



MONTANA 2017 LABOR DAY REPORT



Montana Department of
LABOR & INDUSTRY

MONTANA 2017 LABOR DAY REPORT

SEPTEMBER 5, 2017

STATE OF MONTANA

Steve Bullock, Governor
Mike Cooney, Lieutenant Governor

MONTANA DEPARTMENT OF LABOR & INDUSTRY

Pam Bucy, Commissioner

PRIMARY AUTHOR

Barbara Wagner, Chief Economist

CONTRIBUTORS

Research & Analysis Bureau
Julia Brennan, Montana Occupational Health
and Safety Surveillance program

LAYOUT AND GRAPHICS

Robert C. Marvin

CREATED BY

Research & Analysis Bureau
P.O. Box 1728
Helena, MT 59624-1728
(406) 444-4100
www.lmi.mt.gov



Montana Department of
LABOR & INDUSTRY

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the recipient and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This product is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner.



Governor Steve Bullock:

Thank you for the opportunity to present the 2017 Labor Day Report to you and the citizens of Montana. It is my privilege to share an update on our state's economy and on the steps taken this past year to strengthen our workforce, including expanding apprenticeships, improving workplace health and safety, and the continued success of work being done with schools to build leadership and employment skills for students.

This past year, our state's economy grew through the addition of thousands of new jobs across Montana's diverse industry sectors. At 3.9% in July, our unemployment rate continues to be among the strongest in the country. Never before in our state's history have we had more people working, and their wages continue to grow. Our local communities are seeing these benefits every day, and businesses of all sizes are able to expand and fill their talent pipelines.

Because of Montana's diverse industries, we are able to weather the ebbs and flows of the economy. Our state continues to be a launch pad for new businesses both large and small, leading to employment opportunities for Montanans.

While we are facing a workforce shortage, this is a chance for us to grow and improve from within, whether it is providing someone an alternative career pathway to higher wages, or increasing their employment training at their local Job Service Montana office.

Looking forward, I feel the state will take advantage of the current economic landscape over the next year. The Department of Labor & Industry will keep focused on helping businesses implement new apprenticeship training models, making sure workers come home safely to their loved ones after their shifts end, and preparing the future generations of workers to lead the 21st century marketplace.

Governor Bullock, thank you for your leadership and dedication to Montana's workforce, businesses, and communities throughout the state.

Sincerely,

Pam Bucy, Commissioner
Montana Department of Labor & Industry

Table of Contents

Introduction.....	1
Part 1: Montana’s Economic Growth Continues	3
Overall Economic Growth Picks up Steam in Last Half of 2016	3
Figure 1: US and MT Personal Income Growth	3
More Jobs and GDP for Montanans.....	5
Figure 2: Total Employment Growth by Region	5
Industry Performance	7
Figure 3: Employment and GDP Growth	9
Infographic: Size of Montana’s Industries	10
Infographic: Montana Wages	11-12
Wages Continue to Grow	13
Figure 4: Wage Gains by Region	13
Figure 5: Fourth Fastest Wage Growth over 10 Years	14
Figure 6: Work Status of the Population Aged 16 to 64 Years	15
Montana Still at the Top for Entrepreneurialism.....	15
Figure 7: Share of Employment and Net Job Growth by Age of Firm	15
Infographic: The Montana Worker–By the Numbers	16-17
Part 2: Addressing Montana’s Worker Shortage.....	18
Figure 8: Projected Labor Force, Employment, and Unemployment Rate	18
Finding More Workers	20
Figure 9: Montana Labor Force Participation	21
Use Each Worker Effectively.....	22
Figure 10: Reasons Given for Working Part-Time	22
Improving Education Systems.....	23
Improve Worker Safety	25
Figure 11: Non-Fatal Work-related injuries and illnesses	25
Infographic: Worker Safety at a Glance.....	26
Montana’s Growth Expected to Continue.....	27
Endnotes	28

Introduction

Over the last eight years, Montana and the rest of the nation have seen steady economic growth, making this one of the longest economic expansions in recorded history.¹ While this expansion has been slow at times, the slow and steady pace increases the likelihood that the economy will continue to grow.² The long and consistent growth over the past several years has benefitted Montana businesses and workers alike.

Montana's economy continues its prosperity in 2017, with growth in the western half of the state exceeding expectations. Our entrepreneurs continue to be among the best in the nation for new business startups and for the successful launch of businesses. Workers have experienced real wage growth faster than the national average over the last ten years, allowing families to achieve a higher standard of living.

- Over 504,500 Montanans were employed in 2016, and the state's unemployment rate of 4.1% was the 16th lowest in the nation.
- Montana's industry diversity supported the state's economy in 2016, with gains in the service sector in western Montana outweighing losses in eastern Montana from mining and energy.
- Montana is the fastest growing state for manufacturing GDP in the nation. Manufacturing GDP was \$3.2 billion in 2016, over \$1.2 billion more than the industry's 2011 contribution.
- Montana continues to outperform for entrepreneurialism, with over 50,000 workers employed in businesses that did not exist five years ago. Montana has the 4th highest rate of net business creation among employing businesses, and is first in the nation for the percentage of households reporting income from a farm or business.
- Personal income increased by 2.3% over the last year, faster than our neighboring states of Wyoming and North Dakota. Montana's personal income growth has been accelerating since the 4th quarter of 2015, putting us on track to exceed the U.S. growth in 2017.
- Montana added 6,480 jobs over the last year, with strong job gains in healthcare. The healthcare industry has added over 2,150 jobs over the last year and roughly 7,300 jobs during the last five years.
- Montana's wages have been increasing faster than the national average for most of the last ten years, with the state ranking 4th in the nation for wage growth from 2006 to 2016.



2017 Labor Day Report

This economic growth, combined with Montana's 2016 unemployment rate of 4.1%, have continued to tighten the state's labor markets. Tight labor markets are expected to continue as the large Baby Boomer generation enters retirement without enough young people to replace them. Recognizing this workforce shortage, Governor Steve Bullock and the Montana Department of Labor & Industry have partnered with employers, business organizations, and educational institutions to make sure businesses of all sizes have access to a highly trained workforce, allowing employers to expand their operations for now and future generations.

- Montana's labor force aged 16 to 24 is only projected to grow by about 130 people per year through 2026, while the labor force over 55 is growing by nearly 4,000 people per year.
- Roughly, 75% of Montana college graduates work in the state after graduation. Students who have an existing connection to the labor market are more likely to work for a Montana employer.
- Through an increasing number of private and public sector partnerships, work-based learning continues to provide career pathways for Montanans.
- Montana has made improvements in worker safety, and strives to ensure every person in the workforce comes home safely after his or her shift ends. However, the state still has high incidences of workplace injuries, which exacerbates the worker shortage due to lost time for employees recovering from injuries.

Businesses must also work to recruit under-utilized populations into the labor force by adapting work conditions and hiring practices. For example, addressing the gender pay gap would increase women's labor force participation and provide greater incentive for women to work longer hours. Adding accommodations would attract workers with disabilities. Even simple scheduling changes can help students work between classes and allow parents to plan for daycare or babysitting.

Businesses and workers must also improve labor productivity in the state, thus allowing more output to be produced with each labor hour. Productivity gains often result from increased mechanization or automation, quick adoption of new technologies and techniques, and investing in worker training and development. Increasing labor productivity not only leads to higher profits for businesses, but also increases worker's wages. Businesses that successfully implement innovative and creative solutions to the worker shortage will have a competitive edge in our future economy.

