administration of highway-rail grade crossings is provided in the following sections.



Quiet Zones

WYDOT's role in opening and closing public highway-rail grade crossings is described in Chapters 1 and 2 of the WYDOT Rules and Regulations mentioned above.

In 2009, WYDOT sponsored a Quiet Zone Study involving 84 grade crossings at 38 communities throughout the state. WYDOT administered a one-time state appropriation to fund quiet zone implementation at grade crossings in certain communities statewide. As part of this project, wayside horns were installed in Worland (Washakie County), Newcastle (Weston County), Torrington (Goshen County), and Lingle (Goshen County) in order to reduce locomotive horn noise. Non-traversable medians have also been installed as a quiet zone measure in Lusk (Niobrara County), Moorcroft (Crook County), Cheyenne (Laramie County), Glendo (Platte County), Fort Laramie (Platte County), and Gillette (Campbell County). Legislative funds for quiet zones in Wyoming expired in July 2016. One crossing in Fort Laramie has been fitted with channelization. Additionally, one crossing in Clearmont (Sheridan County) is to be fitted with channelization as well.

Quiet zones have also been established in Sheridan (Sheridan County) and on the F. E. Warren Air Force Base, though these projects were not funded by WYDOT.

Highway-Rail Crossing Improvement Planning

Increases in train volumes and the length of trains (most are a mile in length or longer) during the last several years has had the unintended consequence of increasing the interface between vehicles and trains and also physically blocking activities and dividing many communities for longer periods.

WYDOT has a long record of involvement in highway-rail grade crossing safety and policy. In these instances, it seeks solutions and works to locate funding for grade-crossing separations via appropriations and to build consensus with stakeholders for potential remedies. In all cases, the solutions are complicated and can involve tradeoffs and challenging decisions for the community. Some scenarios that WYDOT and the affected communities have faced include:

- Improved grade-crossing protection could potentially enable higher train speeds, which would keep crossings clear of train movements for longer periods of time. However, this could increase noise and vibration from the change in train operations.
- Grade separation would eliminate the conflicts associated with a highway-to-rail grade crossing. However, such a project is costly and could impact community aesthetics.
- Routing of highway traffic around the community to a new grade-separated crossing would minimize safety issues. However, the vigor and economy of a community's central business district would be diminished.

A Highway-Rail Grade Crossing State Action Plan is currently being developed.

Highway-Rail Grade Crossing Safety and Trespassing Prevention

Wyoming Operation Lifesaver is a nonprofit public safety education and awareness organization dedicated to reducing collisions, fatalities, and injuries at highway-rail grade crossings and trespassing on or near railroad tracks. Wyoming Operation Lifesaver promotes rail safety through public awareness campaigns and education initiatives, including free safety presentations by authorized volunteers. The program is co-sponsored by state and local government agencies,





highway safety organizations, America's railroads, and other entities.¹⁰ WYDOT is actively involved in Wyoming Operation Lifesaver and currently serves as chair of the organization within the state.

1.5.4.2 RAIL LINE ABANDONMENT REVIEWS

Historically, rail abandonment cases in Wyoming have been few and have involved a marginal or low-density branch line operation where demand for rail service declined sharply. Recent cases of rail abandonment in Wyoming are addressed in greater detail in Chapter 2, Wyoming's Existing Rail System.

WYDOT has been charged with preserving the existing rail network in the state. By the terms set forth in Wyoming statutes, WYDOT monitors and investigates potential rail abandonment applications before the Surface Transportation Board (STB) and identifies alternatives for preserving rail service and modal competition when it is feasible to do so.

WYDOT has the statutory authority to take action in the following manner:

- Protest applications filed or other actions taken by a rail carrier to abandon railroad lines
- Protest, challenge by legal action or intervene in rail carrier actions leading to potential abandonment of railroad lines
- Investigate the evidence offered by a rail carrier supporting the subsidy amount or minimum sale or salvage price of railroad lines to be abandoned and intervene in abandonment proceedings to challenge unjustified subsidy amounts and minimum sale or salvage prices
- Provide technical assistance to prospective rail carriers and to counties and municipalities seeking to purchase and operate railroad lines which other rail carriers are seeking to abandon or are likely to seek to abandon and provide assistance in preparing any filings with federal agencies necessary for them to purchase the railroad lines at the minimum sale or salvage price or to begin operations
- Bring a legal action or intervene in a legal action or regulatory action to reduce the costs of trackage rights established in an agreement where the costs or conditions of the agreement appear to be contributing to potential abandonment of railroad lines or discouraging discovery of a prospective replacement rail carrier.¹¹

It is the policy of the State of Wyoming to prevent the loss of railroad service and competition in the provision of railroad service by preventing abandonment of railroad lines.

1.5.4.3 RAIL LINE ACQUISITION PROGRAMS

The State of Wyoming does not own or operate any rail lines in the state; however, Wyoming statutes offer a provision for city and county authorities to:

- Independently or jointly purchase, own, improve, rehabilitate, repair, and maintain rail lines
- Receive grants and loans to guarantee such action
- Lease out rail lines to operators that will provide freight service¹²

¹⁰ Wyoming Operation Lifesaver. Retrieved from: <u>https://community.oli.org/state/wy#about</u>

¹¹ Wyoming Statute 37-9-1001 and 37-9-1002

¹² Wyoming Statute 37-9-901



Cities and counties may not operate a railroad or provide railroad services independently or purchase a rail line from the abandoning carrier at a price exceeding the net salvage or fair market value established by the proper regulatory authority.¹³

No cities or counties in Wyoming currently own railroads, but some municipalities own industrial track within business parks.

1.5.5 ADDITIONAL PUBLIC SECTOR RAIL PLANNING IN WYOMING

Other state and local agencies have a vested interest in the vitality, efficiency, and safety of Wyoming's multimodal transportation network and are involved in the numerous organizational aspects of rail planning in coordination with WYDOT.

1.5.5.1 WYOMING BUSINESS COUNCIL

The Wyoming Business Council (WBC), based in Cheyenne, was created as a state government entity and lead economic development agency in 1998 following the passage of the Wyoming Economic Development Act. Members of its board of directors represent a broad array of business and community interests statewide and are appointed by the governor and confirmed by the state senate. One of WBC's primary goals is to facilitate economic growth in Wyoming by helping retain existing business and industry in the state and by attracting new companies that will support and add value to Wyoming's major industries, including agriculture and minerals and energy sectors—both of which depend on rail transportation. The *Why Wyoming* page and associated booklet available on the WBC website take care to mention the benefits of Wyoming's access to two Class I railroads and nearly 1,800 miles of track within the state.¹⁴

WBC's Business Ready Community Program provides funding for publicly owned infrastructure that serves business and encourages economic development; rail-served industrial sites are included. Cities, towns, counties, joint powers boards, and tribes are all eligible to apply for grants and loans. WBC contributes a percentage of the total cost with the balance paid for by matching contributions from local sources and additional private investment.

1.5.5.2 WYOMING DEPARTMENT OF AGRICULTURE

In addition to its primary role as a regulator, the Wyoming Department of Agriculture also promotes agriculture and the markets for Wyoming products. According to National Agricultural Statistics Service data from 2020, Wyoming's top agricultural commodities in terms of production are beef and sheep in the livestock category and hay, corn, barley, beans, wheat, and sugar beets in the crop category.¹⁵ Many of these products can be shipped to destinations nationwide via the state's rail network. The Department of Agriculture works with WYDOT regarding long-range plans for all transportation modes.

¹³ Wyoming Statute 37-9-902

¹⁴ Wyoming Business Council, Why Wyoming. Retrieved from: <u>https://www.wyomingbusiness.org/thatswy</u>

¹⁵ United States Department of Agriculture (2019) *State Agriculture Overview*. Retrieved from: <u>https://www.nass.usda.gov/Quick Stats/Ag Overview/stateOverview.php?state=WYOMING</u>



1.5.5.3 METROPOLITAN PLANNING ORGANIZATIONS

Metropolitan planning organizations (MPOs) are federally mandated and funded organizations that are responsible for planning, programming, and coordinating federal highway and transit investments in urban areas, according to the United States DOT. MPOs have identified rail service as a means of promoting economic vitality by fostering global competitiveness and productivity. The planning activities of MPOs have surpassed their original highway planning scope and now also address cost-effective, energy-efficient, and environmentally responsible means of moving freight by rail; promoting rail connectivity to other transportation modes; and pursuing greater accessibility to rail for shippers. MPOs are required for maintaining long-range transportation plans and work in partnership with WYDOT to identify best transportation practices and policies that benefit the state, preserve existing transportation systems, and broaden public awareness and outreach in transportation-related matters.

Wyoming's two MPOs, identified below, have jurisdiction over the state's largest metropolitan areas. Both areas are connected to the state's rail network.

Casper Area Metropolitan Planning Organization

The planning area for the Casper Area MPO includes the city of Casper; the towns of Evansville, Mills, and Bar Nunn; and Natrona County. The MPO members are the City of Casper; the Towns of Evansville, Mills, and Bar Nunn; Natrona County; and WYDOT. The planning area is served by the BNSF and the Bighorn Divide & Wyoming Railroad.

Cheyenne Metropolitan Planning Organization

The planning area for the Cheyenne MPO includes the city of Cheyenne and parts of surrounding Laramie County. The MPO members are the City of Cheyenne, Laramie County, and WYDOT. The planning area is served by BNSF, UP, and the Swan Ranch Railroad.

As one example of this ongoing cooperation, WYDOT provided planning assistance to the Cheyenne MPO as it undertook a study for a potential relocation of the BNSF rail yard on the west side of Cheyenne.

1.5.5.4 LOCAL ECONOMIC DEVELOPMENT AGENCIES

Wyoming has a number of entities statewide that aim to bolster local economic growth opportunities through various means including retaining and recruiting businesses and industries based on location, skills of the labor force, room for expansion, and transportation assets and access.

The Wyoming State Economic Development Directory lists several such entities statewide, including economic development alliances, councils, and corporations; chambers of commerce; and professional associations. Some of these entities encourage and incentivize economic development via tax credits and exemptions and various other forms of relocation assistance to attract business.

These agencies do not often work with freight railroads but have a vested interest in rail services and infrastructure as they pertain to their incentives and the needs of prospective businesses. WYDOT has coordinated with these agencies regarding the transportation needed to sustain local economic development.



1.6 STATE AUTHORITY FOR GRANT, LOAN, AND OTHER FINANCING

A State is eligible to receive federal grant assistance for rail-related projects when it complies with the regulations that the United States Secretary of Transportation prescribes under 49 United States Code § 22102. The State of Wyoming meets these criteria and is therefore eligible to receive federal funding. The regulations require that:

- 1. The State has an adequate plan for rail transportation and a suitable process for updating, revising, and modifying the plan;
- 2. The State Plan is administered or coordinated by a designated state authority and provides for a fair distribution of resources;
- 3. The state authority
 - o Is authorized to develop, promote, supervise, and support safe, adequate, and efficient rail transportation;
 - o Employs or will employ sufficient qualified and trained personnel;
 - Maintains or will maintain adequate programs of investigation, research, promotion, and development with opportunity for public participation; and,
 - Is designated and directed to take all practicable steps (by itself or with other State authorities) to improve rail transportation safety and reduce energy use and pollution related to transportation, and
- 4. The State has ensured that it maintains or will maintain adequate procedures for financial control, accounting, and performance evaluation for the proper use of assistance provided by the U.S. government.

The State of Wyoming may not obligate any state aid or debt in the construction of any rail system, as per the Wyoming state constitution. WYDOT's legal authority to finance rail-related projects is therefore limited to one major component.

In an effort to promote public safety and pay for part of the cost of installing and upgrading highway-rail grade-crossing signals, WYDOT has legislative authority to maintain a highway crossing protection account within the highway fund.¹⁶ The total cost for such projects is apportioned, with contributions made by the State; the City, Town, County, or other political entity; and the railroad.

Section 2.1.5, Public Financing for Rail Projects, of the 2021 Wyoming SRP includes a discussion of federal programs and options that provide funding for rail projects in Wyoming and other states.

1.7 SUMMARY OF RAIL SERVICES AND STUDIES

1.7.1 FREIGHT-RAIL SERVICES

The Wyoming rail network consists of 1,750 route-miles, which are owned and operated by five freight railroads. Two of these railroads are classified as Class Is, which own the majority (1,727 miles) of the total rail mileage in Wyoming. One Class II regional railroad and two Class III short-line railroads own and operate the remaining route-miles in the state. Chapter 2, Wyoming's Existing Rail System, includes a map of the Wyoming rail network and a detailed discussion of the freight railroads and the individual lines, rail yards, and facilities operated by each railroad.

¹⁶ Wyoming Statutes 37-10-101 through 37-10-105



In 2018, these freight railroads carried over 416 million tons (or about 4.9 million rail cars) of various commodities that originated or terminated in Wyoming or passed through the state.¹⁷ Coal that originated in or passed through Wyoming remained the dominant commodity and accounted for 76 percent of the total tonnage. Chapter 2 includes a discussion of the origins and destinations of freight rail traffic and includes descriptions and tonnages of major commodities shipped by rail.

1.7.2 PASSENGER-RAIL SERVICES

There is currently not any regularly scheduled long-distance, intercity corridor, commuter-rail, or light-rail-transit passenger-rail service in Wyoming. Chapter 2, Wyoming's Existing Rail System, includes a brief history of passenger-rail operations in Wyoming. Chapter 3, Proposed Passenger Rail Improvements and Investments, discusses potential long-distance, intercity, and commuter-rail options explored since the discontinuance of Amtrak service to the state in 1997.

1.7.3 WYOMING RAIL STUDIES SUMMARY

Wyoming has a legacy of participating in or supporting studies that address passenger- and freight-rail operations and that determine the needs and benefits related to public investment in the state's rail network. This section includes plans and studies completed during the years prior to the completion of the 2021 Wyoming SRP.

1.7.3.1 FREIGHT-RAIL STUDIES

The State of Wyoming Rail Plan, 2004. This study included discussions of the state's freight-rail lines, facilities, operations and service options, traffic flows, and issues facing the industry; public planning relative to Wyoming's railroads; security and grade-crossing safety; and the role of railroads in transporting the state's primary commodities. It was superseded and replaced by the *Wyoming Statewide Rail Plan, 2015*.

Wyoming Quiet Zone Study, 2009. This two-phase study involved a field assessment of 84 Wyoming grade crossings to determine what improvements would be appropriate for quiet zone qualification on a crossing-by-crossing basis and to estimate the costs of both the improvements and installing the required equipment.

Wyoming Connects: Long Range Transportation Plan, 2010. To advance the mission and goals of WYDOT, the Department undertook a four-part planning process called Wyoming Connects, from which a long-range transportation plan emerged. This plan updates Wyoming's vision for the state transportation system to 2035 as a means of maintaining a transportation system that is efficient and responsive to the needs of residents, visitors, the economy, and Wyoming's place in interstate commerce. Key to this plan is the identification of 16 state significant corridors and the role of each in a multimodal transportation system, which includes freight railroads. The plan also examines long-term needs and strategies for funding and implementation necessary to achieve transportation goals.

Wyoming State Freight Plan, 2014. WYDOT developed a State Freight Plan that conforms to the freight planning requirements listed in the current federal transportation authorization law, Moving Ahead for Progress in the 21st Century (MAP-21). MAP-21 directs USDOT to develop a national freight policy and creates incentives for states to prepare their own freight plans.

¹⁷ Federal Highway Administration (FHWA) (2018) Freight Analysis Framework Version 4



Wyoming Statewide Rail Plan, 2015. This study included discussions of the state's freight-rail lines, facilities, operations and service options, traffic flows, and issues facing the industry; public planning relative to Wyoming's railroads; security and grade-crossing safety; and the role of railroads in transporting the state's primary commodities. This study replaces *The State of Wyoming Rail Plan, 2004.*

Town of Mills Intermodal Planning Study/Industrial Rail Park Feasibility Assessment, 2015. This study evaluated the strengths, weaknesses, opportunities, and threats pertaining to the possibility of developing a new rail-served industrial park in the town of Mills, Wyoming. The study area included 230 acres of undeveloped land straddling the BNSF Railway main line near an existing rail spur. The study established three conceptual alternatives with combinations of road and rail elements to provide the needed transportation infrastructure to support industrial uses of the land in question, along with preliminary cost estimates for each alternative. At this time, no further actions on this effort have been pursued.

1.7.3.2 PASSENGER-RAIL STUDIES

Commuter Rail Study/Passenger Rail Feasibility Study, 2008. This study, which was produced for the Wyoming Joint Transportation, Highways, and Military Affairs Interim Committee, examined the feasibility of establishing rail passenger service along the Front Range over an existing freight rail corridor between Fort Collins, Colorado, and Casper, with an emphasis on an initial service phase between Fort Collins and Cheyenne. The study investigated rail infrastructure upgrades, station facility availability, projected passenger-train layover locations, and possible equipment types. This overview study did not identify funding sources to implement, operate, and maintain the proposed service. Further study of commuter route options was terminated in 2009 mostly because of the inability to make full use of existing rail corridors, challenging topography, and high preliminary cost estimates for such service.

Pioneer Route Passenger Rail Study, 2009. This study, which was mandated by PRIIA Section 224 and prepared by Amtrak, explored the restoration of the long-distance Pioneer service between Chicago, Omaha, Denver, Boise, Portland, and Seattle via either southern Wyoming or Salt Lake City. The Pioneer service through southern Wyoming was discontinued in 1997. Four service route alternatives were identified (two of which traverse the UP network across southern Wyoming between Cheyenne and Evanston) along with full route and station descriptions; ridership and revenue figures; conceptual schedules; presentation of capital, implementation, and operations and maintenance costs; and a description of equipment. In conjunction with the Amtrak effort, UP provided a preliminary capacity evaluation for each of the four route options which identified proposed infrastructure enhancements necessary to support the passenger service and minimize possible conflicts with UP freight train operations.

Front Range Passenger Rail Study, Ongoing. The Colorado Department of Transportation in 2019 initiated a service development planning process, known as Front Range Passenger Rail (FRPR) to evaluate alternatives for implementing intercity passenger rail service between Fort Collins, Denver, and Pueblo, Colorado. Although Wyoming is not formally included in the scope of this project, a representative of the Cheyenne, Wyoming, Chamber of Commerce is a non-voting member on the Southwest Chief and Front Range Passenger Rail Commission board, which is overseeing the project.¹⁸ Wyoming has an interest in FRPR as it would bring passenger service closer to Wyoming's border and there may be the



¹⁸ Colorado Department of Transportation, Southwest Chief and Front Range Passenger Rail Commission. Retrieved from: <u>https://www.codot.gov/about/southwest-chief-commission-front-range-passenger-rail</u>



possibility of a later extension of service to Cheyenne or beyond, to be determined through later planning efforts. At the time of writing, FRPR completed the pre-National Environmental Policy Act planning and stakeholder engagement phase, which concluded at the end of 2020. WYDOT staff attends all FRPR meetings, either in person or virtually.













CHAPTER 2 Wyoming's Existing Rail System





2.1 WYOMING'S EXISTING RAIL SYSTEM: DESCRIPTION AND INVENTORY

Wyoming is served by a rail network comprising a total of 1,750 route-miles of track. Two Class I railroad companies form a 1,727-mile trunk network that provides long-haul freight rail transportation for both inbound and outbound products. The state has one Class II (regional) railroad and two Class III (short-line) railroads that operate an additional 23 miles of track to serve local customers that originate and terminate traffic. Industrial railroads provide transportation service to several coal mines and other industrial facilities in Wyoming but, due to their classification, the mileage of privately owned industrial track over which they operate is not included in the calculations of the state's rail network. Similarly, the industrial track of Class I, Class II, and Class III rail carriers is also not included in the route-mile calculations.

Table 2-1 shows the number of route-miles owned by carrier and the percentage it represents in terms of the state's total network as of December 31, 2019.

Railroad	Carrier Class	Route-Miles Owned	Percentage of State Total
BNSF Railway		960*	52%
Union Pacific Railroad		873*	47%
Rapid City, Pierre & Eastern Railroad	II	7	<1%
Bighorn Divide & Wyoming Railroad	III	8	<1%
Swan Ranch Railroad	III	8	<1%
Total		1,750*	100%

Table 2-1: Wyoming Rail Carriers and Miles Owned

Source: Class I Railroad Annual R-1 Reports for 2019

*Includes 106 miles of jointly owned and operated track in the Southern Powder River Basin coal production area; 106 miles are accounted for in the BNSF and UP figures above but are counted once for the total.

Most of the Class I rail traffic in Wyoming follows one of two distinct patterns: (1) transcontinental traffic that passes through the state without stopping except for train crew changes, refueling, or inspections; or (2) trains that carry coal, soda ash, or other minerals extracted or processed in Wyoming that originate in solid trainloads and depart the state for customers elsewhere.

Due to Wyoming's geographic location and comparatively low and snow-free summits, a substantial percentage of transcontinental traffic moved by rail between the West Coast and destinations in the Midwest and East passes through Wyoming. The Powder River Basin (PRB) coal fields, the source of most of the coal traffic hauled by rail in Wyoming, is the largest single source of rail traffic for the Class I network in Wyoming.

Figure 2-1 is a map of the Wyoming rail network that shows all active lines as they existed in 2020.


Figure 2-1: Wyoming Rail Network, 2020



Source: HDR

Over 2.8 million carloads totaling about 336.3 million tons of freight originated in Wyoming in 2017. Over 146,000 carloads totaling about 15.8 million tons of freight terminated in Wyoming that same year. Coal from the Southern Powder River Basin is the primary commodity shipped from Wyoming and made up about 94 percent of originated freight tonnage in 2017.

The rail industry continues to be a major employer in Wyoming. As of 2017, the state's five railroads employed a total of 2,119 people within the state, and average wage and benefits per employee in Wyoming was \$125,760, according to the Association of American Railroads (AAR).¹⁹

¹⁹ Association of American Railroads, Wyoming State Fact Sheet. Retrieved from: <u>https://www.aar.org/wp-content/uploads/2019/01/AAR-Wyoming-State-Fact-Sheet.pdf</u>



2.1.1 EXISTING RAIL LINE NETWORK

A primary purpose of this chapter is to provide an inventory and description of the assets of the state rail network, which includes an explanation of each class of railroad, identification and history of each railroad, and a description of the physical and service characteristics of each rail line segment in Wyoming. These data are used to understand freight capacity, service velocity, and versatility and to determine what types of freight transportation and levels of service can potentially be accommodated over each line segment. Furthermore, this inventory will be used as a tool to later identify and prioritize potential rail infrastructure improvements that eliminate bottlenecks and operating conflicts, expand capacity, promote connectivity with other transportation modes, and encourage growth in the rail transportation sector that is consistent with the needs of Wyoming's people, businesses, and industry.

This inventory identifies the following key physical and service characteristics for each active Wyoming rail line segment or railroad subdivision:

- Owner of the line
- Operator of the line
- Maximum train speeds
- Track configuration (number of mainline tracks; presence of sidings for train meet-pass events)
- Signal systems (wayside signals used to convey operating authority and/or show occupancy and integrity of mainline track)
- Operational authority (method or system by which mainline train movements are controlled)
- Trackage rights (authority for one railroad [a tenant] to operate over the line of another [a host])
- Haulage rights (an arrangement whereby one railroad markets service over a route owned by another but does not operate its own trains over the host railroad)
- Maximum gross weight (maximum allowable loaded railcar weight limitations, as dictated by the classification of mainline bridges and track and other considerations)
- Clearances (maximum railcar width and height above top of mainline rail that can be handled in regular service without an operating restriction)
- Double-stack capable (route clearance can accommodate intermodal trains carrying shipping containers stacked two high)
- Industrial leads (designated railroad spurs that are used to access rail customers off the mainline)

The maximum authorized speed for trains over each segment is established at the discretion of the railroad based on federal regulations, safe and best railroad operating practices, and various railroad requirements and preferences.

This inventory presents an overview of rail traffic on each line segment. A more detailed discussion of traffic flows, primary commodities transported by rail, and tonnage figures for the state's rail network is presented later in this chapter.



2.1.1.1 CLASS I RAIL NETWORK IN WYOMING

The Surface Transportation Board (STB) designates any railroad with more than \$900 million in annual carrier operating revenue as a Class I carrier.²⁰ Wyoming is served by two Class I railroads: BNSF Railway (BNSF) and Union Pacific Railroad (UP). **Table 2-2** illustrates the rail mileage owned and operated (via lease or trackage rights) for each of these railroads as of December 31, 2019.

Table 2-2: Wyoming Class I Rail Miles Owned and Operated

Class I Carrier	Mainline Owned	Lines Leased to Class III	Miles Operated	Trackage Rights
BNSF Railway	960*	0	965*	5
Union Pacific Railroad	873*	0	873*	0
Class I Total	1,727*	0	1,732	5

Source: Surface Transportation Board Class I Railroad Annual Report R-1 for 2019

*Includes 106 miles of jointly owned and operated track in the Southern Powder River Basin coal production area; 106 miles are accounted for in the BNSF and UP figures above but are counted once for the total.

BNSF Railway

BNSF is one of the most extensive Class I railroads in North America in terms of track-miles and market share. BNSF is headquartered in Fort Worth, Texas. As of March 2020, BNSF operated about 32,500 miles of track in 28 states and 2 Canadian provinces. About 23,191 route-miles are owned by BNSF, with the remainder operated by the railroad pursuant to trackage rights or leases. BNSF handled 10.2 million carloads in 2019 with a resulting operating revenue of \$20.8 billion.²¹

BNSF has transfer facilities for ship-to-rail and truck-to-rail movements to facilitate intermodal movement of containers, trailers, automobiles, and other freight traffic. The transfer facilities include 25 intermodal terminals located across the system, 23 automotive distribution facilities, and access to more than 40 maritime ports in North America. **Table 2-3** lists railroad statistics for BNSF from national and Wyoming perspectives.

²⁰ Surface Transportation Board Adopts Final Rule Amending Thresholds for Classifying Rail Carriers, April 5, 2021. Retrieved from: <u>https://prod.stb.gov/news-communications/latest-news/pr-21-16/</u>

²¹ BNSF Railway Fact Sheet, January 2021. Retrieved from: <u>https://bnsf.com/about-bnsf/pdf/fact_sheet.pdf</u>



Table 2-3: BNSF Railway Statistics

Location	Employees	Locomotives	Freight Cars	Passenger Cars
United States	~34,000	~8,000	78,408	91
Location	Miles Operated	Miles Owned	Miles Leased	Miles Leased to Class IIIs
Wyoming	965	960	—	
Linite of Chatan	22 500	00.050	10	030

Sources: BNSF Railway Class I Railroad Annual Report R-1 to the Surface Transportation Board for the Year Ending December 31, 2019, and 2021 BNSF Railway Fact Sheet

Historically, all of the BNSF routes in Wyoming were part of the Chicago, Burlington & Quincy Railroad (CB&Q), except for the Wendover, Wyoming-Denver, Colorado line controlled by the Colorado & Southern Railway (C&S), which was owned by CB&Q but was operated as a separate entity until 1981. CB&Q and C&S—as well as their predecessors—developed an extensive network that connected remote areas with population centers in Wyoming during the 1886–1915 period and penetrated all but the southwestern quarter of the state. The result of this development was an enormous collection of lines in Wyoming that bridged emerging transcontinental routes and provided a viable transportation option for extraction of coal, mineral, and timber resources in the central and northern sections of the state.

In 1970, CB&Q merged with the Great Northern, Northern Pacific, and Spokane, Portland & Seattle railways to form a vast Class I network—Burlington Northern Railroad (BN)—stretching from the Midwest to the Pacific Northwest and extending from Canada to the Gulf Coast. During the 1970s, BN built a new rail line into the Powder River Basin to tap the massive deposits of low-sulfur coal in eastern Wyoming—coal that would ultimately become the single largest source of rail traffic in the state.

The Burlington Northern Santa Fe Railway, now rebranded as BNSF Railway, was created on September 22, 1995, from the merger of the Burlington Northern Railroad and the Santa Fe Pacific Corporation (parent company of the Atchison, Topeka & Santa Fe Railway, further expanding the reach of Wyoming rail shippers to a greater array of origins and destinations in the larger combined network. Since 2010, BNSF has been a subsidiary of Omaha, Nebraska–based Berkshire Hathaway. **Figure 2-2** shows BNSF routes in Wyoming and their connections to the BNSF system in adjoining states.



Figure 2-2: BNSF Routes in Wyoming



Source: BNSF data acquired by HDR

BNSF operates numerous facilities and equipment systemwide to support its network functions. Support facilities for rail operations include yard and terminals throughout its rail network (including at Cheyenne, Casper, Greybull, Sheridan, Donkey Creek, and Guernsey, Wyoming); locomotive shops to perform locomotive servicing and maintenance; car shops to service and maintain rail cars; localized track section employees and track inspection equipment as well as systemwide traveling maintenance-of-way laborers and equipment for large track maintenance projects; a centralized network operations center for train dispatching and network operations monitoring and management in Fort Worth, Texas; back-office servers and telecommunications networks; railroad signal, hazard detection, and safety systems; and other corporate infrastructure to support BNSF's business activities.

The railroad also owns or leases other equipment to support rail operations, including intermodal containers and vehicles. BNSF owned 960 route-miles in Wyoming in 2019, or just over half of the state's total rail-miles. **Figure 2-3** shows a map of BNSF operating subdivisions in the state and the continuation of each subdivision to neighboring states and terminals. A general description of the traffic and the physical and operating characteristics for each of BNSF's 10 subdivisions in Wyoming follows **Figure 2-3**.



2-8

Figure 2-3: BNSF Subdivisions in Wyoming



Source: BNSF data acquired by HDR



FRONT RANGE SUBDIVISION

The Front Range Subdivision travels in a north-south direction from Denver, Colorado, to Wendover, Wyoming, via Cheyenne. It is a primary route for intermodal (both domestic and international), automotive, and general manifest traffic between Denver and Laurel (near Billings), Montana, and the Pacific Northwest region including the ports of Seattle, Tacoma, and Portland. It is also BNSF's connection to the Swan Ranch Railroad near Speer, just outside of Cheyenne. The Swan Ranch Industrial Park has become a significant driver of local originating and terminating rail freight traffic for the Cheyenne area. According to the Federal Railroad Administration (FRA) Highway-Rail Crossing Inventory Database, approximately six trains per day traverse the Front Range Subdivision as of 2019. **Table 2-4** lists the physical and operating characteristics of the line.

Characteristics	Front Range Subdivision (240.8 Miles; 133.9 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	49 miles per hour
Track Configuration	Single-track mainline with sidings
Signal Systems	None
Operational Authority	Track Warrant Control
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	Downtown Lead (Cheyenne, Wyoming)

Table 2-4: BNSF Front Range Subdivision Characteristics



CASPER SUBDIVISION

The Casper Subdivision is a route from Bridger Junction (near Orin), Wyoming, northwest to Laurel (near Billings), Montana, via Douglas, Casper, Thermopolis, Worland, Greybull, and Lovell, Wyoming. The line passes through the scenic Wind River Canyon near Thermopolis. Intermodal, automotive, and general manifest traffic traverse the line between Denver, Colorado, and the Pacific Northwest region including the ports of Seattle, Tacoma, and Portland. Laurel is a major sorting point for general manifest traffic moving through the region. The yard facilities at Laurel are operated by Montana Rail Link (MRL), which leases a former BN main line from Huntley, Montana, (near Billings) to Sandpoint, Idaho, across southern Montana. Since its inception, MRL has provided haulage for BN and now BNSF trains between Laurel and Sandpoint, with BNSF maintaining trackage rights on MRL between Laurel and Huntley.

On the Casper Subdivision, there are a significant number of online customers originating and terminating carloads, with local freight trains operating to provide timely pickup and delivery. Carload interchange is conducted with short-line Bighorn Divide & Wyoming Railroad (BDW) at Shobon (near Bonneville) and Bishop (near Casper), Wyoming. BDW has trackage rights over the BNSF network between Lysite and Shobon. Recently, there has been an increase in traffic related to the oil and gas industry, transporting hydraulic fracturing material (frac sand) into Wyoming and crude oil out. According to the FRA Highway-Rail Crossing Inventory Database, approximately six trains per day traverse the Casper Subdivision as of 2019. **Table 2-5** lists the physical and operating characteristics of the line.

Characteristics	Casper Subdivision (382.3 Miles; 327.89 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	49 miles per hour
Track Configuration	Single-track mainline with sidings
Signal Systems	None
Operational Authority	Track Warrant Control
Trackage Dights	Bighorn Divide & Wyoming Railroad over BNSF Railway (Shobon-Lysite/Lost Cabin,
	21 miles)
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17
Clearances	feet in height. All others are classified as dimensional loads which require clearance
	before transport.
Double-Stack Capable	Yes
Industrial Leads	Mills Industrial Lead

Table 2-5: BNSF Casper Subdivision Characteristics



ORIN SUBDIVISION

The north-south Orin Subdivision links Donkey Creek Junction (near Gillette) and Bridger Junction (near Orin), Wyoming. The majority of the line is jointly owned by BNSF and UP; however, BNSF manages control of all train movements on the Orin Subdivision. BNSF trains operate over the full length of the subdivision, while UP operates only over the West Caballo Junction–Shawnee Junction segment. The Orin Subdivision's primary purpose is to collect coal from several mines in the Southern Powder River Basin region and funnel it to principal rail routes out of Wyoming. Recently, BNSF began routing high-priority domestic intermodal trains between Texas and the Pacific Northwest over the Orin Subdivision as a shortcut route. According to the FRA Highway-Rail Crossing Inventory Database, approximately 58 trains per day traverse the Orin Subdivision as of 2019, including both BNSF and UP trains. **Table 2-6** lists the physical and operating characteristics of the line.

Table 2-6: BNSF Orin Subdivision Characteristics

Characteristics	Orin Subdivision (126.9 Miles in Wyoming)	
Owner	 BNSF Railway (Donkey Creek Junction—West Caballo Junction, 14.3 miles) BNSF Railway/Union Pacific Railroad (West Caballo Junction—Shawnee Junction, 102.4 miles) BNSF Railway (Shawnee Junction—Bridger Junction, 10.2 miles) 	
Operator	 BNSF Railway (Donkey Creek Junction—West Caballo Junction, 14.3 miles) BNSF Railway/Union Pacific Railroad (West Caballo Junction—Shawnee Junction, 102.4 miles) BNSF Railway (Shawnee Junction—Bridger Junction, 10.2 miles) 	
Maximum Authorized Speed	50 miles per hour	
Track Configuration	Multiple Main Tracks	
Signal Systems	Centralized Traffic Control	
Operational Authority	Wayside Signal Indication	
Trackage Rights	None	
Haulage Rights	None	
Maximum Gross Weight	286,000 pounds	
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.	
Double-Stack Capable	Yes	
Industrial Leads to Coal Mines	 North Antelope Spur Antelope Spur Black Thunder Junction to Jacobs Ranch Black Thunder Junction to Orin Subdivision Switches (former BNSF Railway Reno Subdivision, 3.0 miles; joint BNSF Railway/ Union Pacific Railroad ownership) Black Thunder Spur Black Thunder East Black Thunder West Spur Coal Creek Spur Cordero Spur Belle Ayr Spur Caballo Rojo Spur Caballo Spur 	



CANYON SUBDIVISION

The short, east-west Canyon Subdivision between Bridger Junction (near Orin) and Guernsey, Wyoming, is situated at the confluence of the BNSF Casper, Orin, Front Range, and Valley subdivisions and provides a vital link in the state rail network. Coal, intermodal, and manifest traffic—some of which originates or terminates in Wyoming—flows over this subdivision and onto principal rail routes connecting Wyoming with the rest of the North American rail network. Recently, the line has experienced an increase in traffic related to the oil and gas industry, with shipments of hydraulic fracturing material (frac sand) transported into Wyoming and crude oil out. BNSF also began routing high-priority domestic intermodal trains between Texas and the Pacific Northwest over this line. According to the FRA Highway-Rail Crossing Inventory Database, approximately 34 trains per day traverse the Canyon Subdivision as of 2019. **Table 2-7** lists the physical and operating characteristics of the line.

Characteristics	Canyon Subdivision (42.8 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	50 miles per hour
Track Configuration	Single-track/Multiple Main Tracks
Signal Systems	Centralized Traffic Control
Operational Authority	Wayside Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	None

Table 2-7: BNSF Canyon Subdivision Characteristics



VALLEY SUBDIVISION

The east-west Valley Subdivision between East Guernsey, Wyoming, and Northport, Nebraska, via Torrington, Wyoming, is used primarily to forward Powder River Basin coal to customers located to the south and east. Local freight trains also operate on the line, primarily to serve agricultural customers in the North Platte Valley. According to the FRA Highway-Rail Crossing Inventory Database, approximately 28 trains per day traverse the Valley Subdivision as of 2019. **Table 2-8** lists the physical and operating characteristics of the line.

