

Developing a Homegrown Multidisciplinary Rail Workforce through Engagement with the Corridor Systems Planning Process

MONTANA

Task 2.1 Rail Workforce Needs Assessment

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Disclaimer Statement

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Acronym List

AAS	Associate of Applied Science Degree
ACI	American Concrete Institute
AAR	American Association of Railroads
ACTE	Association for Career and Technical Education
AEFLA	Adult Education and Family Literacy Act
AESS	Automatic Engine Start and Stop
AI	Artificial Intelligence
AFFCO	Anaconda Foundry Fabrication Company
AgEd	Agricultural Education
AP	Advanced Placement
AREMA	American Railway Engineering and Maintenance-of-Way Association
ARP	Apprenticeship-Readiness Program
AS	Associates of Science Degree
BA	Bachelor of Arts Degree
BAP	Butte Anaconda Pacific Railway
BAS	Bachelor of Applied Science Degree
BME	Business and Marketing Education
BNSF	Burlington Northern Santa Fe
BS	Bachelor of Science Degree
BSPRA	Big Sky Passenger Rail Authority
CAD	Computer-Aided Design
Caltrans	California Department of Transportation
CAS	Certificate of Applied Science
CARB	California Air Resources Board
CC	Community College
CCC	California Community Colleges
CCL	Career Connected Learning
CCSP	Certified Career Service Providers
CEO	Chief Executive Officer
CHSRA	California High Speed Rail Authority
CNC	Computer Numerical Control
Corridor ID	Corridor Identification and Development
CPKC	Canadian Pacific Kansas City
CTAE	Career, Technical, and Adult Education
CTE	Career and Technical Education
CTS	Certificate of Technical Studies
CTSO	Career and Technical Student Organization
CSU	California State University

CSULB	California State University, Long Beach
DMVW	Dakota, Missouri Valley and Western Railroad
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAFSA	Free Application for Federal Student Aid
FRA	Federal Railroad Administration
FTI	Freight Train Interference
FY	Fiscal Year
GAO	Government Accountability Office
GHG	Greenhouse Gas
GIS	Geographic Information Systems
HB	House Bill
HRD	Host Responsible Delay
HSR	High Speed Rail
HVAC	Heating, Ventilation, and Air Conditioning
IBEW	International Brotherhood of Electrical Workers
IJA	Infrastructure Investment and Jobs Act of 2021
ITE	Industrial Technology Education
IUEC	International Union of Elevator Constructors
IUPAT	International Union of Painters and Allied Trades
JATC	Joint Apprenticeship & Training Center/Committee Programs
K-12	Kindergarten through 12 th grade
LATTC	Los Angeles Trade-Technical College
LiDAR	Light Detection and Ranging
LiUNA	Laborers' International Union of North America
MBCTC	Montana Building and Construction Trades Council
MC3	Multi-Craft Core Curriculum
MDRC	Manpower Demonstration Research Corporation
MMEC	Montana Manufacturing Extension Center
MS	Master of Science Degree
MSU	Montana State University
MUS	Montana University System
NABTU	North America's Building Trades Union
NCCER	National Center for Construction Education and Research
NCEES	National Council of Examiners for Engineering and Surveying
NCH	North Coast Hiawatha
LDSS	Long Distance Service Study
LGI	Locally Governed Institution
NS	Norfolk Southern
OCHE	(MUS) Office of the Commissioner of Higher Education

OCS	Overhead Catenary System
OJT	On-The-Job Training
OPI	(Montana) Office of Public Instruction
OSHA	Occupational Safety and Health Administration
PSR	Precision Scheduled Railroading
PTC	Positive Train Control
RailTEC	Rail Transportation and Engineering Center
RASC	Railway Association of Southern California
RPSA	Rail Passenger Service Act of 1970
STARS	Student and Teacher Advancement for Results and Success Act
STEM	Science Technology Engineering Mathematics
SWIB	State Workforce Innovation Board
TBR	Tennessee Board of Regents
TCAT	Tennessee Colleges of Applied Technology
TRACC	The Rail Academy of Central California
TRB	Transportation Research Board
UC	University of California
UM	University of Montana
USDOT	U.S. Department of Transportation
UT	University of Tennessee
VST	(Montana) Validated Skills Training (Task Force)
WBL	Work-based Learning
WBLC	Work-based Learning Cooperative
WFC	Workforce Certificate
WIOA	Workforce Innovation and Opportunity Act
ZE	Zero-emissions

1. Executive Summary

The federal government recently made historic investments to upgrade the nation's rail infrastructure and to support rail planning and implementation projects. To realize the full economic, operational, and job creation benefits deriving from these investments, efforts to strengthen the industry's talent pipeline need to occur in tandem with rail systems planning processes and capital improvement projects. Montana State University (MSU) is leading an initiative to align education, training, and outreach efforts with the real-world needs of regional rail operators and rail suppliers and service providers. The project is funded by the Federal Railroad Administration's (FRA) Consolidated Rail Infrastructure and Safety Improvements (CRISI) program.

The state-level needs assessment documents rail workforce challenges and gaps in Montana and identifies the available training, education, and job placement resources and programs that can be leveraged regionally to address industry needs. The research will be utilized to inform the development of a project implementation plan—based on local conditions and needs—and to engage industry, academic, and other multisector stakeholders to guide project implementation in the region. This document describes Montana's current and projected rail operations and local labor market conditions. It also outlines local education and training resources that can be leveraged for the purposes of the project. The conclusions and key takeaways encompass national rail workforce trends and findings for context.

2. Current Rail Operations in Montana

The unique characteristics of the state of Montana offer both challenges and opportunities for rail operations and workforce development. The state's status as the fourth largest in the U.S. by area, covering over 147,000 square miles,¹ requires a sprawling highway and rail infrastructure to move people and goods across the state. With a resident population of just over 1 million, the state also has one of the lowest population densities in the nation (after Alaska and Wyoming), averaging just 7.4 people per square mile.² Certain rail occupations require personnel willing and able to work in rural and remote locations. Due to difficulties with relocating staff to these areas, railroads often focus recruitment efforts at the local level.

2.1. Freight Rail Operations

Freight rail in Montana primarily transports coal, petroleum products, and grain and is dominated by a single Class I railroad, the Burlington Northern Santa Fe (BNSF), which controls over 90% of railway in Montana. The only other Class I railroad in the state, Union Pacific, operates a short but important north-south connection along 125 miles of track stretching from Silver Bow County to the Idaho border. Shortline companies include a single Class II Regional Railroad—the Dakota, Missouri Valley, and Western (DMVW)—operating 56 miles of track in northeastern Montana and connecting to Canadian Pacific and BNSF transfer points in North Dakota. Class III/local railroads operating in Montana include the Butte, Anaconda, and Pacific Railway (BAP) (29 miles); Central Montana Rail (89 miles); and Mission Mountain Railroad (24 miles). Montana Rail Link transferred operation of its freight services to BNSF in 2024, although it still retains ownership of a few branch lines not currently in operation.

BNSF is the largest single employer of rail workers in the state by a significant margin due to its large footprint in the state. Rail employment, recruitment, and retention trends in Montana will therefore rely heavily on the decision-making and strategic priorities set by a single company.

¹ U.S. Census Bureau, Montana. <https://data.census.gov/profile/Montana?g=040XX00US30#populations-and-people>

² U.S. Census Bureau, Population Density of the 50 States, the District of Columbia, and Puerto Rico: 1910-2020. <https://www2.census.gov/programs-surveys/decennial/2020/data/apportionment/population-density-data-table.pdf#:~:text=Density,626%2C932>

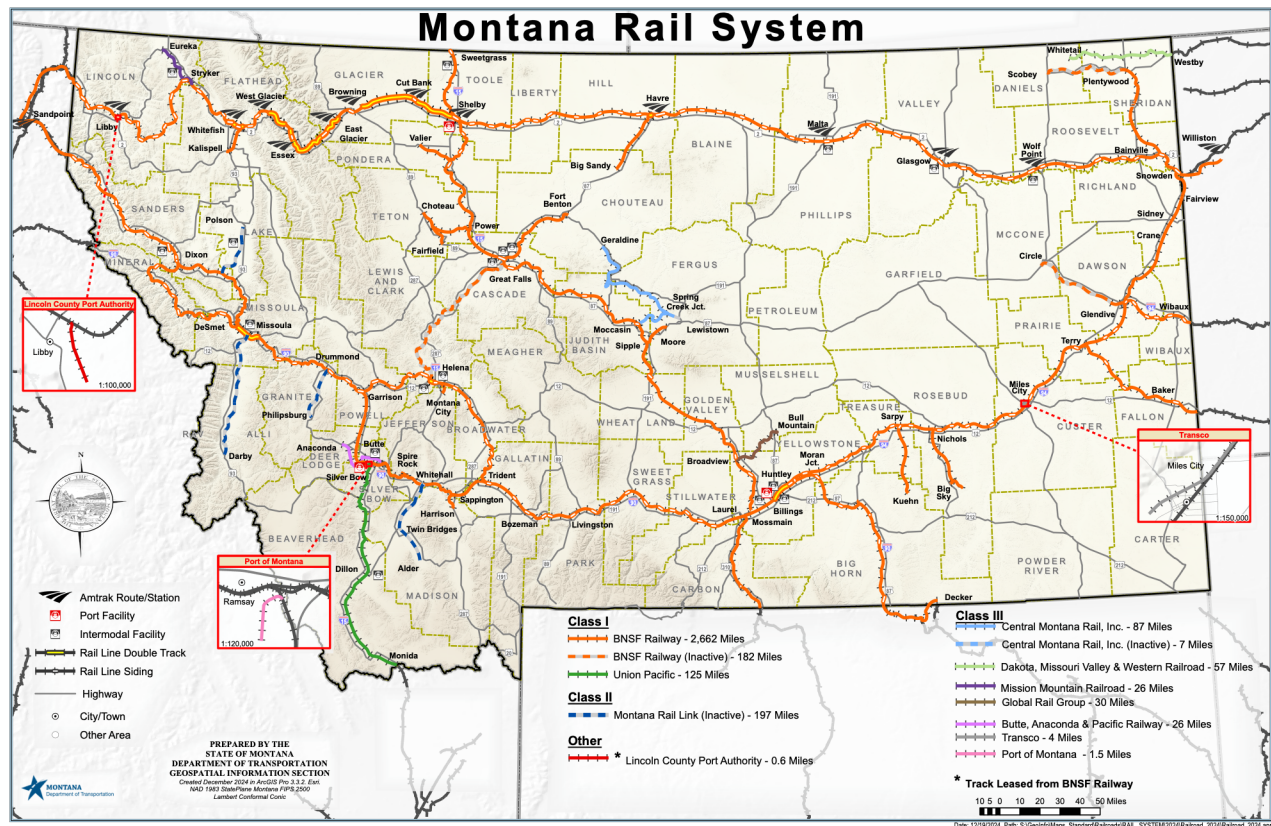


Figure 1: Montana Rail System map, produced by Montana Department of Transportation (Source: MDT)³