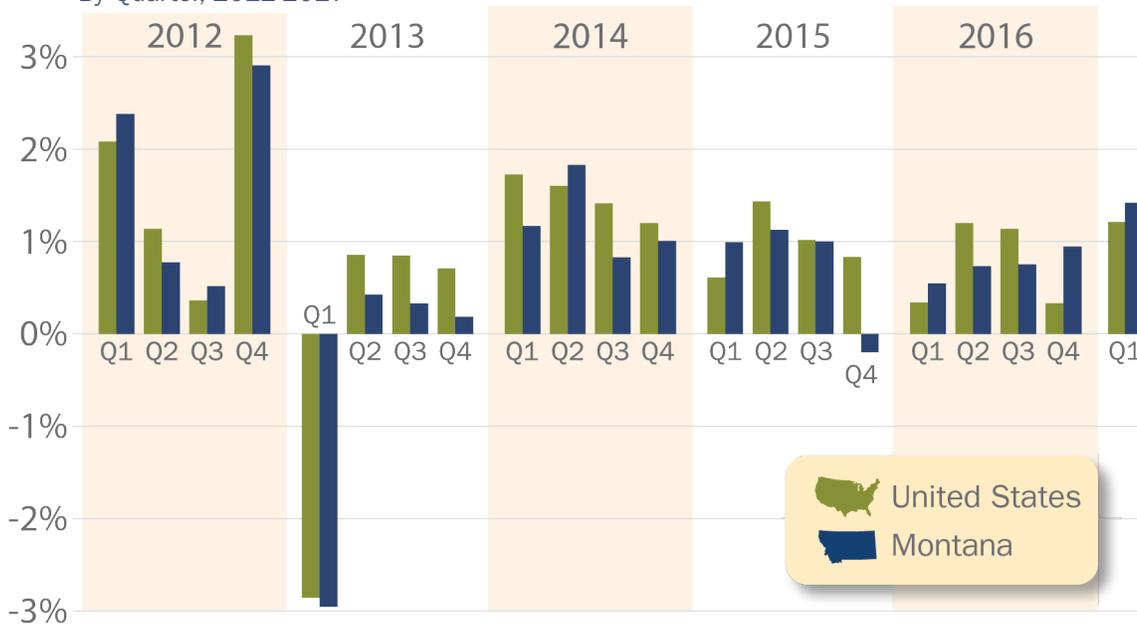
Part 1: Montana's Economic Growth Continues

The state's growth in 2016 is a tale of industry and geographic diversity. Areas in the western portion of the state posted strong employment and wage gains, led by a flourishing service sector. However, eastern Montana faced struggling energy and agricultural industries. Manufacturing throughout the state continued strong employment, GDP, and personal income gains. The combined result was a statewide economy that grew steadily, although slightly slower than the previous year.

Overall Economic Growth Picks up Steam in Last Half of 2016

Figure 1 demonstrates the pace of personal income growth in Montana and the U.S. by quarter over the last five years. Personal income measures the monetary value received by Montana residents from economic activity, and thus is an overall measure of economic growth. Personal income grew by 2.3% in 2016, slightly slower than the U.S. average of 3.6% because of a slow start to the year that was related to declines in mining, transportation, and agriculture. However, Montana's diverse economy fared much better than our neighboring states of North Dakota and Wyoming, where mining plays a larger role in the economy. Montana's personal income growth over the past ten years is the 11th fastest among all states.³

Figure 1: US and MT Personal Income Growth
By Quarter, 2012-2017



Source: Bureau of Economic Analysis (BEA), U.S. Department of Commerce

2017 Labor Day Report

Montana has two negative quarters of personal income growth during the timeframe shown in **Figure 1**. The first negative quarter was due to the “fiscal cliff,” when the federal government both increased taxes and made substantial spending cuts across a wide variety of government programs. Federal funding cutbacks slowed economic growth throughout 2013, with particular impacts near military bases and the national parks, and on reservations.

Montana is on track to outperform the U.S. for personal income growth in 2017.

The second negative quarter was in the fourth quarter of 2015, when sustained low oil prices led to a delayed oil and gas “bust.” Oil prices declined in 2014, but a backlog of work in the Bakken development kept many workers employed for roughly a year after the price drop, slowing the impact of the oil bust over a longer period. The sustained low prices for oil, gas, coal, and other energy products is due to lower demand from a slow-growing global economy, and an over-supply in these products after fracking and other new production techniques allowed for cheaper recovery out of shale oilfields. Oil and gas development helped stabilize our economy during the 2007 recession, but it has been a drag on growth over the last two years.

Farm income also contributed to the negative quarter for personal income growth in the 4th quarter of 2015, with losses in farm earnings continuing throughout 2016. Farm earnings in 2016 were roughly ½ billion less in 2016 than in 2015, leading to slower economic growth in Montana’s rural areas.

After the negative growth in the fourth quarter of 2015, Montana’s economic growth has been accelerating due to large gains in the service sector. The service sector includes many consumer-driven industries like retail and leisure activities, which typically pay lower-than-average wages. However, the recent growth in Montana’s service sector also comes from high-paying jobs in healthcare, finance, and professional services. The growth in these knowledge-based service sector industries has added significant income, jobs, and GDP to Montana’s economy in recent years. Personal income growth in Montana exceeded that of the U.S. in the 4th quarter of 2016 and the 1st quarter of 2017. Montana is on track to outperform the U.S. for personal income growth in 2017.

What’s the Difference between GDP and Personal Income?

Gross Domestic Product (GDP) measures the value of economic activity within Montana, typically calculated by taking final sales minus the costs of inputs and wages. Personal income measures the amount of income Montanans received from their economic activities, even if these activities took place outside Montana’s borders. If a Montana corporation distributed dividends to out-of-state investors, the amount of the income would be included in GDP because it was created in Montana, but the personal income would be recorded in the investor’s home state.

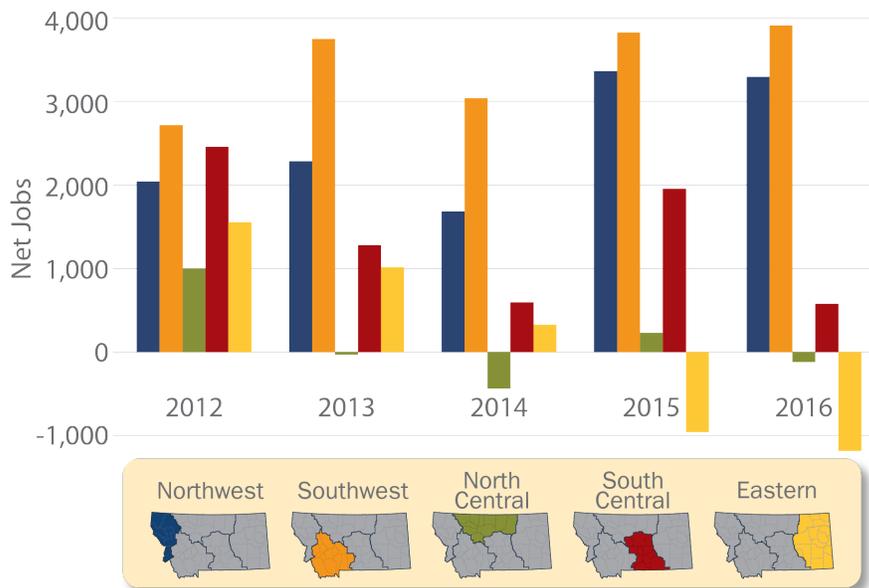
More Jobs and GDP for Montanans

Montana's job growth and GDP statistics echo the story told by personal income, with surging employment in western Montana tempered by slowdowns in eastern Montana related to energy and agriculture. Employment in Montana has continued to grow, with 6,481 jobs added over the last year (1.3% growth). Over 504,500 Montanans were employed in 2016.⁴

**Over 504,500
Montanans were
employed in 2016.**

Figure 2 illustrates employment growth by region over the last five years. The two western regions posted very strong growth over the last five years. The Southwest region added over 17,000 jobs in the last five years, while the Northwest added over 12,500 jobs. Specifically, the Bozeman area has been the center of job creation for the state, with Gallatin County alone adding over 12,000 jobs since 2011. The growth in these areas has been broad-based across most industries, with healthcare, leisure activities, and construction adding the most jobs in both the Northwest and Southwest regions.