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Characteristics	Valley Subdivision (91.2 Miles; 36.32 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	50 miles per hour
Track Configuration	Single-track mainline with sidings/Multiple Main Tracks
Signal Systems	Centralized Traffic Control
Operational Authority	Wayside Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	None in Wyoming



BLACK HILLS SUBDIVISION

The Black Hills Subdivision travels in a southeasterly direction from West Gillette, Wyoming, to Edgemont, South Dakota. It is a primary route for coal trains travelling east out of the Powder River Basin coal production area, and it also accommodates manifest and grain traffic. According to the FRA Highway-Rail Crossing Inventory Database, approximately 32 trains per day traverse the Black Hills Subdivision as of 2019. **Table 2-9** lists the physical and operating characteristics of the line.

Table 2-9: BNSF Black Hills Subdivision Characteristics

Characteristics	Black Hills Subdivision (123.8 Miles; 102.1 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	60 miles per hour
Track Configuration	Multiple Main Tracks
Signal Systems	Centralized Traffic Control
Operational Authority	Wayside Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	None in Wyoming





BIG HORN SUBDIVISION

The Big Horn Subdivision between West Gillette, Wyoming, and Huntley (near Billings), Montana, via Sheridan, Wyoming, is a primary route for coal trains travelling north out of the Powder River Basin coal production area, and it also accommodates manifest and grain traffic. Recently, BNSF began routing high-priority domestic intermodal trains between Texas and the Pacific Northwest over this line. According to the FRA Highway-Rail Crossing Inventory Database, approximately 16 trains per day traverse the Big Horn Subdivision as of 2019. Table 2-10 lists the physical and operating characteristics of the line.

Table 2-10: BNSF Big Horn Subdivision Characteristics

Characteristics	Big Horn Subdivision (229.6 Miles; 127.5 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	60 miles per hour
Track Configuration	Single-track mainline with sidings
Signal Systems	Centralized Traffic Control
Operational Authority	Wayside Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	None in Wyoming





CAMPBELL SUBDIVISION

The Campbell Subdivision between Campbell and Eagle Butte Junction, Wyoming, is a short branch line used by BNSF to access coal mines immediately north of Gillette, Wyoming. According to the FRA Highway-Rail Crossing Inventory Database, approximately 16 trains per day traverse the Campbell Subdivision as of 2019. **Table 2-11** lists the physical and operating characteristics of the line.

Table 2-11: BNSF Campbell Subdivision Characteristics

Characteristics	Campbell Subdivision (9.5 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	35 miles per hour
Track Configuration	Single-track
Signal Systems	Centralized Traffic Control
Operational Authority	Wayside Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet
Clearances	in height. All others are classified as dimensional loads which require clearance before
	transport.
Double-Stack Capable	No
Industrial Leads	None



DUTCH SUBDIVISION

The Dutch Subdivision between Dutch, Wyoming, and Spring Creek, Montana, is a short branch line used by BNSF to access Montana coal mines north of Sheridan, Wyoming. According to the FRA Highway-Rail Crossing Inventory Database, approximately six trains per day traverse the Dutch Subdivision as of 2019. **Table 2-12** lists the physical and operating characteristics of the line.

Table 2-12: BNSF Dutch Subdivision Characteristics

Characteristics	Dutch Subdivision (22.8 Miles; 12.25 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	30 miles per hour
Track Configuration	Single-track
Signal Systems	Centralized Traffic Control
Operational Authority	Wayside Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	No
Industrial Leads	None in Wyoming





CODY SUBDIVISION

The Cody Subdivision between Frannie and Cody, Wyoming, is a branch line used by BNSF to access agricultural and mineral traffic. According to the FRA Highway-Rail Crossing Inventory Database, an average of one to two trains per day traverse the Cody Subdivision as of 2019. **Table 2-13** lists the physical and operating characteristics of the line.

Table 2-13: BNSF Cody Subdivision Characteristics

Characteristics	Cody Subdivision (41.8 Miles in Wyoming)
Owner	BNSF Railway
Operator	BNSF Railway
Maximum Authorized Speed	25 miles per hour
Track Configuration	Single-track
Signal Systems	None
Operational Authority	Track Warrant Control (TWC)
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	No
Industrial Leads	None



Union Pacific Railroad

UP's North American rail network encompasses 23 states and links Pacific Coast and Gulf Coast ports with gateways in the Midwest that provide access to rail carriers serving the eastern United States. UP also operates several routes to key Mexican and Canadian gateways. The Omaha, Nebraska-based railroad owns a total of 32,340 route-miles, of which 26,075 miles are owned and the balance are operated pursuant to trackage rights or leases. In 2019, UP handled 8.3 million carloads with a resulting operating revenue of \$21.7 billion. UP's traffic base primarily included the following commodities in 2019: coal, intermodal, industrial products, agricultural products, chemicals, and automotive products. **Table 2-14** lists railroad statistics for UP from national and Wyoming perspectives.

Table 2-14: Union Pacific Railroad Statistics

Location	Employees	Locomotives	Freight Cars	Passenger Cars
United States	37,500	7,700	57,000	45
Location	Miles Operated	Miles Owned	Miles Leased	Miles Leased to Class IIIs
Wyoming	873	873	—	_
United States	32,340	26,075		

Sources: Union Pacific Railroad Class I Railroad Annual Report R-1 to the Surface Transportation Board for the Year Ending December 31, 2019, and Union Pacific Corporation 2020 Building America Report

UP has transfer facilities for rail-to-rail movements as well as intermodal transfer of containers, trailers, and other freight traffic. The transfer facilities include 24 major intermodal hubs located across the system. UP operates or has access to 43 automotive distribution facilities and serves five terminal facilities in North America where automobiles are loaded on or unloaded from multilevel rail cars. The railroad has access to many ports along the West and Gulf Coasts.

Historically, UP was chartered by an act of Congress in 1862 to construct the eastern portion of the first transcontinental rail route. The rail line began at Council Bluffs, Iowa, in 1865 and forged westward in stages, reaching Wyoming in 1867 and joining at Promontory, Utah, in 1869 with the Central Pacific Railroad that had built eastward from Sacramento, California. UP was the first major enterprise to enter the Wyoming Territory, and European-American settlement followed its Overland Route west across the state. The railroad played a significant role in the territory's emerging transportation needs and played an even larger role after Wyoming statehood in 1890.

Subsequent additions to the system in Wyoming included an additional transcontinental route from the Overland Route at Granger, Wyoming, west to Portland, Oregon, which was developed by UP subsidiary Oregon Short Line during 1881– 1884. Additional branch lines tributary to these mainline routes were constructed or acquired from other railroads in the ensuing decades to tap coal and trona deposits, oil fields, timberlands, and emerging pockets of agricultural production statewide.

UP added significantly to its Wyoming route structure and coal market share when it merged with the Chicago & North Western Transportation Company (C&NW) in 1995. C&NW's predecessors had built westward across the Great Plains from Chicago, Illinois, reaching Wyoming in 1886. Ultimately, the C&NW network advanced as far as Lander, Wyoming, by 1906. However, ambitious plans to extend the line west to Ogden, Utah, to form a transcontinental connection with the Central Pacific Railroad (by that time a subsidiary of Southern Pacific Railroad [SP]) were ultimately scuttled.



CHAPTER 2



The 1995 transaction provided UP with access to the Southern Powder River Basin (PRB) coal region via two former C&NW mainline segments: West Caballo Junction–Shawnee Junction, Wyoming, (jointly owned and operated with BNSF) and Shawnee Junction, Wyoming–Joyce, Nebraska. These lines resulted from C&NW's tenacious efforts to break BN's monopoly on PRB coal transportation. C&NW won a protracted regulatory and court contest in 1983, during which the Interstate Commerce Commission ordered BN to sell a 50-percent share in its Southern PRB coal line to Western Railroad Properties (owned jointly by UP and C&NW) and to allow a new connection to be built between C&NW and an existing UP line at Joyce, Nebraska. Subsequent to UP's acquisition of C&NW, UP acquired SP in 1996, thereby expanding UP's market reach and taking another step towards consolidating Class I carriers in the West. **Figure 2-4** is a map of UP routes in Wyoming and the continuation of each route to neighboring states and terminals.

Significant portions of the C&NW route across Wyoming were abandoned starting in the 1940s and continuing into the 1990s. UP abandoned an isolated operation on the former C&NW network in Casper after the 1995 merger. Additionally, UP operated the isolated former C&NW Colony Line between Crawford, Nebraska, and Colony, Wyoming, for 1 year following the merger before selling it to the Dakota, Minnesota, and Eastern Railway (DM&E) in 1996.

UP operates numerous facilities and equipment systemwide to support its network functions including infrastructure, locomotives, and freight cars. It also owns or leases other equipment to support rail operations including intermodal containers and vehicles. Support facilities for rail operations include yard and terminals throughout its rail network (including at Cheyenne, Laramie, Rawlins, Green River, and Bill, Wyoming); system locomotive shops to perform locomotive servicing and maintenance; a centralized network operations center for train dispatching and network operations monitoring and management in Omaha, Nebraska; regional dispatching centers, computers, telecommunications equipment, and signal systems; and other support systems.

UP operates 879 route-miles of track in Wyoming which is just under half of the state's rail system mileage. The Overland Route (Central Corridor) via Cheyenne, Rawlins, Green River, Granger, and Evanston, Wyoming, is the principal artery of UP's transcontinental system. This route has been the recipient of considerable investment for over a century as volume and service needs have grown and as greater operating efficiencies have been identified and achieved. The rail line segment from Cheyenne to Granger is one of the nation's most heavily used freight routes, moving in excess of 100 million gross tons annually. Routes diverge west of Granger, carrying traffic alternatively to the Los Angeles Basin, Northern California, or the Pacific Northwest. **Figure 2-5** shows a map of UP's operating subdivisions in Wyoming. A general description of the traffic and the physical and operating characteristics for each of these nine subdivisions follows.



Figure 2-4: UP Routes in Wyoming



Source: UP data acquired by HDR





Figure 2-5: UP Subdivisions in Wyoming



Source: UP data acquired by HDR





SIDNEY SUBDIVISION

The east-west Sidney Subdivision between Hinman (west of North Platte), Nebraska, and Cheyenne, Wyoming, is a component of UP's transcontinental Central Corridor. Trains carrying intermodal, automobile, grain, and manifest traffic, most of which originates and/or terminates outside Wyoming, run over this subdivision on its route between the West Coast/Pacific Northwest and the Midwest. Trains off the Yoder Subdivision connection at Egbert, Wyoming (described later), add coal and occasional local traffic between Egbert and Cheyenne. The east end of the Sidney Subdivision connects with the North Platte Terminal, which contains Bailey Yard, the largest and most extensive railcar classification yard on the UP system and in the world. According to the FRA Highway-Rail Crossing Inventory Database, approximately 60 trains per day traverse the Sidney subdivision as of 2020. Table 2-15 lists the physical and operating characteristics of the line.

Characteristics	Sidney Subdivision (133.6 Miles; 43.76 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	70 miles per hour
Track Configuration	Multiple Main Tracks
Signal Systems	Centralized Traffic Control/Automatic Cab Signal
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in
Clearances	height. All others are classified as dimensional loads which require clearance before
	transport.
Double-Stack Capable	Yes
Industrial Leads	None in Wyoming

Table 2-15: UP Sidney Subdivision Characteristics





LARAMIE SUBDIVISION

The east-west Laramie Subdivision between Cheyenne and Rawlins is a component of UP's heavily trafficked transcontinental Central Corridor. Trains carrying intermodal, automobile, grain, manifest, and coal traffic, most of which originates and/or terminates outside Wyoming, run over this subdivision between the West Coast/Pacific Northwest and the Midwest. The Laramie Subdivision crests the Laramie Mountains, a range of the Rocky Mountains, at Sherman Hill, the highest point on the UP route between Chicago, Illinois, and Oakland, California. Operating challenges in this mountainous territory required the relocation of existing track alignments and the construction of new alignments during the 19th and 20th centuries to create a complex, interrelated network of mainlines and connecting tracks necessary to surmount the escarpment between Cheyenne and Laramie, Wyoming (each segment is described below). According to the FRA Highway-Rail Crossing Inventory Database, approximately 60 trains per day traverse the Laramie Subdivision as of 2020. **Table 2-16** lists the physical and operating characteristics of the line.

Table 2-16: UP Laramie Subdivision Characteristics

Characteristics	Laramie Subdivision (243.2 Miles total in Wyoming, includes the aggregate of all mainline segments)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	70 miles per hour
Track Configuration	 Multiple Main Tracks, Cheyenne—Rawlins, Wyoming: Main Tracks 1/2 (Cheyenne–Rawlins): 173.8 miles Main Tracks 3/4 (Cheyenne–West Speer): 10.2 miles Main Track 3 (Emkay–Dale Junction): 35.8 miles Main Track 3 (Hermosa–Laramie): 23.4 miles Borie Cutoff (connection track between Main Tracks 1/2 at Borie and Main Tracks 3/4 at West Speer) Note: Mainlines separate into two alignments between Cheyenne and Dale Junction and between Hermosa and Laramie.
Signal Systems	Centralized Traffic Control/Automatic Cab Signal
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	 Ramsey Industrial Lead (4.2 miles): Ramsey, Wyoming Medicine Bow Industrial Lead (13.1 miles): Hanna, Wyoming



RAWLINS SUBDIVISION

The east-west Rawlins Subdivision between Rawlins and West Green River, Wyoming, is a component of UP's heavily trafficked transcontinental Central Corridor. Trains carrying intermodal, automobile, grain, manifest, and coal traffic, most of which originates and/or terminates outside Wyoming, run over this subdivision between the West Coast/Pacific Northwest and the Midwest. According to the FRA Highway-Rail Crossing Inventory Database, approximately 60 trains per day traverse the Rawlins Subdivision as of 2020. **Table 2-17** lists the physical and operating characteristics of the line.

Table 2-17: UP Rawlins	s Subdivision	Characteristics
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Characteristics	Rawlins Subdivision (133.6 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	70 miles per hour
Track Configuration	Multiple Main Tracks
Signal Systems	Centralized Traffic Control/Automatic Cab Signal
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	 South Pass Industrial Lead (6.5 miles): Rock Springs, Wyoming Jim Bridger Industrial Lead (8.1 miles): Point of Rocks, Wyoming Chevron Industrial Lead (9.0 miles): Rock Springs, Wyoming



EVANSTON SUBDIVISION

The east-west Evanston Subdivision between West Green River, Wyoming, and Ogden, Utah, is a component of UP's heavily trafficked transcontinental Central Corridor. Trains carrying intermodal, automobile, grain, manifest, and coal traffic, most of which originates and/or terminates outside Wyoming, run over this subdivision between the West Coast/Pacific Northwest and the Midwest. Coal and trona deposits in the region contribute to rail traffic on the route. According to the FRA Highway-Rail Crossing Inventory Database, approximately 40 trains per day traverse the Evanston Subdivision as of 2020. **Table 2-18** lists the physical and operating characteristics of the line.

Table 2-18: UP Evanston Subdivision Characteristic	S
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Characteristics	Evanston Subdivision (188.9 Miles; 105.53 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	70 miles per hour
Track Configuration	Multiple Main Tracks
Signal Systems	Centralized Traffic Control/Automatic Cab Signal
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	 Solvay Industrial Lead (9.0 miles): Tenneco, Wyoming Stauffer Industrial Lead (10.2 miles): Stauffer, Wyoming General Chemical Industrial Lead (2.4 miles): Alchem, Wyoming Texas Gulf Soda Industrial Lead (5.2 miles): T.G. Soda, Wyoming



POCATELLO SUBDIVISION

The Pocatello Subdivision travels northwesterly from the Evanston Subdivision connection at Granger, Wyoming, to Pocatello, Idaho, and is a component of UP's heavily trafficked transcontinental route between the Pacific Northwest and the Midwest. Trains carrying intermodal, automobile, grain, manifest, and coal traffic, most of which originates and/or terminates outside Wyoming, run over this subdivision. According to the FRA Highway-Rail Crossing Inventory Database, approximately 20 trains per day traverse this line as of 2020. **Table 2-19** lists the physical and operating characteristics of the line.

Table 2-19: UP Pocatello Subdivision Characteristics

Characteristics	Pocatello Subdivision (214.3 Miles; 92.38 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	70 miles per hour
Track Configuration	Single-track mainline with sidings/Multiple Main Tracks
Signal Systems	Centralized Traffic Control
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet
Clearances	in height. All others are classified as dimensional loads which require clearance before
	transport.
Double-Stack Capable	Yes
	 Exxon Industrial Lead (3.5 miles): Shute Creek, Wyoming
Industrial Leads	Cumberland Industrial Lead (10.9 miles): Kemmerer, Wyoming
	Elkol Industrial Lead (3.3 miles): Kemmerer, Wyoming





POWDER RIVER SUBDIVISION

The mostly north-south Powder River Subdivision is UP's conduit for transporting coal out of the Southern PRB to markets nationwide. It was built for the C&NW in 1984 and combined new line construction from an existing UP line at Joyce, Nebraska, to Crandall, Wyoming, (a junction west of Van Tassell, Wyoming) with a rehabilitated and realigned existing C&NW route between Crandall and Shawnee, Wyoming. Subsequent capacity improvements came in response to an increased demand for coal and the resulting boost in traffic and included double-tracking in segments, which was completed in 2001. According to the FRA Highway-Rail Crossing Inventory Database, approximately 40 trains per day traverse the Powder River Subdivision as of 2020. Table 2-20 lists the physical and operating characteristics of the subdivision.

Table 2-20: UP Powder River Subdivision Characteristics

Characteristics	Powder River Subdivision (214.3 Miles; 93.64 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	60 miles per hour
Track Configuration	Multiple Main Tracks
Signal Systems	Centralized Traffic Control
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	None





ORIN SUBDIVISION

The north-south Orin Subdivision runs between Donkey Creek Junction (near Gillette) and Bridger Junction (near Orin), Wyoming. Its primary purpose is to collect coal from several mines in the Southern PRB region and funnel it to principal rail routes out of Wyoming. Two line segments in the Southern PRB coal region are jointly owned by BNSF and UP; however, BNSF manages control of all train movements on these segments: the Orin Subdivision between West Caballo Junction (south of Donkey Creek Junction) and Shawnee Junction, Wyoming, (102.4 miles) and the connecting Reno Lead to Black Thunder Junction, Wyoming (3 miles). UP maintains a yard facility and office at the intermediate point of Bill, Wyoming, where coal trains can be staged and railcars repaired. Based on the train volumes reported on the UP Powder River Subdivision, it is inferred that approximately 40 out of 58 total average trains per day on the Orin Subdivision are UP trains. **Table 2-21** lists the characteristics of the line.

Table 2-21: BNSF (UP) Orin Subdivision Characteristics

Characteristics	Orin Subdivision (126.9 Miles in Wyoming)
Owner	 BNSF Railway (Donkey Creek Junction—West Caballo Junction, 14.3 miles) BNSF Railway/Union Pacific Railroad (West Caballo Junction—Shawnee Junction, 102.4 miles) BNSF Railway (Shawnee Junction—Bridger Junction, 10.2 miles)
Operator	 BNSF Railway (Donkey Creek Junction—West Caballo Junction, 14.3 miles) BNSF Railway/Union Pacific Railroad (West Caballo Junction—Shawnee Junction, 102.4 miles) BNSF Railway (Shawnee Junction—Bridger Junction, 10.2 miles)
Maximum Authorized Speed	50 miles per hour
Track Configuration	Multiple Main Tracks
Signal Systems	Centralized Traffic Control
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads to Coal Mines	 North Antelope Spur Antelope Spur Black Thunder Junction to Jacobs Ranch Black Thunder Junction to Orin Sub Switches (former BNSF Reno Subdivision, 3.0 miles; joint BNSF/UP ownership and operation) Black Thunder Spur Black Thunder East Black Thunder West Spur Coal Creek Spur Cordero Spur Belle Ayr Spur Caballo Rojo Spur Caballo Spur



YODER SUBDIVISION

The north-south Yoder Subdivision in eastern Wyoming is a cutoff between the Sidney Subdivision at Egbert, Wyoming, and the Powder River Subdivision at Horse Creek, Nebraska. It provides an outlet for routing PRB coal to destinations on the UP network in the western United States via Cheyenne and also contributes local traffic. The Wyoming Connect Railroad Industrial Park in Yoder, Wyoming, provides transload services for Goshen County, with carloads delivered by UP from Cheyenne. According to the FRA Highway-Rail Crossing Inventory Database, approximately two trains per day traverse the Yoder Subdivision as of 2020. **Table 2-22** lists the physical and operating characteristics of the subdivision.

Characteristics	Yoder Subdivision (79.9 Miles; 74.9 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	49 miles per hour
Track Configuration	Single-track mainline with sidings
Signal Systems	Centralized Traffic Control at Meier only
Operational Authority	Track Warrant Control
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	286,000 pounds
	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet
Clearances	in height. All others are classified as dimensional loads which require clearance before
	transport.
Double-Stack Capable	Yes
Industrial Leads	South Torrington Industrial Lead (18.6 miles): Yoder, Wyoming

Table 2-22: UP Yoder Subdivision Characteristics





GREELEY SUBDIVISION

The north-south Greeley Subdivision between Speer (southwest of Cheyenne), Wyoming, and Denver, Colorado, provides a link between UP's transcontinental Overland Route and the Denver hub, where routes diverge east to Kansas City, Missouri; west to Salt Lake City, Utah; and south to Texas and the Gulf Coast. Trains carrying intermodal, automotive, grain, manifest, and coal traffic, most of which originate or terminate outside Wyoming, run over this subdivision. According to the FRA Highway-Rail Crossing Inventory Database, approximately 14 trains per day traverse the Greeley Subdivision as of 2020. Table 2-23 lists the physical and operating characteristics of the line.

Characteristics	Greeley Subdivision (98.6 Miles; 4.95 Miles in Wyoming)
Owner	Union Pacific Railroad
Operator	Union Pacific Railroad
Maximum Authorized Speed	60 miles per hour
Track Configuration	Single-track mainline with sidings
Signal Systems	Centralized Traffic Control
Operational Authority	Signal Indication
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	315,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance before transport.
Double-Stack Capable	Yes
Industrial Leads	None in Wyoming

Table 2-23: UP Greeley Subdivision Characteristics





2.1.1.2 CLASS II RAIL NETWORK IN WYOMING

STB designates any railroad with greater than \$40.4 million but less than \$900 million of annual carrier operating revenue as a Class II carrier.²² Class II railroads are less numerous nationwide than the smaller Class III short-line railroads, but are common where vast segments of other railroads have been divested or leased to new operators. Wyoming is served by one regional railroad.

Rapid City, Pierre & Eastern Railroad

The Rapid City, Pierre & Eastern (RCPE) began operations on June 1, 2014, and is a subsidiary of short-line and regional railroad conglomerate Genesee & Wyoming (G&W). RCPE operates on 742 miles of track in Minnesota, Nebraska, South Dakota, and Wyoming.

Table 2-24 lists railroad statistics for RCPE.

Location	Route Miles Operated	Route Miles Owned	Route Miles Leased	Miles Leased to Others	
Wyoming	7	7	N/A	N/A	
United States	742	742	N/A	N/A	

Table 2-24: Rapid City, Pierre & Eastern Railroad Statistics

Source: 2020 data obtained from RCPE by HDR

In 1986, DM&E, a Class II railroad, was formed from about 825 miles of former C&NW trackage in Minnesota and South Dakota. DM&E gained access to Wyoming via the 1996 acquisition of the 203-mile ex-C&NW Colony Line between Bentonite (Colony), Wyoming; Rapid City, South Dakota; and Crawford, Nebraska, from UP. This acquisition connected the existing DM&E network at Rapid City to the BNSF network at Crawford.

In 2007, the Canadian Pacific Railway (CP) purchased the DM&E to help facilitate the development of a new rail line into Wyoming's PRB from South Dakota. However, by late 2012, CP announced its plan to defer its option to construct its PRB extension indefinitely because of ongoing deterioration in the domestic coal market.

In its 2012 annual report, CP reported that it was exploring "strategic options for its main track from Tracy, Minnesota, west into South Dakota, Nebraska, and Wyoming and invited expressions of interest from prospective partners" with interest in that 660-mile portion of its DM&E subsidiary. On January 2, 2014, CP announced that it would sell this portion of the DM&E to short-line railroad conglomerate G&W of Darien, Connecticut, for \$210 million. This new G&W railroad, also operating as a Class II railroad in Wyoming, was called the RCPE which began operations on June 1, 2014.²³



²² Surface Transportation Board Adopts Final Rule Amending Thresholds for Classifying Rail Carriers, April 5, 2021. Retrieved from: <u>https://prod.stb.gov/news-communications/latest-news/pr-21-16/</u>

²³ Genesee & Wyoming, Starting Up the Rapid City, Pierre & Eastern Railroad. Retrieved from: <u>https://www.gwrr.com/customers/case-studies/building-the-rapid-city-pierre--eastern-railroad</u>



Table 2-25 lists the physical and operating characteristics of RCPE's line in Wyoming.

Table 2-25:	RCPE	Black H	Hills	Subdivision	Characteristics
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Characteristics	Black Hills Subdivision (174.3 Miles; 7 Miles in Wyoming)
Owner	Rapid City, Pierre & Eastern Railroad
Operator	Rapid City, Pierre & Eastern Railroad
Maximum Authorized Speed	40 miles per hour/ 25 miles per hour (varies by segment)
Track Configuration	Single-track
Signal Systems	None
Operational Authority	Track Warrant Control
Trackage Rights	None
Haulage Rights	None
Maximum Gross Weight	263,000 pounds
Clearances	Unrestricted railcars do not exceed 11 feet in width including protrusions, or 17 feet in height. All others are classified as dimensional loads which require clearance
	before transport.
Double-Stack Capable	No
Industrial Leads	None in Wyoming



CHAPTER 2

Figure 2-6 is a map of RCPE routes in the state.



Figure 2-6: RCPE Routes in Wyoming

Source: HDR

May 2021

2.1.1.3 CLASS III RAIL NETWORK IN WYOMING

STB designates any railroad with less than \$40.4 million of annual carrier operating revenue as a Class III carrier.²⁴ Many Class III carriers, also known as short-line railroads, were formed from assets divested by Class I carriers during the last 40 years as a strategy to reduce operating and maintenance costs and to direct capital to long-haul mainline routes. Wyoming has two short-line railroads.

²⁴ Surface Transportation Board Adopts Final Rule Amending Thresholds for Classifying Rail Carriers, April 5, 2021. Retrieved from: <u>https://prod.stb.gov/news-communications/latest-news/pr-21-16/</u>





Bighorn Divide & Wyoming Railroad

BDW had its genesis in the Bad Water Line, a railroad operation launched by Bonneville Transloaders, Inc., of Riverton, Wyoming. The Bad Water Line saved former C&NW trackage from abandonment between Riverton and Shoshoni, Wyoming, in 1988. The Bad Water Line subsequently retreated to a short segment between Shoshoni and Bonneville, became the Bad Water Railway in 2000, expanded operations to a new isolated line built between Lysite and Lost Cabin, Wyoming, to the east of Shoshoni in 2001, and was acquired by Shoshoni-based BDW in 2002. BDW began an additional rail operation at the Casper Logistics Hub, now known as CTran (in 2009), although this trackage is not contiguous to the rest of the BDW network.

BDW handled 5,793 carloads in 2019. The mainstay of its business is transloading (transferring commodities between truck and rail) and transporting bulk products to BNSF interchanges for furtherance to destinations nationwide. A significant transloading infrastructure is maintained on the property, including ground space and silos for storage, conveyors and belts for movement of material, and rail and truck scales. Principal outbound commodities are molten sulfur and soda ash (trucked in from the Green River, Wyoming, area); petroleum products; inbound frac sand and barite for use by local drilling interests; pipe; shingles; lumber; and urea. Bonneville Transloaders opened a new railcar shop and repair facility adjacent to the BDW at Shoshoni in 2006.

Table 2-26 lists railroad statistics for BDW.

Segment	Route Miles Operated	Route Miles Owned	Route Miles Leased	Miles of Trackage Rights	Train Movements per Day
Shobon Line	4.2	4.2	0	0	1
Lost Cabin Line	4	0	4	0	1
BNSF Casper Subdivision	23.5	0	0	23.5	1
Total	31.7*	4.2	4	23.5	3

Table 2-26: Bighorn Divide & Wyoming Railroad Statistics

Source: 2020 data obtained from BDW by HDR

*Note: BDW reported 41.2 total miles of track operated as of 2020, including yard tracks and transload facilities.

In 2020, BDW operations consisted of the following components:

- **Bonneville Rail Yard (Bonneville, Wyoming):** A transloading and storage facility. The 125-acre facility features 25,436 total feet of track (14,000 feet for transloading purposes) and 215 railcar spots. The facility can accommodate petroleum products, soda ash, molten sulfur, frac sand, pipe, and lumber.
- Shoshoni Rail Yard (Shoshoni, Wyoming): A transloading and storage facility. The 125-acre facility features 17,217 total feet of track, all of which can be used for transloading purposes, and 265 railcar spots. The facility can accommodate petroleum products, frac sand, cement, pipe, and lumber.
- **Shobon Line (Shoshoni, Wyoming):** A 4.2-mile line connecting the Bonneville Rail Yard and Shoshoni Rail Yard. The line features an additional 3,000 feet of track for transloading and storage purposes as well as 45 railcar spots. The line serves propane and scrap iron facilities.

STATEWIDE RAIL PLAN

- **CTran Railyard (Bishop, Wyoming):** A transloading, trucking, erecting, storage, and warehousing facility 7 miles northwest of Casper that is managed by CTran and operated by BDW. The 700-acre facility features 45,200 feet of track (36,500 feet for transloading purposes) and 600 railcar spots. The facility can accommodate lumber, petroleum products, frac sand, casing, coated pipe, cement, soda ash, and wind turbines. CTran is the largest rail transload facility along the BNSF network between Denver, Colorado, and Billings, Montana, and it offers strategic access to the Casper–Natrona County International Airport, the Foreign Trade Zone, and principal U.S. and interstate highways.
- Lost Cabin Line: BDW leases a 4-mile line between Lysite and Lost Cabin, Wyoming, to access the ConocoPhillips
 gas plant at Lost Cabin. BDW accesses the isolated line via 23.5 miles of trackage rights over BNSF's Casper
 Subdivision between Shobon (Bonneville) and Lysite. BDW transloads molten sulfur at the ConocoPhillips gas
 plant and assembles unit trains at the Bonneville Rail Yard for BNSF.

Figure 2-7 is a map of BDW routes in the state.



Figure 2-7: BDW Routes in Wyoming

Source: HDR





The maximum allowable gross weight for railcars on BDW is 286,000 pounds. Carload interchange with BNSF occurs at Shobon (Bonneville) and Bishop (Casper CTran Railyard). In BDW's operation involving customer and yard switching, train movements are made not to exceed 10 miles per hour. The maximum authorized speed on the BNSF Casper Subdivision over which the BDW has trackage rights is 40 miles per hour. The BNSF Casper Subdivision main track is dispatched by Track Warrant Control with track warrants issued by the dispatcher. On BDW's Shobon and Lost Cabin lines, a Block Register is used to keep a record of track occupancy.

Swan Ranch Railroad

The Swan Ranch Railroad (SRRR) of Cheyenne, Wyoming, began operations on December 28, 2011, and is a subsidiary of short-line and regional railroad conglomerate Watco Transportation Services of Pittsburg, Kansas. SRRR operates an approximately 8-mile route between the BNSF Front Range Subdivision and the UP Laramie Subdivision (Main 3) at Speer, just outside of Cheyenne. The rail connection forms the backbone of Granite Peak Development's 7,200-acre Swan Ranch Industrial Park. Situated near the intersection of the BNSF and UP networks and Interstates 25 and 80 on the southwest side of Cheyenne, the park contains transloading facilities as well as sites for energy companies and manufacturers.

SRRR is responsible for the rail operations at the industrial park and does not own any of the track it operates on. The railroad's traffic is primarily hydraulic fracturing material (frac sand), crude oil, asphalt, chemicals, and coiled steel. SRRR assumes operations 5 days per week and handled 9,500 carloads in 2019.

 Table 2-27 lists railroad statistics for SRR.

Table 2-27: Swan Ranch Railroad Statistics

Segment	Route Miles Operated	Route Miles Owned	Route Miles Leased	Miles of Trackage Rights	Train Movements per Day
Cheyenne Logistics Hub	7.5	0	0	0	1-3

Source: 2020 data obtained from SRRR by HDR

The maximum allowable gross weight for railcars on SRRR is 286,000 pounds. Carload interchange with BNSF and UP occurs at Speer, Wyoming. Figure 2-8 is a map of SRRR in Wyoming.



Figure 2-8: SRRR in Wyoming



Source: HDR

2.1.1.4 OTHER RAIL-SERVED INDUSTRIAL PARKS

Tiger Transfer

Tiger Transfer operates a 600-acre industrial park near Upton, Wyoming.²⁵ This site has been identified by BNSF as a Premier Transload Facility and has both rail and non-rail sites available. Tiger Transfer has capabilities to serve both unit train and individual carload rail shippers, with internal on-site switching available.

Progress Rail Services

Progress Rail Services is a subsidiary of heavy equipment manufacturer Caterpillar and provides switching services to an industrial park at Rock Springs, Wyoming.



²⁵ <u>http://www.tigertransfer.com/</u>


Wyoming Connect Railroad

The family owned Wyoming Connect Railroad operates a switching and terminal operation to facilitate transloading in Yoder, Wyoming.²⁶ Figure 2-9 illustrates the plan for the Wyoming Connect Railroad Industrial Park.





Source: Wyoming Connect

2.1.1.5 RAILCAR REPAIR SHOPS

Independent railcar repair shops exist in Wyoming to maintain equipment used to transport freight originating in or passing through the state. These facilities can handle repairs of both railroad-owned and privately owned railcars and are situated in the following locations:

- Bill, Wyoming: Progress Rail Services handles contract railcar repair for unit coal train sets serving nearby mines.
- Evanston, Wyoming: Union Tank Car Company (UTLX) Shop Number 113 handles contract rail car repair.
- Rock Springs, Wyoming: Progress Rail Services handles contract rail car repair for UP. .
- Shoshoni, Wyoming: Wasatch Railcar Repair operates a railcar repair shop in Shoshoni, Wyoming²⁷ .

²⁶ <u>http://www.wyconrr.com/</u>



²⁷ <u>https://www.wrrc.us/about-wasatch-railcar-repair/</u>



2.1.1.6 INDUSTRIAL RAILROADS

Industrial railroads exist in Wyoming to provide intra-plant and interplant rail switching service to large industrial and manufacturing customers and to coordinate and facilitate carload interchange with Class I railroads. These small carriers typically operate over private track on company property. They can be owned and operated by the company that they serve or can be operated under a contract agreement with an outside party.

G&W and Watco Companies, L.L.C. are two examples of railway operating companies that provide switching services in Wyoming.

2.1.1.7 PASSENGER RAIL NETWORK IN WYOMING

Passenger trains were the dominant mode of intercity travel in Wyoming from the time of UP's 1867 arrival in the state until the immediate post–World War I era. Historically, intercity and long-distance passenger-rail services were offered in Wyoming by UP, CB&Q and its subsidiary C&S, and C&NW. During this halcyon era of passenger-rail travel, trains connected Wyoming cities and small towns with each other as well as metropolitan areas in adjoining states and across North America. In addition to passengers, most passenger-carrying trains hauled mail, express freight, and even fresh milk.

Intercity passenger-rail travel began its slow decline in the 1920s, a decade in which a network of improved highways emerged and automobile travel became more reliable and affordable in Wyoming and elsewhere. The emergence of the interstate highway system and the availability of reasonably priced air travel, starting immediately after World War II and continuing into the 1960s, significantly decreased the market for passenger trains. In September 1967, the United States Postal Service largely discontinued its use of passenger trains for the haulage of mail between cities. With the loss of mail revenue, many rail carriers rapidly sought to discontinue passenger trains that were no longer economical to operate. The United States passenger-rail network winnowed down to a small core network of routes by 1970. **Figure 2-10** shows passenger routes in Wyoming, sorted by the year they were last served.