2.2. Passenger Rail Operations

Amtrak currently runs 15 long-distance service lines, which operate on host railroad tracks primarily owned by freight rail companies, although by statute Amtrak services have preference over freight transportation except in emergency situations.⁴ Ridership on the Empire Builder, Amtrak's long distance passenger line operating between Chicago and Seattle, increased by 20% between 2022 and 2025, and averaged over 350,000 passengers annually over the same period.⁵ The line runs through northern Montana, and the map above indicates the twelve stations serving Amtrak passengers between Libby in western Montana and Wolf Point in the east. An economic benefits assessment of the Empire Builder underscored the importance of the service for rural residents, its affordability as compared to Essential Air Service, as well as the direct

³ Montana Department of Transportation, accessed April 2026:

<https://www.mdt.mt.gov/other/webdata/external/planning/maps/railmap.pdf>

⁴ United States Department of Transportation, Federal Railroad Administration. Amtrak Daily Long-Distance Service Study Report to Congress. January 2025. <https://fralongdistancerailstudy.org/wp-content/uploads/2025/01/Amtrak-Daily-Long-Distance-Service-Study—Final-Report-2025.pdf>

⁵ Amtrak FY23 Ridership. <https://media.amtrak.com/wp-content/uploads/2023/11/Amtrak-Fiscal-Year-2023-Ridership.pdf>

⁶ Amtrak FY25 Ridership. <https://media.amtrak.com/wp-content/uploads/2025/11/FY25-Year-End-Ridership-Fact-Sheet.pdf>

spending and tax revenues it brings to the state.⁷ A more recent community engagement effort (2026) conducted by the Trillium Cooperative, with support from the Big Sky Passenger Rail Authority (BSPRA), highlighted residents' perceptions of the Empire Builder's passenger rail service as an essential transportation mode, providing critical access to healthcare, employment, education, family, and regional hubs while presenting a safer alternative to driving. The service is also seen as an important asset for bringing tourism and economic activity to communities along the corridor.⁸

2.3. Projected Trends

A coalition of rail advocates, state legislators, and public agency staff interested in returning passenger rail service to southern Montana spurred more detailed feasibility studies.⁹ The southern portion of the state was previously served by Amtrak's North Coast Hiawatha (NCH) route, which ran between Chicago and Seattle until 1979. Amtrak's North Coast Hiawatha Study Plan (2009) explored whether to reinstate passenger rail service along the route (or segments of the route).¹⁰ The study noted a portion of the discontinued line through Butte and Deer Lodge, Montana is no longer in service, requiring re-routing through Helena, Montana; and estimated costs for upgrading track, signals, and grade crossings at \$620 million to restore passenger service along the entire line. Additional expenditures would be required to restore stations, to acquire new locomotives and passenger cars, and to recruit, hire, and train the approximately 269 new Amtrak employees needed to service the restored route. The study estimated annual ridership at approximately 359,800 passengers, with higher-than-average farebox recovery compared to other long-distance routes. Expected public benefits resulting from restoration of passenger service along the NCH included expanded transportation options for communities along the route that have limited air service, economic benefits deriving from tourism and job creation, and environmental benefits resulting from the higher energy efficiency of rail travel as compared to other modes.¹¹

The Infrastructure Investment and Jobs Act (IIJA) of 2021 directed Amtrak to conduct a Daily Long-Distance Service Study to evaluate restoring daily intercity passenger rail service on discontinued routes or those offering less frequent service. The statute emphasized prioritizing routes that link and serve both large and small communities, advance the economic and social well-being of rural areas, enhance connectivity for the national network, and reflect local and regional support for restored passenger rail. The final report to Congress on the study identified

⁷ R.L. Banks & Associates, Inc. Analysis of the Economic Benefits of The Amtrak Empire Builder to Montana. July 2003.

⁸ Trillium Cooperative, Community Engagement Report: Hi-Line Corridor Communities. Final Report, January 2026.

<https://static1.squarespace.com/static/601b3c34aabc2212d364dd39/t/69b086474ae76b546a1a9dd7/1773176391870/BSPRA+Empire+Builder+Public+Engagement+Report+1.12.26+%282%29.pdf>

⁹ Cambridge Systematics, Inc. 2010 Montana State Rail Plan.

<https://www.mdt.mt.gov/other/webdata/external/Planning/508Archive/MSPM/railplan-archive-2026-03-20.pdf>

¹⁰ Amtrak. North Coast Hiawatha Passenger Rail Study. P.R.I.I.A. Section 224. October 16, 2009.

¹¹ Ibid.

fifteen preferred routes for restoration, which included restoration of passenger rail along the discontinued NCH route.¹² Expected public benefits from restored service on preferred routes identified in the study encompassed job creation and earnings, enhanced transportation access for people living on tribal lands and in areas of persistent poverty, increased passenger rail access for rural communities, and improved access to important destinations and services, including medical centers, education institutions, and National Park Service lands.¹³

In 2020, the BSPRA was established with the passage of a joint resolution by twelve Montana counties with the goal of creating a governance structure to lead the expansion and enhancement of passenger rail service in Montana. The Authority has governmental powers to develop and operate rail services under a Montana law enacted in 1993. BSPRA is the largest transportation district in the state and was accepted into FRA's Corridor ID Program in December 2023, which will facilitate acquisition of federal funding to support corridor systems planning and related work. BSPRA selected a team of consultants to begin work on a service development plan, and eventually to conduct the environmental analyses and engineering and design work necessary to restore passenger service along the former NCH route. BSPRA and its community partners are interested in enhancing rail workforce development efforts in tandem with the corridor systems planning process in preparation for the expansion of passenger rail services in the state.

3. Current Rail Workforce in Montana

3.1. Statewide Labor Market Conditions

Competition among industries for qualified workers in Montana is high. The Montana Department of Labor's *2025 Montana Labor Day Report* noted a record high number of Montanans employed (560,000), and tight labor market conditions, with record low unemployment numbers in 2024. Labor force participation rates continue to decline due to aging demographic trends; 25% of the state's population is over 65 years old. Beyond age, the report identifies lack of childcare access as a significant barrier to workforce participation. Licensed childcare capacity in the state is estimated to meet only 46% of demand.¹⁴

The rail network extends throughout the state and meeting workforce needs in low population areas can be especially challenging for rail companies. In Montana, population densities tend to be particularly low in the eastern half of the state, except for Yellowstone County where Billings, the state's largest city with a population just over 120,000, is located.

¹² United States Department of Transportation, Federal Railroad Administration. Amtrak Daily Long-Distance Service Study Report to Congress. January 2025. <https://fralongdistancerailstudy.org/wp-content/uploads/2025/01/Amtrak-Daily-Long-Distance-Service-Study---Final-Report-2025.pdf>

¹³ Ibid.

¹⁴ Montana Department of Labor & Industry, 2025 Montana Labor Day Report, September 2025. https://lmi.mt.gov/_docs/Publications/LMI-Pubs/Labor-Market-Publications/25_LaborDayReport_Final.pdf

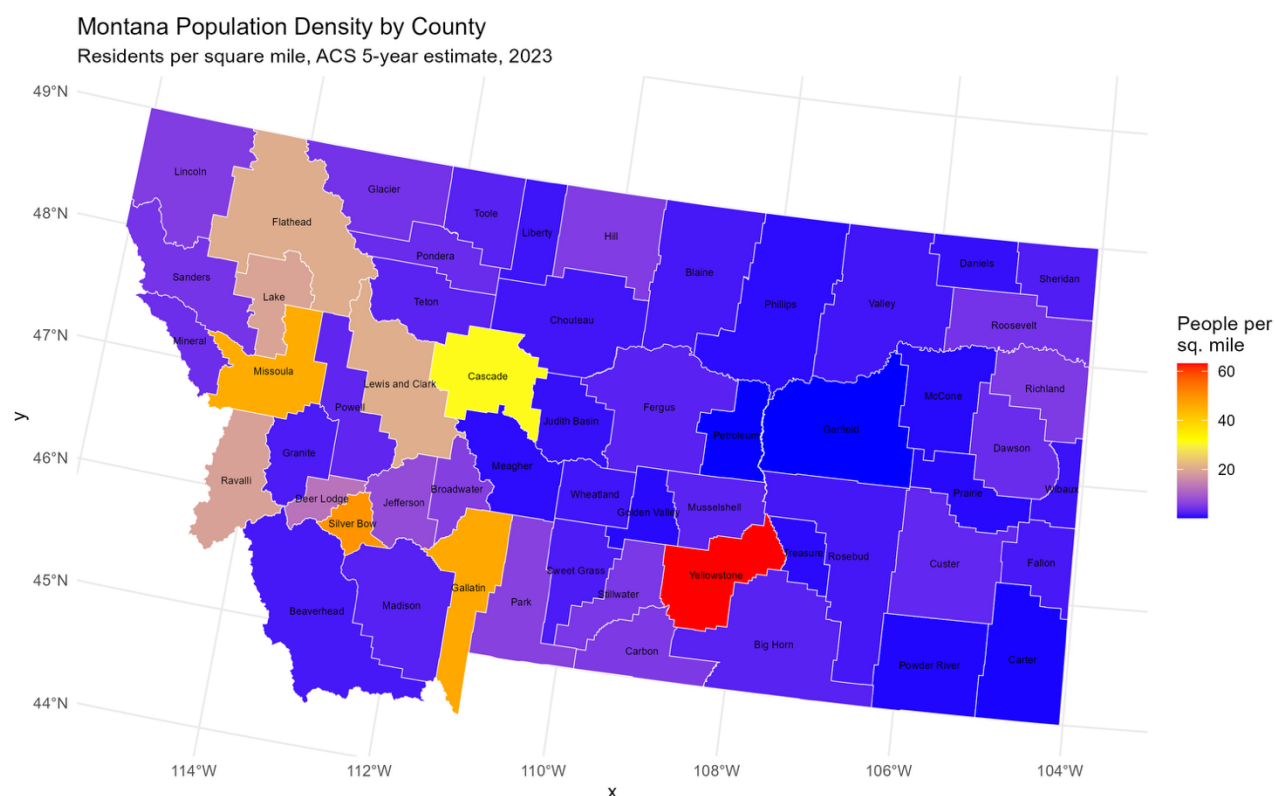


Figure 2: Montana Population Density by County (Source: U.S. Census Bureau, American Community Survey 2023)

The levels of educational attainment, median age, and employment rates also vary by county. Overall, Montana's level of educational attainment is comparable to the national average (36.3% of Montanans were college graduates in 2024, as compared to 38.3% nationally).¹⁵ However, there is substantial variation across counties, with higher attainment observed in more populated, urban and university-centered areas. The highest percentages of the population holding a bachelor's degree or higher are found in Gallatin County (location of Montana State University), Missoula County (location of University of Montana), and Lewis and Clark County (location of the state capital, Helena).