Figure 2: Total Employment Growth by Region
2012-2016



Source: Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics (BLS) and Montana Department of Labor & Industry (MTDLI)

The North Central region has struggled to maintain steady growth since the 2013 federal government spending cuts, and has struggled with sliding prices for wheat and other agricultural goods in recent years. However, wheat prices are recovering in 2017, and recent diversification efforts have resulted in value-added manufacturing and agriculture jobs for the region, promising more consistent growth opportunities in the future.

The Eastern and South Central regions experienced slower growth in 2016 than in the past,

Preparing for Colstrip's Future

A lawsuit settled in the summer of 2016 requires the closure of Colstrip Units 1&2 by July 1, 2022. The settlement also requires restoration of the waste ponds and groundwater contaminated by pond seepage. In addition, the development of fracking technologies has ensured a large supply of natural gas, shifting energy demand away from coal. These forces have created risk and distress for the community of Colstrip and for Montana's coal industry overall.

However, the closure also creates opportunity. Colstrip Units 1&2 hold roughly 1/10th of Montana's electricity generation capacity. Energy entrepreneurs have the opportunity to fill this supply gap with newer and cleaner energy technologies, thus strengthening the state's position as an energy exporter. All industries must continuously evolve and improve to maintain a competitive position in the global economy. Entrepreneurs in Colstrip have already identified some potential energy alternatives in their economic diversification strategy.⁵

However, the transition involved in the partial closure of the Colstrip plant and slowing global demand for coal will be difficult for workers facing layoffs and their families. The Montana Department of Labor & Industry was recently awarded a \$4.6 million grant for workforce planning and the training of workers in coal-impacted counties, even for workers not directly tied to coal. \$2 million of the grant is immediately available to be spent over the next two years, with the remaining funds contingent on training needs. In addition, the grant funds an office location in Colstrip for a workforce training professional to help workers with career planning and identification of training opportunities. The community has received several other grants to help with economic development and planning. With this support from federal and state sources, the community of Colstrip and other impacted areas have strategies in place to transition successfully into Montana's economic future.



with both regions affected by declines in energy and mining, plus the impacts of related reduced consumer spending. The Eastern region has now posted two years of negative growth, but with positive net employment over the five-year period. However, there are signs of a recovery in oil and gas, with positive personal income growth thus far in 2017, and small employment gains over the last year. Employment in oil and gas extraction increased in 2016, adding 26 jobs (3.3% growth).

Industry Performance

The successful economic growth in the western half of the state is partially due to the development of a “knowledge-based” economy that has added to our state’s economic strength and industry diversity.

Knowledge-based jobs are those that add to the quality, quantity, and accessibility of information, and that often lead to accelerated technical or scientific advancements, ultimately generating economic growth by improving productivity.⁶ Growth in professional services, such as software development, engineering, accounting, and legal services has helped spur growth in the western half of Montana, particularly in the Bozeman area. Professional services was the fastest growing industry in Montana over the last year for employment, as shown in **Figure 3**. **Figure 3** illustrates the one and five-year employment and GDP growth by industry, sorted by the fastest growing GDP over the last five years.

#1 Among states for Manufacturing GDP growth!

Although Montana is developing a stronger knowledge-based economy, our traditional goods-producing industries also played an influential role in 2016. Manufacturing had the fastest GDP growth of any industry for both the one-year and five-year timeframes, growing by over 10% in the last year.⁷ Montana has the fastest growing manufacturing sector among all states for both one and five-year timeframes. Overall, manufacturing produced \$3.2 billion to the state’s GDP in 2016, over \$1.2 billion more than the industry’s 2011 contribution. The majority of the manufacturing GDP growth has occurred in petroleum refining (which grew by roughly ½ billion dollars from 2011 to 2015), but the manufacturing sub-sectors of food and beverage, nonmetallic mineral products, fabricated metal, and wood products have all posted substantial gains in GDP since 2011.

Mining lost roughly 1,200 jobs over the last year, with losses concentrated in the Eastern region.⁸ Thus far, the slowdown in oil and gas has only affected mining-related businesses, such as transportation (which provides the shipping of both oil and frack fluid) and the administrative services industry (which includes the temporary employment firms often used to hire workers). However, the oil and gas bust may also have a lagged impact on other regions of the state through lower oil and gas tax collections and the resulting state government spending cuts. Government spending adds to the total amount of goods and services demanded in an economy, thus adding to GDP. Details regarding state revenue are still unfolding, and the impact of the oil and gas slowdown on other areas of the state is unclear.



2017 Labor Day Report

Although agriculture had significant personal income losses (mostly incurred by farm owners), the industry posted employment and GDP gains over the last year. The agriculture industry has also performed well over a longer timeframe, with the fastest payroll employment growth over the last five years. However, because this sector is relatively small, the rapid growth added only about 1,000 payroll jobs since 2011. In comparison, the larger healthcare industry added 2,150 jobs just within the last year.

The contrast in job gains between agriculture and healthcare highlights the importance of the service sector in Montana's economy. The graphic "Size of Montana's Industries" demonstrates the large role of retail, leisure activities, and healthcare in terms of employment and GDP generation. While the goods-producing industries of mining, agriculture, and manufacturing help explain the economic outcomes in the central and eastern portions of the state, the growth of the overall economy is driven by the job and GDP growth in healthcare, professional services, accommodations and food services, and other service-sector industries that comprise large segments of the Montana economy.

Figure 3 also illustrates the expected job growth by industry for the next ten years, according to Montana Department of Labor & Industry employment forecasts. Healthcare is expected to add the most jobs, with roughly 1,300 new jobs per year for 1.7% growth. The fastest growing industry is likely to be construction (adding 830 jobs per year at 2.7% growth). Projections also show the professional services industry will continue its rapid growth, adding 455 jobs per year at 1.9% growth.