Figure 2-10: Wyoming Passenger Train Routes by Year of Most Recent Service

Source: HDR analysis of Public Passenger Timetables of the Chicago, Burlington, and Quincy Railroad, Union Pacific Railroad, and Amtrak (1955–1997)

Amtrak Operations Background

The National Passenger Rail Corporation, generally known as Amtrak, was formed by Congress in 1970 to relieve United States railroads of their obligation to operate passenger trains and to establish a single intercity passenger-rail network in the United States (initially, six railroads chose to operate their own services independently). Amtrak assumed control of about half of the passenger trains that were operating nationwide on May 1, 1971, while the remainder were discontinued indefinitely.

Prior to Amtrak's startup in 1971, Wyoming was served by the daily *City of San Francisco* long-distance train between Chicago and Oakland, California, operated by UP. At the time Amtrak assumed control of the service, it rerouted the trains off the UP network east of Cheyenne, Wyoming. The new route operated via Denver, Colorado, and used UP trackage from Denver north to Borie (west of Cheyenne, Wyoming) and then west to Ogden, Utah, with station stops at Laramie, Rawlins, Rock Springs, Green River, and Evanston, Wyoming. Amtrak renamed the train the *San Francisco Zephyr* in 1972. This Amtrak service became the *California Zephyr* in 1983, when it was rerouted from the UP network at Denver onto the Denver & Rio Grande Western Railroad's parallel route across Utah and Colorado to the south, thus ending 116 years of uninterrupted passenger-rail service in Wyoming.

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Amtrak returned to the state in 1991 when it routed its daily Chicago-to-Seattle, Washington, Pioneer over the UP route used previously by the San Francisco Zephyr. The train provided Wyoming riders with coach, sleeper, dining, and baggage service over the length of the route and connections to the nearby Denver, Ogden (near Salt Lake City), and Boise metropolitan areas. Due to reductions in Amtrak's federal operating support, the frequency of Pioneer service declined to thrice-weekly trains across Wyoming by 1993, and the service was discontinued altogether on May 10, 1997.

Since 1997, Amtrak has operated irregularly in Wyoming on several occasions. The California Zephyr has periodically detoured over the UP between Denver, Colorado, and Salt Lake City, Utah, through Wyoming when the normal UP route across Utah and Colorado to the south is undergoing maintenance. However, these occasional detouring trains do not board or disembark passengers at stations within Wyoming.

In addition to detours, Amtrak has historically exercised its trackage rights to operate chartered special passenger trains for travel enthusiasts. On August 3 and 4, 2013, Amtrak operated a chartered train from Denver, Colorado, north to the Wind River Canyon in Wyoming and onwards to Shelby, Montana. In June of 2016, High Iron Travel in partnership with Amtrak operated the Front Range Explorer public charter through Wyoming. The train originated in Fort Worth, Texas, and traveled via Denver, Colorado to St. Paul, Minnesota. A map of this journey is shown in Figure 2-11.



Figure 2-11: Route of the Front Range Explorer

Source: Charles B. Weinstock²⁸

²⁸ Charles B Weinstock, *The Front Range Explorers*, June 2016. Retrieved from: https://ramblings.weinstock.us/2016/06/the-front-range-explorers.html



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The train's itinerary included a segment between Denver and Gillette, Wyoming, via Cheyenne operated on June 3, 2016, making it the first and only revenue passenger train to traverse the PRB. The train continued to Forsyth, Montana, via Sheridan the next day. On September 13 and 14, 2016, Amtrak provided haulage for the American Association of Private Rail Car Owners (AAPRCO) *City of Spokane* private car charter special through Wyoming. This train operated from Denver, Colorado, to Spokane, Washington, via Cheyenne and Casper.

In 2018, Amtrak announced it would no longer operate charter or special trains outside of its normal passenger routes in order to optimize its train crew and locomotive utilization practices.²⁹

Today, Amtrak continues to operate passenger-rail service over a network that encompasses 21,400 route-miles and serves over 500 stations in 46 states, the District of Columbia, and three Canadian provinces. Amtrak carried a record 32.5 million passengers in federal fiscal year (FY) 2019.³⁰ Nearly 89,100 passengers on average ride on Amtrak's 300 trains every day, which include long-distance, intercity corridor (state-supported) services, and the Northeast Corridor service. **Figure 2-12** shows Amtrak's current route network, including connecting intercity bus services.

Sustained high gas prices and competitive pricing have been identified as contributing factors to Amtrak's ridership growth in recent years. Wyoming was one of four states in the United States without Amtrak trains in 2020, but riders can access Amtrak's long-distance *California Zephyr* service (Chicago, Illinois, to the San Francisco Bay Area) to the south at principal stations in Salt Lake City, Utah, and Grand Junction, Glenwood Springs, and Denver, Colorado.

As of 2020, there are no long-distance, intercity corridor, commuter-rail, or light-rail transit services in Wyoming. The longdistance, intercity, and commuter-rail options that have been explored since the elimination of Amtrak service to the state in 1997 are detailed in Chapter 3.

²⁹ The Wall Street Journal, Amtrak Ends Chartered and Specialty Train Trips on U.S. Railways, March 29, 2018. Retrieved from: <u>https://www.wsj.com/articles/amtrak-ends-chartered-and-specialty-train-trips-on-u-s-railways-1522338049?reflink=desktopwebshare_permalink</u>

³⁰ Amtrak *FY 2019 Company Profile*. Retrieved from: <u>https://media.amtrak.com/wp-content/uploads/2020/06/Amtrak-Corporate-Profile FY2019 -FINAL-033120.pdf</u>



Figure 2-12: The Amtrak Network (2018)



Source: Amtrak

2.1.1.8 TOURIST RAILROAD SERVICES IN WYOMING

Terry Bison Ranch, located south of Cheyenne, operates a standard-gauge tourist rail line that straddles the Wyoming– Colorado state border on an alignment not previously used for railroad purposes. The route is approximately 2 miles long and began operations in 2004. The Terry Bison Ranch rail line is not a component of the national rail network, nor does it physically connect with any other rail carrier's network. All of its equipment, including six locomotives, was home-built on the ranch property and are not examples of historic railroad equipment. The ranch operates regular Bison Train Tours every day except Christmas Day and operates a Sunday Lunch Train during the summer.



Inside its Cheyenne terminal, UP has a roundhouse and machine shop where two historic steam locomotives are maintained that operate special excursion trains throughout the UP network. Locomotive No. 4014, built in 1941 with two sets of powered driving wheels, was part of a class of steam locomotives that were some the largest ever built, earning the nickname "Big Boy." It was restored to operation in 2019 and toured UP system to commemorate the transcontinental railroad's 150th anniversary. Locomotive No. 844 was the last steam locomotive built for UP, delivered in 1944 as a high-speed passenger train locomotive and was repurposed for excursion service in 1960. The locomotive has pulled numerous excursion trips over the decades, including trips over Sherman Hill between Cheyenne and Laramie, Wyoming. Although UP announced that it would suspend steam excursions in 2020, owing to the uncertainty surrounding the COVID-19 virus and social distancing measures, the railroad has stated it intends to operate steam-powered excursion trains in the future.

2.1.1.9 RAIL LINES OWNED BY THE STATE

The Wyoming state constitution prohibits state ownership of rail lines in Wyoming, as noted in Title 97, Article 3, Section 39 of the state constitution, as follows

Title 97, Article 3, Section 39. Aid to railroads prohibited.

The legislature shall have no power to pass any law authorizing the state or any county in the state to contract any debt or obligation in the construction of any railroad, or give or loan its credit to or in aid of the construction of the same.

2.1.1.10 ABANDONED AND RAILBANKED LINES

Abandonments

Wyoming has largely avoided the network rationalization issues that other states have experienced because the state's historic rail system consists almost entirely of high-density mainline trackage and few secondary lines or branch lines. Rail abandonments in Wyoming have therefore been minimal and limited only to low-density, marginal operations where the demand for service declined. Wyoming is an anomaly considering that its rail abandonments have been offset significantly by the mileage of new track constructed into the Southern PRB during the 1970s and 1980s. Wyoming's statewide rail network totaled 1,931 miles in 1920 but did not reach its peak of 2,065 miles until 1995. Rail line abandonment applications made by railroads are reviewed and approved for abandonment by the federal STB.

The longest continual loss of rail mileage in the state's history was the former C&NW line from Lander, Casper, and Douglas, Wyoming, to Crawford, Nebraska, most of which was abandoned in segments starting in the early 1940s and continuing into the 1990s.

Another significant historical abandonment was the BN line from Sterling, Colorado, to Cheyenne, Wyoming. This line was abandoned in phases throughout the 1970s. This was a low-density prairie branch line that was made redundant for through-traffic to Cheyenne by Burlington's control of the C&S line from Denver. Such redundancy of these "granger" lines across the Great Plains was the reason behind much of the route rationalization throughout this region.

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More recently, the Wyoming and Colorado Railroad (WYCO), a Class III carrier, acquired two branch lines from UP in 1987, both of which have been subsequently abandoned. WYCO filed to abandon its 24.3-mile Encampment Branch from a connection with the UP network at Walcott Junction south to Saratoga in 2004 in response to the loss of its single source of traffic, a Louisiana Pacific mill at Saratoga. STB gave final authority to abandon the line in 2006. The other WYCO branch line was the 107.5-mile Coalmont Branch between Laramie and Walden, Colorado (67.7 miles in Wyoming) which was abandoned in stages starting in 1996. The last 1.12-mile segment of this line in Laramie was removed by UP in 2013.

Knowledge of the history and geography of abandoned rail lines often fades from collective memory over time. In some cases, these corridors are rediscovered as new land uses are sought. A map of known abandoned and railbanked railroad segments in Wyoming is shown in **Figure 2-13**. Other than the significant route abandonments mentioned above, many of the segments identified are locations where a railroad shifted its route to a more favorable alignment to soften curves and grades or to avoid hills or floodplains. In one such example, the creation of Boysen Reservoir near Bonneville, Wyoming, required the relocation of an existing CB&Q line to higher ground and a new tunnel to bypass the dam.³¹



Figure 2-13: Abandoned and Railbanked Railroad Segments in Wyoming

Source: HDR, HDR review of Google Earth aerial imagery

³¹ Popular Mechanics (July 1949)



Railbanked Lines

Recognizing that abandoned rail lines are typically lost as complete linear corridors for future transportation uses, some rail right-of-way have been railbanked in Wyoming. Railbanking is a process by which corridors are preserved as potential future transportation corridors while being converted to recreational trails in the interim. The Wyoming Department of Transportation (WYDOT) reviews all potential rail abandonments in the state for suitability as recreational corridors under the federal Rails-to-rails legislation.

About 21,000 miles of open rails-to-trails corridors exist nationwide, with over 50 of those miles in Wyoming. The following four abandoned rail line segments have been converted to rail-trails for interim recreational use in the state:

- Wyoming Heritage Trail: 22 miles of the former C&NW/(BDW line between Shoshoni and Riverton, Wyoming
- **Medicine Bow Rail Trail:** 21 miles of the former UP/ WYCO Coalmont Branch between Albany and near Wyocolo, Wyoming, which opened in 2007
- **Casper Rail Trail:** 3 miles of the former C&NW/UP line in Casper, Wyoming, which will eventually extend 6 miles east to Edness Kimball Wilkins State Park
- Al's Way: 2.5 miles of the former C&NW line in Glenrock, Wyoming

2.1.1.11 WYOMING GRADE CROSSING INVENTORY

Wyoming has nearly 400 active public highway-rail grade crossings. These are often referred to colloquially as simply railroad crossings or grade crossings. The term "grade" implies that the intersection of the road and railway alignments are at the same physical height in the built environment, thus presenting the opportunity for conflict as one might observe at a street or highway intersection, or at a pedestrian crosswalk. A crossing is considered "grade separated" when the pathways intersect at different heights with either the road or the railway traveling across the other over a bridge structure. A highway-rail grade crossing can be classified as either public or private. A public grade crossing is a location where a public highway, road, or street, including associated sidewalks or pathways, crosses one or more rail tracks at grade. If a public authority maintains the roadway on both sides of the crossing, the crossing is considered a public street, road, or highway.

An inventory of Wyoming's public and private grade crossings was assembled for inclusion in this SRP. The source for this inventory is the FRA Office of Safety Analysis website. The inventory is presented by county and includes the crossing number, name of railroad, type of crossing (public or private), city, railroad division, and street name, when applicable.



2.1.2 MAJOR FREIGHT AND PASSENGER TERMINALS

2.1.2.1 FREIGHT TERMINALS

BNSF Railway

BNSF's major rail terminals and main activities in Wyoming are listed in Table 2-28 and Table 2-29.

Table 2-28: BNSF Yards and Terminals

City				
Casper				
Cheyenne				
Donkey Creek				
Gillette				
Greybull				
Guernsey				
Sheridan				

Table 2-29: Freight Transload Facilities Served by BNSF

La	Commodities				
City	Terminal	Hydraulic Fracturing Material (Frac Sand)	Crude Oil	Cement	Other
Bill	Pronghorn Rail Terminal		Yes		
Bishop (Casper)	CTran (served by BDW)	Yes	Yes		
Bonneville	BDW				Yes
Douglas	Douglas Rail Terminal	Yes	Yes		
Fort Laramie	Eighty-Eight Oil		Yes		
Guernsey	John Bunning Transfer				Yes
Moorcroft	GCC Cement			Yes	
Shoshoni	BDW				Yes
Speer	Swan Ranch Industrial Park	Yes	Yes		Yes
Upton	Tiger Transfer				Yes

BDW Bighorn Divide & Wyoming Railroad

PRB Powder River Basin

BNSF BNSF Railway

SRRR Swan Ranch Railroad



General carload (manifest) traffic is sorted by destination and outbound trains are built at switching yards. BNSF does not have any automotive or intermodal terminals in Wyoming, though this traffic does flow through the state.

Carload interchange in Wyoming occurs with the UP at Cheyenne, with the SRRR at Speer (south of Cheyenne), and with the BDW at Shobon (Bonneville) and Bishop (Casper).

Union Pacific Railroad

UP's rail stations and main activities in Wyoming are listed in Table 2-30 and Table 2-31.

Table 2-30: UP Yards and Terminals

City				
Bill				
Cheyenne				
Green River				
Kemmerer				
Laramie				
Rawlins				

Table 2-31: Freight Transload Facilities Served by UP

Lo	Commodities			
City	Terminal	Hydraulic Fracturing Material (Frac Sand)	Crude Oil	Other
Bill	Progress Rail Services	Yes		
Bill	Pronghorn Rail Terminal		Yes	
Rock Springs	Progress Rail Serves	Yes		
Speer	Swan Ranch Industrial Park	Yes	Yes	Yes
Yoder	Wyoming Connect			Yes

General carload (manifest) traffic is handled at switching yards. UP does not have any automotive or intermodal terminals in Wyoming, though this traffic does flow through the state.

Carload interchange in Wyoming occurs with the BNSF at Cheyenne and with the SRRR at Speer.

2.1.2.2 PASSENGER TERMINALS

Since 1997, none of Wyoming's rail stations have been used in active passenger service. Some remaining historic stations are used as offices by Class I railroads BNSF and UP. Several legacy rail stations of UP, CB&Q and its subsidiary C&S, and C&NW heritage remain statewide and have undergone adaptive reuse to foster economic development; sustain commercial, tourism, cultural, and residential endeavors; and promote historic and architectural preservation and civic pride. For example, a historic train station in Douglas, Wyoming, built in 1886 by a C&NW predecessor railroad, now houses the Douglas Railroad Museum and Visitor Center, while a second historic station in Douglas, built by a BNSF predecessor, is a restaurant. **Table 2-32** lists remaining station structures located on active rail lines in Wyoming in 2020.



Table 2-32: Remaining Historic Passenger Rail Station Structures

City	Current Railroad/Historic Railroad	Subdivision	Current Use	
Casper	BNSF/CB&Q	Casper	BNSF Office	
Cheyenne	BNSF/C&S	Front Range	Private Office Space	
Cheyenne	UP	Sidney/Laramie	Museum, Restaurant, Chamber of Commerce	
Douglas	BNSF/CB&Q	Casper	Restaurant	
Douglas	C&NW	Abandoned	Museum	
Evanston	UP	Evanston	Museum	
Green River	UP	Rawlins	UP Office	
Laramie	UP	Laramie	Museum	
Lusk	UP/C&NW	Powder River	UP Office	
Medicine Bow	UP	Laramie	Museum	
Newcastle	BNSF/CB&Q	Black Hills	BNSF Office	
Rawlins	UP	Rawlins	Event Space	
Riverton	C&NW	Abandoned	Restaurant	
Rock Springs	UP	Rawlins	Coffee Shop	
Sheridan	BNSF/CB&Q	Big Horn	Food Hall	
Thermopolis	BNSF/CB&Q	Casper	BNSF Office	
Worland	BNSF/CB&Q	Casper	Private Office Space	

BNSF BNSF Railway

CB&Q Chicago, Burlington & Quincy Railroad

C&S Colorado & Southern Railway

UP Union Pacific Railroad

C&NW Chicago & North Western Transportation Company

2.1.2.3 OTHER TRANSPORTATION MODES

Wyoming is landlocked in the Intermountain West and does not have seaports or any waterways navigable for trade or commercial transportation purposes. Rivers and reservoirs statewide provide only recreational transportation opportunities, including boating and kayaking.

Wyoming has several airports designated by the Federal Aviation Administration as primary, commercial service, reliever, and general aviation airports. Primary airports in the state—from which regularly scheduled commercial air service is provided—are Cheyenne Regional Airport in Cheyenne, Casper–Natrona County International Airport in Casper, Gillette–Campbell County Airport in Gillette, Jackson Hole Airport in Jackson Hole, Laramie Regional Airport in Laramie, Riverton Regional Airport in Riverton, Rock Springs–Sweetwater County Airport in Rock Springs, and Yellowstone Regional Airport in Cody.³²

³² Wyoming Airport Operators Association. Retrieved from: <u>www.wyomingairports.org/index.php?/main/airports</u>



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Freight railroads currently operate within all of the communities served by the state's airport network except for Jackson Hole and Riverton.

2.1.3 OBJECTIVES FOR PASSENGER SERVICE IN WYOMING

There are currently no efforts underway to establish objectives for a regularly scheduled long-distance, intercity, highspeed, or commuter-rail service in Wyoming. Such an effort will be deferred to future planning efforts and would be in concert with this 2021 SRP in cooperation with all public and private stakeholders and other planning bodies statewide. The effort would be maximized in terms of efficiency and service integration with the multimodal transportation network and neighboring states as directed by the applicable legislation and transportation planning best practices.

2.1.4 WYOMING PASSENGER-RAIL PERFORMANCE EVALUATION

No passenger-rail performance data are available for the creation of this 2021 SRP. Passenger-rail services have not operated within Wyoming since Amtrak discontinued its service through the state in 1997.

2.1.5 PUBLIC FINANCING FOR RAIL PROJECTS

The State of Wyoming has made use of federal and state programs to fund rail infrastructure improvements where eligible and appropriate. This section summarizes public financing options available for rail projects in the recent past and explains Wyoming's use of these resources.

2.1.5.1 STATE RAIL-RELATED PROGRAMS AND FUNDING OPTIONS

The Wyoming state constitution and Wyoming statutes prohibit state funds from being used for rail construction and infrastructure improvements. State funding programs for use in rail-related initiatives are therefore limited to a small number of projects involving upgrading or improving rail-vehicle grade crossings and developing rail transportation options within city owned industrial or business parks.

The grants provided by the Wyoming Business Council's Business Ready Community (BRC) Program are covered with funds appropriated by the Wyoming state legislature every 2 years. Each transaction involves the commitment of matching funds via local contribution and/or additional private investment. The following rail-related projects were recipients of funding during the last 10 years:

- **Transloading Rail Site (Evanston, Wyoming):** \$1.48 million in Community Readiness grant funds was awarded to the City of Evanston in 2013 for the purchase of an existing transload site (formerly Pioneer Oil), two rail spurs, and associated commodity-unloading infrastructure. The facility, expected to make the city more competitive with local businesses that request rail access, is served by UP.
- Energy Rail Park Feasibility Study (Gillette, Wyoming): \$25,000 in Feasibility Study Planning grant funding from 2013 was applied to the \$40,000 Energy Park Rail Spur Feasibility Study for development by the City of Gillette. The study, conducted in collaboration with BNSF, evaluated an existing rail spur and determined the opportunity and cost associated with improved or expanded property use and rail infrastructure.
- **Guernsey Rail Spur Expansion (Guernsey, Wyoming):** \$717,792 in BRC funding was awarded in 2019 to construct two rail spurs and 260 feet of track to provide rail access to two lots in the Guernsey Industrial Park.
- **Upton Logistics Center (Upton, Wyoming):** As of July 2013, the logistics center had received \$5,393,616 in funding, with local contributions and private investment totaling about \$15.7 million. This project began as the Upton Regional Industrial Site when the Town of Upton and Weston County Development Corporation (WCDC)

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received an initial \$1.5-million BRC grant in 2004 to purchase the 555-acre American Colloid Plant and to construct a new rail spur for a connection to the BNSF network. (The application was submitted prior to statutory changes to the BRC program allowing for multi-year phased projects.) The Town of Upton, Weston County, and WCDC have nearly completed the Upton Logistics Hub. To date, the Town of Upton has received four BRC funding awards and Weston County has received one BRC funding award.

- **Casper CTran Rail Yard (Bishop, Wyoming):** \$1.5 million Business Committed grant was awarded to Natrona County in 2013 for the installation of water and sewer infrastructure at the logistics hub (formerly the Bishop Rail Park).
- **Trans-Modal Site (Laramie, Wyoming):** \$955,050 in Community Readiness grant funds to the Laramie Economic Development Corporation (LEDC) in 2010 to refurbish UP Track 107 and extend it 1,640 feet to create the South Laramie Trans-Modal Site. Grant funds will be used to pay for the rail extension and to upgrade an existing atgrade road crossing. UP will own the property and lease it to LEDC for a term of 20 years at \$1,350 per acre.
- Transportation and Utility Infrastructure (Speer/Laramie County, Wyoming): \$3,479,569 in Community Readiness grant funds to Laramie County in 2012 to extend water infrastructure and paving into the Swan Ranch Business Park. The park is a logistics hub located south of Cheyenne and contains 4,000 developable acres. It is bordered by UP and BNSF lines as well as Interstates 25 and 80. Granite Peak Development is developing the hub in phases. Phase I of the project consisted of 550 acres and provided a connection to the BNSF rail network. Laramie County was the recipient of a \$3 million Business Committed grant in 2010 to fund road construction as well as a water well and lines and a regional septic system. These improvements were necessary to recruit a Midwestern Pipeline Services pipe-coating plant. Phase II involved opening an additional 670 acres for development and added a connection to the UP network.

2.1.5.2 FEDERAL RAIL-RELATED PROGRAMS AND FUNDING OPTIONS

Historically, freight-rail infrastructure and operations have been funded almost entirely by private-sector companies. Few dedicated programs for rail capital assistance to states existed at the federal level until 2008. The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) and related appropriation bills provided funds for intercity passenger-rail investments directly to states in 2008 and amounted to \$13 billion in total investment between 2009 and 2013. In 2009, the American Recovery and Reinvestment Act (ARRA) provided additional transportation funding options to states that could be leveraged for passenger-rail development. Provisions of SAFETEA-LU (the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005), the nation's surface transportation program, contained a number of options for funding rail line relocations, infrastructure and facilities improvements, enhanced connectivity between transportation modes, and safety initiatives in addition to offering loans and credit assistance to public and private sponsors of rail and intermodal projects.

The following section describes grant programs that are available to Wyoming and other states specifically for rail assistance as of 2020, as well as those programs that might be eligible for rail-related funding in particular applications. Many current federal grant programs are due to expire at the end of 2020 and will need to be renewed or superseded by future legislation and will be guided by the policy platform and goals of the next administration.

Federal-State Partnership for State of Good Repair Grant Program (FY 2020)

This program provides \$291,422,706 for eligible capital projects within the United States to repair, replace, or rehabilitate qualified railroad assets to reduce the state of good repair backlog and improve intercity passenger rail performance.



<u>Rebuilding American Infrastructure with Sustainability and Equity (RAISE), previously</u> <u>known as Better Utilizing Investments to Leverage Development (BUILD), formerly known</u> <u>as Transportation Investment Generating Economic Recovery (TIGER) Grants (FY 2009–</u> <u>2021)</u>

The RAISE program provides a unique opportunity for the DOT to invest in road, rail, transit and port projects that promise to achieve national objectives. Since 2009, Congress has dedicated nearly \$8.1 billion for 11 rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact.

Consolidated Rail Infrastructure and Safety Improvements Program (CRISI) (FY 2017–2021)

The CRISI program provides funding for capital projects that will improve passenger and freight rail transportation systems in terms of safety, efficiency, or reliability.

Infrastructure for Rebuilding America (INFRA) Grants (FY 2017–2021)

The INFRA program provides dedicated, discretionary funding for projects that address critical issues facing our nation's highways and bridges. INFRA grants create opportunities for all levels of government and the private sector to fund infrastructure in innovative ways that improve project delivery and increase accountability.

Restoration and Enhancement Grants Program (FY 2018–2020)

This program provides \$26,337,600 in operating assistance grants for initiating, restoring, or enhancing intercity rail passenger transportation.

Railroad Trespassing Suicide Prevention Grant Program (FY 2019–2020)

This program provides \$293,000 for targeted outreach campaigns to reduce the number of suicides that involve trespassing on railroad property. Funding is intended to facilitate thoughtful and consistent collaboration between railroad carriers, communities, law enforcement, educators, and mental health organizations.

2.1.5.3 OTHER FEDERAL PROGRAMS FOR RAIL-RELATED FUNDING

In addition to transportation programs available under the Transportation Authorization bill, rail-related capital projects are eligible for funding assistance under other programs administered by federal agencies. These programs are described below.

United States Department of Commerce, Economic Development Administration

The United States Department of Commerce provides Economic Development Administration (EDA) grants for projects that promote job retention or creation in economically distressed industrial areas. Eligible projects must be located within EDA-designated redevelopment areas or economic development centers. Eligible rail projects include construction of rail sidings and industrial spurs as well as disaster recovery grants.

Grant assistance is generally available for up to 50 percent of the project cost, although EDA can provide up to 80 percent for projects in severely depressed areas.



United States Department of Agriculture Programs

The United States Department of Agriculture Community Facility Program and Rural Development Program provide grant or loan funding mechanisms to fund construction, extension, enlargement, or improvement of community facilities providing essential services in rural areas and towns. Grant assistance is available for up to 75 percent of the project cost. Eligible rail-related facilities include community transportation infrastructure for municipal docks and industrial parks.

United States Environmental Protection Agency

United States Environmental Protection Agency (EPA) funding is available for environmental remediation at Brownfield and other industrial sites where contaminants and other pollutants might be present, including properties once owned by railroads.

2.1.5.4 RAILROAD FUNDING CHALLENGES

The Wyoming state constitution and Wyoming statutes currently prohibit state funds from being used in rail construction and infrastructure improvements. Future state legislative changes would be required to reverse these conditions. State funding programs for use in rail-related initiatives will continue to be restricted to a small number of projects involving upgrading or improving rail-vehicle grade crossings and developing rail transportation options within City owned industrial or business parks. The federal funding mentioned earlier in this chapter for use in rail initiatives is subject to availability, implementation of current and proposed federal regulations, and keen competition from other states.

2.1.6 SAFETY AND SECURITY PROGRAMS IN WYOMING

Rail safety remains a top priority for railroads in the state and for WYDOT. Safety has potential impacts on the efficiency of rail operations and on the public in general. The Class I railroads in Wyoming have long had employee safety programs and dedicated police and security forces. However, the focus of rail security over the last two decades has been mostly concerned with the threat of terrorism on the national rail network and the possibility that such acts could disrupt transportation or harm citizens. Federal agencies cooperate with the freight railroads to improve rail safety and security in Wyoming. The State cooperates with federal agencies in this regard but has only a minor direct role.

2.1.6.1 RAIL ACCIDENT STATISTICS

Rail accidents and incidents that occurred in Wyoming for the full 10-year period (2010–2019) are presented in **Table 2-33**. Accidents are train derailments (often minor), collisions, and any accident to a person that occurs on railroad property that results in fatalities, injuries, or property damage exceeding an amount established by FRA. Highway-rail grade-crossing incidents or accidents are included. Non-fatal conditions are reportable injuries that occur to railroad employees or trespassers. This data is provided by the FRA Office of Safety Analysis.³³



³³ FRA Office of Safety Analysis, *Accident Data as reported by Railroads*. Retrieved from: <u>https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/on the fly download.aspx</u>



Incidents	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total Incidents	109	77	64	63	85	77	68	71	73	74
Deaths	0	1	1	2	4	3	1	1	8	0
Injuries	66	41	37	31	46	36	35	46	28	33
Train Accidents	48	34	24	30	35	36	33	26	36	36
Deaths	0	0	0	0	1	0	0	0	2	0
Injuries	6	1	0	1	0	0	5	4	0	2
Highway-Rail Incidents	1	2	2	4	1	4	5	5	6	6
Deaths	0	0	0	1	1	1	0	0	2	0
Injuries	0	0	0	2	0	1	1	3	0	0
Other Incidents	60	41	38	29	49	37	30	40	32	31
Deaths	0	1	1	1	3	2	1	1	4	0
Injuries	60	40	37	28	46	35	29	39	28	31

Table 2-33: Accidents Reported by Railroads in Wyoming 2010–2019

2.1.6.2 RAIL SAFETY

In Wyoming, rail safety requirements are provided mostly by federal law. Most safety related rules and regulations are under the jurisdiction of FRA as defined in the Rail Safety Act of 1970 and other legislation, including the Rail Safety Improvement Act of 2008. Many of FRA's safety regulations are codified in Title 49 Code of Federal Regulations Parts 200–299.

Passenger-rail operations are subject to the same FRA safety standards regarding track safety, operating practices, and other areas as are freight railroads. Wyoming does not have any passenger-rail services at this time.

Rail safety issues are classified into the following general categories:

- Railroad employee safety
- Inspection and maintenance of track, bridges, signals, and other infrastructure
- Inspection of locomotives and railcars
- Operating rules and operating practices
- Control of the use of drugs, alcohol, and controlled substances by railroad employees
- Accident and incident reporting
- Rail-highway grade crossing safety
- Movement and handling of hazardous materials
- Development and implementation of new technologies
- Passenger equipment safety standards
- Passenger train emergency preparedness



Highway-Rail Grade Crossing Safety Program in Wyoming

The key elements of WYDOT's efforts are summarized below.

- **Data Collection.** WYDOT collects data on public highway-rail grade crossings in conjunction with the railroads and FRA.
- Funding Needs. WYDOT receives about \$1.2 million in Federal Highway Safety Program funds (Section 130 funds) annually. This program provides federal support to minimize the incidence of accidents, injuries, and fatalities at public rail-highway crossings. States may use funds to improve rail crossings, which includes installing or upgrading warning devices or surface improvements, eliminating at-grade crossings through grade separation, or consolidating or closing crossings. The federal share is 90 percent for these funds, and states, railroads, or municipalities can provide the 10-percent match. In Wyoming, these funds are used to cover part of the cost to install signals at four to six grade crossings and to upgrade or resurface up to six additional crossings per year.
- Highway-Rail Grade Crossing Safety Review of State Highway Projects. Apart from the administration of the improvement program funds, WYDOT evaluates state highway improvement projects that involve crossing rail lines to ensure that appropriate warning devices and other safety improvements are included.
- **Grade Crossing Closure / Grade Separation Projects.** To minimize the interface between the rail and highway systems and to reduce grade crossing maintenance and improvement costs, WYDOT and the state's Class I railroads pursue crossing closures in cases when reasonable alternate access is available.
- **Support of Operation Lifesaver.** Operation Lifesaver is a national, nonprofit program charged with promoting education and awareness and reducing collisions, fatalities, and injuries at highway-rail at-grade crossings, and its mission is supported by WYDOT. Discussion about Wyoming's Operation Lifesaver program is included later in this chapter.

2.1.6.3 OTHER STATE AGENCIES AND PROGRAMS

Hazardous Materials Response

Response to hazardous materials (HAZMAT) emergencies and disasters in Wyoming is the responsibility of local residents and public officials. As described in the State Operations Plan (SOP) issued by the State of Wyoming's Office of Homeland Security in 2013, the responsibility for securing public safety and welfare rests at the county level in Wyoming with the County Commissioners. The SOP describes coordinating structures for emergency response and identifies immediate actions for saving lives, meeting basic human needs, and protecting property. It explains strategies for providing effective coordination of government agencies at the county, state, and federal levels and private companies and parties and proper utilization of assets necessary to issue an effective response. That response to hazardous materials incidents on Wyoming's rail network is facilitated quickly and effectively and in cooperation with the state's freight railroads, which have their own local management and systemwide HAZMAT coordination and education teams.

The shipper or originator of hazardous materials is often responsible for the costs of the HAZMAT response and remediation. Most HAZMAT clean-up efforts are handled by private contractors skilled in emergency and HAZMAT response. Any effort in this regard is conducted in coordination with the state's freight railroads and state and local authorities.



The state's freight railroads place a heavy emphasis on employee safety training and programs. As part of that commitment, the railroads provide their field personnel with HAZMAT training that includes compliance with rules for the safe transportation of HAZMAT commodities (loaded railcars and empty railcars containing residue) and the proper response in case of a HAZMAT incident. This training takes into account United States Department of Transportation and FRA regulations and all applicable railroad safety rules and special instructions regarding the proper handling of HAZMAT commodities.

Wyoming Operation Lifesaver

A UP employee troubled by the number of crashes, injuries, and fatalities at highway-rail grade crossings worked with Idaho communities in 1972 to establish a statewide public education program, called Operation Lifesaver, aimed at reducing the number of such tragedies. By the end of the year, Idaho's fatality rate dropped 39 percent, and the same program reduced that number by 46 percent in Nebraska in 1973. Today, the nonprofit Operation Lifesaver initiative is a robust cooperative program among railroads, public safety officials, and volunteers; and it has contingents in 49 states in the United States and parts of Canada.

Wyoming Operation Lifesaver (WY OL) is a chapter of the national Operation Lifesaver program. As the organization states, "Wyoming Operation Lifesaver is a free public service education program dedicated to preventing and reducing fatalities and injuries at highway-rail grade crossings and along railroad rights-of-way in Wyoming." WY OL uses presenters and car crash displays to educate the public about grade crossing safety and the dangers of trespassing on railroad property. Further, WY OL is involved in engineering efforts aimed at improving and maintaining crossings, and it works with local law enforcement agencies to ensure safety compliance at crossings. Representatives from WYDOT are on the WY OL board, as well as representatives from BNSF and UP. WYDOT currently serves as chair of WY OL.

Positive Train Control

Positive Train Control (PTC) is an emerging rail safety technology intended to stop a train and prevent the following types of accidents:

- Collisions between trains
- Derailments caused by excessive speed or by trains operating through switches left in the wrong position
- Trains operating beyond the limits of authority provided by dispatcher or wayside signal

PTC is an overlay that will be integrated with existing wayside Centralized Traffic Control systems as well as Track Warrant Control (TWC) territory with or without passive wayside Automatic Block Signal systems. In non-signaled territory with TWC, other forms of control and safety hardware can be integrated with PTC systems without wayside signals. These include Remote Control Power Switch³⁴ powered turnout locations, Switch Point Monitoring System³⁵ switch position

³⁵ Federal Railroad Administration, *Development of a Switch Point Monitoring System in Non-Signaled Territory*, 2007. Retrieved from: <u>https://rosap.ntl.bts.gov/view/dot/40342</u>



³⁴ AREMA, *Remote Control Power Switch*, 2007. Retrieved from: <u>https://www.arema.org/files/library/2007 Conference Proceedings/Remote Control Power Switch 2007.pdf</u>



sensors, and Track Integrity Warning System³⁶ track circuitry. PTC is designed to determine the location and speed of trains, warn locomotive engineers of potential problems, and take braking action if engineers do not respond to a warning in the time prescribed. Trains and on-track maintenance equipment, wayside components, and back-office servers corresponding to each railroad's respective train dispatching centers are all connected by data radio systems and/or fiber-optic cable.

The Rail Safety Improvement Act of 2008 originally required United States railroads to install PTC systems by December 31, 2015, on Class I rail routes carrying over 5 million gross ton-miles of freight per mile with commuter or intercity passenger operations or any amount of toxic or poison-by-inhalation hazardous materials. PTC requirements currently exclude Class II (regional) or Class III (short line) railroads that do not host passenger service. However, Class II and III railroad trains that operate over PTC-equipped Class I lines are also required to have locomotives that are PTC-equipped.