¹⁵ U.S. Census Bureau. 2025 Educational Attainment Data. <https://www.census.gov/newsroom/press-releases/2025/educational-attainment-data.html>

Montana County Bachelor's Degree or Higher
Population age 25+, ACS 5-year estimate, 2023

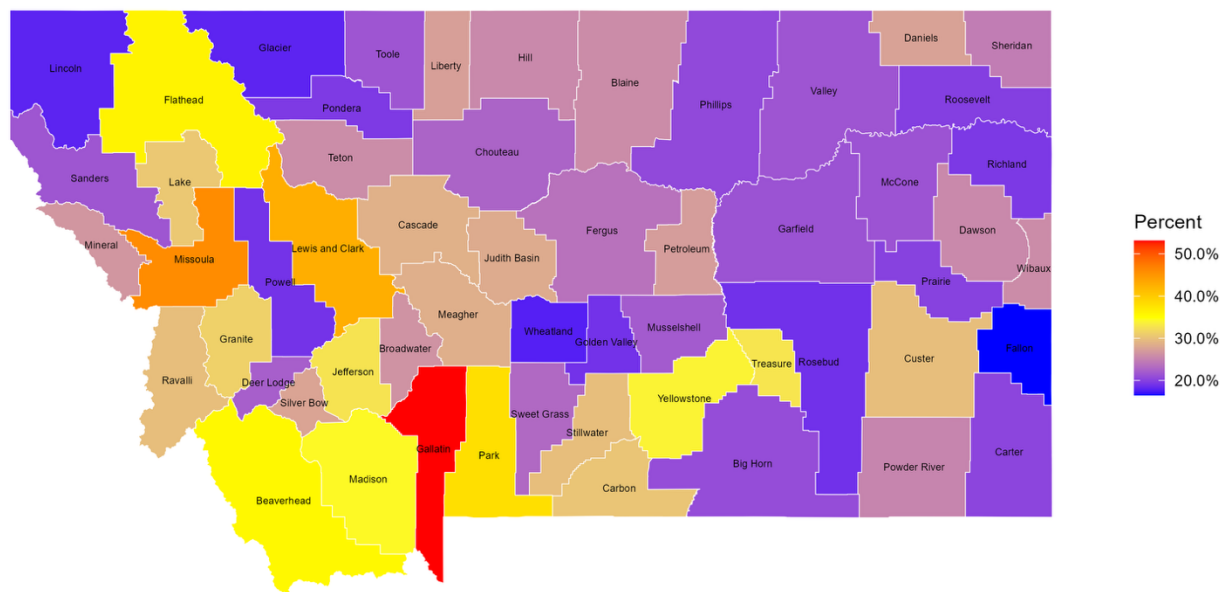


Figure 3: Educational Attainment by County (Bachelor's Degree or Higher) (Source: U.S. Census Bureau, American Community Survey 2023)

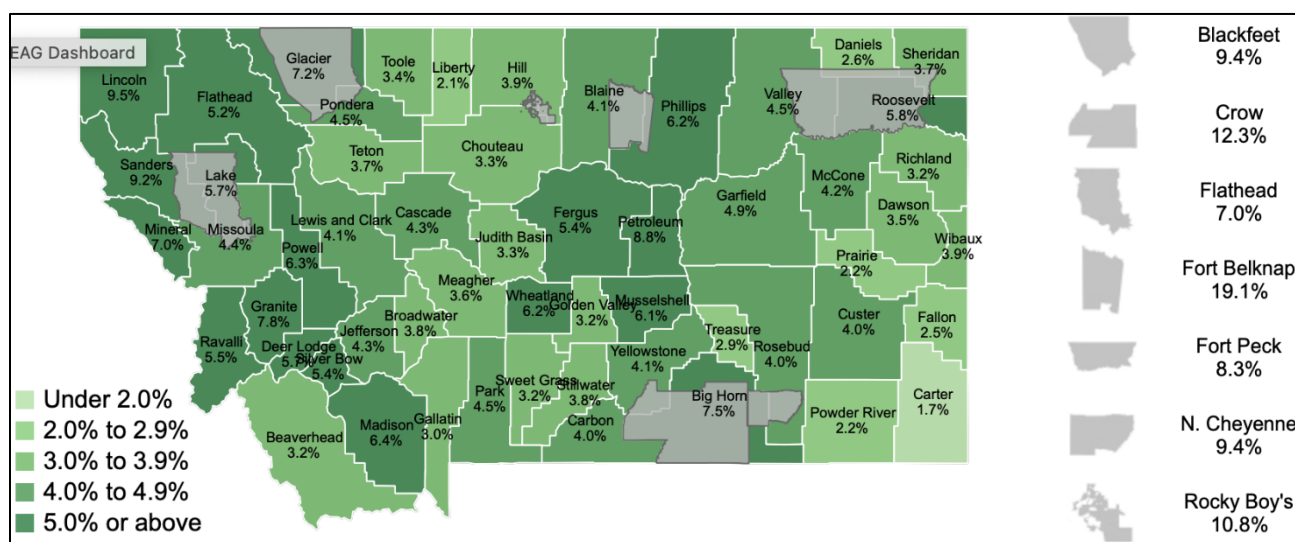
Labor force participation rates are expected to decline in Montana over the next ten years due to aging demographics. Without in-migration of younger populations, labor force participation will erode as older residents retire. While the state's population grew overall by 5.2% between 2020 and 2024, most in-migration was to the western portion of the state, with some counties in the north and east experiencing population loss.¹⁶

Seven American Indian reservations (Flathead, Blackfeet, Rocky Boy's, Fort Belknap, Fort Peck, Crow, and Northern Cheyenne) and eight federally recognized Native nations representing thirteen Tribes share Montana geography.¹⁷ Montana's Native American population is younger than the statewide median age at just 27.3 years old. American Indian reservations also consistently report higher unemployment rates, lower labor force participation, and lower median household incomes compared to statewide averages. Native American populations in Montana out-perform their counterparts elsewhere in high school completion rates (84.8% as compared to

¹⁶ Montana Department of Labor & Industry, 2025 Montana Labor Day Report, September 2025. https://lmi.mt.gov/_docs/Publications/LMI-Pubs/Labor-Market-Publications/25_LaborDayReport_Final.pdf

¹⁷ Holom, Nick. "Montana's Reservation Economies," February 2020. Montana Labor Market Information. https://lmi.mt.gov/_docs/Publications/EAG-Articles/0220-MontanasReservationEconomies.pdf

80% nationally) but have lower median household incomes than those found among Native American populations in other states.¹⁸ Unemployment rates vary between the different Montana reservations but are higher across the board when compared to regional and statewide unemployment rates. Unemployment rates in 2026 exceeded 9% on several reservations in the northern part of the state (Blackfeet, 9.4%; Rocky Boy's, 10.8%; and Fort Belknap, 19.1%) and in the southern part of the state (Crow, 12.3%; Northern Cheyenne, 9.4%) as compared to a statewide unadjusted unemployment rate of 4.5%.¹⁹



- Installation, Maintenance, and Repair Occupations (49-0000)
- Transportation and Material Moving Occupations (53-0000)

Overall, Montana employs approximately 2,500 people in the rail industry. Due to the small numbers of employees in some occupations and the dominance of one employer, BLS data suppresses some data on specific occupations if anonymity of the data cannot be guaranteed. As a result, some occupational data is available only under more general categories (e.g., Management Occupations), rather than by specific occupation title (e.g., Locomotive Engineers), and employment totals in rail do not completely add up to individual line items. The top named occupations in Montana from BLS data for the rail industry are: Locomotive Engineers, Rail-Tracking Laying and Maintenance Equipment Operators, Railroad Conductors and Yardmasters, and First-line Supervisors of Transportation and Material Moving Workers.

Location quotient (LQ) measures the share of a specific occupation in the state compared to the share of that occupation nationally. An LQ greater than one indicates above-average concentrations. BLS data reveals Montana to be highly specialized in Locomotive Engineers (LQ=9) and Rail-Track Laying and Maintenance Equipment Operators (LQ=2.7).

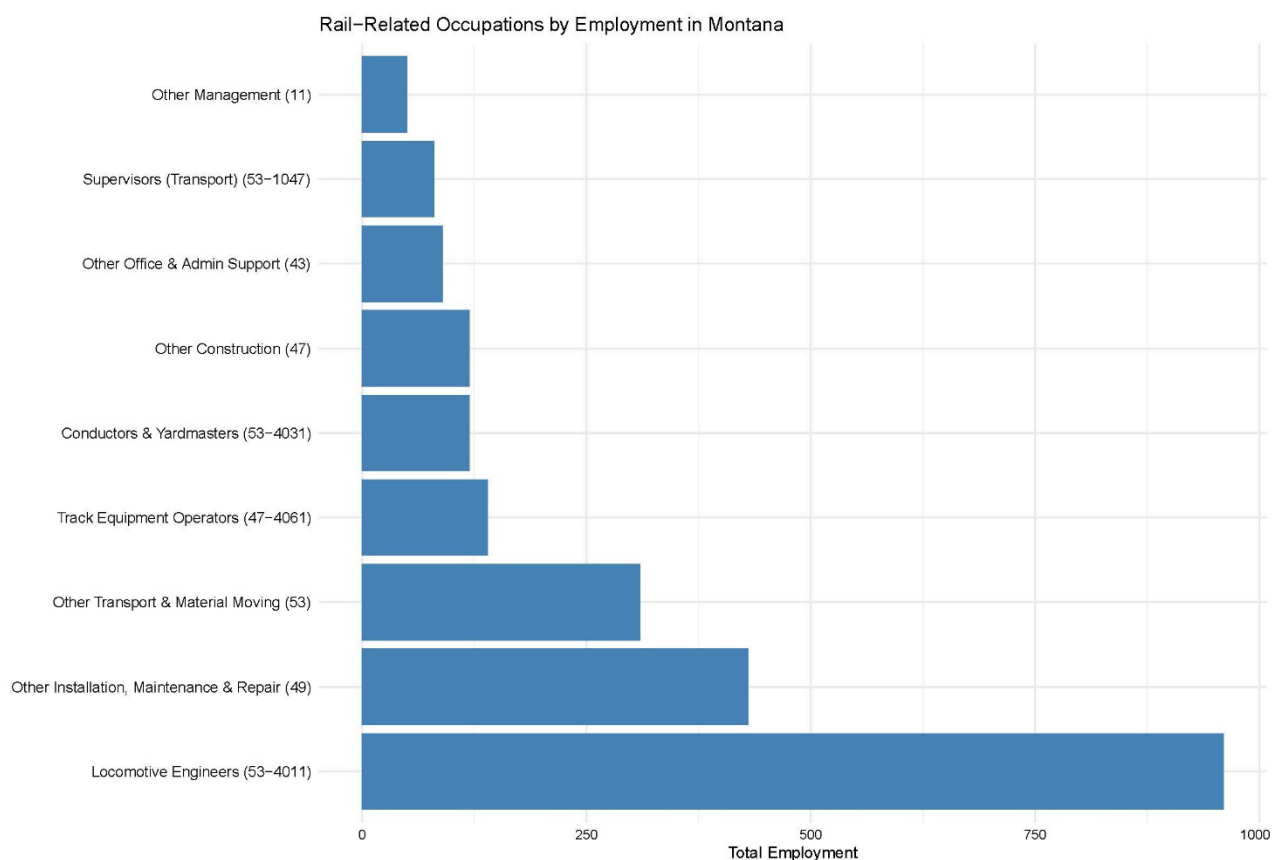


Figure 5: Top Occupational Classifications for Rail Jobs in Montana (Source: BLS OES 2023)