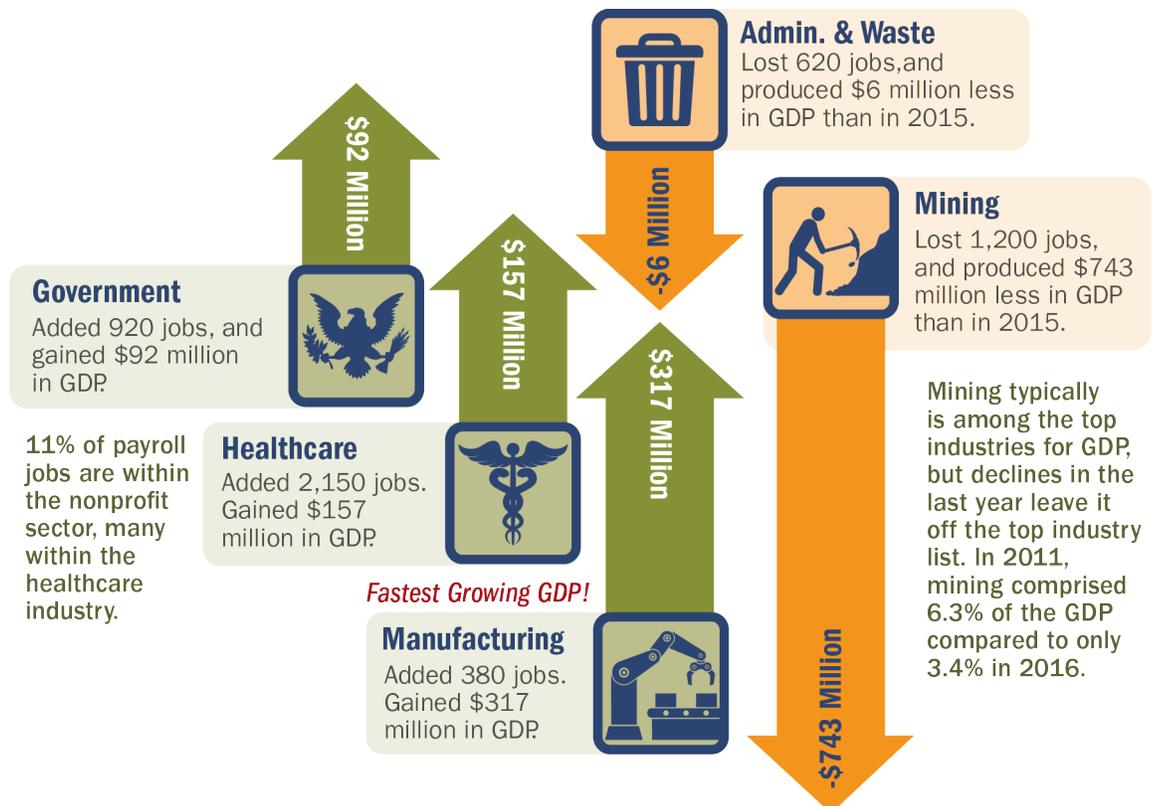


Figure 3: Employment and GDP Growth
By Detailed Industry

Industry	Employment					GDP		
	2015-2016		2011-2016 Annual Growth	2016-2026 Forecast		2015-2016 GDP Added (Millions)	2015-2016 Annual Growth	2011-2016 Annual Growth
	Jobs Added 2015-2016	2015-2016 Annual Growth		Expected Annual Jobs Added	Expected Growth			
Manufacturing	384	2.0%	3.0%	160	0.8%	316	10.7%	9.8%
Ag & Forestry	110	2.0%	4.0%	70	1.2%	20	1.3%	5.6%
Management	7	0.3%	0.6%	30	1.4%	3	1.4%	4.2%
Wholesale Trade	(244)	-1.4%	2.0%	110	0.6%	-9	-0.4%	3.7%
Arts and Recreation	209	1.8%	1.8%	220	1.7%	27	4.9%	3.6%
Accommodation and Food Services	1,495	2.9%	2.9%	570	1.0%	5	0.3%	3.2%
Health Care	2,155	3.4%	2.4%	1,300	1.7%	157	4.1%	3.1%
Professional Services	787	3.8%	2.6%	460	1.9%	54	2.8%	2.6%
Construction	568	2.1%	3.6%	830	2.7%	-3	-0.1%	2.4%
Information	(35)	-0.6%	-2.6%	-30	-0.5%	32	3.1%	1.5%
Other Services	309	1.8%	1.9%	180	1.0%	17	2.0%	1.2%
Retail Trade	613	1.0%	1.6%	450	0.7%	68	2.5%	0.5%
Education (Private)	41	0.8%	2.9%	*	*	-2	-1.2%	0.1%
Real Estate and Leasing	(15)	-0.3%	1.5%	80	1.3%	-34	-0.6%	0.0%
Admin and Waste Services	(619)	-3.6%	-3.0%	320	1.8%	-6	-0.6%	-0.1%
Transportation and Warehousing	(37)	-0.3%	2.2%	160	1.0%	-59	-3.4%	-0.6%
Finance and Insurance	25	0.2%	0.5%	135	0.9%	10	0.6%	-1.7%
Utilities	(49)	-1.6%	-0.6%	*	*	25	2.7%	-2.0%
Mining	(1,194)	-15.7%	-3.4%	80	1.2%	-743	-35.0%	-10.6%
Federal Government	253	1.9%	-0.8%	-100	-1.1%			
Local Government	605	1.3%	0.2%	300	1.4%	92	1.6%	-0.2%
State Government	64	0.3%	0.5%	45	0.4%			
Total**	5,481	1.2%	1.5%	5,500	1.1%	72	0.2%	1.3%

Source: Real GDP, BEA. QCEW, MTDLI and BLS. Employment Forecasts, MTDLI.

*Nondisclosable **Total may not be the sum of industries due to rounding

MONTANA WAGES

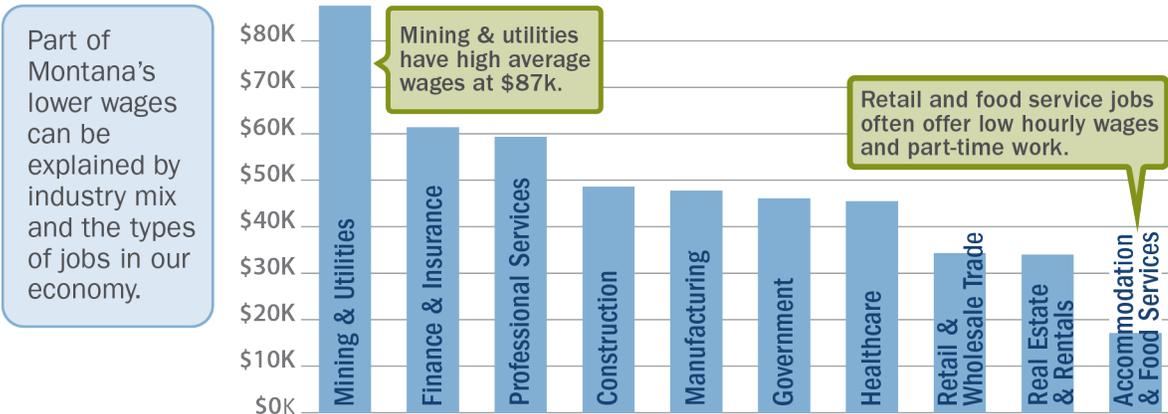
NOTE Montana's average annual wage was **\$40,735**

Including benefits and bonuses, Montana's average compensation per job was **\$50,318**, ranking 47th among states.



Montana had the 4th **FASTEST-GROWING** wage over the last 10 years!

Average Annual Wage Select Industries



Montana's personal income per capita is **\$42,386**

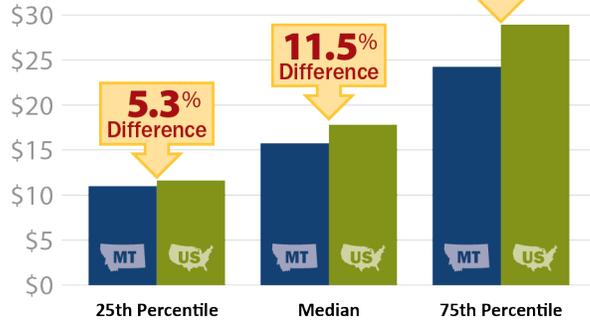
Ranking 38th among states.



MONTANA WAGES

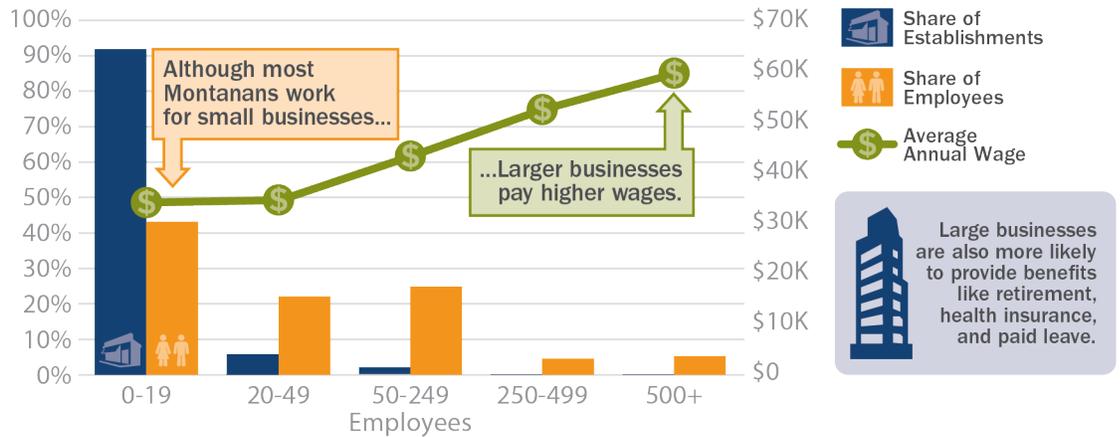
Montana's Median Hourly Wage among payroll jobs is **\$15.75** per hour
 Ranking 43rd among states.