The rail industry widely considered the 2015 PTC implementation deadline to be generally challenging, as about 60,000 miles of rail line nationwide would be affected over a 20-year period and implementation costs were estimated at approximately \$12 billion. As of late 2013, the United States Congress was considering an extension of the implementation deadline but had not yet acted. Despite the possible extension of the deadline, UP and BNSF worked diligently to develop and install PTC systems for their respective networks.

Ultimately, the PTC implementation deadline was extended to December 31, 2018, by the Positive Train Control Enforcement and Implementation Act of 2015. This law also enabled affected railroads to apply for an extension of up to 24 months provided the railroad demonstrated progress towards key milestones. While Class I railroads met the December 31, 2018, deadline, many smaller railroads and transit agencies that operate commuter rail service did not have the resources necessary to complete their implementation on time. As a result, nearly every affected railroad, including each Class I, applied for an extension in order to accommodate adjoining railroads until full interoperability could be achieved.

In Wyoming, both Class I Railroads BNSF and UP have installed PTC on all required line segments. **Figure 2-14** and **Figure 2-15** respectively show BNSF's and UP's PTC implementation progress in Wyoming and nationwide, as of 2019.

³⁶ AREMA, Broken Rail Detection System in Non-Signaled Territory, 2010. Retrieved from: <u>https://www.arema.org/files/library/2010 Conference Proceedings/Broken Rail Detection in Non-Signaled Territory.pdf</u>





Figure 2-14: BNSF's PTC Implementation



Source: BNSF Railway

Figure 2-15: UP's PTC Implementation



Source: Union Pacific Railroad





2.1.6.4 RAIL SECURITY

The focus of rail security has changed markedly since the terrorist attacks against the United States on September 11, 2001. In response to potential future terrorist threats to the nation's multimodal transportation network, new federal agencies have been established to oversee and provide assistance to ensure security. This section addresses specific rail security issues and the State of Wyoming's involvement in rail security procedures.

Federal and State Roles in Rail Security

The primary agencies responsible for security related to transportation modes in Wyoming are the United States Department of Homeland Security and Wyoming Homeland Security. The United States Department of Homeland Security has addressed transportation security largely through identifying critical infrastructure assets, developing protection strategies for these assets, and developing emergency management plans.

On the federal level, the United States Department of Homeland Security addresses rail system security in the following ways:

- Training and deploying staff and assets for high-risk areas
- Developing and testing new security technologies
- Performing security assessments of systems across the country
- Providing funding to state and local agencies

Wyoming's railroads are eligible to apply to the United States Department of Homeland Security for Freight Rail Security grants.

The Association of American Railroads (AAR) is cooperating with the United States Department of Homeland Security and other federal agencies in the Rail Security Task Force. This task force developed a comprehensive risk analysis and security plan for the nation's rail system that includes:

- Database of critical railroad assets
- Assessments of railroad vulnerabilities
- Analysis of the threat of terrorism
- Calculation of risks and identification of countermeasures

The private railroad sector maintains communications with the United States Department of Defense, the United States Department of Homeland Security, the United States Department of Transportation, the Federal Bureau of Investigation, and state and local law enforcement agencies on all aspects of rail security.

The lead state agency for rail security in Wyoming is the Wyoming Office of Homeland Security, which works in cooperation with the United States Department of Homeland Security to provide services and protect facilities deemed critical to the nation and the state.

The Wyoming Office of Homeland Security sets forth the State's role in hazards-incidents management and the responsibilities of local and state governments in the Wyoming SOP. According to the SOP, WYDOT is responsible for two Emergency Support Functions (ESF): Transportation (ESF No. 1) and Communication (ESF No. 2).



- In ESF No. 1, WYDOT is the coordinating agency and primary agency. WYDOT and support agencies provide assistance in domestic incident management as it pertains to transportation.
- In ESF No. 2, WYDOT is a primary agency and its role is to help coordinate communication and support to local governments during an emergency.

Strategic Rail Corridor Network

The Strategic Rail Corridor Network (STRACNET) is a 38,800-mile interconnected network of the rail lines that are most important to national defense, as identified by the United States Military Surface Deployment and Distribution Command's Transportation Engineering Agency.³⁷ Key rail lines throughout Wyoming are included in STRACNET, including the following segments:

- **UP:** Nebraska–Wyoming border at Pine Bluff, Wyoming, to the Wyoming–Utah border at Evanston, Wyoming (via Cheyenne, Laramie, Rawlins, and Green River)
- **UP:** Granger, Wyoming, to the Wyoming–Idaho border at Border, Wyoming (via Kemmerer)
- UP: Borie, Wyoming (near Cheyenne) to the Wyoming–Colorado border near Speer, Wyoming
- **BNSF:** South Dakota–Wyoming border near Newcastle, Wyoming, to the Wyoming–Montana border near Parkman, Wyoming (via Gillette and Sheridan)

In addition to providing strategic mainline routes, these lines also provide access to maneuver and logistics sites that are critical to national defense training and preparedness. **Figure 2-16** shows STRACNET routes within Wyoming.

³⁷ Transportation Engineering Agency, *Railroads for National Defense (RND)*. Retrieved from: <u>https://www.sddc.army.mil/sites/TEA/Functions/SpecialAssistant/Pages/RailroadsNationalDefense.aspx</u>



Figure 2-16: STRACNET in Wyoming



Source: The US Army Surface Deployment and Distribution Command (SDDC) Transportation Engineering Agency (TEA)

2.1.7 RAIL TRANSPORTATION IMPACTS IN WYOMING

In 2003, the American Association of State Highway and Transportation Officials (AASHTO) published the Freight-Rail Bottom Line Report to present AASHTO's views regarding freight railroads. The report concluded that railroads "make a significant contribution to the national economy and the economies of most states."³⁸ The report describes economic benefits in terms of operational cost savings, reduced highway use and congestion, and improved connectivity with international trade. The report also describes the significant environmental benefits of rail transportation.³⁹ An updated version of the *Freight-Rail Bottom Line Report* was released in 2018.



³⁸ "Transportation: Invest in America: Freight-Rail Bottom Line Report," American Association of State Highway and Transportation Officials (AASHTO), Forward page

³⁹ "Transportation: Invest in America: Freight-Rail Bottom Line Report," pages 26–29



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Another AAR report titled *The Economic Impact of America's Freight Railroads*, dated October 2020, provides data on United States jobs provided by freight railroads and their suppliers and on other economic and environmental benefits provided by freight railroads.⁴⁰ This includes:

- Enhancing global competitiveness
- Providing fuel efficiency four times that of trucks, on average
- Reducing greenhouse gas emissions
- Reducing highway congestion
- Reducing highway maintenance costs
- Improving productivity

Rail transport plays a key role in the economic vitality of Wyoming's mining industries. The ability to move coal by rail supports jobs and reduces the environmental impact of the shipment of these materials. This efficiency extends to agricultural products, containerized freight, and most other goods as well.

2.1.7.1 ECONOMIC IMPACTS

Rail service plays a crucial role in Wyoming's economy. Though declining, coal continued to account for the largest share of both tonnage and value of freight moved by rail in 2018.⁴¹ Construction and extraction occupations industries, inclusive of coal and other mining activities, which employed 10.5 percent of wage and salary workers in Wyoming in 2019,⁴² continue to depend on rail to move goods into and out of the state as efficiently as possible. Mining, quarrying, and oil and gas extraction industries generated nearly one-fifth, or \$7.5 billion of the \$39.1 billion Wyoming gross domestic product in 2018.⁴³ This is a crucial component of the Wyoming economy that remains critically dependent on rail.

Though mining remains an important industry in Wyoming, the state is projected to lose more 1,800 mining jobs between 2018 and 2028 according to the Wyoming Department of Workforce Services—a 9 percent decrease.⁴⁴ However, despite the losses in the mining sector, Wyoming is still projected to add over 19,000 jobs across all industries between 2018 and 2028, growing the overall number of employment opportunities in the state by almost seven percent.

2.1.7.2 LIVABILITY, SUSTAINABLE LAND USE, AND ECONOMIC DEVELOPMENT IMPACTS

Livability is a combination of attributes that determine how attractive a certain place is to live. These attributes try to tie quality and location of transportation facilities to access to broader opportunities such as good jobs, affordable housing, quality schools, safe streets, green space, clean air and water, and other similar characteristics. The transportation system

⁴⁰ Association of American Railroads, *Economic Impact Fact Sheet*. Retrieved from: <u>https://www.aar.org/wp-content/uploads/2020/08/AAR-Economic-Impact-Fact-Sheet.pdf</u>

⁴¹ Freight Analysis Framework 4 data (2018)

⁴² Bureau of Labor Statistics

⁴³ Wyoming Economic Analysis Division, Gross Domestic Product (GDP) for Wyoming by Industry. Retrieved from: <u>http://eadiv.state.wy.us/i&e/WyoGDP97_18.htm</u>

⁴⁴ Wyoming Department of Workforce Services, Wyoming Long-Term Industry and Occupational Projections, 2018-2028. Retrieved from: <u>https://doe.state.wy.us/lmi/projections/2020/Long Term 2018-28 Industry.htm</u>

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and its impacts on the environment play a vital role in connecting these opportunities and characteristics and influence a person's assessment of overall livability in a particular area.

Though rail does generate pollution and noise impacts that adversely affect community areas, these effects are generally less than those from highway and truck traffic. The emission impacts associated with rail are generally less than those associated with trucks. Noise pollution varies, since there is a federal requirement that rail operators sound a horn as notification on approaching and entering highway-rail crossings. Although this is a regulation, the rail industry is participating in measures to reduce the overall noise impacts of trains. Some of these measures include closure and/or grade separation of highway-rail grade crossings and implementing rail quiet zones, where the locomotive engineer is not obligated to sound the horn approaching the crossing, except in cases of emergency. These quiet zones are typically implemented by a community subject to FRA specifications and through coordination with the affected railroads. Typical means of implementing the quiet zones include street closures and installation of four-quadrant gates, among other means of increasing the safety of the area. Once these measures have been implemented, the engineer is required to sound the horn only if he or she feels that it will rectify an unsafe situation.

The livability of communities can be enhanced by freight rail if it provides efficient transport of goods and access to centers of economic activity. This is particularly true in Wyoming, where rail is the primary and most efficient means of moving coal and other goods. Preserving and expanding the rail network in Wyoming to allow the most efficient delivery of goods increases the overall livability and sustainability of the state. Using rail freight transport instead of truck transport can provide lower shipping costs, greater reductions in fuel consumption, lower environmental emissions, fewer accidents, and less noise disruption.

Rail is relatively less land-intensive than other modes of transportation such as highways, and there is already an extensive rail network in Wyoming. Using, maintaining, and improving this existing network will allow continued growth in the mining and agricultural industries while maintaining the characteristics that make Wyoming a desirable place to live. This will also allow the potential for additional freight to be moved by rail and help mitigate some of the highway-related transport issues associated with delays due to weather closures on Wyoming roads and ongoing road wear and road maintenance issues caused by the passage of heavy trucks. Climate-change impacts have the potential to increase weather-related issues along the highway, and maintaining the rail network in a state of good repair is one way to potentially mitigate detrimental environmental effects caused by dependence on other modes.

The rail network is a central part of the city of Cheyenne as it exists today. Cheyenne has enacted a long-term plan, *Plan Cheyenne*, that demonstrates a vision that integrates parks, open spaces, transportation, and land use to create a livable, sustainable community that supports multimodal transportation. The plan seeks to integrate safe pedestrian and bicycle travel into the existing community while also improving bridges and crossings over rail lines and other barriers to improve safety and connectivity within the city. This type of plan will create a sustainable community while supporting multimodal transportation.

2.1.7.3 ENERGY USE AND COSTS

Railroad carriers are continually working to improve fuel efficiency. Between 2000 and 2019, United States freight railroads saved 656 million gallons of fuel thanks to the increasing efficiency of the railroads' locomotive fleets. For every gallon of



fuel, United States freight railroads can move one ton of freight over a distance of more than 470 miles.⁴⁵ Advances in software programming, data collection, and modeling have allowed railroads to determine which operating speeds and locomotive throttle settings yield the most efficient use of fuel for a given train on a given route. Advances in chemical, mechanical, and thermal engineering have enabled more complete combustion of fuel inside the high-horsepower diesel engines used in modern locomotives, reducing certain types of pollutants that are inherently produced by the incomplete combustion of hydrocarbons.

2.2 WYOMING'S EXISTING RAIL SYSTEM: TRENDS AND FORECASTS

This section describes the trends that will affect the need for rail in Wyoming in the future. These trends include demographic and economic growth factors and industrial-sector trends and projections that will affect the future demand for rail service. The following discussion provides the historic basis for rail service and identifies the future rail needs for Wyoming.

2.2.1 DEMOGRAPHIC AND ECONOMIC GROWTH FACTORS

This section describes the demographic and economic trends and projections for Wyoming, including an industrial outlook for the major rail-transporting sectors.

2.2.1.1 POPULATION

Though Wyoming is the 10th-largest state in terms of land mass, it has the smallest population of any state in the United States at 578,759 residents as of July 1, 2019.⁴⁶

The median age in Wyoming is slightly above the national average (38.5 years compared to 38.2 years).⁴⁷ Nearly 92 percent of the population over the age of 25 graduated from high school, with 24.7 percent earning a bachelor's degree or higher. The high school graduation rate is higher than that of the United States as a whole, though the share of people with a higher level of education is slightly lower.

2.2.1.2 EMPLOYMENT

Wyoming had an average labor force of 292,258 in 2019. During this period, the average number of people employed was 281,730, leading to an average unemployment rate of 3.6 percent.⁴⁸



⁴⁵ Association of American Railroads, Sustainability Fact Sheet, 2020. Retrieved from: <u>https://www.aar.org/wp-content/uploads/2020/06/AAR-Sustainability-Fact-Sheet.pdf</u>

⁴⁶ United States Census Bureau, Quick Facts, Wyoming, United States. Retrieved from: <u>https://www.census.gov/quickfacts/fact/table/WY,US/PST045219</u>

⁴⁷ United States Census Bureau Wyoming State Profile

⁴⁸ www.wyomingatwork.com



2.2.1.3 PERSONAL INCOME

Wyoming had an average hourly wage of \$23.30 and annual wage of \$48,464 in 2019, compared to \$27.38 and \$56,940 respectively nationwide.⁴⁹ The median household income, however, was \$61,584.⁵⁰

2.2.1.4 INDUSTRIAL OUTLOOK BY SECTOR

Few states or nations have the diversity and abundance of natural resources present in Wyoming. This section discusses key industry sectors in Wyoming that are supported by rail transportation and provide the majority of rail tonnage originating in Wyoming. This section also discusses emerging energy sectors that could contribute to rail traffic in Wyoming

<u>Coal</u>

Coal accounted for 30.1 percent of the total tonnage originated by United States railroads in 2019, down from a peak of 46.3 percent in 2008.⁵¹ Wyoming and coal production have become synonymous during the last 50 years, and this combination has eclipsed coal extraction in once-dominant historic mining regions in the East. In 2018, more than 304 million tons of coal were extracted from 15 surface mines and one underground mine, according to the Wyoming Mining Association.⁵² This declined to 277 million tons in 2019.⁵³ Wyoming continues to produce 40 percent of the United States domestic supply of coal. **Figure 2-17** shows the locations of Wyoming coal regions and coal mines in relation to the Class I networks (BNSF and UP) that provide transportation.

⁴⁹ www.wyomingatwork.com

⁵⁰ United States Census Bureau, Wyoming State Profile

⁵¹ Association of American Railroads, Coal Fact Sheet. Retrieved from: <u>https://www.aar.org/wp-content/uploads/2020/07/AAR-Coal-Fact-Sheet.pdf</u>

⁵² Wyoming Mining Association, Coal Production and Employment. Retrieved from: <u>https://www.wyomingmining.org/minerals/coal/coal-production-employment/</u>

⁵³ Wyoming Mining Association, Coal. Retrieved from: <u>https://www.wyomingmining.org/minerals/coal/</u>



Figure 2-17: Wyoming Class I Railroads and Major Coal Mines



Source: Wyoming Department of Transportation and Wyoming Mining Association

Sub-bituminous coal from the PRB region has relatively high BTU (energy output in British thermal units) and low sulfur and ash content and complies generally with Clean Air Act regulations for consumption in the energy market. Wyoming coal is overwhelmingly shipped to power plants in other states (primary destinations include utilities in Illinois, Missouri, and Texas), where it is used to create steam to generate electricity. However, not all coal leaves Wyoming; intrastate coal movements from mines to electricity-producers elsewhere in the state are a large component of the traffic flow for this commodity. Power plants that receive coal by rail exist near Glenrock, Wheatland, and Point of Rocks, Wyoming. Other power plants exist near the mines and receive coal by conveyor belt.

The volume and longevity of the full coal reserve in the PRB of northeastern Wyoming and adjacent southeastern Montana has been a subject of conjecture since the region was first exploited for coal in the 1970s. The answer depends on the depth and geographic location of the deposits and whether they are technically or economically feasible to recover, sell, and transport. The answer also depends on evolving environmental regulations that could reduce the domestic market for PRB coal. **Figure 2-18** shows Wyoming's historic coal-production rates while **Figure 2-19** depicts Wyoming's geological resource diversity.





Figure 2-18: Wyoming Coal Production, 1969–2017



Source: Wyoming Mining Association, 2020

Figure 2-19 Wyoming Geological Resource Diversity



Source: United States Geological Survey



Clay, Concrete, Glass, and Stone Products

In central and northern Wyoming, bentonite is an important commodity shipped by rail. Bentonite is dense clay with unique chemical properties that allows it to swell up to 18 times its original dry mass when it is saturated by water. Its primary ingredient, hydrous silicate of alumina, attracts and retains water molecules to its negatively charged side, which accounts for this unusual phenomenon. The clay is named after the Benton Formation in Wyoming where it was first commercially discovered. Major exploitation and processing of the material began in the 1920s.

In the early years of production, it was used as a sealant and in the manufacture of foundry molds, cosmetics, and drilling mud. In subsequent years, it was discovered to be an effective binder with a low-grade iron ore known as taconite and was mixed together to form small pellets that allowed efficient transportation of taconite from mines to steel mills via rail and ship. Wyoming has about 70 percent of the world's known supply of this clay and is the number-one bentonite-producing state in the United States.

Bentonite produced in the United States is used for absorbents, drilling mud, iron ore pelletizing, foundry sand bonds and castings, and miscellaneous uses including groundwater control and the manufacture of cat litter and cosmetics.

In 2018, Wyoming produced over 4 million tons of bentonite.⁵⁴ Principal bentonite-producing areas are located in northcentral and northeastern Wyoming in Big Horn, Crook, Hot Springs, Johnson, Natrona, Washakie, and Weston Counties. BNSF and RCPE serve the bentonite production areas and handle this rail traffic out of Wyoming.

Trona and Soda Ash

The largest trona deposits in the world, estimated to be as voluminous as 127 billion tons, are found in Wyoming. Over 40 separate trona beds are located predominantly in Sweetwater County in the southwestern corner of the state. These sodium-rich deposits were created about 50 million years ago from volcanic ash and minerals left behind as sediment when ancient Lake Gosiute, covering 15,000 square miles of Wyoming's Green River Basin, evaporated. Trona was first mined in the state in 1947, and today four companies operate five total mines in the state.

After mining, trona ore is processed into sodium carbonate or soda ash (about 1.5 pounds of trona yields 1 pound of soda ash). Soda ash produced in Wyoming is used in glass production, chemical manufacturing, soaps and detergents, flue gas desulfurization, pulp and paper production, and other miscellaneous uses including water treatment. According to the Wyoming Mining Association, the state produced over 17 million tons of trona in 2018.⁵⁵ About 95 percent of Wyoming's soda ash rail traffic is handled by UP, whose mainlines overlay the primary trona production areas.

As of 2020, one new soda ash facility is planned to be constructed near Green River.⁵⁶



⁵⁴ Wyoming Mining Association, *Bentonite Production and Employment*. Retrieved from: <u>https://www.wyomingmining.org/minerals/bentonite/bentonite-production-and-employment/</u>

⁵⁵ Wyoming Mining Association, *Trona Production and Employment*. Retrieved from: <u>https://www.wyomingmining.org/minerals/trona/trona-production-employment/</u>

⁵⁶ Gillette News Record, Company seeks permits for new soda ash plant, August 19, 2020. Retrieved from: <u>https://www.gillettenewsrecord.com/news/wyoming/article_39a65359-5c5a-57c2-9399-0c157179e268.html</u>



<u>Sulfur</u>

Sulfur is obtained from various sources, primarily during the processing of natural gas and refining of crude oil.

The United States Geological Survey, which produces an annual yearbook, reports that global demand for sulfur (which is used in fertilizer production and myriad other industrial uses) remains strong. Its major derivative, sulfuric acid, is one of the most important industrial materials.

The principal sulfur-producing counties in Wyoming are Carbon, Fremont, Laramie, Lincoln, Natrona, Park, Sweetwater, and Uinta Counties. Nearly all of the sulfur produced in Wyoming is transported by rail.

<u>Oil</u>

Wyoming generated about 2 percent of the total volume of crude oil produced in the United States in 2019, according to the United States Energy Information Administration (EIA).⁵⁷ EIA's *Annual Energy Outlook 2020* projections anticipate continued increasing production of petroleum through 2025, followed by declining production in the decades to follow. Despite increases in production, domestic consumption is projected to decline in the coming decades.

The hydraulic fracturing process—which has made available underground oil reserves previously deemed unrecoverable has been a driver of rail freight traffic in Wyoming in recent years.

Table 2-34 provides information about the unit train oil transloading facilities recently developed in Wyoming and their connections to the state rail network.

Location	Name of Terminal	Status	Developer	Rail Access
Casper, Wyoming	Casper CTran Rail Yard	Active	Cogent Energy Solutions/Granite Peak Development	BNSF
Douglas, Wyoming	Pronghorn Rail Facility	Active	Genesis Energy	BNSF, UP
Douglas, Wyoming	Douglas Rail Terminal	Active	Enserco Midstream/Inergy Midstream	BNSF
Fort Laramie, Wyoming	Eighty-Eight Oil	Active	Eighty-Eight Oil	BNSF
Cheyenne, Wyoming	Swan Ranch Industrial Park	Active	Granite Peak Development	BNSF, UP
Wright, Wyoming	Black Thunder Terminal	Active	Meritage Midstream Services/Arch Coal	BNSF

Table 2-34: Unit Train Facilities for Crude Oil Shipment in Wyoming

BNSF BNSF Railway

UP Union Pacific Railroad

⁵⁷ U.S. Energy Information Administration, *Crude Oil Production*. Retrieved from: <u>https://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbl_a.htm</u>



Two of the facilities that have been constructed in Wyoming are particularly noteworthy. First, the Eighty-Eight Oil facility in Fort Laramie is the first rail transloading installation capable of loading multiple types of crude, including oil from the Williston Basin (Bakken Shale), Powder River Basin (Niobrara Shale), Southwest Wyoming, Big Horn Basin, and Canada. The facility ties into Eighty-Eight Oil's existing pipeline infrastructure, which receives crude from the Butte, Belle Fourche, Platte, and Rocky Mountain pipelines. Second, the Pronghorn Rail Facility constructed along the joint BNSF/UP Orin Subdivision north of Douglas is the only one in the PRB region with access to both the BNSF and UP networks.

Natural Gas

Wyoming generated about 4 percent of the total volume of natural gas produced in the United States in 2019, according to the EIA.⁵⁸ EIA's *Annual Energy Outlook 2020* projections include continued increasing production of natural gas, primarily shale gas, based on improved drilling efficiencies and increased demand for exports.⁵⁹ Despite increases in production, domestic consumption is relatively stable. Furthermore, relatively low oil prices have put downward pressure on natural gas prices.

While shale gas formations do underlie portions of Wyoming, increased onshore gas production in the Gulf Coast region has outpaced Wyoming's production.

Coal Bed Methane

Coal bed methane is a form of natural gas extracted from coal beds before coal is mined. It has been identified as a relatively clean-burning source of energy. Methane is the primary energy source of natural gas. Coal bed methane has in recent decades become an important source of natural gas. It is a relatively untapped energy source, with extensive reserves in the United States. Methane from unmined coal is recovered through drilling vertical or horizontal wells into the coal seam. EIA data indicate that, in 2017, Wyoming was the third largest producer of coal bed methane in the United States, after Colorado and New Mexico.⁶⁰

EPA sponsors a voluntary Coalbed Methane Outreach Program, the goal of which is to reduce methane emissions from coal-mining activities.⁶¹ Methane is a greenhouse gas that is considered many times more harmful than carbon dioxide.

Agricultural Products

Wyoming's crop production is small compared to that of neighboring Midwestern states. According to National Agricultural Statistics Service data from 2019, Wyoming's top agricultural commodities in terms of production are hay,



⁵⁸ U.S. Energy Information Administration, *Natural Gas Gross Withdrawals and Production*. Retrieved from: <u>https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FPD_mmcf_a.htm</u>

⁵⁹ U.S. Energy Information Administration, *Annual Energy Outlook 2020*. Retrieved from: <u>https://www.eia.gov/outlooks/aeo/pdf/AEO2020%20Full%20Report.pdf</u>

⁶⁰ U.S. Energy Information Administration, *Coal Bed Methane Production*. Retrieved from: <u>https://www.eia.gov/dnav/ng/ng_prod_coalbed_s1_a.htm</u>

⁶¹ United States Environmental Protection Agency, Coalbed Methane Outreach Program (CMOP). Retrieved from: <u>https://www.epa.gov/cmop</u>



barley, corn, wheat, and sugar beets in the crop category.⁶² The state's modest yields do not produce the consistent, heavy volume grain shipment opportunities required to support shuttle-train loading facilities. These facilities are common in the Midwestern states and can rapidly assemble a full unit train for delivery to a single destination.

Rail-served elevators with more traditional loading capacities and operations are clustered predominantly in the eastern part of the state. **Table 2-35** lists all such facilities in Wyoming.

Location	Operator	Railcar Capacity	Rail Carrier
Albin	Champ LLC	25	UP
Basin	Big Horn Cooperative Marketing Association	8	BNSF
Burns	Frenchman Valley Farmers Co-Op	25	UP
Garland	ADM Edible Bean Specialties	3	BNSF
Gillette	СВН Со-Ор	10	BNSF
Lindbergh	Jessen Wheat Company LLC Jessen Agribusiness Inc	4	UP
Lingle	West Plains LLC	2	BNSF
Manderson	Yellowstone Bean Company	5	BNSF
Pine Bluffs	Frenchman Valley Farmers Co-Op	50	UP
Pine Bluffs	Pine Bluffs Feed and Grain	5	UP
Powell	Big Horn Cooperative Marketing Association	12	BNSF
Powell	Treasure Valley Seed Company	12	BNSF
Ralston	Briess Malt & Ingredients Company	26	BNSF
Torrington	Kelley Bean Company	5	BNSF
Torrington	Z & W Mill Inc.	4	BNSF
Worland	Adolph Coors	15	BNSF
Yoder	Yoder Wyoming Grain Co.	10	UP

Table 2-35: Wyoming Grain Elevator Facilities

Source: BNSF, UP, Wyoming Business Council, and Yoder Wyoming Grain

UP Union Pacific Railroad

BNSF BNSF Railway

2.2.2 FREIGHT DEMAND AND GROWTH

An important function of this 2021 SRP is establishing and presenting a clear understanding of the goods that are transported by rail in Wyoming. It is important to understand how much freight originates and terminates in the state and how much rail traffic travels through Wyoming. This information, combined with an evaluation of freight-rail movements and truck movements, facilitates understanding intermodal connectivity and potential opportunities to divert freight movements onto the rail system.



⁶² U.S. Department of Agriculture, 2020 State Agricultural Overview – Wyoming. Retrieved from: <u>https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=WYOMING</u>



Two primary data sources were used in this freight and commodity flow analysis for Wyoming: the STB Carload Waybill Sample and the Federal Highway Administration (FHWA) Freight Analysis Framework (FAF).

Carload Waybill Sample. The Carload Waybill Sample is a sampling of railroads that terminate (deliver) more than 4,500 rail cars per year; freight railroads that handle less than 4,500 rail cars annually are not counted. The data are considered representative of rail freight moved and provide insight into inbound, outbound, internal, and through movements by various measures. This 2021 SRP incorporates data from 2018, which was the most recent information available.

The complete waybill database for Wyoming was requested by WYDOT for this analysis. Given that more than 98 percent of the route-miles in Wyoming are owned by Class I railroads, each carrying well in excess of 4,500 rail cars annually, the data reporting likely includes most of the statewide freight-rail volumes. Because of STB's confidentiality requirements, which are designed to protect the data of various carriers, the most detailed information related to individual railroad commodity flows cannot be published. For this reason, the analysis of commodity data is presented in the aggregate for the state.

Freight Analysis Framework. The FAF is a publicly available freight database with a geographic coverage of all states and major metropolitan areas. The FAF provides data classified by freight tonnage and freight value as well as mode share. It also provides a forecast of freight tonnage and value for each mode. The key limitation of these data is that they do not cover through trips.

All freight data provided by Carload Waybill Sample classify freight using a seven-digit Standard Transportation Commodity Code (STCC), while FAF uses a two-digit Standard Classification of Transportation Goods. These commodity codes identify the type of freight moved and assigns commodity descriptions. A forecast of Wyoming rail flows through 2045 was developed by HDR based on the Carload Waybill Sample data, FAF4 forecast, and EIA data. The remainder of this section describes and analyzes rail freight demand and growth projections based on commodity transportation in terms of commodity and geography.

2.2.2.1 RAIL FREIGHT COMMODITY FLOWS BY DIRECTION

Moving freight by rail provides several potential impacts and benefits. This section assesses the major trade flows in Wyoming and its trading partners. The commodity flow analysis focuses on the different types of flows, freight trends, opportunities for growth, and an analysis of the various commodities shipped. Trade flows evaluated in this 2021 SRP include four major types of rail commodity movements:

- Inbound (interstate): Freight originating outside the state with a destination in Wyoming
- **Outbound (interstate):** Freight originating in Wyoming with a destination outside the state
- Internal (intrastate): Freight that has both an origin and destination in Wyoming
- **Through:** Freight with an origin and destination outside of Wyoming traveling along Wyoming's rail infrastructure to reach the destination.

Freight-rail traffic density is measured by gross ton-miles per mile of track. A ton-mile is calculated as 1 ton of train weight, including the weight of locomotives and railcars, moved a distance of 1 mile. Taken in the aggregate, coal and transcontinental traffic in Wyoming results in some of the highest rail traffic densities globally **Figure 2-20** depicts the traffic density of the Wyoming rail network, by average number of trains per day, between 2019 and 2020.





Figure 2-20: Wyoming Rail Traffic Density (2019–2020)



Source: HDR with data from FRA Highway-Rail Grade Crossing Inventory Reports

The remainder of this section describes and analyzes freight transportation in terms of freight transportation by mode, freight transportation by commodity, and a freight rail geographic profile.

The vast majority of Wyoming rail freight, 74.9 percent in terms of tonnage, originates in Wyoming and is shipped out of state, as presented in **Table 2-36.** The volume of freight being transported out of state by rail is so large that it dwarfs through traffic and intrastate movements even though their combined flows are over 100 million tons. The fewest tons of freight by rail terminate in Wyoming from other states. According to AAR, in 2017, Wyoming ranked 31st in terms of terminating rail tonnage but ranked first in originating tonnage.
Table 2-36: Wyoming Freight-Rail Flows, 2018

	Carloads		Tor	Tons per	
Traffic Type	Carloads (in thousands)	Percentage	Tons (in thousands)	Percentage	Carload Utilization
Origin	2,635	53.5%	311,851	74.9%	118.3
Termination	39	0.8%	3,472	0.8%	88.9
Intrastate	108	2.2%	12,313	3.0%	113.7
Through	2,139	43.5%	88,686	21.3%	41.5
Total	4,922	100.0%	416,322	100.0%	84.6

Source: 2018 STB Carload Waybill Sample

Major Commodities

The rail system in Wyoming handles a variety of freight but it is dominated by coal shipments. Coal shipments alone are 3.45 times larger than all other commodities shipped in Wyoming, according to the STB Carload Waybill Sample data. Other major commodities transported by rail include chemicals, food, hazardous materials, and farm products. **Table 2-37** compares origin, destination, intrastate, and through traffic for freight in the state.

STCC	Commodity Name	Origin	Destination	Intrastate	Through	Total
11	Coal	291,223	0	12,170	19,537	322,929
28	Chemicals or Allied Products	13,025	139	20	4,464	17,649
20	Food or Kindred Products	235	146	0	14,342	14,723
49	Hazardous Materials	2,019	765	32	9,318	12,135
01	Farm Products	256	4	0	11,716	11,976
46	Miscellaneous Mixed Shipments	0	0	0	9,662	9,662
14	Nonmetallic Minerals	717	1,767	17	2,749	5,249
32	Clay, Concrete, Glass or Stone	3,550	118	25	890	4,583
24	Logs, Lumber, Wood Prod.	53	12	0	4,187	4,253
37	Transportation Equipment	85	120	34	2,710	2,949
	All Other Commodities	688	401	15	9,110	10,214
	Total	311,851	3,472	12,313	88,686	416,322

Table 2-37: Wyoming Commodities by Movement Type in Thousands of Tons, 2018

Source: 2018 STB Carload Waybill Sample

STCC Standard Transportation Commodity Code

Aside from coal, the major resource-based commodities shipped from Wyoming are nonmetallic minerals; clay, concrete, glass, or stone; and logs, lumber, and wood products. The major value-added products shipped from Wyoming via rail are chemicals and allied products followed by food or kindred products. Given Wyoming's location and position on the national rail network, through traffic is the next-largest flow of rail freight after originating freight.



Inbound Interstate Rail Traffic

Inbound shipments by rail are less than 1 percent of all freight-rail flows in Wyoming. The total inbound tonnage in 2018 was nearly 3.5 million tons and 39,051 carloads. On the inbound side, nonmetallic minerals (e.g., industrial sand) account for over a half of the tonnage carried by rail. Industrial sand is used in multiple industries, including construction, chemical manufacturing and metal production industries. The value-added products (such as chemicals, petroleum products, primary metal, transportation equipment, food, wood products, and machinery) account for approximately 23.1 percent of inbound rail movement. The following paragraph describe the freight origins. **Table 2-38** identifies the top 10 freight commodified for inbound traffic into Wyoming.

ѕтсс	Commodity Name	Tons (in thousands)
14	Nonmetallic Minerals	1,767
49	Hazardous Materials	765
33	Primary Metal Products	358
20	Food or Kindred Products	146
28	Chemicals or Allied Products	139
37	Transportation Equipment	120
32	Clay, Concrete, Glass or Stone	118
29	Petroleum or Coal Products	28
24	Logs, Lumber, Wood Products	12
26	Pulp, Paper or Allied Products	8
	All Other Commodities	10
	Total	3,472

Table 2-38: Top 10 Freight Commodities by Weight Terminating in Wyoming, 2018

Source: 2018 STB Carload Waybill Sample

STCC Standard Transportation Commodity Code

The top 10 trading partners accounted for almost 78.2 percent of the inbound tonnage destined for Wyoming, and they are illustrated in **Figure 2-21**. The largest inbound origination of freight destined for Wyoming is Wisconsin with approximately 955,000 tons shipped in 2018, followed by Illinois and Alberta, Canada. The inbound freight from Wisconsin and Illinois consisted almost entirely of nonmetallic minerals (e.g., industrial sand), while imports from Alberta, Canada, and Texas consisted primarily of chemicals, hazardous materials, and primary metal products. The ratio of tons per carload is similar for all of Wyoming's top inbound trading partners.







Figure 2-21: Origins of Inbound Rail Traffic Destined for Wyoming, 2018

Outbound Interstate Rail Traffic

Outbound rail traffic accounts for 74.9 percent of Wyoming's freight-rail tonnage, and coal tonnage is the largest outbound flow and largest commodity moved via rail for Wyoming. The major value-added commodities produced in Wyoming and shipped outbound by rail are chemicals, food, petroleum products, and transportation equipment. Wood products and primary metal products are also shipped out of Wyoming via rail but are just outside the top 10 outbound flows. The following paragraph describes the freight destinations. **Table 2-39** outlines the top 10 freight commodities by weight originating in Wyoming.