For rail occupations identified in BLS data for the state of Montana, most do not require preparatory education beyond a high school diploma. Specialized training is typically offered

post-hire by the employer or in cooperation with union or other specialized rail training centers. Jobs in the rail industry therefore offer attractive opportunities for higher paying jobs without attaining a degree in higher education. The average annual wage in Montana was just over \$60,000 in 2024, while the lowest mean annual wage for a rail occupation in the state was over \$67,000, and the mean annual wage for all rail occupations in Montana was over \$81,000.

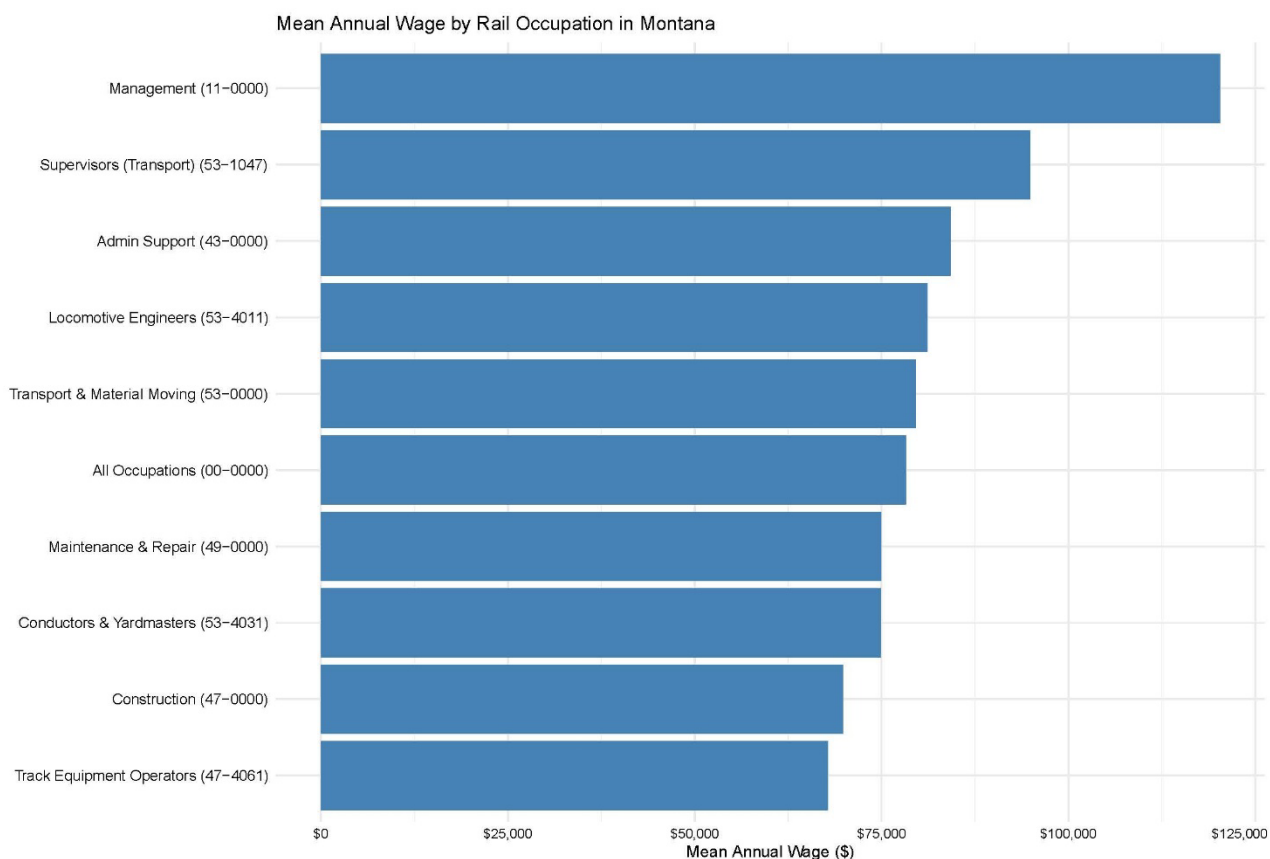


Figure 6: Mean Annual Wage for Rail Occupations in Montana (Source: BLS OES 2023)

When considering the rail workforce, it is important to note that many employees who work on rail projects will not necessarily be incorporated into BLS employment data under the rail industry. This is particularly true of engineering, data, computing, technology, and planning personnel, who may apply their skillsets to a broad range of industries and projects. Industry-spanning occupations may generate more competition from diverse employers or contractors; at the same time, it may be difficult for rail employers to identify potential employees, consultants, or firms offering specific rail knowledge and expertise. There is also considerable overlap between freight trucking, supply chain logistics and other transportation support industries, transportation infrastructure construction activities, and rail. Workers in related transportation industries could benefit from a greater understanding of the rail industry. The figure below provides a snapshot of employment trends over the past twelve years in Montana for interconnected transportation industries. Rail employment in the state has trended downward over time and little growth in hiring is expected over the next ten years according to labor statistic

projections.²¹

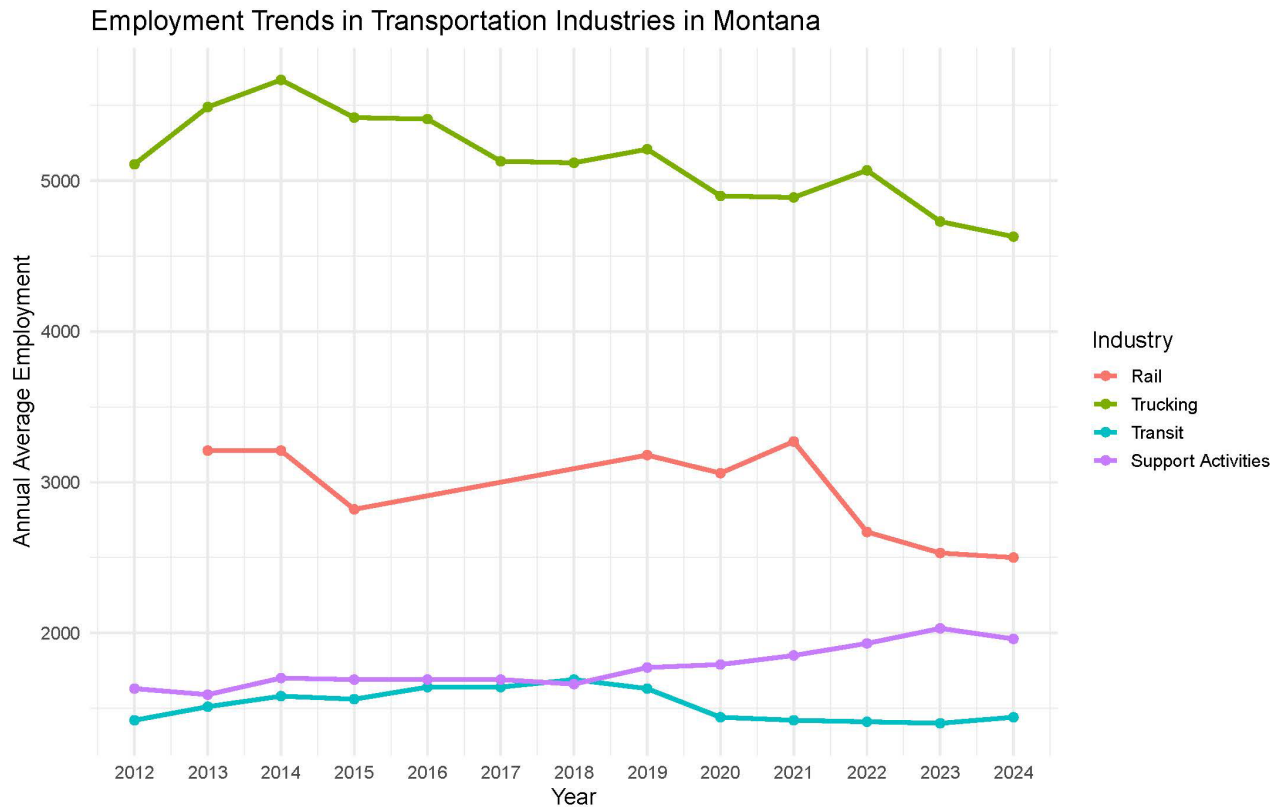


Figure 7: Employment Trends for Transportation Industries in Montana

Although rail employment is not available at the county level in Montana due to data suppression, employment in transportation and warehousing occupations can be used as a proxy to indicate where above median transportation employment aligns with rail infrastructure. The figure below highlights “opportunity zones” for targeting potential rail workforce development activities in the state.