Hourly Wages by Wage Quartile



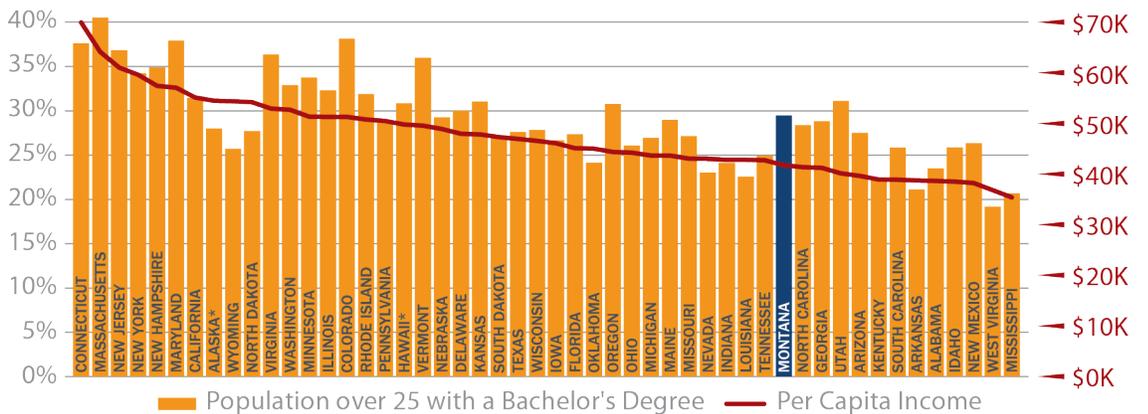
The gap between Montana and U.S. wages is larger among high-paying jobs than low-wage jobs, suggesting that having higher wages for high-wage jobs would improve Montana's ranking.

Montana Establishments, Employment, and Average Wages by Size of Business



Workers with higher education levels tend to be more productive, and therefore earn higher incomes. Montana ranks #1 for the percent of our population with a high school diploma or equivalent, but we fall in post-secondary degree attainment, ranking 20th, and in advanced degree attainment (ranking 32nd).

Per Capita Income and Percent of Population over 25 with Bachelor's Degree



Source: MTDLI using 5-year ACS, U.S. Census, and BEA data.

Wages Continue to Grow

One of the major benefits of GDP growth for Montanans is higher wage earnings. Montana's workers continued to achieve higher wages in 2016, with the average annual wage increasing by 1.6% last year to \$40,735. This wage growth was faster than the rate of inflation, suggesting that workers can achieve a higher standard of living with their wage than in the prior year. Real wage growth in 2016 was 0.4%.⁹

Although the 2016 wage growth of 1.6% added to the household wealth of Montana workers, it is slower than in previous years. The causes of slower wage growth echo the geographic and industry differences highlighted above – the prosperous western regions experienced strong wage gains over 2%, but the statewide average was dampened by continued job losses in the high-wage mining industry, with negative impacts primarily felt in the Eastern and South Central regions. **Figure 4** illustrates the wage gains by region in dollar terms over the year and five-year timeframe. The average annual wage in the Eastern region slipped over the last year, but remains competitive with other regions of the state. The Eastern region wage has increased by \$4,286 since 2011. The South Central region had slow wage growth over the last year, but offers the highest average annual wage and had the strongest gains in dollar terms over the last five years. The western regions continue strong wage growth.

Figure 4: Wage Gains by Region

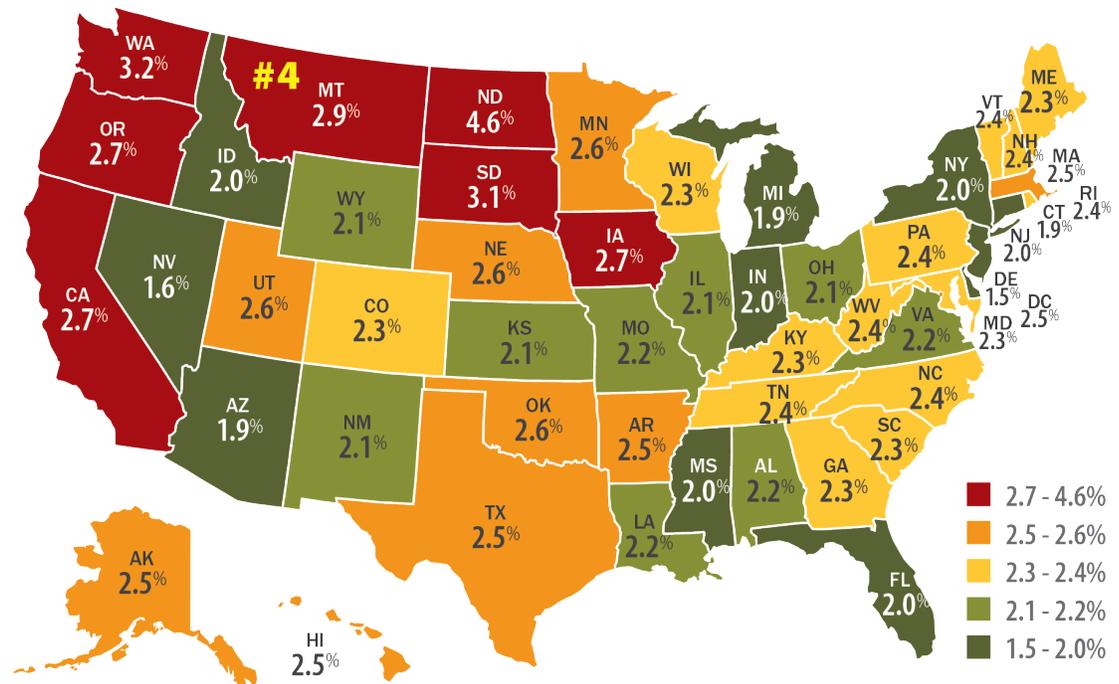
	 Northwest	 Southwest	 North Central	 South Central	 Eastern
2016 Average Annual Wage	\$38,135	\$41,106	\$37,753	\$43,654	\$40,909
Change since 2015	\$825	\$1,078	\$961	\$254	-\$1,617
Annual Growth	2.2%	2.7%	2.6%	0.6%	-3.8%
Change over Five Years (2011-2016)	\$4,700	\$5,186	\$3,590	\$5,272	\$4,286
5-Year Annual Growth	2.7%	2.7%	2.0%	2.6%	2.2%

Source: QCEW, BLS & MTDLI. Nominal terms. Five-year rate is compounding annual growth rate.

Montana's wages have been increasing faster than the national average for most of the last ten years, with the state ranking 4th in the nation for wage growth over 2006-2016, as illustrated in **Figure 5**. The average wage has increased by \$10,100 over the last ten years, helping Montana to catch up to the national average. In 2000, Montana's average wage was only 69% of the national average wage, but fast wage growth has helped Montana gain ground, with the 2016 average wage equal to 76% of the U.S. average.