Source: 2018 STB Carload Waybill Sample

STCC	Commodity Name	Tons (in thousands)
11	Coal	291,223
28	Chemicals or Allied Products	13,025
32	Clay, Concrete, Glass or Stone	3,550
49	Hazardous Materials	2,019
14	Nonmetallic Minerals	717
40	Waste or Scrap Materials	356
29	Petroleum or Coal Products	311
01	Farm Products	256
20	Food or Kindred Products	235
37	Transportation Equipment	85
	All Other Commodities	74
	Total	311,851

Table 2-39: Top 10 Freight Commodities by Weight Originating in Wyoming, 2018

Source: 2018 STB Carload Waybill Sample

STCC Standard Transportation Commodity Code

Figure 2-22 shows the top 10 destinations of outbound freight carried by rail in 2018. On the primary (left) y-axis is total tonnage (in thousands of tons), and on the secondary (right) y-axis are the total outbound carloads. Figure 2-22 shows the proportional relationship between carloads and tons shipped to the top 10 states from Wyoming. The tonnage and carload shipments of the outbound freight to other parts of the United States and Canada were primarily coal, and therefore the average tons per carload are similar for each destination. All the top 10 destinations for freight originating in Wyoming are within the United States and account for 83.5 percent of all outbound shipments. The top destination (in terms of both carloads and tons) is Illinois, accounting for more than 58.8 million tons of rail freight.





Figure 2-22: Origins of Outbound Rail Traffic Originated in Wyoming, 2018

Through Rail Traffic

Through traffic is the second-largest share of all rail traffic in Wyoming, accounting for almost 21.3 percent of all shipments. As presented in **Table 2-40**, the two largest commodities after coal are food and farm products, which represent nearly 30 percent of Wyoming's through shipments. These are followed by mixed shipments, hazardous materials, chemicals, lumber, nonmetallic minerals, transportation equipment, and primary metal products. Through traffic in 2018 generated 2.1 million carloads of freight. The following paragraphs describe the known through freight origin and destination pairs.

Source: 2018 STB Carload Waybill Sample



Table 2-40: Top 10 Freight Commodities by Weight Through Wyoming, 2018

ѕтсс	Commodity Name	Tons (in thousands)
11	Coal	19,537
20	Food or Kindred Products	14,342
01	Farm Products	11,716
46	Misc. Mixed Shipments	9,662
49	Hazardous Materials	9,318
28	Chemicals or Allied Products	4,464
24	Logs, Lumber, Wood Prod.	4,187
14	Nonmetallic Minerals	2,749
37	Transportation Equipment	2,710
33	Primary Metal Products	2,084
	All Other Commodities	7,915
	Total	88,686

Source: 2018 STB Carload Waybill Sample

STCC Standard Transportation Commodity Code

Through traffic is the second-largest directional flow of freight traffic in Wyoming and consists mostly of coal, food, and farm products. **Figure 2-23** shows the major freight flows by origin and destination pair (sorted by share of tonnage) that travel through Wyoming. The top 10 origin and destination pairs include three that originate in Montana; these pairs transport freight either to the West Coast states and Canada or to the Midwest. In total, 23.1 percent of freight (or 20.5 million tons of through traffic) originates in Montana.

The second-largest share of tonnage (8.0 million tons) originates in Illinois. With 16.7 million tons or 18.8 percent of the total through volume, freight destined for California accounts for the largest share passing through Wyoming. The largest number of carloads moving through Wyoming (at 21.9 percent or approximately 468,000) originates in Illinois. The next-largest shares are from California and Washington. The two largest destinations by number of cars are California, (accounting for 23.2 percent) and Illinois (accounting for nearly 22.5 percent). Rail movements between California and Illinois account for 23.9 percent of all through movement in terms of carloads.





Figure 2-23: Top 10 Origins and Destinations Flows of Through Rail Tonnage, 2018

The largest share of through traffic travels from Montana to British Columbia, followed by Montana to Wisconsin, with California to Illinois and Illinois to California a close third and fourth, respectively. Domestically, California, Wisconsin, Illinois, and Washington are the major destinations for freight tonnage traveling through Wyoming. Each of these destinations is a state with at least one port that can accommodate the bulk commodities shipped. These destinations are opportunities for additional future freight-rail growth in outbound and through traffic because they provide an additional mode of travel and the ability of the freight to reach more markets by water. As **Figure 2-23** shows, the largest shipments are from Montana to British Columbia which are predominantly coal.

Intrastate Rail Traffic

Intrastate rail shipments represent about 3 percent of all freight-rail traffic in Wyoming, largely due to the 12.2 million tons of coal shipped. If not for the intrastate shipments of coal, the total intrastate rail shipments would account for less than 1 percent of the total shipments in Wyoming. **Table 2-41** shows all the intrastate shipments by commodity for Wyoming. As with the inbound and outbound shipments, intrastate shipments include nonmetallic minerals; clay, concrete glass, and stone products; petroleum products; and transportation equipment.

Source: 2018 STB Carload Waybill Sample



STCC	Commodity Name	Tons (in thousands)
11	Coal	12,170
37	Transportation Equipment	34
49	Hazardous Materials	32
32	Clay, Concrete, Glass or Stone	25
28	Chemicals or Allied Products	20
14	Nonmetallic Minerals	17
29	Petroleum or Coal Products	15
	All Other Commodities	0
	Total	12,313

Table 2-41: All Freight Commodities by Weight Intrastate in Wyoming, 2018

Source: 2018 STB Carload Waybill Sample

STCC Standard Transportation Commodity Code

2.2.2.2 FREIGHT TRANSPORTATION BY MODE

In 2018, 18.6 billion tons of freight were shipped in the United States, of which 1.8 billion were shipped via rail, representing 9.6 percent of the total freight moved in the United States. Of that, 300.8 million tons were shipped by rail in Wyoming. In terms of tonnage, most of Wyoming's freight is shipped by rail; the remainder travels mostly by pipeline, by truck, and by air.⁶³ **Figure 2-24** illustrates the share of freight tonnage carried by mode for Wyoming and the United States in 2018.

In terms of the value of goods shipped, rail ranks third behind pipeline and truck in Wyoming. This is not surprising and reinforces the notion that rail traditionally ships heavy and bulk commodities, which have a lower value per ton and are generally not as time sensitive as air or truck movements. The advantage of shipping freight via rail is the large hauling capacity and relatively low costs. Based on weight, Wyoming's freight-rail transportation system proportionally carries a much larger share of freight due to Wyoming's resource-based economy with large, heavy, long-haul shipments that are well suited for transport by rail.

Compared to the United States overall, Wyoming carries a much smaller share of the total freight value shipped by truck, which is offset by a larger pipeline and rail freight presence. These results reinforce the notion that heavy, bulk, low-value commodities are shipped by rail, whereas the high-value, low-weight items shipped in Wyoming are transported via truck. In the state, pipeline transport also represents a relatively large share of the total freight by value. The total value of freight shipped through Wyoming in 2018 was \$90.7 billion, of which rail transported \$8.7 billion. The shares of freight value by mode are shown in **Figure 2-25**.

⁶³ FHWA FAF4 Database





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Figure 2-24: Share of Freight Tonnage by Mode for Wyoming and the United States, 2018

Source: FHWA FAF4



Figure 2-25: Share of Freight Value by Mode for Wyoming and the United States, 2018

Source: FHWA FAF4

Figure 2-26 shows forecasted growth indices of freight tonnage by mode for Wyoming based on the FAF forecasts. All modes have experienced growth since 2012, except for rail. Although rail is still expected to transport the most freight in terms of tonnage at least till 2035, the most significant growth is expected to be in pipeline transport. Based on the FAF forecasts, and given the large share of freight transported, rail is expected to remain the dominant mode until year 2035.





Figure 2-26: Wyoming Mode Share Index Based on Tonnage, Excluding Through Traffic

Source: FHWA FAF4

2.2.2.3 FORECAST

The 2018 STB Carload Waybill Sample data provided the starting point for building forecasts of future rail movements in Wyoming by direction and commodity. In deriving the 2045 movements, growth rates between 2012 and 2045 were applied by direction and commodity.⁶⁴ For the largest-volume commodity transported by rail in Wyoming—coal—the future growth rates are based on EIA's latest Annual Energy Outlook.⁶⁵ Coal-related growth rates for outbound and intrastate movements are Wyoming-specific, while those for through movements are based on FAF's forecasts of outbound coal movement in Montana as the dominant origin state for coal shipments to other states through Wyoming.

For all the other (non-coal) commodities, future growth rates are based on the 2012-to-2045 growth rates projected in the FAF4⁶⁶ database of rail movements in Wyoming. For non-coal through movements, the annual growth rate of 1.2 percent from FAF's forecast report⁶⁷ on United States national movement trends was applied to through tonnage values. Applying



⁶⁴ Note that the ensuing freight forecasts are a function of the projected relevant growth rates by well-recognized and widely-used sources, but they are incapable of foreseeing unpredictable factors, which have either positive or negative influence on the freight rail flows, such as catastrophic climate change, international plagues or health epidemics, acts of international terrorism, drastic political change, immigration reforms, famine, extreme energy shocks, natural disasters, or any other significantly destabilizing force majeure factors.

⁶⁵ Annual Energy Outlook, EIA, 2020. Retrieved from: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=95-AEO2020&cases=ref2020&sourcekey=0

⁶⁶ Freight Analysis Framework (FAF4). Retrieved from: <u>https://faf.ornl.gov/fafweb/</u>

⁶⁷ Freight Analysis Framework Inter-Regional Commodity Flow Forecast Study. Retrieved from: https://ops.fhwa.dot.gov/publications/fhwahop16043/index.htm#figure3



growth rates by direction and commodity to 2018 freight transported by rail in Wyoming, year 2045 Wyoming rail forecasts were derived, as presented in **Table 2-42**.

Table 2-42: Foreca	st Summary	2018-2045
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2018		2045		Change			
Traffic Type	Tons (in thousands)	Percent	Tons (in thousands)	Percent	Tons (in thousands)	Percent	CAGR
Origin	311,851	74.9%	161,697	58.4%	-150,154	-48.1%	-2.4%
Termination	3,472	0.8%	5,424	2.0%	1,952	56.2%	1.7%
Intrastate	12,313	3.0%	5,630	2.0%	-6,683	-54.3%	-2.9%
Through	88,686	21.3%	104,332	37.7%	15,647	17.6%	0.6%
Total	416,322	100.0%	277,084	100.0%	-139,238	-33.4%	-1.5%

Source: HDR Analysis of 2018 Carload Waybill Sample and FAF4 Forecasts

CAGR compound annual growth rate

Comparison of 2045 Wyoming rail forecasts to the base of 2018 is presented in Table 2-42 and Figure 2-27.

Figure 2-27: Forecast Summary with Coal Movement (2018–2045)



Source: HDR Analysis of 2018 STB Carload Waybill Sample and FAF4 Forecasts



Overall tonnage transported by rail in Wyoming (all directions and all commodities) is projected to amount to 277.1 million tons (a decrease of 139.2 million ton compared to 2018 values), equating to a compound annual growth rate (CAGR) of about -1.5 percent between 2018 and 2045. Outbound and intrastate movements (which are Wyoming coal-dominated) are forecasted to decrease at an annual rate of about -2.4 percent and -2.9 percent—reaching 161.7 million tons and 5.6 million tons by 2045, respectively. Inbound flows are expected to increase to 5.4 million tons (CAGR of 1.7 percent), while through movement is expected to grow at the average pace of 0.6 percent annually, reaching 104.3 million tons by 2045.

Because EIA and FAF expect that production and rail movement of coal in Wyoming will be decreasing in the future, the drop in total tonnage moved is not surprising. If coal is excluded from the forecast summary, the tonnage of other commodities moved by rail is projected to increase in all directions. These results are presented in **Table 2-43** and **Figure 2-28**.

	201	2018		2045		Change		
Traffic Type	Tons (in thousands)	Percent	Tons (in thousands)	Percent	Tons (in thousands)	Percent	CAGR	
Origin	20,629	22.1%	32,300	24.2%	11,671	56.6%	1.7%	
Termination	3,472	3.7%	5,424	4.1%	1,952	56.2%	1.7%	
Intrastate	143	0.2%	223	0.2%	80	55.8%	1.7%	
Through	69,149	74.0%	95,424	71.5%	26,275	38.0%	1.2%	
Total	93,393	100.0%	133,371	100.0%	39,978	42.8%	1.3%	

Table 2-43: Forecast Summary without Coal

Source: HDR Analysis of 2018 Carload Waybill Sample and FAF4 Forecasts

CAGR compound annual growth rate





Figure 2-28: Forecast Summary without Coal Movement (2018–2045)



Source: HDR Analysis of 2018 Carload Waybill Sample and FAF4 Forecasts

Total tonnage (excluding coal) moved by rail in Wyoming is expected to increase from 93.4 million tons to 133.4 million tons, an increase of 56.6 percent or a CAGR of 1.3 percent.

The breakdown of the forecast by commodities and direction is presented in Table 2-44.

STCC	Commodity Name	Origin	Destination	Intrastate	Through	Total
11	Coal	129,397	0	5,407	8,908	143,713
28	Chemicals or Allied Products	23,038	196	29	6,160	29,424
20	Food or Kindred Products	375	167	0	19,792	20,334
49	Hazardous Materials	2,290	855	46	12,859	16,051
01	Farm Products	270	9	0	16,168	16,447
46	Miscellaneous Mixed Shipments	0	0	0	13,333	13,333
14	Nonmetallic Minerals	1,131	3,504	28	3,794	8,458
32	Clay, Concrete, Glass or Stone	4,026	190	25	1,228	5,469
24	Logs, Lumber, Wood Prod.	183	10	0	5,778	5,971
37	Transportation Equipment	206	43	72	3,740	4,063
	All Other Commodities	781	448	21	12,571	13,822
	Total	161,697	5,424	5,630	104,332	277,084
	2018-2045 CAGR	-2.4%	1.7%	-2.9%	0.6%	-1.5%

Table 2-44: Wv	oming 2045 Rail Fl	ows by Direction an	nd Commodity (in	Thousands of Tons)

STCC Standard Transportation Commodity Code

CAGR compound annual growth rate





Outbound movements are expected to continue to account for most of the rail freight, at about 161.7 million tons of primarily coal. As discussed above, coal is expected to decrease significantly between 2018 and 2045. Outbound coal movement will decrease from 291.2 million tons in 2018 to 129.4 million tons in 2045, a decrease of 55.6 percent. Chemicals or allied products are projected to increase by 66.7 percent between the base and forecast years. The overall tonnage of chemical products will grow from 17.6 million tons to 29.4 million tons, most of which account for outbound movements. Nonmetallic minerals commodities will also significantly increase from 5.2 million tons in 2018 to 8.5 million tons in 2045, an increase of 61.1 percent. Increases in other commodities range from approximately 20 to 40 percent.

Even though the total tonnage moved among non-coal commodities are expected to grow, those gains do not make up for the drastic decrease in coal movements. **Table 2-45** summarizes projected 2045 Wyoming rail flows.

Table 2-45: Wyoming 2045 Rail Flows Summary (in Thousands of Tons)

Traffic Type	Tons (in thousands)
Outbound	161,697
Inbound	5,424
Intrastate	5,630
Through	104,332
Total	277,084
2018-2045 CAGR	-1.5%

CAGR compound annual growth rate

Coal Market Trends Summary

Larger coal market trends (as shown in **Figure 2-29**) are expected to affect Wyoming rail tonnage movements. Because coal is the major commodity moved in Wyoming, the market trends for coal are especially important. Coal rail tonnage movements in Wyoming are expected to be influenced by overall coal production in the United States, fuel prices, mining productivity, and environmental policies. The following EIA discussion summarizes these major coal market trends.⁶⁸

⁶⁸ Energy Information Administration (EIA), Annual Energy Outlook 2020. Retrieved from: <u>https://www.eia.gov/outlooks/aeo/pdf/AEO2020%20Full%20Report.pdf</u>





Figure 2-29: US Coal Production by Region, 2000–2050



Source: U.S. EIA, Annual Energy Outlook 2020 69

United States coal production largely follows the trend of domestic coal consumption but is also influenced by coal exports. Due to the combination of relatively competitively priced natural gas and increasing generation of electricity from renewables in the near term, coal-fired generation capacity in the United States is expected to decrease by around 46 percent between 2019 and 2025. The retirement of coal-fired generation plants will decrease coal production through 2025, after which it will start to level off. **Figure 2-30** shows the projected coal production in Wyoming (PRB—reference case), and it is expected to decrease at an annual average rate of 2.96 percent between 2019 and 2045.

⁶⁹ U.S. EIA, Annual Energy Outlook 2020





Figure 2-30: Projected Wyoming Coal Production in Millions of Short Tons, 2019-2050

Source: U.S. EIA, Annual Energy Outlook 2020, Reference case for Wyoming Powder River Basin⁷⁰

Figure 2-31 presents EIA's forecasts of average minemouth coal prices in the United States. EIA expects the average real minemouth price for United States coal to gradually fluctuate between \$34.30 per short ton in 2019 and \$37.49 per short ton in 2045.



Figure 2-31: Average Annual Minemouth Coal Prices by Region, 2018-2050

Source: EIA, Annual Energy Outlook 2020, Coal Supply Minemouth Price⁷¹

⁷⁰ U.S. EIA, Annual Energy Outlook 2020
⁷¹ U.S. EIA, Annual Energy Outlook 2020



A similar trend is observed for the West and Interior regions minemouth coal prices where prices will stay relatively flat. Minemouth coal prices in the West, however, are priced at around \$16.83 per short ton in 2019. EIA projects the price to decrease to \$15.36 per short ton in 2045. The most drastic change is expected for coal prices in Appalachia, where minemouth coal price decreases by 12 percent between 2019 and 2020. EIA forecasts the price to then increase steadily through 2050.

2.2.3 PASSENGER TRAVEL DEMAND AND GROWTH

There are currently no efforts underway to establish regularly scheduled long-distance, intercity, high-speed, or commuter-rail service to Wyoming. Any future attempts would be in concert with the State's Rail Vision, in cooperation with all public and private stakeholders and other planning bodies statewide, and would be maximized in terms of efficiency and service integration with the multimodal transportation network. Wyoming is currently monitoring and supporting the development of passenger rail initiatives in neighboring states.

2.2.4 FUEL COST TRENDS

Figure 2-32 shows trends in gasoline prices over the last 10 years. Costs were increasing steadily until the recession in 2008, with a large spike in crude oil and gasoline prices before a sharp decline. Since 2008, prices rose steadily before declining in 2015. **Figure 2-33** shows the diesel fuel price trend. As shown in **Figure 2-33**, though they generally follow the same pattern, the prices in Wyoming are typically slightly lower than the United States average. Wyoming's reliance on Canadian crude oil (which is typically cheaper than crude oil from other countries) and the low fuel taxes keep the overall prices low relative to the United States average. It should also be noted that, because of the increased drilling of Marcellus Shale, natural gas prices are also decreasing in Wyoming.

Figure 2-32: Gasoline Fuel Cost Trends







Figure 2-33: Diesel Fuel Cost Trends



2.2.5 RAIL CONGESTION TRENDS

The 2007 *National Rail Freight Infrastructure Capacity and Investment Study*, sponsored by AAR, showed two congested rail segments in Wyoming at that time: the UP line between Rawlins and Granger and the BNSF line between the South Dakota–Wyoming state line near Newcastle and Donkey Creek Junction (east of Gillette). Without ongoing capacity improvements, the report estimated that the rail network in Wyoming would not be able to handle the 2035 projected volumes, with nearly the entire rail network at a future level of service of E or F. Although changes in transportation demand since the report's publication likely have changed the projected freight volumes on certain corridors, United States freight railroads have continued to monitor capacity issues and capitalize infrastructure improvements to mitigate congestion as appropriate.

Railroads have been essential to the transportation needs of Wyoming since UP arrived in Cheyenne in 1867. Owing to Wyoming's inland geographical position, extraction and forwarding of Wyoming's vast inland natural resources would not have been efficient or economically feasible without rail transportation.

Wyoming's rail network is among the most heavily trafficked state rail networks in the United States today. Most of the rail activity in Wyoming is derived from a substantial volume of transcontinental traffic that passes through the state or trains carrying coal, soda ash, or other minerals extracted or processed in Wyoming that originate in solid trainloads and depart the state for customers elsewhere.



Wyoming carries a disproportionately large percentage of national freight-rail tonnage, considering its ranking at number 34 in terms of total rail-miles by state. According to 2017 data from AAR, Wyoming ranks in the top 10 states in the United States in the following three categories used to gauge the railroad industry:⁷²

- Wyoming ranked first in rail tonnage originated by state, at 343.7 million tons.
- Wyoming ranked third in rail carloads originated by state, at 2,911,300 carloads.
- Wyoming ranked second in rail tonnage carried by state, at 424.9 million tons.

These figures are attributable primarily to the abundance of coal traffic that originates in Wyoming and the state's position along on a primary transcontinental trade route.

In the year 2020, United States rail traffic year-over-year had been in decline since 2018 and all indications showed that a recession was likely. In March 2020, the COVID-19 pandemic struck the United States, resulting in a partial economic shutdown and a marked decrease in freight traffic through the first and second quarter of 2020. By summer, traffic was beginning to return to trend as reopening was encouraged. Railroads finished the year 2020 with strong performance and near-record high intermodal volumes in response to high consumer demand.⁷³ **Figure 2-34** illustrates the recent trends.

Figure 2-34: United States Total Carloads and Intermodal Originated Rail Traffic



Source: Association of American Railroads; Retrieved 9/25/2020



⁷² Association of American Railroads, *State Rankings*, 2017. Retrieved from: <u>https://www.aar.org/wp-content/uploads/2019/05/AAR-State-Rankings-2017.pdf</u>

⁷³ Railway Age Magazine, AAR: November Rail Traffic 'Making Up Lost Ground', December 02, 2020. Retrieved from: <u>https://www.railwayage.com/news/aar-november-rail-traffic-making-up-lost-ground/</u>



Coal in particular is showing a much greater decline year-over-year. Coal-fired power plants around the country are being decommissioned or converted to natural gas, with renewable energy sources making up an increasingly large share of electricity production. The reasons for this shift are both economic (with natural gas becoming increasingly affordable) and cultural, in concert with the changes in environmental policy nationwide. Although coal is still the largest source of rail traffic originated for Wyoming, the railroads will be inclined to seek to diversify their traffic sources systemwide as coal traffic declines. The well-engineered, high capacity, heavy-haul rail connections through the PRB may potentially see increased use in the future as transcontinental corridors for other types of freight to and from the Pacific Northwest. **Figure 2-35** illustrates the recent coal rail traffic trends.





Source: Association of American Railroads. Retrieved 09/25/2020

2.2.6 HIGHWAY AND AIRPORT CONGESTION TRENDS

2.2.6.1 HIGHWAY CONGESTION TRENDS

Owing to the large land mass and low population density of Wyoming, there is a heavy reliance on the highway system for travel throughout the state. According to FHWA, the total vehicle-miles traveled on Wyoming highways was 10.44 billion in 2018, up from 9.27 billion in 2012. The per-capita average miles driven in Wyoming were much higher than the national average in 2012, with Wyoming drivers averaging 16,078 miles per year compared to 9,459 nationally. The majority of these miles (70 percent) are driven in rural areas, a much larger share than the national average of 30 percent.

As part of Wyoming's Long-Range Transportation Plan, a corridor vision was created for each of 16 identified state significant corridors. These visions intend to establish the best multimodal transportation system possible given the realities of funding and use constraints. These corridors make up 2,820 of the 6,742 miles in the Wyoming highway network which includes these corridors, regional corridors, and urban/local corridors. Precisely 47 percent of the roadway miles on these state significant corridors carry a medium- or high-volume of trucks.





2.2.6.2 AIRPORT CONGESTION TRENDS

Airports provide quick and efficient travel. Though Wyoming has a sparse population compared with other states, there is a robust travel and tourism industry that brings people into and out of the state, often by air. Wyoming has 10 commercial-service airports and has 32 general-aviation airports without commercial passenger service.

In total, the top 10 commercial airports in Wyoming saw approximately 213,000 take-offs and landings in 2019. While some of the airports in Wyoming have multiple runways, they are not parallel and thus do not increase capacity as planes cannot take off and land from intersecting runways at the same time. Despite these constraints, none of Wyoming's airports are expected to have capacity issues between now and 2045. **Table 2-46** shows the 10 commercial airports in Wyoming with their 2019 operations levels and projections for 2045. Note that the data in **Table 2-46** are take-offs and landings and do not reflect the number of passengers.

Table 2-46: Wyoming Commercial Airport Operations, 2019 and 2045

Airport Name (Associated City)	2019 Airport Operations	2045 Airport Operations
Casper–Natrona County International Airport (Casper)	36,543	41,444
Cheyenne Regional–Jerry Olsen Field (Cheyenne)	34,792	37,838
Sheridan County Airport (Sheridan)	30,008	30,008
Yellowstone Regional Airport (Cody)	29,544	39,374
Jackson Hole Airport (Jackson Hole)	27,263	34,798
Gillette–Campbell County Airport (Gillette)	17,272	17,272
Rock Springs–Sweetwater County (Rock Springs)	16,674	16,674
Laramie Regional Airport (Laramie)	12,463	12,463
Riverton Regional airport (Riverton)	5,090	5,194
Worland Municipal Airport (Worland)	3,325	3,325

Source: Federal Aviation Administration Terminal Area Forecast 2020

2.2.7 LAND-USE TRENDS

Wyoming is a vast state with varied terrain including mountains, rivers, and wide-open lands that contain a wide variety of species and natural resources. Many of the resources in Wyoming provide economic opportunity; however, it is also important to balance the extraction of these resources with potentially detrimental depletion. For the State of Wyoming, preserving and protecting sensitive wildlife and ecosystems are just as important as economic growth, and the State strives to strike a balance between growth and preservation with partnerships, planning, and cooperation.

About 48 percent of Wyoming land is federally owned, including nine national forests, seven national parks, six national trails, and eight areas that are maintained by the United States Fish and Wildlife Service. Many of these lands are connected by the interstate highway system and the previously mentioned state significant highway network.

Wyoming is primarily a rural state with very few urban areas and a very low-population density. The cities and towns cover only about 77 square miles but incorporate the majority of the state's population. Although the federally owned lands are not expected to change drastically, municipal areas will continue to grow and change to meet the increasing demands associated with population and industry growth.



2.2.7.1 FREIGHT RAIL ACCESS

Proper railroad and business infrastructure are needed in order to support the origination and termination of freight by rail. For safe and efficient rail operations, railroads do not allow customers to load and unload freight other than at designated locations. Such locations may consist of a rail spur owned either by the railroad or by the customer that leads directly to the rail customer's facility, or, in other cases the location may be a designated railroad team track or transload facility where one or more customers can transfer freight between rail and truck.

Because rail economic impact and rail economic development are tied to infrastructure and real estate availability, an inventory of all existing rail-served industrial sites was created and analyzed. Locations were identified using Google Earth aerial imagery. Originating, terminating, and intrastate traffic records contained in the *2018 STB Carload Waybill Sample* were used to determine whether each identified location is active or inactive based on whether the commodities related to the type of business at each location were waybilled to or from the Standard Point Location Code (SPLC) for the area, and cross-referenced by visually identifying and confirming that the types of railroad cars suited to particular commodities are present at the respective locations using publicly available Google Earth aerial and street-level imagery.

Statewide, a total of 295 existing locations with direct rail access or indirect rail transload access were identified. Of these, approximately 44 percent were determined to be active, while 56 percent were inactive. About 71 percent of the locations identified had direct rail access, while the remaining 29 percent were team tracks or transload facilities. Around 50 percent of locations with direct rail access were determined to have active shippers, while only 28 percent of team tracks and transload facilities had active shippers. Statewide, 105 properties were identified that have direct rail access and do not currently use rail for freight transportation purposes. **Table 2-47** provides a summary of the usage of existing rail access in Wyoming.

Impact Metric	Count	Percentage
Rail Spurs		
Active	129	44%
Inactive	166	56%
Rail Spur Locations by Type		
Private Industry Tracks	210	71%
Team Tracks	85	29%
Businesses with Direct Rail Access		
Active Rail Users	96	63%
Inactive Rail Users	56	37%
Active Shippers Originating/Terminating Freight		
Originating-Only	60	47%
Terminating-Only	59	46%
Originating and Terminating	10	7%

Table 2-47: Rail Spur Utilization in Wyoming

Source: Cross-reference of 2018 STB Carload Waybill Sample data with Google Earth aerial imagery



Figure 2-36 illustrates the geographic distribution of businesses with direct rail access, and their usage.



Figure 2-36: Businesses with Direct Rail Access

Source: HDR, Cross-reference of 2018 STB Carload Waybill Sample data with Google Earth aerial imagery

One notable finding was that rail-served warehouses and industrial properties centrally located in cities such as Cheyenne and Casper appear to have largely fallen into disuse. Today, many prospective rail shippers prefer to establish themselves in rail-served industrial parks or greenfield locations where they can customize a site to meet their specific needs.

Figure 2-37 illustrates the geographic distribution of team track or transload locations with indirect rail access, and their usage.







Figure 2-37: Locations with Indirect Truck-Rail Transload Access

Source: HDR, Cross-reference of 2018 STB Carload Waybill Sample data with Google Earth aerial imagery

Many railroad team tracks or transload sites have also fallen into disuse, or may be used very infrequently. In most cases, shippers prefer direct rail access rather than a truck-to-rail transload whenever possible. Trucking product to and from a rail transload site increases the cost of shipping. Nevertheless, for freight destined to or from sites without rail access, or for infrequent or one-time shipments, transloading remains an attractive option to enable rail use. Transloading has been widely popular among rail customers in the oil and gas exploration industry as they source industrial sand, drilling mud, and pipeline materials that must be transported to multiple destinations that span wide production areas. Transloading has also proven to be effective for the wind energy industry as windmill components are moved by rail as one-time shipments for the construction of new wind farms.

Implications for Land Use Planning

With this information, local planners may choose to look more closely at land use on parcels that have rail access. In many cases, rail-served warehousing may have undergone adaptive re-use to serve other purposes, including both industrial and commercial uses. Adaptive re-use in former industrial areas may be desirable for urban revitalization efforts. However, if diverting freight from truck to rail is deemed a priority, it may be desirable for local jurisdictions to seek to reserve the use of existing rail-served properties for businesses that are existing or potential rail users.





2.2.7.2 REED AVENUE RAIL CORRIDOR PLAN

When the Cheyenne and Northern Railway was built, the City of Cheyenne granted a railroad easement within the rightof-way of Reed Avenue, on the western edge of downtown Cheyenne. This allowed the Cheyenne and Northern to construct its railway northward from the existing UP rail line in Cheyenne towards Orin, Wyoming. Over the years, railroad reorganizations and acquisitions led to this Reed Avenue rail corridor becoming a part of the Burlington Northern Railroad and today this segment of track belongs to BNSF Railway.

While this corridor had once provided valuable rail freight access to rail shippers in Cheyenne, the area no longer serves in this role as effectively. The Cheyenne Metropolitan Planning Organization identifies the area adjacent to the track as "underperforming and in need of a new economic identity."⁷⁴

The Reed Avenue Rail Corridor Plan (or Reed Avenue Rail Corridor Master Plan) seeks to establish a community-oriented conceptual design that will:

- Enable the Corridor to revitalize as a vibrant multi-use corridor;
- Safely co-exist with rail operations; and
- Celebrate the West Edge's historic and industrial themes.

A Reed Avenue Rail Corridor project may potentially include the removal of disconnected rail spurs, drainage improvements, track fencing, pathway construction, and landscaping. This urban design work, in conjunction with rezoning efforts at the city level, are intended to help transition the area into a mixed-use neighborhood.

Proposed improvements to the Reed Avenue Corridor are not anticipated to impact or change railroad operations.

⁷⁴ Cheyenne Metropolitan Planning Organization, *Reed Avenue Rail Corridor Master Plan*, April 2018. Retrieved from: <u>https://www.plancheyenne.org/wp-content/uploads/2017/05/ReedAveReport Finalsmall.pdf</u>





2.3 WYOMING'S EXISTING RAIL SYSTEM: RAIL SERVICE NEEDS AND OPPORTUNITIES

This section presents an overview of rail service needs and opportunities for Wyoming's existing rail system. Rail service needs and opportunities are presented in detail in the next two chapters of this document. Chapter 3, Proposed Passenger Rail Improvements and Investments, presents an overview of the needs and opportunities for passenger rail service in Wyoming. Chapter 4, Proposed Freight-Rail Improvements and Investments, presents identification of and opportunities to address rail service issues, service gaps, intermodal connectivity, community and economic development, and general needs for the state's rail network in response to increased demand for rail system access, economic opportunities, growth, and shifts in freight movement demand.

2.3.1 RAILROAD CORRIDOR DEVELOPMENT TRENDS

As owners and operators of large transportation networks, Class I railroads BNSF and UP manage their businesses across state lines, considering the entire market potential and competition they face in their Midwestern and western United States operating territory. The portions of the railroads' networks connecting key regional markets are considered rail freight corridors, most all of which span multiple states. BNSF and UP name these corridors for business planning, investment, and marketing purposes. Wyoming's location at the crossroads of the west and its close proximity to major rail hubs in neighboring states—including Denver, Colorado; Laurel, Montana; North Platte, Nebraska; and Ogden, Utah—means that many of the rail corridors in the regional and national rail network connect through Wyoming. Class I freight railroads typically provide the capital necessary for their own network corridor infrastructure improvements. Yet in recent years, some Class I railroads have made corridor improvement investments that have involved public financial assistance, typically justified on the basis of the public benefits from reducing truck traffic and truck emissions on parallel portions of the highway network. A primary interest of the State of Wyoming is in the impact of declining domestic coal production and related coal volumes and the opportunity for diversification of traffic and other uses for the rail lines spanning the PRB.

The remainder of this section discusses Class I freight railroad corridors in Wyoming and elsewhere in the Western United States that affect Wyoming in some way. While the focus is on freight rail corridors, some or portions of these routes may have potential to expand existing or add new passenger rail service in coordination with the ongoing operations of the freight railroads in Wyoming.

BNSF Corridors of Commerce

BNSF has designated Corridors of Commerce within its network of routes in the United States and Canada to create jobs; deliver rail transportation, safety, and environmental benefits; and promote economic growth and competitiveness in the United States.⁷⁵



⁷⁵ Texas Department of Transportation, *Texas State Rail Plan*, December 2019. Retrieved from: <u>https://ftp.txdot.gov/pub/txdot-info/rail/texas-rail-plan-chapters.pdf</u>



While none of the three currently identified BNSF Corridors of Commerce cross Wyoming, a potential fourth transcontinental corridor of commerce could be emerging. Since 2016, BNSF has developed a new intermodal corridor between Texas and the Pacific Northwest.⁷⁶⁷⁷ This corridor—spanning Texas, New Mexico, Colorado, Wyoming, Montana, Idaho, and Washington—offers an opportunity for BNSF to use lines for other traffic types that had been dominated for decades by high volumes of coal traffic. **Figure 2-38** illustrates BNSF's Pacific Northwest-Texas intermodal corridor.



Figure 2-38: BNSF Intermodal Service between Pacific Northwest and Texas (2016)

Source: BNSF Railway

UP Corridor Development

The famed Transcontinental Railroad, known today as the Overland Route, remains the backbone of the UP network. The Overland Route serves as a land bridge for domestic and international container freight traffic between the West Coast and the Great Lakes, in addition to other domestic carload rail freight traffic. The route's prominence and importance to



⁷⁶ BNSF launches new, faster intermodal service between Pacific Northwest and Texas, September 01, 2016. Retrieved from: <u>https://www.bnsf.com/news-media/news-releases/newsrelease.page?relld=intermodal-pnw-texas-launch</u>

⁷⁷ BNSF Railway, PNW-TX Intermodal Service. Retrieved from: <u>https://www.bnsf.com/ship-with-bnsf/intermodal/service-options-and-details/pnw-tx-intermodal-service.page</u>



UP, the State of Wyoming, and to the United States as a whole have not waned over more than 150 years of continuous operation.

2.3.2 FACTORS DRIVING CORRIDOR DEVELOPMENT

Many external factors are generally affecting the demand for use of rail corridors as well as influencing Class I railroads' business and network investment strategies. Some of the key factors influencing rail corridor development generally are identified in this section.