²¹ U.S. Bureau of Labor Statistics, OES (2023)

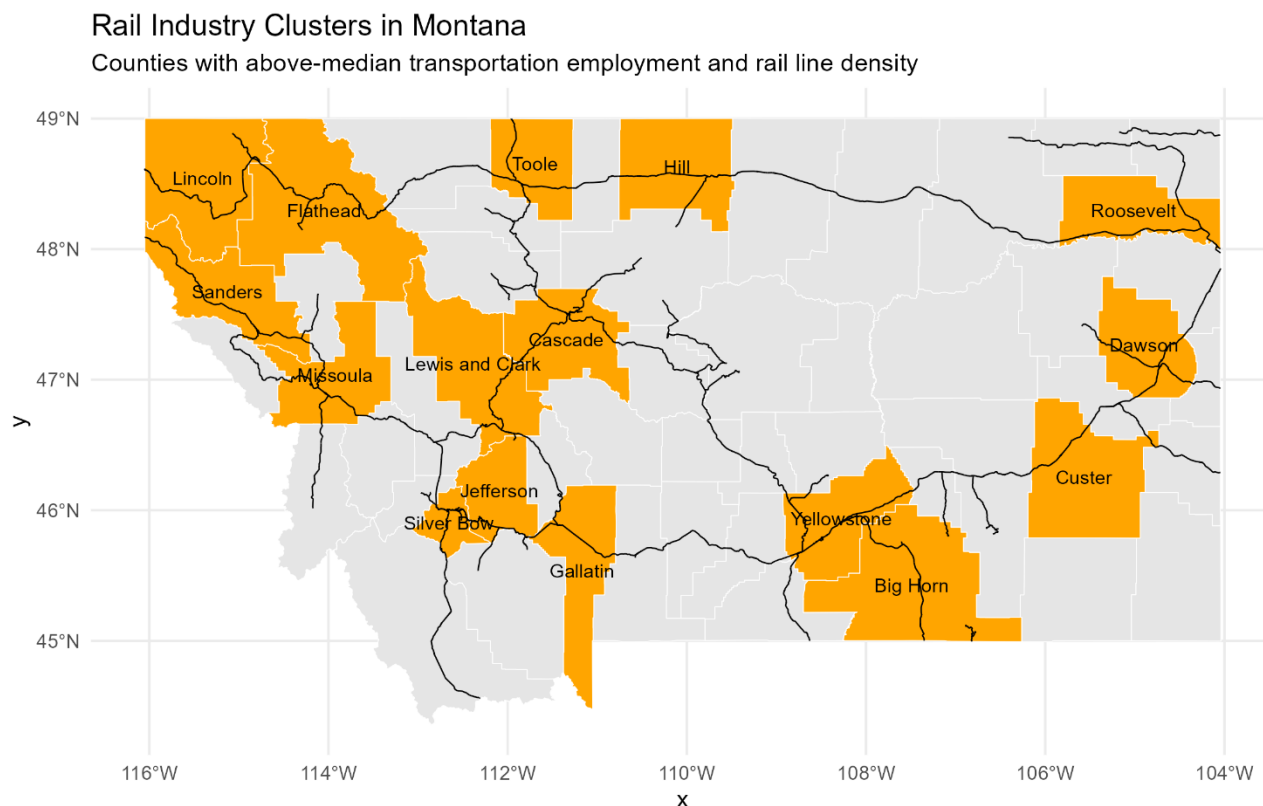


Figure 8: Rail Industry Workforce Opportunity Zones (Source: U.S. Census Bureau, County Business Patterns 2022-23)

4. Emerging Industry Workforce Needs

While recent trends have minimized crew members on trains, industry stakeholders indicate that this trend has reached its apex and further reductions are unlikely. Locomotive engineers, conductors, maintenance-of-way, yard masters, and other on-the-ground staff will continue to be needed to operate freight and passenger rail services. Recent advances in train signaling and automation will require workers with additional electrical and computer systems knowledge and skillsets than previous hires required. The main challenge for rail companies will be in cultivating local talent pools in geographically remote/rural areas to maintain and operate rail infrastructure and assets.

Increasing freight rail traffic through Montana raises issues related to track congestion and bottleneck points, as well as rail crossing safety. The extensive rail network through a northern state prone to extreme weather also heightens the need for effective inspection, maintenance, and repair systems and staffing to be in place to ensure that rail lines and cars remain in safe operating condition; and track or car defects are quickly identified and fixed. Plans for expansion of passenger rail services in the state will exacerbate these issues as more railcars move over shared

rail lines, increasing congestion.

Addressing these challenges requires a multidisciplinary workforce with understanding of rail systems. Specialties as diverse as systems optimization, light detection and ranging (LiDAR) and optical systems, cybersecurity, diesel mechanics, human factors engineering, electrical and computer systems maintenance, community engagement, bridge underwater inspections, and environmental remediation can all play a role in achieving safe, sustainable, and efficient rail operations. The corridor systems planning process is underway to explore passenger rail expansion in the state. It will require planning, engineering, design, environmental, and related professionals with rail-focused expertise to achieve project implementation.

5. Education and Training Sources

5.1. Overview of Montana's Public Education System

5.1.1. K-12, Elementary, Secondary

Most K-12 schools in the state are small, enrolling less than 100 students in rural communities, with large schools (over 500 students) clustered in the cities of Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula. According to the Montana Office of Public Instruction (OPI), there were just under 143,00 students enrolled for the 2025-2026 school year²² in 680 public schools across the state's 56 counties – elementary, middle, high school, and K-12 combined.²³

The approximately 400 school districts in Montana have “free will = local control” and each have their own priorities, goals, and values. The Montana OPI provides technical assistance for teaching and learning standards, teacher certification and licensing, as well as school accreditation for K-12 education. The office administers federal funding programs and operates and maintains the necessary information systems for measuring and assessing student achievement and school quality.²⁴ The Montana OPI is led by an elected Superintendent of Public Instruction and administers professional development and adult education programs, including teacher licensure.

5.1.2. Post-Secondary Education

Public post-secondary education in Montana enrolls over 40,000 students at 16 colleges and universities and seven tribal colleges.²⁵ As the state's system of public colleges and universities, the Montana University System (MUS) is led by the Montana Board of Regents, a seven-member board appointed by the Governor. Ex-officio members include the Governor, the Superintendent of Public Instruction, and the Commissioner of Higher Education. The Office of the Commissioner

²² “School & District Data, Enrollment, GEMS Interactive Dashboard,” *Montana Office of Public Instruction*, n.d., accessed March 19, 2026, <https://gems.opi.mt.gov/school-district-data>.

²³ “Education Facts and Statistics,” *Montana Department of Commerce*, February 2, 2026, accessed March 19, 2026, https://montanakids.com/facts_and_figures/education/Education_Facts_and_Statistics.htm.

²⁴ Montana Office of Public Instruction, n.d., accessed March 19, 2026, <https://opi.mt.gov/>.

²⁵ Montana University System, n.d., accessed March 23, 2026, <https://mus.edu/>.

of Higher Education (OCHE) is the administrative unit for the MUS, providing strategic direction and budget coordination.²⁶

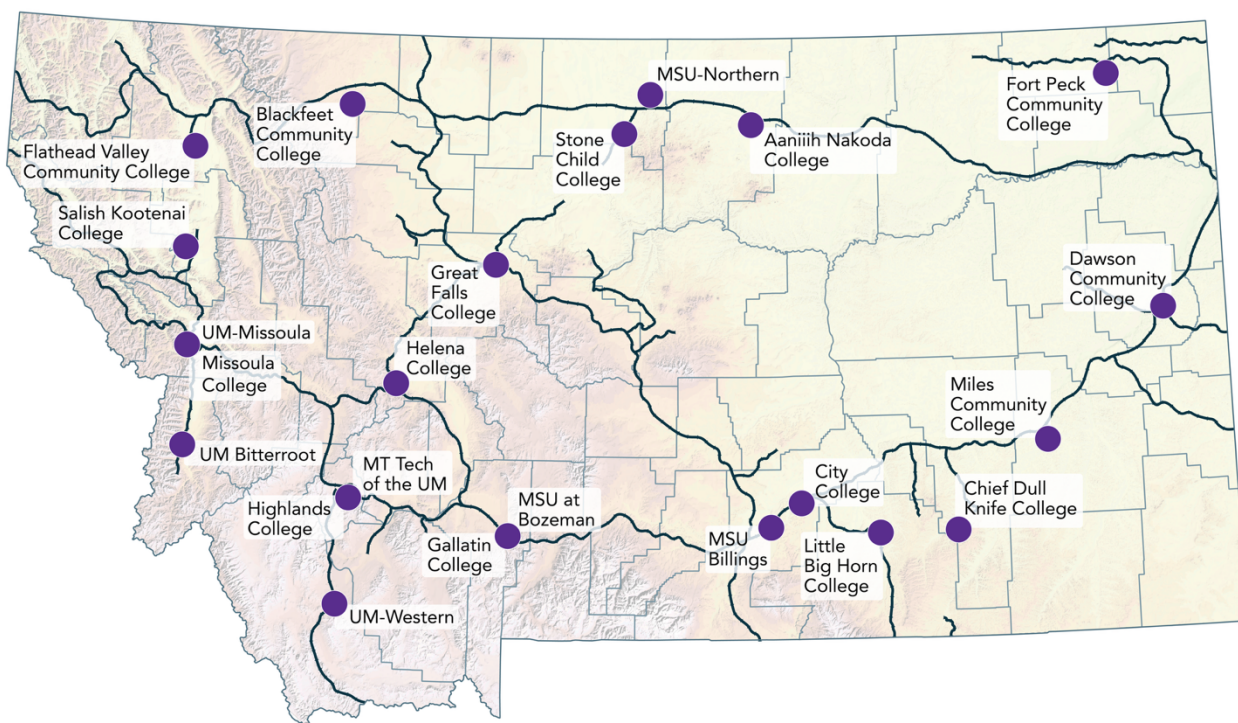


Figure 9: Location of Montana's Colleges and Universities

The MUS is organized under the two public flagship universities – Montana State University (MSU) and the University of Montana (UM) – and encompasses a system of Community Colleges (CC) and Tribal Colleges. MSU is the state's land grant institution, with colleges of agriculture and engineering, MSU Extension, and the Montana Agricultural Experiment Stations. The University of Montana includes a college of forestry and conservation, advanced health programs in pharmacy and physical therapy, and a school of law. The tables identify the organizational clusters for the MUS.

Table 1. MUS, Montana State University

Name	Type	Location
Montana State University, Bozeman	Public 4-Year University	Bozeman
Gallatin College MSU	Public 2-Year College	Bozeman
Montana State University – Billings	Public 4-Year University	Billings
City College at MSU Billings	Public 2-Year College	Billings

²⁶ “Office of the Commissioner of Higher Education, About Us,” *Montana University System*, n.d., accessed March 23, 2026, <https://mus.edu/che/>.