Figure 5: Fourth Fastest Wage Growth over 10 Years
2006 to 2016

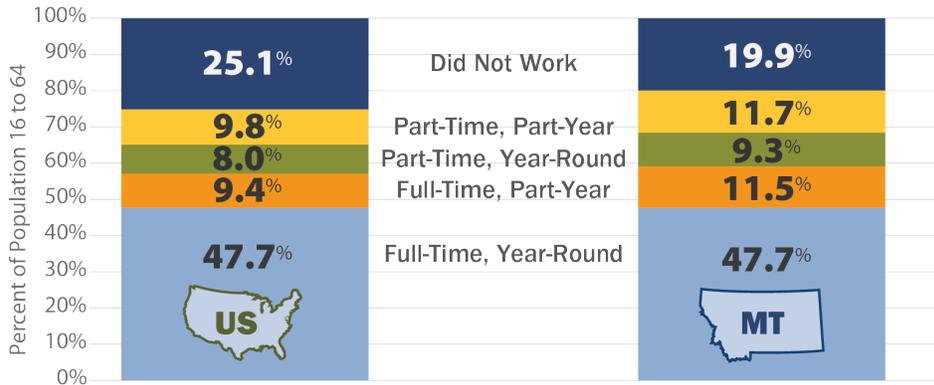


Source: QCEW, MTDLI, and BLS. Growth calculated as compounding annual.

Despite this faster wage growth, wages in Montana remain lower than in many other states, partially because Montana has a high share of part time jobs. Montana jobs average only 32 hours worked per week per job, the second lowest in the nation. The low average hours per week is not because Montana has fewer full-time jobs – 47.7% of working age adults work full-time jobs for both Montana and the nation. Rather, Montana has more people working part-time jobs instead of not working. **Figure 6** illustrates the work status of the population 16 to 64 in the U.S. and Montana. The high share of part-time jobs pulls down Montana's average annual wage per job. However, even when comparing wages per hour, which would adjust for differences in hours worked, Montana's wages are still lower than the national average, ranking 45th among states. The infographic "Montana's Wages" explores a few additional drivers of Montana's wages compared to the national average, including the size of Montana businesses, the types of jobs available, and education levels.

Montanans make up for lower wages through high rates of business ownership and other sources of income, which helps make income levels more comparable to other states. Montana ranks 38th for per capita income, with over 14.4% of earned income received by business owners (compared to 12.5% for the nation). Per capita income is a similar metric as average wage, but per capita income includes dividends, rental income, business owner (proprietor) income, and other nonwage income. Per capita income also uses all Montanans (not just workers) in the calculation, and therefore is a measure of the well-being of retirees and children in addition to working adults. Montana's per capita income was \$42,386 in 2016, a gain of 1.3% over the prior year.

Figure 6: Work Status of the Population Aged 16 to 64 Years



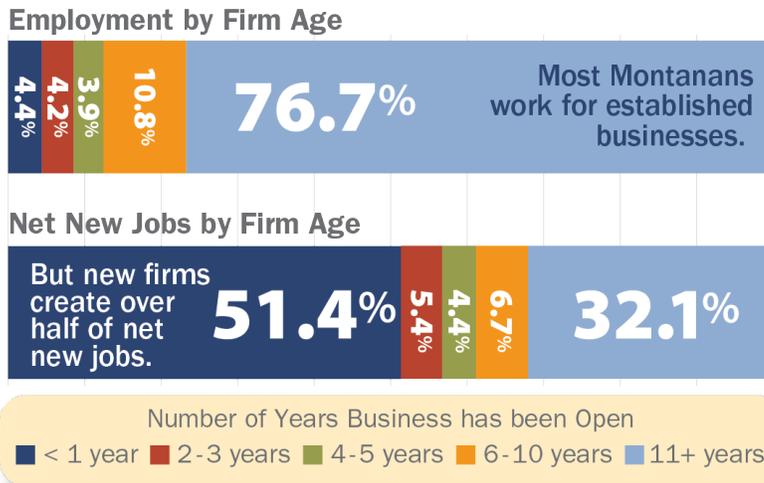
Source: 2015 American Community Survey (ACS) 5-Year Estimates, U.S. Census Bureau

Montana Still at the Top for Entrepreneurialism

Proprietor income is one measure of business ownership, but there are also other indications that Montana fosters high levels of entrepreneurialism. Montana also has a high share of personal income from dividends, ranking 4th among states for this metric. Both proprietor and dividend income reflect the fact that many Montanans gain income from multiple sources, including their own businesses. Montana has the highest rate of business ownership among households, with 21% of Montana households reporting income from a business or farm.¹⁰

Montana also has a high rate of business startups among employers. Montana had the 4th highest rate of net business creation in 2015, with net new businesses equal to roughly 1% of existing establishments. In fact, over 50,000 Montanans are currently employed in businesses that did not exist five years ago.¹¹ **Figure 7** illustrates the shares of employment by firm age and net job growth by age of firm in Montana over the last year of available data (from the third quarter of 2015 to the second quarter of 2016). Montana continues to be successful at starting and growing new business, leading to greater employment and economic opportunities for our state.

Figure 7: Share of Employment and Net Job Growth by Age of Firm

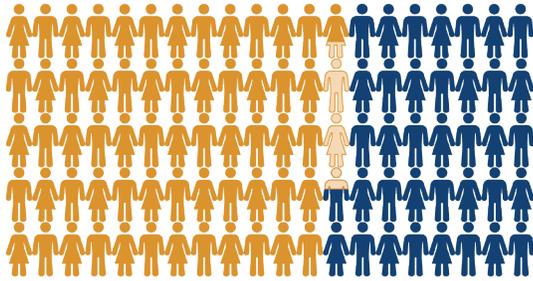


Source: Quarterly Workforce Indicators (QWI), Net Job Creation, and Beginning of Quarter Employment, 3rd Quarter 2015 to 2nd Quarter 2016, U.S. Census Bureau.

The Montana Worker

By the Numbers

The Montana Labor Force



Montana Population 2016:	1,042,000
Population over 16:	840,000
Civilian, Non-Institutionalized	
Population over 16:	823,000
In the Labor Force:	522,000
Employed:	500,000
Unemployed:	22,000

63.4%

of Montanans over 16 are in the labor force.

60.7% are employed.

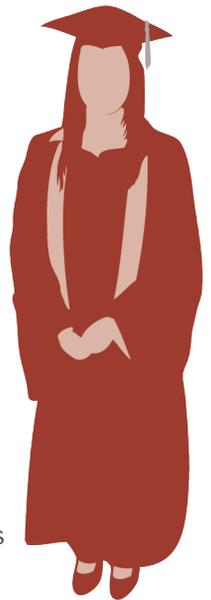
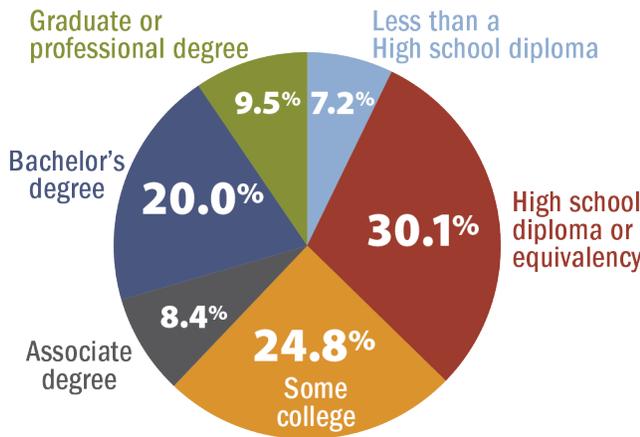
Both rates are above the national average.

The Montana Labor Force is



Population Educational Attainment

Educational Attainment of Montanans 25 and Older



Montana ranks highest in the nation for high school-level education.