Expansion of the Panama Canal

The Panama Canal was opened in 1914 as a major international trade artery that cuts through the Isthmus of Panama and connects Pacific Ocean and Atlantic Ocean trade routes. A century later, the Panama Canal Authority undertook a significant capacity expansion project to maintain the canal's viability as a conduit for international trade. In 2016, the authority placed a larger, third set of locks into service, significantly increasing the throughput capacity of the canal. The project has allowed much larger vessels to transit the locks, potentially providing savings from greater economies of scale for shippers on Panama Canal trade routes. The canal capacity for container vessels, historically limited to 4,500 Twenty-foot Equivalent Units (TEU) ships in the original locks, has been increased to accommodate container vessels of 12,500 TEU capacity in the new locks. The larger locks also have enabled larger dry bulk and tanker vessels to use the canal. This expansion project has created an opportunity for the ports in the eastern and southern United States to capture additional ocean trade with countries in Asia and along the West Coast of South America—traffic that, before now, had bypassed Atlantic ports and moved instead through ports on the West Coast before traveling to or from the eastern and southern United States by rail or truck. Additional international trade could be carried to and from Atlantic ports by rail, if port market shares increase. International trade commodities traveling cross-country by rail through Wyoming to or from Atlantic and Pacific Coast ports may see a decrease in share.

Increases in Domestic Intermodal Transportation

The Class I railroads are increasingly focused on growing their intermodal container business and facilities. The intermodal business has been part of the railroads' services since the 1960s, and it grew substantially between 1980 and 2000. Intermodal transportation may include a truck trailer on a flatcar (TOFC), or a shipping container stacked one or two high on specialized container well railcars or other flatcars (COFC). COFC was first initiated to transport international ocean container traffic to and from ports. However, within the last decade, railroads have grown their domestic intermodal container business nationwide. The railroads have accomplished this generally by offering speed and pricing of service and intermodal container yards strategically located near interstate highways and key truck routes, thus replacing the need for truck drivers to drive long-haul distances far from home, which can help address the present and surging shortage of truck drivers in the United States. The domestic intermodal service uses larger size containers than used in ocean shipping, matched instead to standard highway trailer sizes that are 53 feet long and taller and wider than a standard 40-foot-long international ocean container. As of 2020, Wyoming does not have an active rail intermodal facility. Wyoming's central location in the Intermountain West and proximity to major interstate highway corridors could potentially make it a hub for the development of a facility to take advantage of various existing domestic intermodal rail corridor services extending to the southern, eastern, and western United States and various international ports, thus enhancing access to the rail network in Wyoming and the reach of Wyoming's shippers and receivers in the national and global marketplace.



Changes in Energy Production: Oil, Gas, and Coal

There has been growth in United States domestic production of oil and gas through the application of hydraulic fracturing and directional drilling in the last 5 years. Rail has played a significant part in supplying drilling equipment and materials such as frac sand to these operations. Rail service has made oil and gas production possible in areas where pipeline capacity has been inadequate or nonexistent. Wyoming's oil exploration industry has been greatly affected by this growth, with rail supplementing limited pipeline capacity to expedite the movement of crude oil to distant refineries. Frac sand shipped by rail is also transported into Wyoming. This increased traffic may have impacts that are significant to the national and Wyoming railroad networks.

The abundance of low-priced natural gas, and the additional capital investments required for coal-fired electric generating plants to comply with emissions regulations, have reduced the demand for domestic coal as a source of energy in the United States. Retirements of coal-fired power plants are increasing and accelerating nationwide—a trend that has implications for states such as Wyoming that produce and ship coal by rail. Since the 1970s, large volumes of low-sulfur Wyoming coal produced in the PRB have traveled over the state's rail network to markets in the United States Midwest, East, and South. As noted previously, those volumes have declined in recent years. Other less direct effects on Wyoming's economy and rail network that may result from this shift in energy demand may be relatively greater manufacturing and related shipping activity levels, as lower electricity prices may make Wyoming even more competitive as a manufacturing location, including products for export.















CHAPTER 3

Proposed Passenger Rail Improvements and Investments





3.1 INTRODUCTION

Wyoming has not been served by intercity passenger trains since May 1997, when Amtrak discontinued the *Pioneer*, a long-distance train that had operated between Chicago and Seattle, with scheduled station stops in Wyoming at Borie, Laramie, Rawlins, Rock Springs, Green River, and Evanston. Initially begun as a daily train in 1991, Amtrak reduced the *Pioneer's* service frequency to three times per week in each direction in 1993, before budget cuts prompted its cancellation 4 years later.

There are presently no active efforts in Wyoming to establish regularly scheduled long-distance, intercity, high-speed, or commuter rail service. This chapter discusses the planning studies that have been undertaken since 1997, as well as initiatives currently underway in neighboring states, that may enable the introduction of new passenger rail services in Wyoming in the future. Any effort to implement passenger-rail service will be deferred to future planning attempts and would be in concert with the State's rail vision and this 2021 Wyoming Statewide Rail Plan (SRP), in cooperation with all public and private stakeholders and other planning bodies statewide, and would be maximized in terms of efficiency and service integration with the multimodal transportation network and neighboring states as directed by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA).

3.2 AMTRAK PASSENGER RAIL PLANNING EFFORTS

3.2.1 PIONEER ROUTE PASSENGER RAIL STUDY

Section 224 of PRIIA mandated that Amtrak undertake a series of studies regarding the improvement and expansion of intercity passenger-rail service nationwide. Two former Amtrak routes were studied for reinstatement: the *North Coast Hiawatha* and the *Pioneer*.

From this effort came the *Pioneer Route Passenger Rail Study*, released in 2009, which explored resuming Amtrak's *Pioneer* service between Chicago and Seattle via Wyoming.⁷⁸ In conjunction with this effort, Amtrak contracted with Union Pacific Railroad (UP) to prepare a *Preliminary Capacity Evaluation Covering Routes Denver/Salt Lake City to Portland* that would identify an initial set of infrastructure improvements needed to support the reinstatement of daily *Pioneer* service on UP-owned tracks between Denver and Portland. These improvements would enable the passenger train to maintain its schedule while minimizing conflicts with and delays to UP freight trains. The Amtrak study identified four potential service and routing options for the reinstated *Pioneer*, with preliminary estimates of ridership, capital costs, and operating costs. Two of the four service options involved routing the proposed train via the UP network across Wyoming. **Figure 3-1** shows each of the service alternatives considered for the *Pioneer* service.

The study found that the two options serving Wyoming would generate more ridership and revenue than options serving western Colorado, but that operating and capital costs would be higher and the train would require a higher annual operating subsidy. UP's preliminary analysis identified \$200 million of potential infrastructure improvements if daily

⁷⁸ Amtrak, Pioneer Route Passenger Rail Study, 2009. Retrieved from: <u>https://transitzac.files.wordpress.com/2014/01/amtrak_pioneerservicestudy.pdf</u>





Pioneer service was restored between Salt Lake City and Portland, and a total of \$309 million of improvements if the *Pioneer* service was operated between Denver and Portland via the Overland Route through Wyoming.





Source: Amtrak Pioneer Route Passenger Study, 2009

Amtrak noted in the study that reinstating the *Pioneer* could provide public benefits but, because the route was not a component of the federally designated high-speed-rail-corridor network, one or more state governments along the train's route would need to apply or co-apply for federal American Recovery and Reinvestment Act funds for the capital needed to initiate the new service, as well as seek out additional federal and state funding sources to cover ongoing operating and maintenance costs. Amtrak stated in the study that although PRIIA recognizes the importance of Amtrak's existing long distance routes, it does not provide funding for capital or operating expenses associated with expanding service beyond current levels. While the companion 2009 *North Coast Hiawatha* study did not propose Amtrak service in Wyoming, this train would serve Billings, Montana, near the northern Wyoming border with its service between Chicago and Seattle. Billings has not had passenger rail service since 1979.

Since the release of the study, considerable support has been voiced by state and local governments and riders for resuming *Pioneer* service over the historic route between Denver and Seattle. However, funding and a potential service implementation schedule have not been identified, and operating agreements with Amtrak and host railroad UP have not been secured for the return of Amtrak long-distance service across the Wyoming portion of the route.



3.2.2 AMTRAK FIVE-YEAR STRATEGIC PLANS

Since Amtrak's release of the PRIIA-mandated long-distance train improvement studies a decade ago, new requirements under Section 11203(b) of the Fixing America's Surface Transportation (FAST) Act have prompted Amtrak to produce 5-year strategic plans. In 2020, Amtrak released its Fiscal Year (FY) 2020 "Five Year Service Line Plans," which outlines strategic, 5-year initiatives for each service line between FY 2020 and FY 2025.⁷⁹ These plans do not identify initiatives for individual trains such as the *California Zephy*r but focus on overall improvements that benefit particular types of services, including long-distance trains and state-supported regional trains, regardless of location.

Amtrak's 5-year plan for the Long Distance Service Line lists the following overall strategies:

- Expand Positive Train Control implementation to all Long Distance Service Line routes to improve safety.
- Improve on-time performance and strengthen train performance.
- Identify and implement operational efficiencies.
- Evaluate service model to improve revenue performance.
- Evaluate and implement customer service improvements, including greater café/lounge car menu variety.
- Acquire new and improve existing fleet.

Amtrak's 5-year plan does not identify the establishment of new long-distance routes as a strategy or initiative. It does, however, support the development of new regional, state-supported passenger rail corridors of up to 750 miles in length. Although no specific corridors in Wyoming or adjoining states are identified for short-term implementation, increasing the number and frequency of state-supported passenger rail services is a core initiative of the strategic plan. Amtrak states that it will identify growth opportunities and work with interested stakeholders to advance expansion of state-supported passenger rail corridors.

The U.S. Department of Transportation, through the Federal Railroad Administration (FRA), has been working with states to develop and fund high-speed rail services, which includes new or enhanced conventional intercity passenger rail services that use existing freight lines and travel at existing passenger rail speeds. Under PRIIA, the federal government established a mechanism for creating federal-state funding partnerships dedicated to developing passenger rail corridors, using federal grant programs. To allocate this funding, FRA established the "High Speed Intercity Passenger Rail Program" in 2009. The program was designed to make strategic investments that would create or enhance an efficient network of passenger rail corridors to connect communities across the country. FRA established three objectives for the program⁸⁰:

- Build new high-speed rail corridors that expand and fundamentally improve passenger transportation in the geographic regions they serve.
- Upgrade existing intercity passenger rail corridors to improve reliability, speed, and frequency of existing services.
- Lay the groundwork for future high-speed rail services through corridor and state planning efforts.

⁷⁹ Amtrak, Amtrak Five-Year Service Line Plans. Retrieved from: <u>https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/businessplanning/Amtrak</u> <u>-Service-Line-Plans-FY21-25.pdf</u>

⁸⁰ Federal Railroad Administration, High Speed Intercity Passenger Rail (HSIPR) Program. Retrieved from: <u>https://railroads.dot.gov/passenger-rail/high-speed-rail/high-speed-intercity-passenger-rail-hsipr-program</u>



Planning and investments initially were focused on a group of federally designated high-speed rail corridors, none of which were located in Wyoming or neighboring states. However, additional federal grant programs under the FAST Act expanded opportunities to improve existing intercity passenger rail services or develop new routes not located within federally designated high-speed rail corridors. Several states have continued to evaluate potential new intercity and high-speed passenger rail services, believing that additional funding will be available in the future.

3.2.3 AMTRAK CONNECTS US VISION PLAN

On March 31, 2021, Amtrak released a vision plan, called "Amtrak Connects Us," that identified locations where new corridors and enhanced service on existing routes could be developed in conjunction with state partners by 2035.⁸¹ **Figure 3-2** shows the candidate routes targeted for potential improvement or an introduction of service under Amtrak's plan. The vision is centered on developing and enhancing intercity passenger rail corridors several hundred miles long located within or between regions of the United States that are expected to experience significant population growth. Amtrak's plan would add intercity passenger rail service on up to 30 potential new routes, expand service on more than 20 existing routes, introduce passenger rail service in up to 160 communities in 15 states, and attract 20 million additional riders beyond the 32 million passengers that rode Amtrak trains in FY 2019.



Figure 3-2: Amtrak Connects Us Plan Proposed Route Expansions

Source: Amtrak

⁸¹ Amtrak, Amtrak Connects Us. Retrieved from: <u>https://media.amtrak.com/amtrak-connects-us/</u>



The Amtrak Connects Us vision includes establishing a new intercity passenger rail service on the Front Range corridor between Cheyenne, Denver, and Pueblo. Amtrak estimates that three daily round trips operating in the corridor between Pueblo and Fort Collins, Colorado, with one round trip extended to Cheyenne, would carry 196,000 riders per year by 2035.⁸² The Amtrak Connects Us plan depends on an authorization of funding from Congress, although no funding has yet been secured, as well as a commitment from state partners that ultimately will be responsible for providing the annual operating support to maintain new and expanded passenger rail services in the long term.

3.3 REGIONAL PASSENGER RAIL PLANNING EFFORTS

3.3.1 COLORADO FRONT RANGE PASSENGER RAIL PROJECT

The Southwest Chief and Front Range Passenger Rail Commission in 2019 initiated a planning process, working with the Colorado Department of Transportation, to evaluate alternatives for implementing intercity passenger rail service between Fort Collins, Denver, and Pueblo, Colorado. With funding from the Colorado General Assembly, the commission was directed to develop a passenger rail service plan for the Front Range Corridor along Interstate 25.⁸³ Although Wyoming is not formally included in the scope of the Front Range Passenger Rail project (FRPR project), a representative of the Greater Cheyenne Chamber of Commerce is a non-voting member on the Southwest Chief and Front Range Passenger Rail Commission board. Wyoming has an interest in the FRPR project as it would bring passenger service closer to Wyoming's border and there may be the possibility of a later extension of service to Cheyenne or beyond, to be determined through later planning efforts. **Figure 3-3** shows the FRPR project's study area.

The planning process for the FRPR project includes the preparation of a passenger rail service development document and activities to advance National Environmental Policy Act (NEPA) planning, which prepares the state of Colorado for preliminary design and project-level NEPA. Additional activities focus on stakeholder engagement and a study of potential policy and governing structures. The planning process is consistent with FRA's project delivery streamlining of environmental procedures to align with those of the Federal Transit Administration and Federal Highway Administration.

At the time of writing, the FRPR project is currently in the pre-NEPA planning and stakeholder engagement phase. In December 2020, the project team released an Alternatives Evaluation report that selected three alignment alternatives in the project corridor between Fort Collins and Pueblo to be carried forward for environmental analysis under the NEPA planning process.⁸⁴ Two of the alignment alternatives primarily follow existing freight and commuter rail corridors while a third alternative follows highways, which in some cases are adjacent to rail corridors. The evaluation included estimates of ridership, capital costs, and operating costs for each alternative to aid in decision-making.



⁸² Amtrak, *Front Range Corridor Fact Sheet*. Retrieved from:

 <u>https://www.amtrakconnectsus.com/wp-content/uploads/2021/04/20210409-Front-Range-Corridor-Fact-Sheet.pdf</u>
⁸³ Colorado Department of Transportation, *Southwest Chief and Front Range Rail Commission*. Retrieved from: <u>https://www.codot.gov/about/southwest-chief-commission-front-range-passenger-rail</u>

 ⁸⁴ Front Range Passenger Rail, *Alternatives Analysis*. Retrieved from: <u>https://www.frontrangepassengerrail.com/alternatives-analysis</u>



Figure 3-3: Front Range Passenger Rail Study Area



Source: Southwest Chief and Front Range Passenger Rail Commission


3.3.2 MONTANA'S BIG SKY PASSENGER RAIL AUTHORITY

Efforts north of Wyoming also are underway to establish intercity passenger rail service in Montana. In July 2020, several Montana counties began laying the groundwork to establish the Big Sky Passenger Rail Authority (BSPRA), which would be a regional rail authority with a governance structure to study, seek, or accept funding for, and facilitate the implementation of passenger rail service across southern Montana. BSPRA was formally established on November 18, 2020, pursuant to Montana state law, with 12 participating counties.⁸⁵ BSPRA has an independent governing board with members appointed by county commissioners. BSPRA serves as a coordination point among government, Amtrak, host freight railroads, and private partners. In addition, BSPRA would partner with other states in any future multi-state compact or regional rail authority established to support regional passenger rail networks in the Intermountain West.

According to BSPRA's website, it is willing to explore a range of potential new passenger rail route options, including cross-state services through the southern part of Montana as well as north-south links connecting Montana with Denver and Salt Lake City. Similar to Wyoming's involvement with the FRPR project, Wyoming state or local officials will partner with Montana agencies as appropriate to create a regional base of support for expanding passenger rail service on corridors that serve Wyoming and Montana. **Figure 3-4** shows existing and potential intercity passenger rail routes in Montana.



Figure 3-4: Existing and Potential Intercity Passenger Rail Routes in Montana

Source: Big Sky Passenger Rail Authority

⁸⁵ Big Sky Passenger Rail Authority. Retrieved from: <u>https://www.bigskyrail.org/about</u>



3.3.3 PREVIOUS PASSENGER RAIL STUDIES

Prior to the FRPR project, several previous planning efforts had been undertaken to assess the feasibility of establishing passenger rail service along the Front Range and in Wyoming. This section provides a summary of previous studies.

3.3.3.1 COMMUTER RAIL/PASSENGER RAIL FEASIBILITY STUDY

Wyoming does not currently have commuter trains, although that service was examined as part of a study to promote connectivity with the state's Front Range cities and the growing metropolitan areas of nearby northern Colorado.

In 2008 the Wyoming Department of Transportation (WYDOT) released the *Commuter Rail/Passenger Rail Feasibility Study* (CR/PR study) that examined the feasibility of establishing some form of rail passenger service along the Front Range over an existing BNSF Railway (BNSF) freight rail corridor between Fort Collins, Colorado, and Casper, Wyoming, via Cheyenne and Douglas, Wyoming. The 265-mile corridor, which last had passenger rail service in 1967, parallels Interstate 25 for its entire length. The CR/PR study was produced for the Wyoming Joint Transportation, Highways, and Military Affairs Interim Committee. **Figure 3-5** shows the route of the proposed service.

The CR/PR study investigated rail infrastructure upgrades (track-capacity improvements, wayside signals, route realignments, and bypasses to avoid freight yards), station facility availability, projected passenger train layover locations, and possible equipment types. Impediments to the service included possible conflicts with existing and anticipated future BNSF freight train volumes, an operating profile including some grades and curvature that would constrain the ability to operate passenger trains at 79- or 90-mile per hour (mph) speeds even after infrastructure improvements, and modal competition from parallel Interstate 25.

Three operating scenarios were considered for an initial 45-mile Fort Collins–Cheyenne service phase with a maximum operating speed of 79 mph. Two scenarios used traditional bi-level commuter and intercity equipment, and one used Talgo equipment, which has a passenger compartment that tilts on curved track to allow for higher operating speeds. An initial analysis revealed that the minimum infrastructure upgrades necessary to support 79-mph service between Fort Collins and Cheyenne would cost between \$1 million and \$1.5 million per mile. The service over the BNSF trackage would require the installation of Centralized Traffic Control and Positive Train Control systems, which are not required for freight service on this route. The feasibility study did not identify either funding sources to implement, operate, or maintain the proposed service, nor did it provide a proposed implementation schedule. Further study of route options was terminated in 2009 based on the CR/PR study's conclusion that:

- A viable passenger rail corridor would require higher-speed segments at certain locations and therefore would not be able to utilize the existing freight rail infrastructure.
- A challenging topography would make improvements in certain locations costly or difficult to implement.
- The high preliminary cost estimates for the service would be prohibitive.



Figure 3-5: Proposed Commuter Rail/Passenger Rail Route



Source: Commuter Rail Study, 2008; Wyoming Joint Transportation, Highways, and Military Affairs Interim Committee

3.3.3.2 HIGH-SPEED RAIL FEASIBILITY STUDY

In 2008 the Rocky Mountain Rail Authority (RMRA) initiated a feasibility study of potential intercity passenger rail corridors along Interstates 25 and 70. The RMRA was formed to explore the possibility of creating a regional high-speed rail network to connect major cities in Colorado. The RMRA is a multi-jurisdictional government body consisting of 52 cities, counties, and transit agencies in Colorado. Its efforts to designate a Front Range alignment including Cheyenne, Wyoming, as a federally designated high-speed rail corridor began in 2004, but to date have not been successful.

RMRA's *High-Speed Rail Feasibility Study* (HSR study), which was produced with significant financial and technical support from the Colorado Department of Transportation, was released in 2010.⁸⁶ The HSR study was intended to determine whether service and route options existed in the Interstate 25 and Interstate 70 corridors that could meet FRA's technical, financial, and economic requirements for high-speed rail service. Route alignments using existing rail corridors, highway rights-of-way, and unconstrained Greenfield alignments were examined.

⁸⁶ http://rockymountainrail.org/RMRA Final Report.html





The Interstate 25 route along Colorado's Front Range from Trinidad to Pueblo, Colorado Springs, Denver, and Fort Collins, Colorado, included an extension north to Cheyenne. **Figure 3-6** shows potential route alignments in the Denver– Cheyenne section of the Interstate 25 north corridor.



Figure 3-6: High-Speed Rail Corridors between Denver and Cheyenne

Source: Rocky Mountain Rail Authority High-Speed Rail Feasibility Study, 2010

In addition to alignment alternatives, the HSR study identified possible infrastructure upgrades, available passenger equipment types and technologies, travel and market demand, ridership and revenue forecasts, capital and operating costs, phased network implementation, operating plans, and funding alternatives from public and private sources. After evaluating multiple alignments and service alternatives in the Interstate 25 corridor between Cheyenne and Trinidad, the HSR study, in an effort to reduce estimated costs, reduced its scope to a shortened Interstate 25 corridor segment between Fort Collins and Pueblo, and ultimately identified eight options capable of meeting the FRA's criteria for a feasible high-speed rail system. The HSR study also described future steps in the process to advance the concept, including completing environmental assessments, completing preliminary engineering, and determining viable financing options.

3.4 CONCEPTS FROM STAKEHOLDER OUTREACH

The 2021 SRP development process included opportunities for stakeholders and members of the public to submit comments and suggestions, including those related to passenger rail transportation in the state. These opportunities included a stakeholder meeting held on October 28, 2020, and an opportunity for the public to comment on the 2021 SRP during an online survey posted on WYDOT's website from September 28 to November 30, 2020.





A complete description of public and stakeholder outreach efforts conducted for the 2021 SRP can be found in Chapter 6, Coordination and Review. Specific comments regarding passenger rail and commuter rail enhancements are summarized below.

When asked to comment on the potential for developing passenger rail service in Wyoming:

- 95% of respondents stated they see a need or potential benefit in having passenger rail service linking to Wyoming.
- 87% of respondents said they think Wyoming should prioritize investment in passenger rail service in the state.
- 83% of respondents said the state could make investments in new or reinstated passenger services and stations.

When asked what the most important aspects of a passenger rail service are:

- 82% of respondents said they value travel reliability.
- 70% of respondents said they value travel speed and travel time.
- 69% of respondents said they value frequency of service.
- 45% of respondents said they value amenities and comfort.
- 7% of respondents said we shouldn't prioritize this mode of travel.
- 11% of respondents listed other considerations.

If passenger rail service were to be offered:

- 38% of respondents said they would travel to visit friends or family.
- 20% of respondents said they would travel for sightseeing or leisure.
- 15% of respondents said they would travel to a vacation destination.
- 13% of respondents said they would travel for business.
- 14% of respondents said they would travel for other purposes.

The following long-term passenger rail service development initiatives were identified during public outreach:

- Service along the I-25 corridor between Cheyenne, Wyoming, and Denver, Colorado, with connections to Denver International Airport.
- Service along the I-80 corridor between Cheyenne, Laramie, Rock Springs, Green River, and Evanston, Wyoming, and Salt Lake City, Utah.
- Service between Billings, Montana and Denver, Colorado.
- Service between Denver, Colorado, and Yellowstone National Park via Wind River Canyon in Wyoming.
- Service for special events, such as University of Wyoming football games in Laramie.

Additionally, many respondents indicated that passenger rail service offers a unique opportunity to provide a safer alternative to driving during winter weather conditions. Other respondents supported passenger rail services that could attract travel and tourism revenue from out-of-state visitors.

Chapter 5 (Wyoming's Rail Service and Investment Program) of the 2021 SRP includes specific projects and studies identified for further development, if funding were to be made available.













CHAPTER 4 Proposed Freight Rail Improvements and Investments







4.1 INTRODUCTION

Chapter 4 describes the improvements and investments made by Wyoming's freight railroads during the last 5 years and identifies potential future improvements and investments that could address the freight rail needs of Wyoming. Many of these projects address the opportunity for enhanced access to the state's rail network, rail service gaps, options for infrastructure improvements, the safety and efficiency of rail operations, climate change adaptation, and economic development. Projects specific to Class I, Class II, and Class III railroads, freight rail users (shippers), and the communities served by the state's rail network are included in the discussion. Options for funding rail projects are discussed in Chapter 2, Wyoming's Existing Rail System, of this 2021 Statewide Rail Plan (SRP).

4.2 WYOMING RAIL CARRIER NEEDS

Wyoming is served by two Class I railroads (BNSF Railway [BNSF] and Union Pacific [UP]), one Class II railroad (Rapid City, Pierre and Eastern Railroad [RCPE]), and two Class III railroads (Bighorn Divide and Wyoming Railroad [BDW] and Swan Ranch Railroad [SRRR]). The needs of Class I railroads in the state vary from the needs of the Class II and III railroads in terms of the Class I railroads' ability to typically fund and facilitate infrastructure improvements. This section presents the challenges facing all three classes of carrier and each individual railroad serving the state, as determined through a survey of the state's rail carriers. Note that private railroads are under no obligation to provide complete information on their current and potential future capital improvement plans. The information presented in this chapter was made available to Wyoming Department of Transportation (WYDOT) by the state's railroads during the development of this 2021 SRP.

4.2.1 CLASS I RAILROADS

Class I railroad companies in Wyoming must use private financing to cover the cost of rolling stock acquisition (that is, locomotives and railcars) and infrastructure improvements aimed at renewing, upgrading, or expanding the physical plant that forms the rail network (that is, rail, ties, bridges, signal systems). Railroads rely on a regulatory framework that provides sufficient return on investment as a means to accommodate these ongoing capital expenditures.

Investment in rail infrastructure in the state of Wyoming by the Class I railroads has been robust and continuous since the opening of the Southern Powder River Basin coal fields in the 1970s. Historically, most projects were aimed at developing the capacity necessary to efficiently handle the surge of coal shipments out of Wyoming. These efforts ranged from gradual upgrades of track and signal infrastructure to complete rehabilitation and multiple-tracking of existing mainlines, construction of new lines, and expansion and creation of new terminal facilities. Funds are budgeted by the Class I railroads each year to facilitate ongoing capital investment in the state's rail network. Class I railroads are particularly attuned to focusing their investments on corridors where they see potential for future growth and wish to maintain the capacity for continued operational safety, resilience, reliability, and fluidity.

Class I railroads have continued to invest heavily in their networks during the last 10 years in order to solve ongoing factors constraining the capacity, efficiency, and velocity of the high volumes of through-traffic and coal shipments in Wyoming; to eliminate or mitigate operational chokepoints; to handle various upgrades associated with maintenance and safety (including implementation of federally mandated Positive Train Control [PTC] systems, which reduce the likelihood of train overspeed incidents and collisions between trains); and to accommodate routine infrastructure renewal. Some of these projects are listed by railroad below.



4.2.1.1 BNSF RAILWAY

BNSF did not identify any ongoing projects or any specific operations bottlenecks or constraints in Wyoming in 2020. According to BNSF's PTC Implementation Plan⁸⁷ and most recent PTC implementation map⁸⁸, the following subdivisions in Wyoming remain slated for PTC installation: Big Horn, Black Hills, Canyon, Casper, and Front Range. **Table 4-1** outlines BNSF's present Wyoming capital improvement plans.

Table 4-1: BNSF Capital Projects in Wyoming

Project	Type of Improvement	Location	Estimated Capital Cost
Big Horn Subdivision PTC	Safety	Gillette, Wyoming –	TBD
		Montana/Wyoming State Line	
Canyon Subdivision PTC	Safety	Guernsey, Wyoming – Bridger Jct.,	TBD
		Wyoming	
Casper Subdivision PTC	Safety	Bridger Jct., Wyoming –	TBD
		Montana/Wyoming State Line	
Front Range Subdivision PTC	Safety	Colorado/Wyoming State Line –	TBD
		Wendover, Wyoming	

4.2.1.2 UNION PACIFIC RAILROAD

UP did not identify any bottlenecks or constraints in Wyoming in 2020 and it has completed all required PTC implementation in the state as of 2020.⁸⁹ UP has invested more than \$348 million into Wyoming infrastructure between 2015 and 2019.⁹⁰ Current projects are related to commercial development. **Table 4-2** outlines UP's present Wyoming capital improvement plans.

⁸⁷ Federal Communications Commission. BNSF Railway Electronic Train Management System PTC Implementation Plan (PTCIP), July 2, 2010. Retrieved from: <u>https://ecfsapi.fcc.gov/file/7020910588.pdf</u>

⁸⁸ BNSF Railway, *Positive Train Control*. Retrieved from: <u>https://www.bnsf.com/in-the-community/safety-and-security/positive-train-control.page</u>

⁸⁹ Union Pacific Railroad, *Positive Train Control*. Retrieved from: <u>https://www.up.com/media/media_kit/ptc/index.htm</u>

 ⁹⁰ Union Pacific Railroad, Wyoming Fact Sheet. Retrieved from: https://www.up.com/cs/groups/public/@uprr/@corprel/documents/up_pdf_nativedocs/pdf_wyoming_usguide.pdf



Table 4-2: UP Capital Projects in Wyoming

Project	Type of Improvement	Location	Estimated Capital Cost
Four Soda Ash Rail Facility Expansions	Commercial	Sweetwater County	TBD
	Development		
Connection to One New Soda Ash	Commercial	Sweetwater County	TBD
Rail Facility	Development		
Stauffer Industrial Lead West Leg	Commercial	Sweetwater County	TBD
Connection Track	Development		

4.2.2 CLASS II RAILROADS

4.2.2.1 RAPID CITY, PIERRE & EASTERN

RCPE provides its Wyoming bentonite customers with safe and efficient rail service to allow them to compete in domestic and international markets. It offers them fully competitive access to three Class I carriers throughout the Upper Midwest.

RCPE's Wyoming shipments are limited to 263,000-pound gross weight per railcar because there are locations of old, obsolete rail and bridge structures that need to be upgraded over the approximately 146 miles of the RCPE's PRC Subdivision between Rapid City and Fort Pierre, South Dakota. The railroad is in the process of addressing these issues, in partnership with both the federal and state governments. All Wyoming rail traffic handled by RCPE must travel through Rapid City, South Dakota, to reach other points on the rail network.

While adequate for current operations, the existing main line rail between near Colony, Wyoming, and the South Dakota/Wyoming state line will need to be upgraded in the future. Sections of the existing rail were laid when the line was built by the Chicago & North Western Railway, and this rail is approaching 100 years old. **Table 4-3** outlines RCPE's present Wyoming capital improvement plans.

Table 4-3: RCPE Capital Projects in Wyoming

Project	Type of Improvement	Location	Estimated Capital Cost
PRC Subdivision Rail and Bridge Replacement to increase maximum gross railcar weight.	Capacity, State of Good Repair	Rapid City, South Dakota – Fort Pierre, South Dakota	TBD
Main Line Rail Replacement	State of Good Repair	Colony, Wyoming – South Dakota/Wyoming State Line	Approx. \$4.3 million
Routine Tie Replacement and Surfacing	State of Good Repair	Colony, Wyoming – South Dakota/Wyoming State Line	TBD

*Note that the rail corridor between Rapid City and Fort Pierre, South Dakota lies entirely within the state of South Dakota.



4.2.3 CLASS III RAILROADS

Class III railroads, or short-line railroads, face a different set of challenges in meeting their needs because they do not generally have the capital and technical resources, operating capacity and flexibility, or modern infrastructure of the larger Class I railroads. Typically, the largest constraints on United States short-line railroads involve accommodating railcars with a 286,000-pound maximum gross weight (these heavier car loadings are an advancement over lighter cars and are the industry standard) and operational chokepoints caused by insufficient operating capacity.

Railcars with larger loading capacity provide greater operating efficiency by reducing labor, fuel, and maintenance costs while increasing capacity and synergy for rail operations and rail shippers. Most Class III railroads have a legacy infrastructure suited to low-density operations and railcars of lighter weight (263,000-pound and 268,000-pound gross weight capacity). In order to accommodate the 286,000-pound cars, short-line railroads must make upgrades to the track structure and substructure (that is, rail, switches, ties, and ballast section) and bridges to handle the additional stress caused by transporting the heavier cars. Short-line railroads that are unable to make the appropriate upgrades might lose business to transportation competitors, namely trucks or other nearby railroads that are capable of handling the 286,000-pound cars.

Short-line railroad chokepoints are often attributed to legacy infrastructure tailored to historical railroad practice, which can limit capacity and hamper efficient modern operations. Such factors include yard capacity that is insufficient for building trains; switching; and staging cars and sidings that are of inadequate number, length, or location to accommodate the demands of present-day train operations and schedules. Some short–line railroads are further constrained by delays that stem from interchanging railcars with another carrier or in the use of trackage rights to access an isolated segment of their network. These deficiencies not only compromise rail transit times and operations safety and cause mainline and yard congestion, but they have the unintended consequence of affecting the quality of life for adjacent communities. Among other things, this condition can lead to protracted delays for motorists and emergency vehicles at highway-rail grade crossings.

Wyoming's short-line railroads were queried during the stakeholder outreach process about the specific challenges they face now and for the next 10 years in terms of capacity constraints, infrastructure needs and upgrades, railroad regulation, and capital funding needs.

4.2.3.1 BIGHORN DIVIDE & WYOMING RAILROAD

BDW reported that the installation of PTC to its current locomotive fleet (to coincide with the eventual implementation of PTC on the BNSF Casper Subdivision and to enable interoperability of BDW trains operating using trackage rights over BNSF Railway track) remains a future unknown cost on their long-term planning horizon. The capital investment necessary to build or maintain new storage and transload capacity remains a major factor in growing the business.

BDW's track and structures are able to accept railcars of 286,000-pound maximum gross weight. Furthermore, BDW did not report any operational chokepoints. **Table 4-4** outlines BDW's present Wyoming capital improvement plans.



Table 4-4: BDW Capital Projects in Wyoming

Project	Type of Improvement	Location	Estimated Capital Cost
Implementation of PTC	Safety	System-wide	TBD
Rail Expansion	Capacity	TBD	Estimated \$1 million per mile

4.2.3.2 SWAN RANCH RAILROAD

SRRR reported that their yard in Speer currently presents a capacity constraint. Establishing operations at the Swan Ranch Industrial Park remains an ongoing process. SRRR reported that there is still a need for a permanent office structure and a mechanical shop for servicing locomotives and railcars. Parent company Watco does not own any property or rail at Swan Ranch, but has indicated an interest in owning the property it operates on. **Table 4-5** outlines SRRR's present Wyoming capital improvement plans.

Table 4-5: SRRR Capital Projects in Wyoming

Project	Type of Improvement	Location	Estimated Capital Cost
Track Tamping	State of Good Repair	Speer	\$80,000
Office and Mechanical Shop	Start-up	Speer	\$300,000

4.2.4 PASSENGER CARRIER NEEDS

No needs for the freight rail network were identified by passenger-rail service providers since there are no Amtrak intercity or long-distance trains, commuter-rail services, or transit lines currently operating in Wyoming. There are also presently no efforts underway to implement long-distance, intercity, high-speed, or commuter-rail service in Wyoming. Discussion of proposed passenger rail improvements and future investments in the state's rail network to sustain passenger rail services would be deferred to future planning efforts.

4.3 RAIL USER AND COMMUNITY NEEDS INVENTORY

Improvements aimed at delivering economic benefits, safety improvements, and rail service enhancements were identified in Wyoming in 2020. The data presented in **Table 4-6** were provided by the Wyoming Business Council, Metropolitan Planning Organizations, WYDOT, local economic development agencies, and community leaders for use in developing the Wyoming Statewide Rail Plan. For each project, **Table 4-6** includes a general project description and need, the location, and the timeframe for potential next steps.