Montana State University - Northern	Public 4-Year University	Havre
Great Falls College MSU	Public 2-Year College	Great Falls

Table 2: MUS, University of Montana

Name	Type	Location
University of Montana, Missoula	Public 4-Year University	Missoula
Missoula College UM	Public 2-Year College	Missoula
Bitterroot College	Public 2-Year College	Hamilton
Montana Technological University	Public 4-Year University	Butte
Highlands College of MT Tech	Public 2-Year College	Butte
University of Montana – Western	Public 4-Year University	Dillon
Helena college UM	Public 2-Year College	Helena

Table 3. MUS, Community Colleges

Name	Type	Location
Dawson Community College	Community College	Glendive
Flathead Valley Community College	Community College	Kalispell
Miles Community College	Community College	Miles City

Table 4. Tribal Colleges in Montana

Name	Location
Aaniih Nakoda College	Harlem, Fort Belknap Reservation
Blackfeet Community College	Browning, Blackfeet Reservation
Chief Dull Knife College	Lame Deer, Northern Cheyenne Reservation
Fort Peck Community College	Poplar, Fort Peck Reservation
Little Big Horn College	Crow Agency, Crow Reservation
Salish Kootenai College	Pablo, Flathead Reservation
Stone Child College	Box Elder, Rocky Boy's Reservation

The State of Montana is unique in having seven independent tribal colleges (established between 1974 and 1984), which provide post-secondary educational opportunities on each of Montana's

seven American Indian reservations. Tribal Colleges and Universities were developed for “*tribes to uphold and integrate culture and tradition into their educational institutions, sharing a mission of tribal “self-determination” and service to their communities.*”²⁷

5.2. Education and Training

5.2.1. Career and Technical Education

Montana has robust career and technical education (CTE) programs across the state, typically offered at the middle and high school levels. The Association for Career and Technical Education (ACTE) predicted that 34% of Montana jobs in 2031 will require post-secondary education less than a bachelor’s degree. There were 36,586 Montana secondary students enrolled in CTE during the 2022-2023 school year. CTE aims to provide students with both academic, technical, job-specific and employability skills, and many of these programs include an intra-curricular or corresponding career and technical student organization (CTSO), which provides opportunities for further skill development. It is important to note that not all schools are able to offer courses and programs in the many different CTE and career pathways. As might be expected, larger schools with more resources can offer most of the different CTE programs, while smaller schools may offer one or two programs or find content overlap.

CTE programs, curriculum design, and instruction are organized around the National Career Clusters® Framework, first released in 2001 by Advance CTE through a United States Department of Education, Office of Vocational and Adult Education grant. In 2024, the Framework design was modernized and validated with the support of numerous Industry Advisory Groups and representatives to “serve as a bridge between learning and work.”²⁸ As an early adopter, Montana first rolled out the updated Framework in the fall of 2025. Local programs are currently working with their Advisory Committees, industry partners, and CTE specialists to assess and align programs with the career clusters and career pathways.

5.2.2. Post Secondary Training and Education

Montana’s colleges and universities offer programs, degrees, and certifications in a wide variety of subjects that are relevant to the rail industry, industries serving rail, and sectors interacting with, or adjacent to rail. These include bachelor’s and advanced degrees, associate’s degrees, and certificates requiring various hours of study and practice.²⁹

²⁷ Education USA, Tribal Colleges and Universities:

https://educationusa.state.gov/sites/default/files/field_resource_file/tribal_colleges_and_university_information_sheet_final_1_0.pdf

²⁸ “The National Career Clusters® Framework,” *Advance CTE*, 2023, accessed March 24, 2026,

<https://careertech.org/what-we-do/initiatives/national-career-clusters-framework/>.

²⁹ “Program Finder,” *ApplyMontana, Montana University System*, 2026, accessed February 2026,

<https://applymontana.mus.edu/colleges/programs-and-degrees/program-finder.html>.

5.2.2.1. *Engineering and Mathematics*

Engineering and engineering technology degrees are offered at MSU Bozeman, MSU Northern, and Montana Technological University (Montana Tech). An Associate of Science (A.S.) degree in Pre-Engineering can be earned at several community and tribal colleges that have articulation agreements in place for transfer to 4-year engineering degree programs in the state. Helena College has organized “Jumpstart Pathways,” which guide students through options for smooth transfer between 2-year to 4-year institutions and degree programs. At Highlands College, students can earn an Associates of Applied Science (A.A.S.) degree in Civil Engineering Technology or a Certificate of Applied Science (C.A.S.) in Engineering Technology both of which can lead to professional engineering technician careers. The array of post-secondary programs in engineering and mathematics is outlined in the table.

Table 5. Montana Post-Secondary Engineering and Mathematics Programs

Topic / Program	Credentials & Degrees	Number of Programs in Montana
Civil Engineering, Civil Engineering Technology	A.A.S., B.S., M.S., PhD, Jumpstart Pathway	5
Computer or Software Engineering	B.S., PhD, Minor	2
Construction Engineering, Technology	B.S.	1
Electrical Engineering	B.S., M.S., PhD, Minor	2
Industrial and Management Systems Engineering	B.S., M.S., PhD	1
Mechanical Engineering, Mechanical Engineering Technology	B.S., M.S., PhD	2
Metallurgical & Materials Engineering	B.S.	1
Materials Science and Engineering	M.S.	1
General Engineering, Pre-Engineering, Engineering Track/Transfer	C.A.S., A.S., Jumpstart Pathway	9
Engineering Management	Minor	1
Mathematics and Statistics	A.S., B.S., M.S., PhD., Minor, Jumpstart Pathway	11

5.2.2.2. *Diesel Technology and Mechanics*

MSU Northern is well-known for its comprehensive Diesel Technology programs. The school offers bachelor’s degrees in Diesel Technology, Diesel Technology: Equipment Management, and Diesel Technology: Field Maintenance. Alternatively, students can earn an Associate’s degree or

a Certificate in Diesel Technology. Associate's degrees and Certificates can also be earned at City College, Helena College, and Missoula College.

Table 6. Montana Post-Secondary Diesel Technology and Mechanics Programs

Topic / Program	Credentials & Degrees	Number of Programs in Montana
Diesel Technology	C.A.S., A.A.S., B.S.	4
Diesel Technology: Equipment Management	B.S.	1
Diesel Technology: Field Maintenance	B.S.	1

5.2.2.3. Welding and Fabrication

Welding programs for degrees or certifications are spread across the MUS. Certificates at various levels can be earned at a variety of schools across the state. Montana Technological University gives students an opportunity to earn a Master's Degree in General Engineering with a welding concentration. Non-credit courses in welding can be taken at City College.

Table 7: Montana Post-Secondary Welding and Fabrication Programs

Topic / Program	Credentials & Degrees	Number of Programs in Montana
Welding Technology	C.A.S., C.T.S., A.A.S.	6
Welding	Certificate, Non-credit courses	1
Welding & Metal Fabrication	C.A.S., C.T.S., A.A.S.	4
Welding Engineering	M.S.	1
Welding Technician	C.T.S., C.A.S.	1

5.2.2.4. Metals, Machining, Drafting, and Instrumentation

Four colleges provide training and degrees or certificates in metal working technology and precision metal machining. In addition, students have unique opportunities in manufacturing technology, including specializations in Photonics and Laser Technology and Process Plant Technology. Programs are also offered in Building Information Modeling and Computer Aided Drafting and Design.

Table 8. Post-Secondary Programs in Metals, Machining, Drafting, and Instrumentation

Topic / Program	Credentials & Degrees	Number of Programs in Montana
Metals Technology,	A.A.S.	2

Topic / Program	Credentials & Degrees	Number of Programs in Montana
Manufacturing		
CNC Machining	C.A.S., A.A.S.	2
Manual Machining	C.A.S.	1
Precision Machining Technology	C.A.S., A.A.S.	1
Industrial Machine Technology	C.A.S., A.A.S.	1
Design Drafting Technology	A.A.S.	1
CNC Robotic Tending	C.T.S.	1
Drafting and CAD Technology	C.A.S., A.A.S.	2
Photonics and Laser Technology	A.A.S.	1
Process Plant Technology	A.A.S.	1
Instrument and Electrical Technician	A.A.S.	1
Building Information Modeling	C.A.S.	1

5.2.2.5. *Heavy Equipment*

Several of Montana's key industries involve the use of heavy equipment in some capacity. Missoula College provides training and the opportunity to earn a Certificate of Applied Science in Heavy Equipment Operation. Through its Trades Institute, Flathead Valley CC offers coursework and training to earn a Heavy Equipment Operator Certificate of Technical Studies (C.T.S.). Salish Kootenai College also offers workforce development training for heavy equipment operations. As noted above, students at MSU Northern can opt into an Equipment Management focus as part of a B.S. degree in Diesel Technology.

5.2.2.6. *Data, Information Technology, Cybersecurity, Networks*

Education opportunities in computer and data science and fields related to information technology, i.e., networking, cybersecurity, etc., are spread across Montana's post-secondary education system with most colleges and universities offering relevant coursework. Students can earn certificates up to doctorate degrees. Some examples of available programs and credentials include:

- Certificate, PC Maintenance Assistant
- Certificate of Completion, Computer Programming
- C.T.S., IT Cybersecurity Information Assurance
- C.A.S., Information Technology
- A.A.S., Computer Programming and Application Development

- A.S., Computer Technology Management
- A.S., Computer Science – Transfer Track
- Baccalaureate Certificate, Big Data Analytics
- B.S., Cybersecurity and Network Administration
- B.S., Computer Science, Computer Engineering
- Post-Baccalaureate Certificate, Data Visualization
- B.S., M.S., Data Science
- M.S., Computer Science
- M.S. Cybersecurity
- Doctorate, Computer Science, Computer Engineering

MSU's new master's program in Cybersecurity is accredited by the Centers of Academic Excellence and the National Security Agency and provides students with the opportunity to conduct research at the MSU Software Engineering and Cybersecurity laboratory. MSU additionally offers a 12-credit Artificial Intelligence (AI) graduate certificate. The Electrical and Computer Engineering program at MSU offers an undergraduate minor in Optics, and a research-focused master's degree in Optics and Photonics, preparing students for jobs in laser and detection system engineering and remote sensing.

5.2.2.7. Other Related Degrees and Training

There are several other training and education opportunities through the MUS that could extend to transportation and the rail industry workforce. Occupational safety, tourism and hospitality, geographic information systems (GIS), general construction, and commercial transportation are examples of alternative fields that may offer potential pipelines into rail or provide touchpoints with the rail industry that require familiarity and knowledge of rail. Montana has a selection of educational opportunities in these fields as listed below.

- Geospatial Science, GIS
 - Workforce Certificate (WFC), Geospatial Science
 - A.S., Natural Resource / Geospatial Technology
 - B.S., Earth Sciences, GIS/Planning
 - M.S., Geography, Community and Environmental Planning
- Occupational safety and health
 - B.S., Occupational Safety and Health
 - Occupational Safety and Health Administration (OSHA) 30 for Construction
 - OSHA Training Courses
- Construction and building
 - Construction Work Exploration and Training Program, Micro-credential
 - B.A.S., Trades Management
 - C.T.S., Electrical Apprentice

- A.A.S., Electronics Technician
 - A.A.S., Electrical Technology
- Commercial transportation
 - Undergraduate and graduate certificates, Logistics and Supply Chain Management
 - Commercial Drivers Licensure
 - Basic Transportation Entrepreneurship
 - Automotive technology and maintenance
- Hospitality and tourism
 - C.A.S., Hospitality
 - B.S., Hospitality Management
 - Lodging and Facilities Management
 - A.S., A.A., B.A., B.S., Forestry, Parks, Tourism, and Recreation
 - C.A.S., Customer Relations

6. Local Career Pathways

Montana has many initiatives and programs designed for career readiness and workforce development. Students can take a Career Interest Quiz at ApplyMontana³⁰ to find a Montana Career Pathway of interest among the 17 pathways currently developed by the state (expected to grow to 32 in the near future). Each pathway is designed to help students explore and navigate different career opportunities and outlines the various levels of education and/or training required, and provides example job titles, average salaries, and job growth projections.³¹ Options for high school courses, college majors, work based learning, and potential careers are listed along with dual enrollment options. The statewide initiative is unified and aligns with all MUS colleges and universities.