93% of Montanans 25 and over have a high school diploma or equivalency.

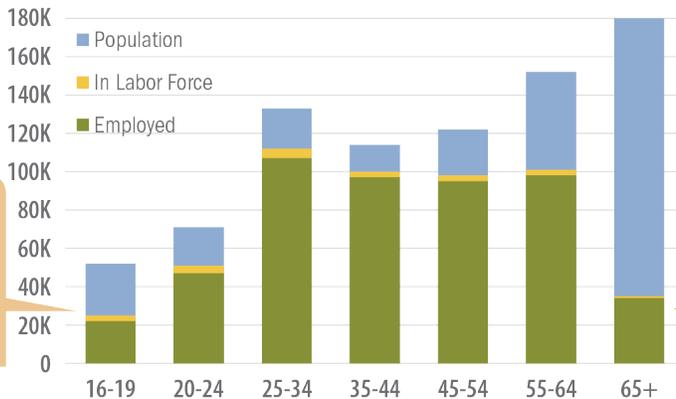
Yet, the state ranks only 20th for bachelor's degree attainment.

Source: LEHD, QWI and 2015 5-year ACS, U.S. Census, LAUS, MTDLI, and BLS

The Montana Worker

By the Numbers

Montana Workers by Age



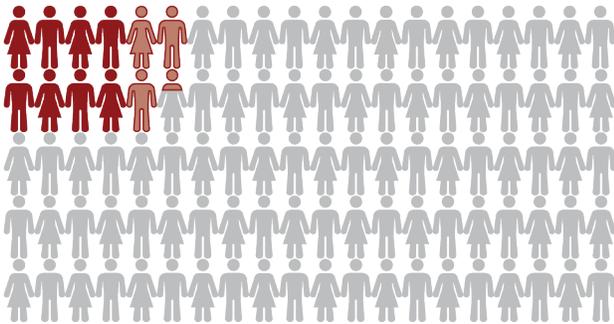
About 50% of teens are working, higher than in most states.

People 65 and older are the largest age category.

But are among the lowest for employed workers.

Population by Veteran Status

11.4% of Montanans are veterans.

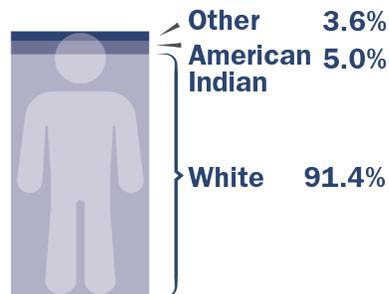


- Veterans
- Veterans with Disabilities
- Non-veterans

29.6% of Montana veterans have a disability.

Montana has the 2nd highest proportion of veterans in the nation, but Montana veterans have lower labor force participation compared to non-veterans and veterans nationally.

Labor Force by Race



Employed by Earnings

Montana Workers by Monthly Earnings in Primary Job (using home location)

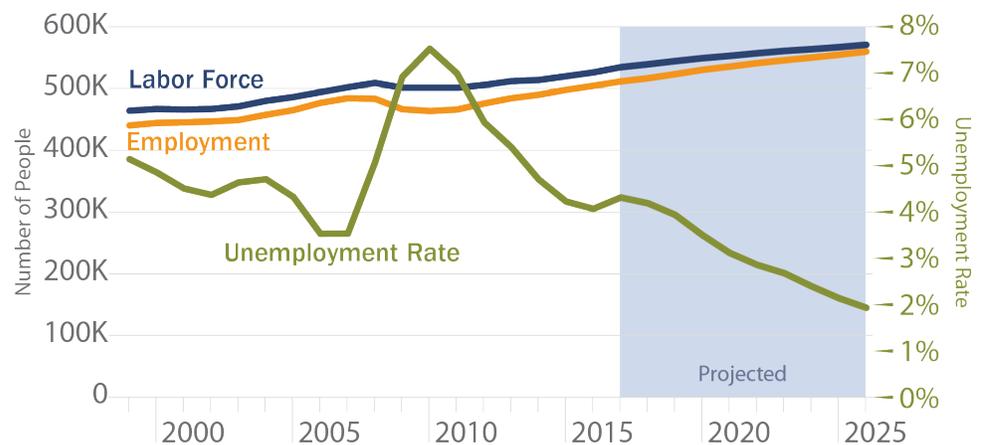


Part 2: Addressing Montana's Worker Shortage

Montana's continued employment growth has combined with slow growth in the labor force to put downward pressure on unemployment rates. Montana's unemployment rate in 2016 of 4.1% was the 16th lowest in the nation. While the state and regional unemployment rates are currently at ideal levels, labor markets are tightening below normal as more Baby Boomers retire without sufficient younger workers to replace them. Economists generally consider unemployment rates between four and five percent to be "normal," where workers have a reasonably easy time finding new jobs, and businesses have a reasonably easy time finding workers to suit their needs. Unemployment rates lower than this normal range cause frustrations for businesses seeking to expand operations. If businesses cannot find the workers needed to expand, Montana's economic growth will be limited.

Tight labor markets are expected for most of the next ten years. Montana's labor force will continue to expand in the next ten years, adding roughly 4,500 workers per year. In comparison, roughly 6,740 new workers joined the economy over the last year.¹² The slowly increasing labor supply is not enough to cover the expected job growth of 5,500 per year, pushing unemployment rates to new lows. **Figure 8** illustrates the expected change in employment, the labor force, and the unemployment rate for the 2000-2016 timeframe.

Figure 8: Projected Labor Force, Employment, and Unemployment Rate



Source: MTDLI Labor Force Projections, 2016 to 2026

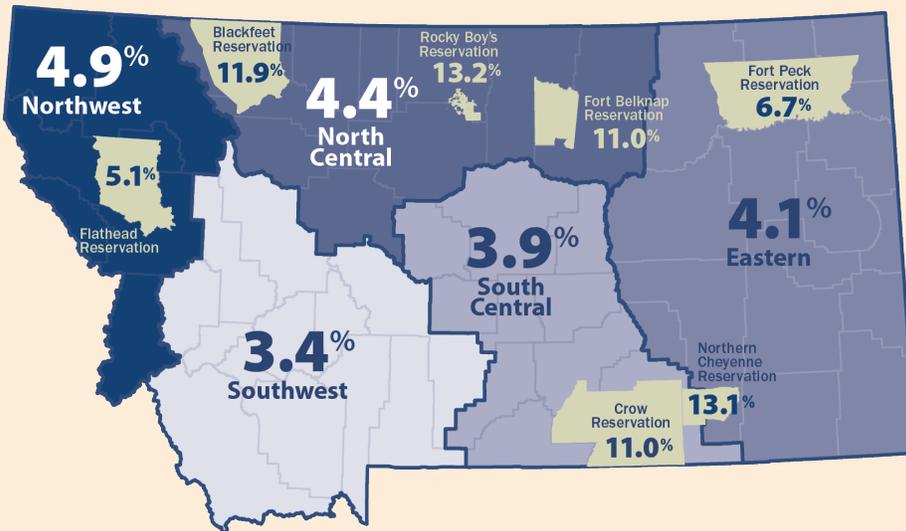
Low unemployment rates generally increase labor force participation as new workers respond to plentiful job opportunities and higher wages by entering the labor force. These economic responses are expected to continue, particularly among prime and working-age adults aged 25 to 54. Increases in migration from other states or countries will also add workers. Yet, even with these positive influences, growth in the labor force will still be slow due to the age composition of

the population. The large Baby Boomer generation is retiring and moving out of the labor force. Younger generations are simply not large enough to make up the difference, even with higher labor force participation. To put the change into context, Montana's labor force aged 16 to 24 is only projected to grow by about 130 people per year through 2026, while the labor force over 55 is growing by nearly 4,000 people per year.¹³

Combining expected growth in the labor force and employment, unemployment rates are expected to reach very low levels below 3% within the next ten years. In worker shortage conditions, workers can expect fast growing wages and more opportunities for career growth, while businesses can expect to spend greater resources on recruitment, retention, and on-the-job training.