Table 4-6: Wyoming Rail User and Community Needs Inventory

Project Name	Project Type	Stakeholder	Project Description	County	Timeframe
Pacific Soda and American Soda Rail Spur	Industrial Development	Pacific Soda LLC	Construct a rail spur to link proposed soda ash facility to the rail network.	Sweetwater	Short Term (1-4 Years)
Reed Avenue Rail Corridor Improvements	Adaptive Reuse	Cheyenne Metropolitan Planning Organization	Improvements to Reed Avenue Rail Corridor (BNSF Cheyenne Downtown Lead) to facilitate urban revitalization. Includes potential removal of disconnected rail spurs, track fencing, pathway construction, and landscaping.	Laramie	Short Term (1-4 Years)
Ranchester US-14 Railroad Grade Separation Bridge Replacement	Grade Separation	WYDOT	Replacement of existing highway bridge over BNSF Big Horn Subdivision in Ranchester (DOT #104152L). Identified in FY 2021 STIP	Sheridan	Short Term (1-4 Years)
Center Street Underpass Improvements	Grade Separation	Casper Metropolitan Planning Organization	Identified in Connecting Crossroads Long-Range Transportation Plan (December 2019). Underpass beautification and pedestrian improvements. Improves safety and placemaking along one of the few routes for pedestrians between downtown and north Casper due to the BNSF Casper Subdivision railroad tracks, allocated in MTIP 2020-2023 (DOT #089347H)	Natrona	Short Term (1-4 Years)
N Center Street Railroad Underpass Widening	Grade Separation	Casper Metropolitan Planning Organization	Identified in Connecting Crossroads Long-Range Transportation Plan (December 2019). Project to widen Center St underpass under BNSF Casper Subdivision from 2 to 4 lanes. Addresses future network congestion and facilitate more downtown access. However, project would require rework of underpass improvements and may be particularly difficult to design and implement given BNSF structure and ROW. (DOT #089347H)	Natrona	Long Term (5+ Years)
College Drive Railroad Grade Separation	Grade Separation	Cheyenne Metropolitan Planning Organization	Identified in Connect 2045 Long-Range Transportation Plan (December 2020). Design and construct a grade separated crossing where the BNSF Front Range Subdivision crosses College Drive, near Cheyenne. (DOT #245617J)	Laramie	Long Term (5+ Years)
New Track Connection between BNSF and UP	Freight Diversion	Cheyenne Metropolitan Planning Organization	Design and construct a new track connection between BNSF and UP outside of the corporate limits of Cheyenne.	Laramie	Long Term (5+ Years)
Sheridan Road Access Improvements	Grade Separation	Public	Members of the public identified a need for additional grade-separated road connections between Downtown Sheridan and I-25 that reduce the need to cross the BNSF Big Horn Subdivision at grade, where crossings are often blocked by trains.	Sheridan	Long Term (5+ Years)



4.4 CONCEPTS FROM STAKEHOLDER OUTREACH

Various rail needs and potential project and policy concepts were identified by the participants of public and stakeholder outreach conducted for the 2021 Wyoming SRP. The outreach was facilitated through interviews with railroad shippers, an online stakeholder meeting held on October 28, 2020, and an opportunity for the public to comment on the 2021 SRP during an online survey posted on WYDOT's website and shared on WYDOT's Facebook page from September 28 through November 30, 2020.

A complete description of public and stakeholder outreach efforts conducted for the 2021 SRP can be found in Chapter 6, Coordination and Review. Specific comments regarding freight rail service and potential railroad infrastructure enhancements are summarized below.

4.4.1 SHIPPER INTERVIEWS

A diverse sample of rail shippers (customers of the railroads) representative of different locations within the state, different industries and commodities, different types of service, and different serving rail carriers were selected to provide input for the 2021 SRP. A few themes from these rail shipper interviews are listed below:

- Bottlenecks exist at rail yards, primarily at points on the rail network outside of Wyoming, where cars are known to dwell for extended periods of time and where multiple cars destined for the same customer may accumulate. As a result, a shipper may receive more cars than their facility is equipped to handle at the same time. If cars arrive at the nearest terminal and are available to be placed at the shipper's facility for loading/unloading but cannot be placed at that time, the cars must be stored elsewhere on the railroad until the shipper indicates that they are able to receive the car. This can result in additional fees charged to the shipper, known as demurrage.
- Competition between multiple rail carriers in parts of Wyoming is limited due to only one railroad serving a given area. In many cases, trucking product to the nearest railhead of an alternative rail carrier is cost-prohibitive, leaving the shipper with only one viable freight rail carrier to choose from in their community.
- Rail transload sites are less attractive to most shippers than direct rail access in general due to the added cost of trucking and added transit time.
- Availability of shipping containers in Wyoming is low due to high demand for containers nationally and limited service options for trucking containers to and from the nearest rail intermodal facilities (located in Salt Lake City, Utah, or Denver, Colorado). Rail shippers see containers as an attractive option for shipping export products to overseas destinations. Short of developing a new rail intermodal hub for Wyoming, it may be beneficial if a local container logistics provider could be established to increase the supply of containers and offer more flexible options for picking up and dropping off containers from shipper facilities by truck.

4.4.2 PUBLIC SURVEY

- Members of the public were generally supportive of improvements to freight rail infrastructure, including the development of new rail transload facilities.
- Many respondents expressed a preference for private funding of freight rail improvements and for the use of local labor for any construction projects.













CHAPTER 5 Wyoming's Rail Service and Investment Program





5.1 INTRODUCTION

Chapter 5 describes Wyoming's long-term vision for rail service and its role in the statewide multimodal transportation system. It addresses the specific projects, programs, policies, laws, and funding necessary to achieve the rail vision and describes the related financial and physical impacts of these proposed actions.

5.2 STATE RAIL VISION

Wyoming's Rail Vision was developed through reviewing the common themes from the public and stakeholder outreach effort described in Chapter 6, Coordination and Review. The Rail Vision statement adopted by the Wyoming Department of Transportation (WYDOT) is provided below along with its supporting freight and passenger rail service objectives.

WYDOT has developed the following vision statement for rail transportation in the state:

The future Wyoming rail system will provide safe, efficient, and reliable mobility for people and goods. In addition, it will contribute to a more balanced transportation system, economic growth, and energy conservation. The state's rail infrastructure will continue to provide transportation efficiency, cost effectiveness, accessibility, capacity, and intermodal connectivity to meet freight transportation demand. To further this vision, the state will continue to support the business council and economic development associations in planning rail service improvements.

Rail service objectives aligned with the Rail Vision were developed based on the rail-related benefits, issues, and obstacles that had been identified. These objectives are described in the next section.

5.2.1 FREIGHT-RAIL OBJECTIVES

With a Rail Vision articulated, the 2021 Statewide Rail Plan (SRP) needs to define specific service objectives to guide State action in the development of its rail system. Listed below are objectives for freight rail operations and investments in Wyoming. These objectives were obtained from the stakeholder outreach process described in Chapter 4, Proposed Freight-Rail Improvements and Investments.

- Encourage economic development in Wyoming through investments in the rail system; for example, improved access to the national rail network via new industrial spurs and intermodal facilities that promote interconnectivity with truck transportation.
- Support as applicable the interchange of Class I rail traffic in the state.
- Minimize crashes, injuries, and fatalities at highway-rail grade crossings in Wyoming through safety improvements, crossing consolidation, and grade separations.

5.2.2 PASSENGER-RAIL OBJECTIVES

Listed below are objectives for potential future passenger-rail operations in Wyoming:

- Participate in the Colorado Front Range Passenger Rail planning study and monitor new passenger rail planning efforts in Montana that could set the stage for the future development of passenger rail service in the region.
- Continue outreach to stakeholders.
- Encourage multimodal integration.
- Support the identification of funding strategies for passenger-rail initiatives, as applicable.



5.3 PROGRAM COORDINATION

The 2021 SRP is intended to integrate and expand on the companion Wyoming Long-Range Transportation Plan (LRTP).

As identified in Chapter 1, The Role of Rail in Wyoming's Statewide Transportation System, the goal of the LRTP is to create a Comprehensive Vision to provide all parties—the public, legislators, and WYDOT executives and managers—with a clear understanding of the direction of WYDOT and the condition and performance of the transportation systems in the state to allow these decision-makers to make more effective and informed decisions regarding the transportation system. This Comprehensive Vision is part of the *Wyoming Connects* planning process and provides a system-wide overview. The 2021 SRP is another piece of the *Wyoming Connects* process under the Strategic Vision which provides management and evaluation of major components of the transportation system to achieve WYDOT's goals. The third step in the *Wyoming Connects* process is the Operational Vision, which identifies and provides solutions for project-level issues and needs within the transportation system.

These three components come together to assist WYDOT's focus on advancing its mission and goals. WYDOT's mission is to provide a safe, high-quality, and efficient transportation system with the following goals:

- Ensure a vibrant, safe and competent workforce
- Acquire and responsibly manage resources
- Provide safe, reliable and effective transportation systems
- Provide essential public safety services and effective communication systems
- Create and enhance partnerships with transportation stakeholders
- Encourage and support innovation
- Preserve our history and heritage

As part of the Comprehensive Vision within the *Wyoming Connects* planning process, the LRTP, combined with the Transportation Asset Management Plan and nine Goal Areas, provides a comprehensive view of the Wyoming transportation system, its needs, and a direction to meet those needs. As part of the Strategic Vision, the 2021 SRP provides the condition and performance of one of the many transportation systems in the state to aid WYDOT's decision-makers in making consistent decisions across the entire transportation network.

The 2021 SRP serves to address the goals of WYDOT through the following objectives:

- Provide an overview of rail assets and identify any issues with the physical aspects of the system.
- Focus on safety, including safety at highway-rail grade crossings, and to address any issues.
- Explore innovative ways to utilize rail assets for community and economic development.

Because Wyoming shares rail corridors and services with adjacent states, it has also been essential for WYDOT to coordinate with these other states through both direct interaction and through comprehensive review and analysis of the SRP for each state in the region. WYDOT will submit its draft 2021 SRP to adjacent states for their review and comment. Because the regions' states have developed and completed their SRPs over the course of the last 5 years, it is likely that the coordination of SRP content will increase as states begin to update their SRPs. These updates are required every 4 years per the Passenger Rail Investment and Improvement Act of 2008 (PRIIA).

CHAPTER 5



The Federal Railroad Administration (FRA) was directed by PRIIA legislation to develop a Preliminary National Rail Plan to address the rail needs of the United States. The Preliminary National Rail Plan, which was published in October 2009, provided objectives for rail as a means of improving the performance of the national transportation system. These objectives are:

- Increased passenger and freight-rail performance.
- Integration of all transportation modes to form a more complementary transportation system.
- Identification of projects of national significance.
- Providing for increased public awareness.

Since 2009, the concept of developing a National Rail Plan has evolved toward capturing state rail planning findings, and reflecting the issues and priorities addressed in various SRPs. An outgrowth of this process is expected to be development of regional rail plans and multi-state corridor plans inclusive of solutions for freight and passenger service issues on a regional rather than state-by-state basis. WYDOT will work with FRA and other states in the region to ensure that the region's rail perspectives and issues are adequately addressed within the national rail planning process.

In addition to the need to coordinate Wyoming's 2021 SRP with the National Rail Plan and the national freight network, Wyoming will also coordinate as necessary with the United States Military Surface Deployment and Distribution Command's Transportation Engineering Agency, which oversees the federal National Strategic Rail Corridor Network (STRACNET). STRACNET and the rail transportation's role in defining a national defense transportation network are discussed in Chapter 2, Wyoming's Existing Rail System.

5.4 RAIL AGENCIES

There is currently no designated state rail authority in Wyoming. Rather, WYDOT conducts rail planning along with other modal planning.

5.4.1 LOCAL AND REGIONAL AGENCIES

A range of local and regional government entities can support rail in Wyoming, both through their own funding sources and by applying for federal funding. A number of organizations within Wyoming play a coordinating role for transportation issues, including rail.

5.4.1.1 METROPOLITAN PLANNING ORGANIZATIONS

Metropolitan planning organizations (MPOs) play a coordinating role. There are 2 MPOs in Wyoming, representing the Cheyenne and Casper metropolitan areas respectively. MPOs are required for metropolitan areas with over 50,000 inhabitants in order to receive certain types of federal highway and mass transit funding. MPOs prepare 20-year long-range transportation plans and three- to five-year transportation improvement plans, as well as provide technical assistance for project planning and implementation. Through their planning processes, they cooperate with state and local jurisdictions. Rail projects such as highway-rail grade separations may be included among the projects with which MPOs may be involved.



5.5 PROGRAM EFFECTS

5.5.1 PASSENGER-RAIL INVESTMENTS

There are currently no passenger rail operations in Wyoming. Identification of proposed passenger rail improvements and future investments in the state's rail network to sustain passenger rail services would be deferred to future planning efforts. Past studies, as well as potential future initiatives to support passenger rail are discussed in Chapter 3, Proposed Passenger Rail Improvements and Investments.

As the majority of potential intercity rail passengers would be diverted from the automobile, service improvements and expansion would result in a more extensive and diverse intercity transportation network, enhanced mobility, increased tourism and access to job opportunities, and increased energy efficiency.

5.5.2 FREIGHT-RAIL INVESTMENTS

For freight rail improvements, the benefits involve increased transportation competition resulting in lower cost to shippers, less highway congestion and damage, and reduced environmental and energy impacts. By their nature, highway-rail grade crossing improvement projects and other rail-related improvements increase transportation safety.

5.5.2.1 CLASS I FREIGHT RAIL INVESTMENTS

Class I railroads in Wyoming must use private financing to cover the cost of acquiring equipment and making infrastructure improvements aimed at renewing, upgrading, or expanding the state rail network. Railroads rely on a regulatory framework that provides sufficient return on investment as a means to accommodate these capital expenditures.

Recent and upcoming projects identified by the Class I railroads are discussed in Chapter 4, Proposed Freight-Rail Improvements and Investments.

5.5.2.2 REGIONAL AND SHORT LINE RAILROAD INVESTMENTS

Class II and Class III railroads, commonly referred to as regional and short-line railroads respectively, face a different set of challenges to meet their needs, since they most often do not have the capital and technical resources, operating capacity and flexibility, or modern infrastructure of the larger Class I railroads. Typically, the largest constraints on United States short-line railroads involve accommodation of railcars with a 286,000-pound maximum gross weight and operational chokepoints caused by insufficient operating capacity.

As of 2020, Wyoming's regional and short-line railroads were all capable of handling 286,000-pound maximum gross weight railcars, and no needs for improved track and bridge infrastructure were identified.

Proposed future projects identified by the Class II and Class III railroads are discussed in Chapter 4, Proposed Freight Rail Improvements and Investments.



5.5.2.3 HIGHWAY-RAIL GRADE CROSSING SAFETY IMPROVEMENTS

WYDOT's annual program for grade-crossing improvements totals approximately \$1.2 million per year. The chief public benefit is enhanced safety public highway-rail at-grade crossings. The funding source is the federal Highway Safety Program (commonly referred to as Section 130 funds). Projects identified to be completed are identified each year in the State Transportation Improvement Program (STIP).

For 2021, WYDOT identified multiple projects at highway-rail grade crossings statewide that involve the upgrade of active warning devices and crossing surfaces.

Table 5-1 outlines the grade crossing improvement projects identified in the Fiscal Year (FY) 2021 STIP.

D • (T	Crossing		Estimated		Fundi	ing by Soui	rce
Project Type	DOT#	Street	County	Capital Cost	Federal	State	Other
Protection Device	090842T	Sherman Street	Big Horn	\$248,000	\$223,000	\$0	\$25,000
Crossing Surface	064970H	Garner Lake Road	Campbell	\$250,000	\$125,000	\$0	\$125,000
Crossing Surface	604975S	Brooks Avenue	Campbell	\$240,000	\$120,000	\$0	\$120,000
Crossing Surface	064953S	Texaco Road	Crook	\$195,000	\$98,000	\$0	\$98,000
Protection Device	816334P	US 85	Goshen	\$296,000	\$268,000	\$0	\$28,000
Crossing Surface	816341A	WY 154	Goshen	\$240,000	\$125,000	\$0	\$120,000
Protection Device	245662D	WY 211	Laramie	\$275,000	\$248,000	\$0	\$28,000
Protection Device	245528S	WY 211	Laramie	\$275,000	\$248,000	\$0	\$28,000
Protection Device	245526D	WY 211	Laramie	\$275,000	\$248,000	\$0	\$28,000
Protection Device	064988T	Quarry Road	Platte	\$269,000	\$242,000	\$0	\$27,000
Crossing Surface	064988T	Quarry Road	Platte	\$70,000	\$35,000	\$0	\$35,000
CRISI	810480A	First Street	Sweetwater	\$73,000	\$0	\$73,000*	\$0

Table 5-1: Highway-Rail Grade Crossing Safety Improvements Programmed in FY 2021 STIP

Source: FY 2021 STIP⁹¹

*Funding indicated is for Preliminary Engineering (PE) only

5.5.2.4 GRADE-SEPARATION PROJECTS

WYDOT does not have an annual program for highway-rail grade crossing separations, but it does participate in such improvements as funding becomes available. The primary public benefits of these projects are enhanced safety and improved mobility. WYDOT performs ongoing maintenance of existing grade separations through its bridge program.

5.6 PASSENGER ELEMENT

Capital projects may be analyzed with regard to their impacts on passenger rail ridership, potential diversion of passengers from highway and air to rail, passenger rail revenues and costs, and impacts on freight rail service. States are also required to describe their 4- and 20-year (or more) financing plans for passenger rail capital and operating costs. Discussion of analytical areas for passenger rail projects are presented below.

⁹¹ WYDOT, Wyoming State Transportation Improvement Plan (STIP), 2021. Retrieved from: <u>http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Planning/2021%20STIP/FY%202021%20STIP%20.pdf</u>





5.6.1 DESCRIPTION OF PASSENGER RAIL CAPITAL PROJECTS

There are currently no detailed proposals for implementing passenger rail service in Wyoming in the short term. Most significant rail intercity or commuter rail projects have a positive impact on overall rail passenger ridership, rail passenger miles travelled, modal diversion from highway and air, and increased rail passenger revenues. Future service development planning studies and preliminary engineering will identify capital improvements needed to support passenger rail service implementation, and their anticipated costs.

5.6.2 CAPITAL FINANCING PLAN

Wyoming is limited in the means available to establish intercity or commuter passenger train service because the State of Wyoming may not obligate any state aid or debt in the construction of any rail system. Any capital investments related to the overall corridors must be made at the regional level with coordination by Amtrak, other states served by the route, the rail line owners (host railroads), and other stakeholders.

Wyoming's lack of direct control over potential rail passenger corridors' physical and operational characteristics, as well as the current prohibition on the state funding of railroad improvements, require that public investments be limited to specific, strategic projects outside of the railroad operating environment that enable new service and provide commensurate public benefits.

5.6.3 OPERATING FINANCING PLAN

Wyoming currently has no intercity passenger rail service. While Amtrak has sole fiscal responsibility for long-distance routes greater than 750 miles in length in the United States, states must cover the operating costs for intercity passenger corridor services less than 750 miles in length beyond what is recovered from passenger fare revenue. However, states that fund intercity corridor services also gain the ability to curate the operation of the service and follow up with Amtrak and host-railroads on performance measures.

The establishment of new corridor services without federal financial assistance would require Wyoming to not only provide the financing for capital improvements necessary to upgrade routes to passenger service standards, but also to bear the responsibility for service operating losses in accordance with the current PRIIA legislation.

Therefore, in light of the current uncertainties with regard to prospective federal rail funding, decisions to move ahead with funding any future passenger rail program must be supported by a thorough comprehensive planning effort. The more detailed studies of expanded commuter and intercity rail will include a comprehensive examination of all potential financing sources and alternatives to ensure that the public is kept aware of the financial benefits and costs of each alternative.

5.6.4 ECONOMIC BENEFITS

Studies of new passenger services would comprise the largest share of investment dollars in the short term. Long-range investments could go further, establishing new intercity and possibly even commuter rail networks with the potential to facilitate economic growth and enhance the quality of life for the people of Wyoming. New station area planning, development, and adaptive reuse of existing historic railway stations can also facilitate economic growth and enhance the quality.





5.7 FREIGHT ELEMENT

Capital projects may be analyzed with regard to their impacts on potential diversion of freight from highway and air to rail, socio-economic and environmental benefits, and impacts on passenger rail service. States are also required to describe their 4- and 20-year (or more) financing plans for freight rail capital and operating costs. Discussion of analytical areas for freight rail projects are presented below.

5.7.1 FINANCING PLAN

The main financing mechanisms for state investments in rail lines and in crossing safety were identified in Chapter 2 of the 2021 SRP. Some of these mechanisms, as well as various federal programs, can potentially support any planned investments in the state rail network noted in Section 5.8 of this chapter.

5.7.2 ECONOMIC BENEFITS

The public benefits of the state's rail network include the transportation-related socio-economic and environmental benefits resulting from providing competitive rail service, as well as the preservation and protection of rail assets. These rail lines have also steadily produced increased traffic levels which have resulted in shippers retaining access to national and global supply chains through cost-effective rail freight service.

As most proposed long-range projects have yet to be analyzed with regard to their economic feasibility, it is premature to identify any correlation between the level of public investment and benefits.

5.8 RAIL STUDIES AND REPORTS

Wyoming has a legacy of participating in or supporting studies that address passenger and freight rail operations and that determine the needs and benefits related to public investment in the state's rail network. This section includes plans and studies completed during the years prior to the completion of the 2021 SRP.

5.8.1 FREIGHT-RAIL STUDIES

The State of Wyoming Rail Plan, 2004. This study included discussions of the state's freight-rail lines, facilities, operations and service options, traffic flows, and issues facing the industry; public planning relative to Wyoming's railroads; security and grade-crossing safety; and the role of railroads in transporting the state's primary commodities. It was superseded and replaced by the *Wyoming State Rail Plan, 2015*.

Wyoming Quiet Zone Study, 2009. This two-phase study involved a field assessment of 84 Wyoming grade crossings to determine what improvements would be appropriate for quiet zone qualification on a crossing-by-crossing basis and to estimate the costs of both the improvements and installing the required equipment.

Wyoming Connects: Long Range Transportation Plan, 2010. To advance the mission and goals of WYDOT, the Department undertook a four-part planning process called Wyoming Connects, from which a long-range transportation plan emerged. This plan updates Wyoming's vision for the state transportation system to 2035 as a means of maintaining a transportation system that is efficient and responsive to the needs of residents, visitors, the economy, and Wyoming's place in interstate commerce. Key to this plan is the identification of 16 state significant corridors and the role of each in a multimodal transportation system, which includes freight railroads. The plan also examines long-term needs and strategies for funding and implementation necessary to achieve transportation goals.



Wyoming State Freight Plan, 2014. WYDOT developed a State Freight Plan that conforms to the freight planning requirements listed in the current federal transportation authorization law, Moving Ahead for Progress in the 21st Century (MAP-21). MAP-21 directs the United States Department of Transportation to develop a national freight policy and creates incentives for states to prepare their own freight plans. WYDOT is currently initiating the process of updating the State Freight Plan in 2021.

Wyoming State Rail Plan, 2015. This study included discussions about the state's freight-rail lines, facilities, operations and service options, traffic flows, and issues facing the industry; public planning relative to Wyoming's railroads; security and grade crossing safety; the role of railroads in transporting the state's primary commodities; and potential opportunities to enhance the rail network and economic development statewide. This study replaced *The State of Wyoming Rail Plan, 2004*.

5.8.2 PASSENGER-RAIL STUDIES

Commuter Rail Study/Passenger Rail Feasibility Study, 2008. This study, which was produced for the Wyoming Joint Transportation, Highways, and Military Affairs Interim Committee, examined the feasibility of establishing rail passenger service along the Front Range over an existing freight rail corridor between Fort Collins, Colorado, and Casper, with an emphasis on an initial service phase between Fort Collins and Cheyenne. The study investigated rail infrastructure upgrades, station facility availability, projected passenger train layover locations, and possible equipment types. This overview study did not identify funding sources to implement, operate, and maintain the proposed service. Further study of commuter route options was terminated in 2009 due mostly to the inability to make full use of existing rail corridors, challenging topography, and high preliminary cost estimates for such service.

Pioneer Route Passenger Rail Study, 2009. This study, which was mandated by PRIIA Section 224 and prepared by Amtrak, explored the restoration of the long-distance *Pioneer* service between Chicago, Omaha, Denver, Boise, Portland, and Seattle via either southern Wyoming or Salt Lake City. The *Pioneer* service through southern Wyoming was discontinued in 1997. Four service route alternatives were identified (two of which traverse the UP network across southern Wyoming between Cheyenne and Evanston) along with full route and station descriptions; ridership and revenue figures; conceptual schedules; presentation of capital, implementation, and operations and maintenance costs; and a description of equipment. In conjunction with the Amtrak effort, UP provided a preliminary capacity evaluation for each of the four route options which identified proposed infrastructure enhancements necessary to support the passenger service and minimize possible conflicts with UP freight train operations.

Front Range Passenger Rail Study, Ongoing. The Colorado Department of Transportation in 2019 initiated a service development planning process to evaluate alternatives for implementing intercity passenger rail service between Fort Collins, Denver, and Pueblo, Colorado. Although Wyoming is not formally included in the scope of this project, a representative of the Greater Cheyenne Chamber of Commerce is a non-voting member on the Southwest Chief and Front Range Passenger Rail Commission board, which is overseeing the project.⁹² Wyoming has an interest in this project as it



⁹² Colorado Department of Transportation, *Southwest Chief and Front Range Passenger Rail Commission*. Retrieved from: <u>https://www.codot.gov/about/southwest-chief-commission-front-range-passenger-rail</u>



would bring passenger service closer to Wyoming's border and there may be the possibility of a later extension of service to Cheyenne or beyond, to be determined through later planning efforts.

5.8.3 FUTURE STUDIES

Analysis of Wyoming's rail network and comments received through the 2021 SRP's outreach efforts pointed to interest in possible new intercity passenger rail options, which could be studied in the future. These include:

- Multi-modal facility planning.
- Intercity or commuter passenger-rail service between Cheyenne and the major metropolitan areas along Colorado's Front Range to the south, including Fort Collins and Denver.
- Intercity passenger rail service on BNSF routes through Wyoming that would connect existing Amtrak longdistance routes at Denver (*California Zephyr* between Chicago and the San Francisco Bay Area) and an undefined location in northern Montana (to connect with the *Empire Builder* between Chicago and Seattle/Portland) with population centers and points of interest in the state. The potential route for the service through Wyoming would be via Cheyenne, Chugwater, Douglas, Casper, Thermopolis, and Greybull, passing through the scenic Wind River Canyon.

5.9 PASSENGER AND FREIGHT RAIL CAPITAL PROGRAM

Wyoming's role in identifying and prioritizing passenger and freight rail service and infrastructure projects and the benefits of each is limited for the following reasons: (1) the State of Wyoming may not obligate any state aid or debt in the construction of any rail system, as per the Wyoming state constitution; (2) the state's Class I freight railroads are under no obligation to report potential improvements and capital project priorities for their networks or to divulge the schedule and capital costs associated with such projects; and (3) no passenger-rail services exist or are anticipated for short-term implementation in Wyoming.

In the interim, WYDOT has developed a Wyoming Rail Project Inventory, prioritizing public rail service and infrastructure projects for short-term (1-4 years) and long-term (5-20 years) implementation in Wyoming and identifying the potential conceptual capital cost of each project, if known. This Wyoming Rail Project Inventory has been assembled with inputs from the 2021 SRP stakeholder outreach process and through coordination with various entities to identify projects for potential implementation in the near term and long term that are in concert with the State's rail vision. **Table 5-2** and **Table 5-3** outline Wyoming's short-term and long-term passenger and freight rail capital projects and studies.





Table 5-2: Short Range Projects and Studies (1-4 Year Planning Horizon; 2022-2025)

Projects and Studies	Stakeholder	Description and Project Benefits	Estimated Capital Cost, If Known	Funding Source(s)
Participate in Front Range Passenger Rail Environmental Study and Service Development Plan (SDP)	Greater Cheyenne of Commerce; Southwest Chief and Front Range Passenger Rail Commission	Explore the feasibility of extending intercity passenger rail service on Colorado's planned Front Range Passenger Rail Corridor northward from Fort Collins, Colorado, to Cheyenne, Wyoming	TBD	TBD
Center Street Underpass Improvements	Casper Metropolitan Planning Organization	Underpass beautification and pedestrian improvements. Improves safety and placemaking along one of the few routes for pedestrians between downtown and north Casper due to the railroad tracks, allocated in MTIP 2020-2023 (DOT #089347H)	\$551,000	Local
Reed Avenue Rail Corridor Improvements	Cheyenne Metropolitan Planning Organization	Improvements to Reed Avenue Rail Corridor (BNSF Cheyenne Downtown Lead) to facilitate urban revitalization. Includes potential removal of disconnected rail spurs, track fencing, pathway construction, and landscaping.	\$5,064,591	Local, Federal
Ranchester US-14 Railroad Grade Separation Bridge Replacement	WYDOT	Replacement of existing highway bridge over BNSF Big Horn Subdivision in Ranchester (DOT #104152L). Identified in FY 2021 STIP.	\$8,613,000	State, Federal
Project 1111003 Pine Bluffs - Nebraska / US 30 East	Town of Pine Bluffs/WYDOT	Pavement rehabilitation project includes construction of new at- grade crossing at Butler Avenue, and closure of two at-grade crossings at Main Street in Pine Bluffs. Identified in FY 2021 STIP.	\$1,364,000	State, Federal (Including Section 130 Funding)



Table 5-3: Long Range Projects and Studies (5-20 Year Planning Horizon; 2026-2040)

Projects and Studies	Stakeholder	Description and Project Benefits	Estimated Capital Cost, If Known	Potential Funding Source(s)
Implement passenger rail service between Denver, CO and Cheyenne, WY	Greater Cheyenne of Commerce; Southwest Chief and Front Range Passenger Rail Commission; Amtrak	Identified as a potential future extension in the Front Range Passenger Rail Study.	TBD	TBD
Investigate the conceptual feasibility of re-establishing north-south passenger rail connections from Montana to Denver, Colorado, via Wyoming	Big Sky Passenger Rail Authority	Identified by Big Sky Passenger Rail Authority.	TBD	TBD
N Center St Railroad Underpass Widening	Casper Metropolitan Planning Organization	Project to widen Center St underpass from 2 to 4 lanes. Addresses future network congestion and facilitates more downtown access. However, project would require rework of underpass improvements and may be particularly difficult to design and implement given BNSF structure and ROW. (DOT #089347H)	\$14,827,000	Local, Federal
College Drive Railroad Grade Separation	Cheyenne Metropolitan Planning Organization	Design and construct a grade separated crossing where the BNSF Front Range Subdivision crosses College Drive, near Cheyenne. (DOT #245617J)	\$19,143,000	Federal
New Track Connection between BNSF and UP	Cheyenne Metropolitan Planning Organization	Design and construct a new track connection between BNSF and UP outside of the corporate limits of Cheyenne	TBD	TBD













CHAPTER 6 Coordination and Review





6.1 INTRODUCTION

The 2021 Wyoming Statewide Rail Plan (SRP) relies on participation and input from state and local agencies, railroads, shippers, and members of the public to help direct the future of freight and passenger rail transportation in the state. Priorities have been be incorporated into the 2021 SRP based on key, common interests for stakeholders and community members statewide. Once adopted, the SRP serves as the foundation for federal funding requests to help maintain and improve Wyoming's railroads. Community and stakeholder outreach was conducted to gather input on the wide spectrum of issues the 2021 SRP addresses, including potential future passenger rail service objectives as well as both short-range and long-range programs for rail infrastructure improvements and further studies. The 2021 SRP enables the Wyoming Department of Transportation (WYDOT) to implement a broad approach to statewide planning that would integrate passenger and freight rail elements into the larger Statewide Long-Range Transportation Plan and Statewide Freight Assessment, expand economic development opportunities, and improve network safety and efficiency.

The project team provided opportunities for continued education and active participation and created valuable partnerships and support at key project milestones. This resulted in more informed decision-making and a plan that reflects the community's needs. The following sections provide a detailed description of the outreach process and the feedback received during that effort.

6.2 STAKEHOLDER OUTREACH

As part of the development of the 2021 SRP, a tailored stakeholder outreach approach was developed to solicit public input and agency collaboration. This approach centered on stakeholder engagement (including agency representatives, elected officials, and property owners) that were involved in informing the project at key milestones.

The project team hosted a virtual stakeholder meeting on October 28, 2020, to share information about the project and obtain input from stakeholders. Copies of the meeting invitation and presentation shared at the meeting are contained in Appendix A of this SRP.

6.2.1 STATE RAIL PLAN WEBSITE

The project website – as presented in the captures below – acted as the primary resource for information to the public. It provided project updates and information and was updated in a timely manner to ensure that the content remained current and consistent for the public. As an online resource, it could be accessed at any time by anyone with an internet connection. The website included a project overview, the purpose and plan, a schedule, a library of background documents and public involvement documentation, an online comment form and instructions for providing formal comments, a link to the online survey, and project contact information. The website address was re-launched at http://www.wyomingstatewiderailplan.com. WYDOT also had an SRP-specific page on its website, and link to the online survey.













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CHAPTER 6

Soda Ash Soda Ash is another term used to describe Sodium Carbonate, a type of salt that has numerous industrial applications. Soda Ash is produced from a naturally occurring mineral called Trona, which is plentiful near Green River, Wyoming.				
CONTACT	SITE LINKS			
Dan Kline	Home			
Systems Planning & Railroads Wyoming Dept of Transportation 5300 Bishop Blvd. Cheyenne, WY 82009-3340	Schedule Contact			
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	Routine Tie Replacement and Surfacing	0 •
alonal Park	Rail Expansion	0 🕈
Black Hillson	One New Soda Ash Rail Facility	0 🕶
Bridger Una Porest	Office and Mechanical Shop	0 •
	Main Line Rail Replacement	0 •
c ty	Guernsey Rail Spur Expansion	0*
Protection Prover	Front Range Subdivision PTC	0.
Celorado	Evanston Roundhouse	0*
Mathematic Revent		
	Crossing 816334P US 85	v
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The tools on the left side of the screen allow you to nat	vigate the map:	
+ Zoom in		
Zoom out		
Q Search for address I Legend		
 To find information for an existing project, click on the symbol on the man or on the existing project pages in 	existing project	
symbol on the map of on the existing project name in right side of the screen. To submit a new comment, click on the button at the bottom of the project list.		





While train length is an ongoing topic at the federal level, it is currently up to the individual Railroad and not WYDOT. WYDOT agrees that longer trains could cause more problems to the motoring public, including excess crossing occupation.

Can WYDOT enact legislation that requires all trains are operated by two certified crew?

This is a legislative issue and has been brought before the legislature within the last few years. Most recently, this labor-related bill was sponsored into the 2019 legislative session. WYDOT recommends contacting your local legislator regarding any ongoing efforts related to the formerly proposed legislation.





CHAPTER 6



	Home	About	Schedule	Comment Map	Libro			\times
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CHAPTER 6







6.2.2 SOCIAL MEDIA

The communications team used social media to announce project milestones and as a means for the public to provide input. Social media was maintained through platforms with existing WYDOT social media accounts, including Facebook. Examples from the social media outreach activities are presented below.





Is passenger rail in our future? Your input is important as we work to update the Statewide Rail Plan! Please provide your thoughts: https://www.surveymonkey.com/.../WYDOTStateRailPlanQuesti...





SURVEYMONKEY.COM

WyDOT State Rail Plan - Stakeholder Survey Take this survey powered by surveymonkey.com. Create your own s... WYOMING DEPT. OF TRANSPORTATION 2h · 🕄

...

How should Wyoming prioritize investment in railroad service throughout the state? Please tell us more! Your input is crucial as we update the Statewide Rail Plan. https://www.surveymonkey.com/.../WYDOTStateRailPlanQuesti...





6.2.3 MEDIA RELATIONS

Website releases were created to announce the online public meeting and request public comment. They outlined ways for the public to provide comments on the 2021 SRP. WYDOT's communications team is distributing the website releases to its main webpage.



6.2.4 HOTLINE

A project hotline (**307-757-9011**) was developed as a means for stakeholders and members of the public who do not have Internet access to obtain project information. The hotline was included on the project website and on promotional materials. The hotline was monitored throughout the duration of the project; however, no comments were received by this method.