Examples of relevant pathways include:

- Air, Space, Ground and Marine Transportation – includes rail transportation³²
- Skilled Trades - Welding and Fabrication
- Engineering and Advance Manufacturing
- Skilled Trades – Construction and Heavy Equipment
- IT Supports, Network Systems and Cyber Security
- Data and Computer Science
- Travel and Event Management

³⁰ Apply Montana: <https://applymontana.mus.edu/>

³¹ “About Montana Career Pathways,” *Montana Office of Public Instruction, Career and Technical Education*, n.d., accessed March 20, 2026, <https://opi.mt.gov/Educators/Teaching-Learning/Career-Technical-Education/About-Montana-Career-Pathways>.

³² “Career Pathways,” *ApplyMontana, Montana University System*, 2026, accessed March 20, 2026, <https://applymontana.mus.edu/careers/career-roadmap/career-pathways/index.html>.

The MUS Dual Enrollment program, dubbed One-Two-Free, allows high school students to earn college credit at no-cost during high school. There were 6,578 Montana students participating in Dual Enrollment during the 2021-2022 school year.³³

6.1. Work-based Learning Collaborative

The Montana Work-based Learning Collaborative (WBLC) was established in 2021 as a “collective impact initiative” consisting of a variety of public and private sector organizations, all with a stake in work-based learning opportunities.³⁴ The organizations in the WBLC include Montana K-12 and post-secondary education, youth organizations, professional organizations, representatives for the public workforce system, and other groups with related missions and goals. The WBLC aims to bring together students, educators, and businesses to foster career experience and facilitate workforce development.³⁵

The WBLC is operated by Reach Higher Montana, a state-wide organization “*Helping Montana students make plans for life after high school, including work-based learning, college, or the workforce – and many options in between.*”³⁶ Reach Higher Montana works with students, schools, teachers and educators to encourage and facilitate student planning for post high school. This includes career/future planning and exploration tools, as well as options for paying for school. Certified Career Service Providers (CCSP) are assigned to smaller schools organized by region.³⁷

The WBLC has compiled resources for employers to help facilitate work-based learning (WBL). For example, employers can access a WBL Toolkit for Employers, quick start guides for participating in career fairs, being a guest speaker, job shadowing, or worksite tours, and concise fact sheets that explain differences between internships, apprenticeships, and paid or unpaid employees.³⁸ Information on Montana’s workforce system, Montana’s child labor laws, and Montana’s apprenticeship programs, including plans and design guidelines, are also available.

6.1.1. Student Internships

Student internships are one of the ways the WBLC is building Montana’s workforce. Student internships can be paid or unpaid, and/or students may be able to earn school credit for the work-based learning opportunity. The WBLC is one group making connections between employers and

³³ “Dual Enrollment,” *ApplyMontana, Montana University System*, 2026, accessed March 20, 2026, <https://applymontana.mus.edu/prepare/student-success-programs/dual-enrollment/index.html>.

³⁴ “Montana Work-based Learning Collaborative”

³⁵ Ibid.

³⁶ “Reach Higher Montana,” *Reach Higher Montana*, 2026, accessed March 31, 2026, <https://reachhighermontana.org/>.

³⁷ “Priority High Schools by Region,” *Reach Higher Montana*, February 2026, available at: [RHM_Priority_Schools_by_region_8-25.pdf](https://reachhighermontana.org/application/files/3117/7153/3282/RHM_Priority_Schools_by_region_8-25.pdf)
https://reachhighermontana.org/application/files/3117/7153/3282/RHM_Priority_Schools_by_region_8-25.pdf.

³⁸ Work-based Learning Toolkit, available at: <https://wblmt.org/application/files/1917/2477/6253/WBLMT-Toolkit-Employer.pdf>

schools to help facilitate these types of opportunities.

6.1.2. Teacher Externships

Through the WBLC, industry and education partnerships are developing Teacher Externships to put classroom teachers directly into Montana businesses around the state. Teachers spend three days at a job site. Teachers can then enhance their classroom instruction with real-world experiences and skills and facilitate additional WBL opportunities in their communities.

6.2. Future Ready, STARS

Montana's 2025 State Legislature passed House Bill (HB) 252, the Student and Teacher Advancement for Results and Success Act, known as STARS. This act modified the school funding formula and included provisions to enhance post-high school graduation success by incentivizing schools. Dubbed Future Ready Incentive Funding, the STARS Act and Future Ready provisions are being implemented by Montana's OPI, Montana OCHE, and the Montana Department of Labor and Industry.³⁹

One of the priorities of the statewide 406 JOBS initiative discussed in a subsequent section is to develop a comprehensive list of industry recognized credentials that high school students can earn through CTE and WBL programs. These credentials can translate into school funding by rewarding schools for offering direct career pathways.⁴⁰ Schools can receive funding based on student achievements as follows:

- Dual enrollments (i.e., courses earning both high school and college) or enrollments in early college courses (including AP courses).
- Earning Industry-Recognized Credentials.
- Successful completion of an WBL course that is part of an approved CTE program.
- Earning an Associate's Degree before graduation.

As an example, the Bozeman School District is approaching this potential funding stream as an opportunity to enhance CTE and dual credit courses to best prepare graduates for the fast-changing workforce. They are collaborating with local Gallatin College and MSU Bozeman, other MUS schools, the Montana Department of Labor, and other stakeholders to adapt and update current coursework/programs and to consider the addition of new opportunities.⁴¹

6.3. Montana Year-to-Career Initiative

The Montana Year-to-Career Initiative is a workforce development effort led by the Education

³⁹ "STARS Information," *Montana Office of Public Instruction*, n.d., accessed April 2, 2026, <https://opi.mt.gov/Home/STARS>.

⁴⁰ "Montana Launches Statewide Industry Recognized Credential Registry Under STARS Act, Setting a New National Standard for Career-Ready Education," *Montana Department of Labor and Industry*, Brenda Bassett, Public Information Officer, December 1, 2025, accessed April 16, 2026, <https://news.dli.mt.gov/News/2025/12/credential-registry>.

⁴¹ "District Dollars With Lacy and Mike – Week #12, BSD7 Communication – 2.27.2026," *Lacy Clark and Mike Waterman, Bozeman School District 7*, February 27, 2026.

Design Lab, OCHE, and the MUS. The initiative is bringing together college leaders, Montana businesses, and students to design micro-pathway programs in high-demand fields including healthcare, trades, and education. These pathways are focused on skills and are employer validated, resulting in stackable credentials that can be earned in less than a year and offering flexibility in timing of coursework. Once complete, students are ready for the workforce and/or on the path to an associate's degree. This micro-pathway model could enhance the rail industry's workforce pipeline.⁴²

As an example, MSU Northern partnered with Lewistown's Allied Steel to develop a 3-week bootcamp micro-pathway in Welding. Specific to Allied Steel's workforce needs, the program is designed to stack into the welding associate's degree. AFFCO in Anaconda and Montana Precision Products in Butte worked together with Highlands College to develop a 10-month micro-pathway in welding. It is also designed to stack into the welding technology associate's degree program.⁴³

6.4. Montana's Future at Work

Montana's Future at Work offers grants for eligible public post-secondary institutions partnered with one or more Montana high schools to train high school students in a CTE field in their local community. Students complete stackable credentials and enroll in credit bearing dual enrollment coursework while completing their high school studies. The program focuses on high need CTE fields. Relevant examples include cybersecurity, robotics, automotive technology, and machining. Grant applications must include a marketing plan to advertise the credential opportunity, means of recruiting student participants, and discussion about how to partner with industry.⁴⁴ These funds and the process could be an avenue for the rail industry to attract potential future employees.

6.5. Multi-Craft Core Curriculum = MC3

The Building Trades National Apprenticeship and Training Committee developed the Multi-Craft Core Curriculum, or MC3, to prepare young people for careers in the construction industry. The MC3 was designed by North America's Building Trades Union (NABTU) as a "comprehensive pre-apprenticeship training curriculum" to prepare young people for careers in the construction industry and is taught by NABTU sponsored apprenticeship-readiness training programs (ARP) around the country. These ARPs are sponsored by state and local trade groups working together with high schools and community colleges. The MC3 is a standardized curriculum presented through 120 hours of coursework. The curriculum concept, and its implementation in Montana, could be of interest to the rail industry as a model for developing so-called "feeder" pre-apprenticeship programs.

6.6. Montana Registered Apprenticeship

⁴² "Montana Year-to-Career Initiative End of Year Report," *Education Design Lab*, January 2025, available at: <https://mus.edu/year-to-career/year-to-career-end-of-year-report-YearOne.pdf>.

⁴³ "Montana Year-to-Career Initiative End of Year Report," *Education Design Lab*, January 2025, available at: <https://mus.edu/year-to-career/year-to-career-end-of-year-report-YearOne.pdf>.

⁴⁴ "Montana's Future at Work, Grant Information"

The Montana Department of Labor and Industry operates the Montana Registered Apprenticeship program and lists 2,718 active apprenticeships and 690 active apprenticeship sponsors in 2026.⁴⁵ With the tag line “Earn While You Learn”, the Montana Registered Apprenticeship offers numerous career pathways for learners immediately out of high school and beyond. Apprentices are part of the employer’s workforce from the start and receive structured, quality, on the job training and classroom instruction from experienced personnel. Apprentices earn a nationally recognized credential or certificate when they successfully complete their program. From an employer perspective, the Montana Registered Apprenticeship program provides step by step assistance in setting up and facilitating an apprenticeship that meets the business’s needs for skillsets and job tasks, as well as applicable federal and industry standards.⁴⁶ Montana apprenticeship sponsors can also receive a tax credit (Montana Apprenticeship Tax Credit) if the apprenticeship program is conducted through the Montana Registered Apprenticeship unit of the Montana Department of Labor & Industry. Employers can also take advantage of the Trades Education and Training Tax Credit for eligible apprenticeship related expenses in qualified trades.⁴⁷

6.6.1. Joint Apprenticeship & Training Center Programs, Union Sponsored Apprenticeships

A significant number of apprenticeships in Montana are sponsored by Union employers, with many listed by the Montana Building and Construction Trades Council (MBCTC). These Joint Apprenticeship & Training Center/Committee (JATC) programs include Boilermakers, Laborers, Electrical, Ironworkers, Operating Engineers and General Contractors, and Sheet Metal workers.⁴⁸ The JATC programs include apprenticeship training and journeyman upgrade training.⁴⁹ The table lists some relevant union JATC programs in Montana⁵⁰ and other Union apprenticeship sponsors.⁵¹

Table 9. Union Sponsored Apprenticeships and JATCs

⁴⁵ “Montana Employers,” *Montana Registered Apprenticeship*, n.d., accessed April 8, 2026, <https://apprenticeship.mt.gov/apprenticeship-sponsors>.

⁴⁶ “Montana Registered Apprenticeship,” *Montana Registered Apprenticeship*, n.d., accessed April 8, 2026, <https://apprenticeship.mt.gov/>.

⁴⁷ “Tax Credit for Apprenticeship Sponsors,” *Montana Registered Apprenticeship*, n.d., accessed April 8, 2026, <https://apprenticeship.mt.gov/sponsor-tax-credit-information>.

⁴⁸ “Earn While You Learn with Union Joint Apprenticeship & Training Center (JATC) Programs,” *Montana Building and Construction Trades Council*, n.d., available online at: https://4ba82ef1-12d8-4b78-b59b-b95d9e32be91.filesusr.com/ugd/99f732_10475cbef8e7412c88757e58418c5ebe.pdf.

⁴⁹ “Union Apprenticeships in Montana,” *Montana Building and Construction Trades Council*, n.d., accessed April 14, 2026, <https://www.montanabuildingtrades.org/apprenticeships>.

⁵⁰ “Earn While You Learn with Union Joint Apprenticeship & Training Center (JATC) Programs,” Montana AFL-CIO, <https://www.mtaflcio.org/apprentices>

⁵¹ “Union Sponsors,” *Montana Registered Apprenticeship*, n.d., accessed April 8, 2026, https://apprenticeship.mt.gov/_docs/union-sponsors1.

Program Name	Local Union or Sponsor	Training Location
Boilermakers Apprenticeship Program (JATC)	Boilermakers Local #11	East Helena
Montana Carpenters Apprenticeship Program, Montana Carpenters JATC	Montana Carpenters Local 82 ⁵²	Helena, Billings
Construction Craft Laborer Apprenticeship Program (JATC)	Laborers AGC Apprenticeship, Training, and Work Preparedness Trust for Montana, LiUNA Local 1686	Helena
Montana Electrical Training Center (JATC)	“Serving the State of Montana and International Brotherhood of Electrical Workers Locals 233, 532, 768” ⁵³	Helena
Ironworker Local 732 JATC	Ironworkers Local Union No. 732	East Helena
Montana Operating Engineers Associated General Contractors JATC	Operating Engineers Local 400	East Helena
Sheet Metal Workers Smart 103 JATC	Sheet Metal Workers Local Union 103	Butte
Missoula Plumbers and Steamfitters Joint Apprenticeship (JATC)	United Association Local Union 459	Missoula (covers all or portions of 10 counties)
Plumbers and Pipefitters #41 JATC	United Association Local Union 41	Butte
Billings Piping Industry Joint Apprenticeship & Training (JATC)	United Association Local Union 30	Billings
Heavy Equipment Operators	Operating Engineers Local 400	East Helena

6.7. 406 JOBS Initiative

In August 2025, Montana’s Governor launched a statewide framework initiative to “...modernize Montana’s workforce, ensuring that every Montanan has a pathway to a career

⁵² “Apprenticeship Program,” *Montana Carpenters Local 82*, 2026, accessed April 14, 2026, <https://mtcarpenters82.com/apprenticeship-program/>.

⁵³ “Montana Electrical Training Center,” *Montana Electrical Training Center*, 2026, accessed April 14, 2026, <http://www.mtelectricaljatc.org/>.

and a plan to achieve it.”^{54, 55} The Montana Department of Labor & Industry’s State Workforce Innovation Board (SWIB) is tasked with implementing the initiative.⁵⁶ In a connection to Montana’s statewide 406 telephone area code, the 406 JOBS effort aims to enhance the workforce system based on industry demand and worker needs by promoting 4 pathways to work and 0 barriers to employment in 6 high demand industries.

SWIB has produced a Year One Work Plan that identifies 12 priority initiatives for implementing the 406 JOBS framework that will have a measurable impact in achieving the initiative’s goals.

The twelve identified priorities in the work plan are to:

- Increase Registered Apprenticeship Pathways
- Prepare Workforce for AI and Automation Opportunities
- Establish Local Sector Partnerships in High Demand Sectors
- Address Child Care Shortages to Enable Labor Force Growth
- Reduce Barriers to Employment Through Disability Empowerment
- Highlight Military Service and Support Veteran Transitions
- Establish Office of Reentry Programs
- Launch Statewide Credential Registry
- Modernize Career Exploration Tools
- Expand Jobs for Montana’s Graduates & Empowered Sites
- Tell the Story of Workforce in Montana
- Improve System Leadership, Coordination, & Communication.⁵⁷

6.8. Professional Development and Adult Education

In addition to K-12 education, the Montana OPI also administers professional development and adult education programs. OPI has compiled a catalog and a calendar of professional development unit resources for classroom educators and administrators. Teachers and administrators are required to complete 60 professional development units for license renewal depending on license class. The Montana Class 4 educator license (Career & Technical License) is available for those interested in becoming teachers but instead of a degree in education, they have various combinations of significant work experience, a completed apprenticeship program, and/or a degree in a field besides education. Example endorsements include Diesel Mechanics, Electronics, Engineering, Heavy Equipment Operations, Industrial Mechanics, Machining, Metals and Welding.⁵⁸

⁵⁴ “Year One Work Plan One-Pager, 406 Jobs, Modernizing Montana’s Workforce,” *State Workforce Innovation Board*, n.d., available online at https://swib.mt.gov/_docs/406-Jobs_One-Pager.pdf.

⁵⁵ “406 JOBS, Modernizing Montana’s Workforce,” *State Workforce Innovation Board, Montana Department of Labor & Industry*, n.d., accessed April 15, 2026, <https://swib.mt.gov/>.

⁵⁶ “406 JOBS Year One Work Plan,” *Sarah Swanson, State Workforce Innovation Board*, November 2025, available online at: https://swib.mt.gov/_docs/406-JOBS_Year-1_Work-Plan.pdf.

⁵⁷ Ibid.

⁵⁸ “Educator Licenses,” *Montana Office of Public Instruction*, n.d., accessed March 23, 2026, <https://opi.mt.gov/Educators/Licensure/Educator-Licensure/Educator-Licenses#93889620-career--technical-license>.

Along with OPI's adult and community education, the Montana Department of Labor and Industry also oversees adult education programs. These are programs receiving federal grant funding as part of the Adult Education and Family Literacy Act (AEFLA), Title II of the Workforce Innovation and Opportunity Act (WIOA). These workforce services programs are designed to provide training and career services to eligible adults while helping fill workforce vacancies.⁵⁹

7. Challenges and Opportunities

Currently, there are no specific railway engineering or rail-focused technical education programs offered in the state. However, there are ample opportunities to leverage Montana's existing training and education resources and programs for the purpose of enhancing career readiness and career pathways into rail. For rail companies, heightened awareness of career opportunities in rail among the emerging or transitioning workforce will be especially helpful in rural and geographically remote locations, where the cultivation of local talent pools is needed to foster recruitment efforts in difficult-to-hire locations. Some of these regions are experiencing high unemployment rates and low labor force participation and would benefit from increased access to higher-paying rail jobs.

Requirements for rail jobs span a wide range of educational levels from high school to graduate degrees, offering an array of opportunities along the entire educational attainment spectrum. Employment of personnel in freight rail has declined in recent years, although as the industry moves increasingly towards automation and advanced technology solutions, new opportunities are emerging in technology, engineering, manufacturing, and computer and information-related fields to service the industry. Expansion of passenger rail service in Montana is forecast to bring additional service-oriented rail and railway-adjacent jobs to the state. In the meantime, the corridor systems planning process requires planning, engineering, design, environmental, and related professionals with rail-focused expertise to move the project from planning to implementation phases.

Rail and other professionals interacting with railways will need an understanding of the broader contexts within which rail operates. Integration of real-world problem-based learning into multidisciplinary coursework will allow students to apply their unique disciplinary knowledge to addressing real issues challenging rail operators in the state. As students transition into the workforce, the rail-focused knowledge and skillsets gained through these experiences can be leveraged to enrich diverse career tracks.

⁵⁹ "Adult Program," *Montana Department of Labor & Industry, Workforce Services Division*, n.d., accessed March 23, 2026, <https://wsd.dli.mt.gov/programs/adult-program>.

8. Conclusions and Key Takeaways

The needs assessment underscores the critical importance of aligning rail workforce development with ongoing and future investments in rail infrastructure, operations, and technology through a strategic and collaborative approach. As the industry evolves, proactive, coordinated strategies are essential to ensure that workforce capacity keeps pace with demand and enables communities to fully realize the economic and mobility benefits of rail expansion. Key findings from research encompassing national workforce trends include:

- *Workforce capacity is a limiting factor.* Historic federal investments and planned rail expansions are outpacing the current availability of a skilled workforce, increasing the need for pipeline development.
- *An aging workforce and anticipated large-scale retirements are driving workforce challenges.* Significant retirements are expected across the industry, intensifying the need for recruitment, training, and knowledge transfer strategies.
- *Persistent recruitment and retention issues further complicate a sustainable workforce strategy.* Workforce shortages are exacerbated by competition with other industries, quality-of-life concerns, and limited awareness of rail career pathways.
- *Evolving technology capabilities in the industry mean evolving skill requirements.* Advances in automation, data analytics, sustainability, and advanced technologies (e.g., PTC, AI, alternative fuels) are shifting demand toward more technical, interdisciplinary skillsets.
- *Education and training gaps exacerbate pipeline challenges.* While programs exist, stronger alignment between industry needs and education/training pathways is needed, along with expanded introductions to rail careers through diverse programs of study, work-based learning, and career-connected opportunities.
- *Coordination between academic and industry stakeholders is crucial to addressing workforce challenges.* Effective workforce development requires sustained collaboration among industry, academia, government, and community partners to build scalable and adaptable talent pipelines.
- *Regional variability matters.* Workforce needs and opportunities differ across contexts (e.g., major hubs like California, logistics centers like Tennessee, and rural/frontier systems like Montana), requiring tailored, place-based solutions.

Overall, this assessment provides a foundation for targeted implementation strategies to be undertaken through this CRISI-funded project that connects workforce development efforts with real-world rail system needs, supporting long-term industry resilience and community benefit.