6.3 ONLINE SURVEY AND PUBLIC COMMENT

The project team used many outreach methods (website, newsletter, email, press release, Stakeholder webinar, etc.) to promote stakeholder response by participating in an online survey or providing email comments. The online survey was made available for stakeholder response during September-December 2020 and consisted of 18 questions. A link to the survey was posted both on the SRP website and on WYDOT's SRP website, and was included in project advertising and outreach materials such as email notifications. The survey was designed to gather feedback on the general perception of rail in the state and the potential for future improvements. Questions focused on stakeholders' perspective on the existing rail system, their interest in passenger rail and freight rail services, and access to other modes of transportation. Questions also focused on how stakeholders perceive the safety of the state's rail network. A total of 184 individuals responded to the survey, with responses indicating a favorable to more-than-favorable attitude toward rail transportation and future



improvements to the state's rail network. Respondents were favorable to passenger rail as a transportation option between adjacent towns or even adjacent states. A summary of the survey responses is outlined in the following section.

Formal comments from the public on the SRP were solicited between September and December 2020. The public was encouraged to comment at the public hearing and via the website comment form, email, phone, and mail-in form.

6.3.1 PUBLIC INVOLVEMENT SURVEY SUMMARY

6.3.1.1 WYOMING STATEWIDE RAIL PLAN

Overview

The survey was available for public input beginning **September 28, 2020** through November 30, 2020.

Total number of responses received: 184

Promotion

The survey was promoted via three posts on WYDOT's Facebook account and a pop-up on the WYDOT website homepage.

Input Received





TYPE OF SURVEY RESPONDENTS



HOW IMPORTANT DO YOU BELIEVE STATE INVESTMENT SHOULD BE FOR FREIGHT RAIL SERVICE IMPROVEMENTS IN WYOMING?

On a scale of 1-5; 1 being not important whatsoever and 5 being extremely important.

The average score provided was:



WHAT INVESTMENTS COULD BE MADE TO ENHANCE THE EFFICIENCY, CAPACITY, AND SAFETY ON THE WY STATE RAIL NETWORK?



Most common suggestions provided regarding possible rail investments Survey respondents were asked to provide input on possible investments that improve the freight rail network, enhance rail access, and catalyze economic and industrial development. The most common responses include:

SUPPORT FOR PASSENGER RAIL

ACCESS TO ADDITIONAL RAIL AND TRANSLOAD FACILITIES

S OPPORTUNITIES FOR ECONOMIC DEVELOPMENT RELATED TO RAIL

CROSSING IMPROVEMENTS

(....

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TRAFFIC OFF THE HIGHWAYS



Requested Passenger Rail routes:

- Cheyenne to Denver
- Along I-80 between Laramie and Cheyenne
- From Cody, south to Denver and north to Billings
- Connection to Yellowstone
- Connection to Park City and Salt Lake City
- Link Evanston to Casper and other major towns
- Day trip options: for example, Thermopolis to Casper or Billings

Do you see a need or potential for passenger rail linking to Wyoming?

95% said "yes"

- Safety (especially related to weather)
 - o Ability to travel without driving in poor weather conditions
- Connection to employment opportunities
- Increased economic development as a result of increased tourism
- Increased access for elderly or disabled communities

"While passenger rail service would be a huge planning commitment, I think it would provide a significant public service to improve safe transportation across our vast state. It would reduce our carbon footprint and reduce some wear and tear on the interstate system."

-Survey Respondent

General themes associated with "no"

• Respondents not necessarily against the concept, but believe it should be privately funded as opposed to funded by the state

"If private business wants passenger rail, they can go for it, but it shouldn't be subsidized with public money."

-Survey Respondent



The most important aspects of a passenger rail service to respondents



Of aspects listed in the "other" category, the most common was cost.



6.3.2 FREQUENTLY ASKED QUESTIONS

In response to the public involvement survey, several questions were frequently asked of the project. Below are these frequently asked questions and responses. This information was available via the project website. Additional information on comments received are available in Appendix B of this SRP.

Does the plan consider economic development in Wyoming as a result of enhanced rail?

Yes, WYDOT recognizes that enhanced rail and intermodal connectivity has the potential to increase employment opportunities, manufacturing, and much more. The economic development associated with rail improvements is included within the intent of the plan.

I am supportive of passenger rail in the State of Wyoming because it could increase safety, tourism, accessibility, and more. Is WYDOT involved in existing passenger rail efforts that may connect Wyoming with surrounding states?

Yes, WYDOT is an active stakeholder at all Colorado Front Range Passenger Rail meetings and is monitoring the recently formed Montana coalition as well. These efforts are outlined in Chapter 3.

Are there plans to improve safety?

Yes, the intent of WYDOT's annual apportionment of Section 130 funds is to bring safety improvements. This may include adding safety devices at crossings, such as active warning devices, improved line of sight, signs and markings, and concrete surfacing. The state railroad coordinator is receptive to public input on potentially problematic locations.

Can WYDOT regulate the length of the trains?

While train length is an ongoing topic at the federal level, it is currently up to the individual Railroad and not WYDOT. WYDOT agrees that longer trains could cause more problems to the motoring public, including excess crossing occupation.

Can WYDOT enact legislation that requires all trains are operated by two certified crew?

This is a legislative issue and has been brought before the legislature within the last few years. Most recently, this laborrelated bill was sponsored into the 2019 legislative session. WYDOT recommends contacting your local legislator regarding any ongoing efforts related to the formerly proposed legislation.













APPENDIX A Stakeholder Meeting







Stakeholder Meeting: You Are Invited

Greetings,

As the Wyoming Department of Transportation works to update the Statewide Rail Plan, the input of stakeholders is critical. We are reaching out to you because you have been identified as a key stakeholder on this project.

We will be hosting a stakeholder meeting on October 28, 2020 from 11 a.m. to 1 p.m. and would greatly appreciate your attendance.

This meeting will be hosted through Webex, a virtual meeting platform. If you haven't used Webex before, there will be short download when you click on the meeting link. Please plan to join the meeting up to 15 minutes before the start time to allow for the download and ensure audio functions are working properly.

For more information on the project, you may visit our project website at: https://www.wyomingstatewiderailplan.com/

In the meantime, please feel free to reach out with any questions and/or comments.

We look forward to hearing your perspective and having you involved as a stakeholder in this important project.

Thank you in advance!





MEETING FACILITATION

Ask Questions & Provide Comments Webex Instructions





Tara Bettale

Cristina Beermann



QUESTION ONE

GO TO MENTI.COM & ENTER THE CODE 55 65 54 1

- What do you hope to get out of this stakeholder meeting?
 - Learn more about the plan development
 - Provide my thoughts on what should be in the plan recommendations
 - Understand how the general public is being engaged
 - Hear about what the next steps are after the plan is finalized







MEETING AGENDA

- 1 Welcome and Speaker Panel Introductions
- 2 State Rail Planning Process, Schedule, and Objectives
- 3 Statewide Rail Trends Update
- 4 Rail Service and Investment Program
- 5 Questions and Open Discussion



MEETING GOALS

- Define the Vision and Objectives for freight and passenger rail in Wyoming
- Provide an understanding of the current rail plan
- Determine future needs for the Wyoming Rail System
- Opportunity for stakeholder input







SPEAKER PANEL















Mark Wingate

Dan Kline La

Laycee Kolkman

Tony Klaumann

Kevin Keller

David Montoya

Matt Van Hattem







FRA Guidance

the Rail Plan is prescribed

by the FRA, although some flexibility is allowed.

FORMAT

Organization of

Appendix A

Rail Plan Outline

- 1. The Role of Rail in Statewide Transportation (Overview)
- 2. The State's Existing Rail System:
 - i. Description and Inventory
 - ii. Trends and Forecasts
 - iii. Rail Service Needs and Opportunities
- 3. Proposed Passenger Rail Improvements and Investments
- 4. Proposed Freight Rail Improvements and Investments
- 5. The State's Rail Service and Investment Program
- 6. Coordination and Review
- Technical Appendix

STATEWIDE RAIL PLAN







Stakeholder Meeting







SCHEDUL	E				「ない」
June – Aug 2020	Sept - Nov 2020	Oct - Nov 2020	Nov – Feb 2021	Winter/Spring 2021	1
Existing Condition and Past Plan Analysis	Stakeholder Working Group Engagement & Interviews	Public Input Opportunity	Draft State Rail Plan development	Final State Rail Plan published and adopted	
STATEWIDE RAIL PLAN					11



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VISION STATEMENT

The future Wyoming rail system will provide safe, efficient, and reliable **mobility for people and goods**. In addition, it will contribute to a more balanced transportation system, economic growth, and energy conservation. The state's rail infrastructure will continue to provide transportation efficiency, cost effectiveness, accessibility, capacity, and intermodal connectivity to **meet freight transportation demand**. To further this vision, the state will support the business council and economic development associations in planning rail service improvements.



FREIGHT RAIL OBJECTIVES



Encourage economic development in Wyoming through investments in the rail system.



Support as applicable the interchange of Class I rail traffic in the state.



Minimize crashes, injuries, and fatalities at highway-rail grade crossings in Wyoming through safety improvements, crossing consolidation, and grade separations.





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QUESTION TWO INFORMATION CONTINUES GO TO MENTI.COM & ENTER THE CODE 45 85 80 8 • How should Wyoming prioritize future freight rail service decisions? • Increased speed/reliability to existing distributors • Increased access to new distributors • Alleviate network bottlenecks • Construction of new routes to accommodate economic growth Image: State State



Continue outreach to stakeholders



Encourage multimodal integration



Support the identification of funding strategies







2020 Statewide Rail Plan

STATEWIDE RAIL TRENDS UPDATE





Corridor Development Trends

- Since 2016, BNSF Railway has operated an intermodal freight service between Texas and the Pacific Northwest through Wyoming.
- The east-west Union Pacific Overland Route through Southern Wyoming continues to serve as a land bridge for container freight traffic between the West Coast and the Great Lakes.



Source: BNSF Railway

Share of Freight Tonnage by Mode for Wyoming and the U.S., 2018

- Rail has the highest share of freight tonnage in Wyoming.
- Trucking is the most prevalent mode of freight transportation nationwide, but not in Wyoming.



Source: HDR, FHWA FAF4





Commodity Flow Analysis - Outbound



Volume of Select Commodities Originating by Rail in Wyoming, 2018

STCC	Commodity Name	Tons (in thousands)
11	Coal	291,223
28	Chemicals or Allied Products	13,025
32	Clay, Concrete, Glass or Stone	3,550
49	Hazardous Materials	2,019
14	Nonmetallic Minerals	717
40	Waste or Scrap Materials	356
29	Petroleum or Coal Products	311
01	Farm Products	256
20	Food or Kindred Products	235
37	Transportation Equipment	85
	All Other Commodities	74
	Total	311,85

Source: HDR, STB 2018 Carload Waybill Sample



Commodity Flow Analysis - Inbound



Source: HDR, STB 2018 Carload Waybill Sample

Volume of Select Commodities Terminating by Rail in Wyoming, 2018

STCC	Commodity Name	Tons (in thousands)
14	Nonmetallic Minerals	1,76
49	Hazardous Materials	76
33	Primary Metal Products	350
20	Food or Kindred Products	146
28	Chemicals or Allied Products	139
37	Transportation Equipment	120
32	Clay, Concrete, Glass or Stone	118
29	Petroleum or Coal Products	28
24	Logs, Lumber, Wood Prod.	12
26	Pulp, Paper or Allied Products	8
	All Other Commodities	1(
	Total	3,47

Source: HDR, STB 2018 Carload Waybill Sample







Wyoming Rail Traffic Forecasts (2018 to 2045)





QUESTION THREE 🛱

GO TO MENTI.COM & ENTER THE CODE 45 85 80 8

- What are the bottlenecks and chokepoints on the Wyoming state rail network?
 - Congestion in urban terminal areas
 - Constrained capacity on principal freight rail corridors
 - Constrained vertical clearances and railcar weight restrictions
 - Other





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Highway-Rail Grade Crossing Safety

- There were 22 total crashes involving public highway-rail intersections in Wyoming between the years 2010 and 2019.
- Three of these crashes resulted in fatalities, while another three crashes resulted in injuries.





Highway-Rail Grade Crossing Safety

- WYDOT receives ~\$1.2 million annually from the Federal Highway Administration (FHWA) for the implementation of safety improvements at public highway-rail grade crossings.
- The 2021 Wyoming Statewide Transportation Improvement Program (STIP) lists 8 highway-rail grade crossing safety improvement projects.







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QUESTION FOUR

GO TO MENTI.COM & ENTER THE CODE 45 85 80 8

- What investments could be made to enhance the efficiency, velocity, capacity, and safety on the Wyoming state rail network?
 - Grade crossing improvements (upgrades to grade crossing signals and surfaces, grade separation, etc.)
 - New or enhanced rail yards and terminals
 - Infrastructure investment (extend or construct new sidings and multiple main tracks, track and bridge upgrades to accommodate 286k cars, wayside signal system upgrades)
 - Investments targeting state of good repair
 - Advanced technology and innovation
 - Other options





2020 Wyoming Rail Plan

FREIGHT RAIL SERVICE INVESTMENT PLAN





2020 UPDATE

- Class I railroads continue towards full implementation of Positive Train Control (PTC) where necessary
- Further development and expansion of rail facilities for soda ash transport were identified by the Union Pacific Railroad
- Regional and short line railroads continue to work on projects to maintain a state-of-good-repair, expand capacity, and enable further industrial development opportunities





WYOMING BUSINESS COUNCIL FUNDED RAIL PROJECTS:

Project Name	Project Type	Project Description	County	Estimated Capital Cost
Guernsey Rail Spur Expansion	Freight Transload	Construct two rail spurs and 260 feet of track to connect rail service to two lots in the Guernsey Industrial Park.	Platte	\$755,590
Evanston Roundhouse – Remaining Sections	Adaptive Reuse	Stabilize and partially rehabilitate the remaining three sections of the historic railroad roundhouse building (47,000 square-feet).	Uinta	\$3,605,795



Presentation Title

Stakeholder Meeting

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QUESTION FIVE \diamondsuit

GO TO MENTI.COM & ENTER THE CODE 85 25 19 4

- What investments could be made in Wyoming to improve freight rail access, promote economic development, and enhance the state's competitiveness in national markets and the global marketplace?
 - New or enhanced intermodal facilities
 - New or enhanced industrial track access
 - New or enhanced multimodal connections
 - New or enhanced federal, state, local and public-private partnership funding options
 - Other options





2020 Wyoming Rail Plan

PASSENGER RAIL SERVICE INVESTMENT PLAN





2020 UPDATE

- No Wyoming-specific efforts underway to establish regularly scheduled passenger rail service
- Wyoming representatives are participating in the Colorado Front Range Passenger Rail planning study and efforts in Montana
- Initiatives have long timeframes of planning and implementation work



QUESTION SIX 🖗

GO TO MENTI.COM & ENTER THE CODE 85 25 19 4

Which environmental effort could yield the most economic benefit to Wyoming?

- Transportation technology advances
- Fuel efficiency improvements
- Greenhouse gas emission reduction
- Community enhancements
- Other











PUBLIC INVOLVEMENT







ONLINE COMMENT MAP

Public Input Opportunity

Learn more about proposed projects and provide ideas and/or comment on specific locations







QUESTION SEVEN

GO TO MENTI.COM & ENTER THE CODE 85 25 19 4

- Do you have public communication channels that we can leverage to promote the comment map?
 - Yes, I'll add my name/organization in to the meeting chat
 - No, I don't have public-facing channels
 - Maybe, need to check with my communications team





2020 Statewide Rail Plan

Questions?

Stakeholder Meeting



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HOW TO CONTACT US

Dan Kline Systems Planning & Railroads

Website () https://www.wyomingstatewiderailplan.com/



Project Hotline

Mail To Wyoming Department of Transportation ATTN: Dan Kline Planning Department 5300 Bishop Blvd Cheyenne, WY 82009













APPENDIX B

Public Comment Resolution





Appendix B

Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)	Specific locations of safety concerns	Evansville, WY. Only exit is blocked by train signals that are constantly broken. Limits access to medical, etc. Sheridan, WY the access to the hospital is blocked by train multiple times a day.	We will pass the Evansville concern along to BNSF for consideration. Unsure about brokendoes this mean not activating? Activating with no train?
N/A	Public questionnaire (Survey Monkey)		In the town of Granger. It is almost impossible to use by heavy, lowboy haul trailers because the four tracks at the crossing are at different grades	WYDOT was awarded a CRISI grant to address lowboy concerns at this crossing. UP is finalizing estimates.
N/A	Public questionnaire (Survey Monkey)		Ranch roads along Hwy 59	Unsure what the comment pertains to. Most, if not all of these would be private crossings.
N/A	Public questionnaire (Survey Monkey)		Worland, Wyoming - the crossing at Big Horn Ave has long been a concern of mine. I worked on the railroad for 36 years and saw multiple accidents on this crossing.	This crossing is fully signalized. The last crash reported to FRA was almost 30 years ago. WYDOT will however, be re-evaluating this crossing's signalization in FY 2021/2022 with BNSF Railway.
N/A	Public questionnaire (Survey Monkey)		West Lincolnway rail crossings in Cheyenne.	Unsure what the comment pertains to train blockage? There is only one to our knowledge near West Lincolnway which is Southwest Drive. There has been blockage reported in the past. Blocked crossings can now be reported directly to FRA at https://www.fra.dot.gov/ blockedcrossings/

K.



Appendix B

Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)		Federal, Wyoming	Unsure what the comment pertains to. WYDOT does have several crossing upgrade projects programmed in the vicinity for FY 2021, both surface and signal.
N/A	Public questionnaire (Survey Monkey)		5th & sheridan	Train traffic is an ongoing concern for this area.
N/A	Public questionnaire (Survey Monkey)		Hardin , Mt	
N/A	Public questionnaire (Survey Monkey)		we recently had a derailment near Green River, huge fireball. We had no follow up on that? What happened? How to make sure it doesn't happen again.	We will pass this question to UP Government Affairs for consideration
N/A	Public questionnaire (Survey Monkey)		Gillette has a big problem with limited access around tracks when road switcher is working. Also Glendo is and can be problematic due to the close proximity of only 2 crossings the can and do block access to the community.	Comment pertains to train blockage or excessive crossing occupation. We agree that crossing occupation is problematic in crossings adjacent to rail yards like Gillette. In communities like Glendo, long unit consists can occupy multiple crossings simultaneously. Blocked crossings can now be reported directly to FRA at https://www.fra.dot.gov/



Appendix B

Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)		Granger wy	WYDOT has a CRISI grant to address this crossing.
N/A	Public questionnaire (Survey Monkey)	Economic Development	Increase in traffic will bring more revenue to the state. Rail travel is safe way to travel as proven early in our history	Unsure what the comment pertains to train blockage? There is only one to our knowledge near West Lincolnway which is Southwest Drive. There has been blockage reported in the past. Blocked crossings can now be reported directly to FRA at https://www.fra.dot.gov/ blockedcrossings/
N/A	Public questionnaire (Survey Monkey)		One of the reasons Wyoming is lacking in manufacturing is because of freight cost. Rail would reduce cost. Thus making it a possibility manufacturing would come here.	
N/A	Public questionnaire (Survey Monkey)		Contract with local companies to do the work.	Unsure what work is referred to. Surfaces and signals are constructed by railroad employees
N/A	Public questionnaire (Survey Monkey)	Improvements	No drop down crossing g guards. But then we dont have active tail on roads	
N/A	Public questionnaire (Survey Monkey)		Access for emergency services when trains are blocking main tavel corridors in town	
N/A	Public questionnaire (Survey Monkey)		Poor separation of access to the physical plant and the public	


Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)		Educate the public / increase public awareness	WYDOT partners with Wyoming's rail carriers, law enforcement, and Department of Education via Wyoming Operation Lifesaver, whose primary purpose is the educate the public about potential hazards of trains and trespassing along railroad rights of way. The group is always open to concerns and suggestions. https://community.oli.or g/state/wy#about
N/A	Public questionnaire (Survey Monkey)		Big facilities to load and unload freight at terminals when the interstate is closed.	
N/A	Public questionnaire (Survey Monkey)		Improvement to grade crossings and highway rail grade separations	
N/A	Public questionnaire (Survey Monkey)		Rail access to oilfields to take heavy trucks off roads.	Need location to respond.
N/A	Public questionnaire (Survey Monkey)		Consistent freight delivery. Tourist travel regenerated. Mail and commercial packages delivered with less wear and tear on highways	
N/A	Public questionnaire (Survey Monkey)		Connecting road way between crossings. To reduce the need to "race " trains	
N/A	Public questionnaire (Survey Monkey)		More overpasses in cities would be helpful in areas where trains bisect towns	



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)		Shorten the length of trains	Train length is an ongoing topic at the federal level. We agree that longer trains could cause more problems to the motoring public, including excess crossing occupation.
N/A	Public questionnaire (Survey Monkey)		It would be useful for there to be an expansion of quiet zones with the requisite upgrades and/or over or underpasses for crossings through populated areas (ie centers of towns/cities).	These efforts must stem from local governments to the railroads
N/A	Public questionnaire (Survey Monkey)		I would recommend more silent crossing in our towns.	These efforts must stem from local governments to the railroads
N/A	Public questionnaire (Survey Monkey)		employment	
N/A	Public questionnaire (Survey Monkey)		As a former truck driver, it would be a vast safety improvement to list (ie a rail map with approved crossings) what rail crossings a semi can safely cross without becoming high centered. with grade crossings its mostly a gamble whether or not your trailer will make it or not because there is no visible way to tell if the grade on either side is too low	This is a great comment. WYDOT will be re- evaluating hump conditions across the state in the coming fiscal year.
N/A	Public questionnaire (Survey Monkey)		Smooth them out with concrete that will last more than a season	



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public		I'd like to see elevated	
	questionnaire		crossings in high traffic	
	(Survey Monkey)		areas such as 5th street	
N/A	Public questionnaire (Survey Monkey)		more obvious reflective markers, markings	WYDOT has undertaken statewide LEDs, crossbucks, flickerstrips, advance warning signs, and RXR pavement markings. If there is a crossing needing attention, please contact us!
N/A	Public questionnaire (Survey Monkey)		Lights indication that the crossing may be occupied blocks away to detour traffic early.	This is a good comment. There is one such device on I-25 in Casper to notify the motoring public about the Bryan Stock Trail crossing. We will consider more of these for applicable locations.
N/A	Public questionnaire (Survey Monkey)		paths across!!! Also maybe car navigation around. To be specific 5th st in Sheridan	There is a sidewalk on 5th Street in Sheridan, but we agree this is a problematic location for train traffic.
N/A	Public questionnaire (Survey Monkey)		Enact legislation required all trains are operated by two certified crew. An engineer and conductor.	This labor-related bill was sponsored into the last legislative session.
N/A	Public questionnaire (Survey Monkey)		transload facilities	
N/A	Public questionnaire (Survey Monkey)		Investments in industrial siting and crossing improvements	
N/A	Public questionnaire (Survey Monkey)		Wildlife underpasses	



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)		Evanston has a rail depot and station that has been renovated and now sits mostly unused. Bring back the heritage that made this town and Wyoming what it is	
N/A	Public questionnaire (Survey Monkey)		Trans load facilities & access to additional rail facilities	
N/A	Public questionnaire (Survey Monkey)		The old round house or area around there. could be a great place	
N/A	Public questionnaire (Survey Monkey)		Simply enforce the laws and rules we already have in place.	
			Improve line of sight	Not sure which location(s) this refers to, but WYDOT is refining line of sight at all passive crossings in 2021
			They need to be more frequent and circumvent the tracks when possible to prevent accidents	
N/A	Public questionnaire (Survey Monkey)	Passenger Rail & Safety	Disability accessibility.	Location would be very helpful.
N/A	Public questionnaire (Survey Monkey)		Passenger rail along 180 could really improve the safety of travel for citizens especially during winter.	
N/A	Public questionnaire (Survey Monkey)		Weather!! Enhaned Rail would offer a way of taking freight traffic off of the road in addition to alternatives for personal vehicles when driving conditions are bad	



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A Pu qu (Su	ublic uestionnaire urvey Monkey)		Improve accessibility and safety for disabled/elderly populations	This is a good comment; a location would be very helpful
N/A Pu qu (Su	ublic Jestionnaire urvey Monkey)	N/A	Wyoming needs additional revenue options. I believe that passenger trains as a tourist attraction/ public transportation source, could be a potential new source of income while potentially being more energy efficient. Passenger trains would reduce the amount of traffic on our highways reducing vehicle accidents and fatalities. With the right type of energy source a train could also be more eco friendly than vehicles. Wyoming road traffic is especially dangerous in the winter time. Passenger train travel would give an alternative- more safe Transportation option to residents and tourists in the winter time. This would prove invaluable for the i-80 and I-25 corridor that is frequently shut down. As a tourist attraction sites like the wind river canyon, and potentially new routes that run along the o'regan trail or, independence rock, martins cove, and the sort could be a new tourist	



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public	Passenger Rail	Build a lite rail system	
	questionnaire	- Requested	from Cheyenne to	
	(Survey Monkey)	Routes	Denver.	
N/A	Public		Passenger rails for	
	questionnaire		commuting along I-80	
	(Survey Monkey)		between Laramie and	
		-	Cheyenne	
N/A	Public		Would love passenger rail	
	questionnaire		service from Cody to	
	(Survey Monkey)		Denver south and north	
		_	to Billings	
N/A	Public		I believe if you include	
	questionnaire		tourism to Yellowstone	
	(Survey Monkey)		you would provide a safe	
			environment for tourists	
			and provide needed	
			employment as well,	
			trains can be a wonderful	
		_	experience	
N/A	Public		Investment into the	
	questionnaire		North/South corridor	
	(Survey Monkey)		through the state to	
			better facilitate the	
			movement of	
			freight/passenger	
		-	services.	
N/A	Public		I think more people	
	questionnaire		would use public	
	(Survey Monkey)		transport if it connected	
			to Park City and SLC.	
			There are plenty of	
			people who would trust	
			the safety of a railway	
			over dangerous winter	
			driving conditions. I am	
		-	one of them.	
N/A	Public		Commuter service to salt	
	questionnaire		lake city	
	(Survey Monkey)			



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
N/A	Public questionnaire (Survey Monkey)		passenger rail linking Evanston, WY to Casper and other major towns would be utilized by people.	
N/A	Public questionnaire (Survey Monkey)		day trip options for example from Thermopolis to Casper or Billings that would be great	
N/A	Public questionnaire (Survey Monkey)	Environmental Stewardship	Improved freight car designs and more efficient locomotives to reduce energy consumption, pollution and greenhouse gas emissions; green technology.	
N/A	Public questionnaire (Survey Monkey)	Funding	No public money invested in private business / let the rail company pay for all	
N/A	Public questionnaire (Survey Monkey)		Some confusion as to why there is public funding for privately operated rail	Business-ready communities
N/A	Public questionnaire (Survey Monkey)	Passenger Rail [conditions]	Speed	
N/A	Public questionnaire (Survey Monkey)		Frequency	
N/A	Public questionnaire (Survey Monkey)		Accessibility	
N/A	Public questionnaire (Survey Monkey)		Affordability	
N/A	Public questionnaire (Survey Monkey)	1	*weather*	





WY Fish & Game	Letter	N/A	Dear Ms. Kolkman,	
			The Wyoming Game and	
			Fish Department	
			(Department) appreciates	
			the opportunity to	
			provide input regarding	
			areas of wildlife concern	
			for the Statewide Rail	
			Plan being developed by	
			the Wyoming	
			Department of	
			Transportation (WYDOT).	
			We offer the following	
			comments for your	
			consideration.	
			Statewide Considerations	
			In general, railroad right-	
			of-way fence presents a	
			difficult challenge for	
			wildlife specifically big	
			game species, across	
			Wyoming, Similar to	
			roadways fencing	
			associated with rail lines	
			may be a barrier to big	
			dame movement	
			particularly pronchorn	
			and may cause direct	
			mortality as a result of	
			entrapment within the rail	
			line right-of-way or	
			entanglement within	
			fence wires Consistent	
			with our	
			recommendations for	
			highway right-of-way	
			fence (in most places) the	
			use of wildlife-friendly	
			fence specifications along	
			rail lines would facilitate	
			big game movement and	
			reduce mortality	
			Additionally railroad	
			trestles and hridges may	
			nresent opportunities for	
			facilitating big game	
			movement We welcome	
			movement, we welcome	



with WTDOT and the railroad companies on the evaluation of trestles and bridges, and the conversion of fences wherever possible. Lander Region West of Rawins In the past, proposals to facilitate big game movement across Interstate 80 (1-80), particularly to benefit pronghorn, have been rejected because animal movements would be impeded by parallel Union Pacific (UP) railroad tracks and associated right-of-way fencing. Addressing the barrier of over 1-80 and the UP railroad west of the Hadsell exit (west of Rawlins roughly at 41.782, -107.390) would lie within a half-mile of each other, where pronghorn (and occasionally mule deer and elk) could be funneled from one overpass on to the other. This could allow restoration of the historic pronghorn movement from the Red Desert to winter ranges to the south, including Red Rim. There may also be opportunities for other overpasse near Creston Junction, Wamsutter, and Wakcut where the 1-80 and the UP railroad lines lie close to each other. Red Rim/Daley Wildlife		the opportunity to work	
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Junction, Wamsutter, and Walcott where the I-80 and the UP railroad lines lie close to each other. Red Rim/Daley Wildlife		overpasses near Creston	
Walcott where the I-80 and the UP railroad lines lie close to each other. Red Rim/Daley Wildlife		Junction, Wamsutter, and	
and the UP railroad lines lie close to each other. Red Rim/Daley Wildlife		Walcott where the I-80	
lie close to each other. Red Rim/Daley Wildlife		and the UP railroad lines	
Red Rim/Daley Wildlife		lie close to each other.	
		Red Rim/Daley Wildlife	



	Habitat Management	
	Area	
	The only legal public	
	access to most of the Red	
	Rim/Daley Wildlife	
	Habitat Management	
	Area (WHMA) is across	
	either of two crossings	
	over the UP railroad west	
	of the Daley buildings	
	(crossings at 41.74476 -	
	107.50273 and 41.74960 -	
	107.48348). Neither	
	crossing has an active	
	warning system and the	
	west crossing has a land	
	berm that occludes view	
	ot east-bound trains for	
	motorists traveling south.	
	Since both crossings	
	provide public access to	
	Department lands, we	
	recommena crossing	
	that improve public	
	condumprove public	
	Salety. Groop Pivor Pagion	
	Generally fencing	
	associated with the LID	
	railroad results in annual	
	losses of hig game in this	
	region, especially during	
	severe winter years. The	
	specific sections	
	identified below	
	represent some of the	
	highest conflict segments.	
	Modification of UP	
	railroad right-of-way	
	fence to more wildlife-	
	friendly specification	
	would reduce annual big	
	game mortality in	
	southwest Wyoming.	
	Southeast Evanston	
	Fence design in this area	



of big game species,	
specifically elk, moose,	
and mule deer. Animals	
often get trapped within	
the right-of-way or within	
fence wires as a result of	
fence design.	
Leroy to Piedmont	
Fence design in this area	
results in the entrapment	
of big game species,	
specifically mule deer, elk,	
and pronghorn. Animals	
often get trapped within	
the right-of-way or within	
fence wires as a result of	
fence design.	
Leroy to Carter	
Fence design in this area	
results in the entrapment	
of big game species,	
specifically mule deer and	
pronghorn. Animals	
frequently get trapped	
within the right-of-way or	
within fence wires as a	
result of fence design.	
This stretch is notably one	
of the highest conflict	
areas for big game and	
UP railroad right-of-way	
fence in the region. In	
2011, the Department	
worked with UP to modify	
a 1.5 mile stretch of this	
fence to a wildlife-friendly	
design (4-strand fence	
with smooth bottom wire)	
in order to reduce	
mortalities. This effort	
was successful, and big	
game mortality as a result	
of fence entanglement in	
this stretch has decreased	
significantly.	
Nugget Canyon	
This segment of the UP	

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	Bryan	
	Fence design in this area	
	results in the entrapment	
	of big game species,	
	specifically pronghorn.	
	Animals frequently get	
	trapped within the right-	
	of-way or within fence	
	wires as a result of fence	
	design. The existing	
	fencing prevents	
	pronghorn movement to	
	a small but important	
	section of crucial winter	
	range during particularly	
	severe winters.	
	Granger	
	The Department has been	
	engaged with the trona	
	industry on a proposed	
	mining operation that	
	may entail rail line	
	expansion originating	
	from Granger. Rail line	
	expansion to	
	accommodate new	
	mining operations have	
	the potential to impact	
	important yearlong and	
	crucial winter range for	
	pronghorn in the	
	southwest. We are	
	concerned about the	
	potential impacts of rail	
	line expansion on the	
	seasonal movements of	
	pronghorn and the	
	potential for increased	
	pronghorn mortality.	
	Alternatives to	
	constructing new rail line	
	should be considered. If	
	constructed,	
	consideration should be	
	given to keeping the rail	
	line unfenced to allow	
	continued wildlife	





relatively unfragmented landscape. Bitter Creek to Table Rock Fence design in this area results in the entrapment of big game species, specifically pronghorn. Animals frequently get trapped within the right- of-way or entangled in fence wires as a result of fence design. The existing fencing limits pronghorn movement to winter range during particularly severe winters. Continental Divide to Wamsutter Fence design in this area results in the entrapment of big game species, specifically pronghorn. Animals frequently agt
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of-way or within tence
Wires as a result of fence
in conjunction with L 80
limits the movement of
pronghorn in this area
There are a several
machinery undernasses
pronchorn use to move
across the interstate that
are impacted by fencing
along this stretch We
have not documented
any large scale mortalities
in this segment, but
wildlife movement would
be facilitated by fence
modifications.
Sheridan Region
Rozet to Moorcroft
Between Rozet and
Moorcroft, pronghorn on



	the north side of	
	Interstate 90 (I-90) in the	
	North Black Hills Herd	
	seasonally attempt to	
	move south, especially	
	during severe winters.	
	These pronghorn are	
	blocked by a series of	
	barriers including the	
	right-of-way fences for I-	
	90, the right-of-way	
	fences for State Highway	
	51, and the right-of-way	
	fences for the Burlington	
	Northern Santa Fe (BNSF)	
	railroad. Converting the	
	BNSF right-of-way fence	
	to wildlife-friendly	
	standards in this area	
	would be an important	
	step toward making this	
	area more permeable to	
	pronghorn movement.	
	Casper Region	
	Carr Canyon	
	Where the BNSF railroad	
	travels in proximity to the	
	Black Hills, there have	
	been several collisions	
	with big game over the	
	years, including multiple	
	bighorn sheep fatalities in	
	a single strike. In the past,	
	we approached BINSF	
	about the Installation of	
	exclusionary lence	
	Centered at the mouth of	
	carr carryon, but the	
	at the time (section of	
	track botwoon 42 65528	
	104 10395 and 12 61181	
	-104 0724)	
	Converse County	
	The BNSE railroad and	
	State Highway 59 corridor	
	hetween Douglas and Rill	
	between bouylas and Bill	



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
			is notably an area of frequent deer collisions along a 40+ mile length of rail and highway. The Department works with WYDOT on a project- specific basis to improve wildlife-vehicle collision issues related to Highway 59 and welcomes the opportunity to also address collisions that occur on the rail line. Thank you for the opportunity to comment. We look forward to reviewing the draft	
			wildlife section of the Statewide Rail Plan when it is available. If you have any questions or concerns please contact me at (307) 777-4587.	
N/A	Survey		The current numbers of grade crossings combined with the reality of ever longer trains provides a unique challenge to both the industry and the public. With current class 1 railroads operating trains in excess of 10k' can and has caused disruptions to residents and railroads alike in the form of breakdowns impeding emergency vehicles for example. Another would be the tragedy that befell two crew members in October of 2018 when their End-of-Train Device was unable to respond	

Spill P



Name/Organization (If applicable)	Comment Source	Theme (if applicable)	Comment	Response
			and help actuate	
			emergency braking	
			coming down a grade	
			West of Cheyenne,	
			leading to their untimely	
			demise. I believe it is in	
			affected by rail traffic for	
			the state to look at	
			enacting measures such	
			as regulating items such	
			as length of trains and	
			providing additional	
			funding for	
			improvements to	
			crossings. Another safety	
			concern that should be	
			addressed should be the	
			various carriers' push for	
			one man crews. While	
			technology is able to	
			provide some measure	
			assistance, it is no	
			replacement for a well	
			trained and experienced	
			crews. As tragedies such	
			as that which struck the	
			community of Lac	
			Megantic, a single crew	
			inferior to a multiple	
			ninenor to a multiple	
			second crew member is	
			another set of eyes for	
			potential issues provides	
			alertness in an industry	
			often struck with	
			inconsistent rest and	
			exhaustion, allows the	
			crew to concentrate of	
			specific tasks, and acts as	
			a first responder when	
			incidents occur.	













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