Unemployment Rates of Regions and Reservations

Annual unemployment rates declined in the Northwest by 0.3 percentage points, and the Southwest and North Central regions by 0.1 percentage points. However, unemployment rates increased in South Central Montana by 0.3 percentage points and by 0.6 percentage points in the Eastern region. Unemployment in the East increased due to job losses, but increases in the labor force drove unemployment rates higher in the South Central region. Even with the increases in the unemployment rates in the Eastern and South Central regions, all Montana regions have healthy unemployment rates.



Unemployment rates on Montana's seven reservations remain higher than their surrounding regions. Reservations located in the fast-growing western part of the state, including the Flathead and Blackfeet Reservations, experienced decreased unemployment rates from 2015 to 2016. However, the reservations in the rest of the state experienced increased unemployment. Unemployment rates on the Crow Reservation increased by 1.2 percentage points, Fort Peck Reservation increased by 0.3 percentage points, 0.9 percentage points on the Rocky Boy's Reservation, and the Northern Cheyenne Reservation increased by 0.5 percentage points. The reservation communities share the fates of their surrounding regions, but typically have higher unemployment rates because of fewer job opportunities and a less mobile labor force.



Finding More Workers

Montana's employers and policy makers are pursuing a number of methods to increase the availability of labor, including increasing migration, updating employment practices, and increase the retention of graduates from Montana colleges. Montana already has a net in-migration of roughly 4,000 people each year, who are already included in labor force projections.¹⁴ In-migrants often bring fresh perspectives and new ideas into our state, helping us to increase productivity levels. However, increasing the number of in-migrants enough to meet worker needs will be a difficult task.

Alternatively, Montana employers are continuously adapting employment practices to attract more workers into the labor force. Increased employment opportunities and higher wages will naturally provide more incentives for workers to enter the workforce. Yet, these natural forces will not be enough to maintain normal unemployment rates; additional efforts are needed. For example, equipment modifications or work-at-home arrangements can encourage disabled workers and disabled veterans to find work. Regular scheduling can help stay-at-home parents arrange daycare or school pick-ups around their jobs. **Figure 9** illustrates the labor force participation rates of select populations. Groups with lower labor force participation than average make good targets for recruiting new workers into the labor force.

Addressing the Gender Pay Gap

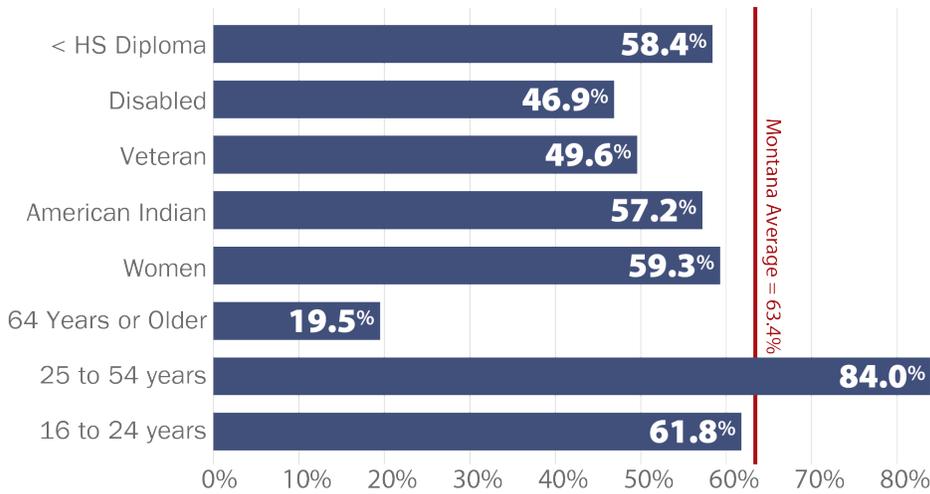
Addressing the gender pay gap and providing greater opportunity for female workers would increase women's labor force participation and provide greater incentive for women to work longer hours, thus addressing Montana's worker shortage. The median earnings for Montana women who work full-time, year-round are only 74% of the median earnings for men, confirming that a gender pay gap exists in Montana.

Economic research has found many reasons for the differences in pay between men and women, including different career and education choices, differences in work experience, and gender bias. Résumé studies are a common type of gender pay bias research. Researchers send identical résumés to employers, but half of the résumés have a female name (Erin) and the other half list a male applicant (Aaron). These studies consistently find that employers are more likely to offer the job to the male, with starting salary offers 7% to 15% higher than those offered to females, despite identical qualifications listed.

Research has also found that the bias in male hiring increases with the salary level, so that women applying for low-wage jobs are 9% less likely to be hired compared to similarly qualified male applicants, but women are 50% less likely to receive job offers for a high-wage job. Both male and female managers are equally likely to demonstrate gender bias in hiring and pay, suggesting that the historic and cultural beliefs that result in gender pay bias are common to us all.¹⁵

Governor Bullock established the Equal Pay for Equal Work Task Force to address these and other issues that result in lower wages and employment opportunities for women. Through the leadership of co-chairs Commissioner Pam Bucy and Director Sheila Hogan, the Task Force has raised awareness about gender discrimination, providing the tools for employers to identify and address gender issues within their own business. Through this Task Force, Governor Bullock is helping the Montana economy utilize all workers, regardless of gender, while improving fair wages in Montana.

Figure 9: Montana Labor Force Participation By Select Demographics

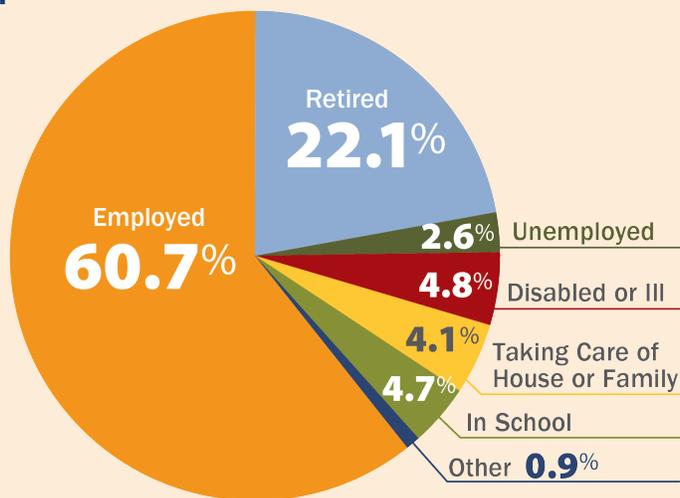


Source: LAUS, BLS, and MTDLI. Current Population Survey (CPS), BLS, used for veterans, and 2015 5-year ACS, U.S. Census Bureau used for <HS graduate, disabled, and American Indian.

Finally, employers could work with the state’s education system to increase ties to high school and college graduates, increasing the retention of graduates in Montana’s labor force. Roughly 75% of graduates from Montana’s colleges work in Montana at some point in the five years after graduation, but this percentage could be improved. Workers with an existing connection to a Montana business during their school years through an internship or other work-based learning activity are more likely to remain in Montana after graduation.¹⁶ Employers who offer internships and career exploration through work experience can gain an edge on recruiting the best workers and retaining graduates within our economy.

Who is Working in Montana?

With low unemployment rates, rising wages, and plentiful job opportunities, many people wonder why every Montanan does not work. In truth, those not in the labor force are often in school, retired, formerly incarcerated, disabled, or caring for family members. Efforts to bring more workers into the labor force must address barriers to employment, such as difficulty with scheduling daycare and classes or needing accommodations.

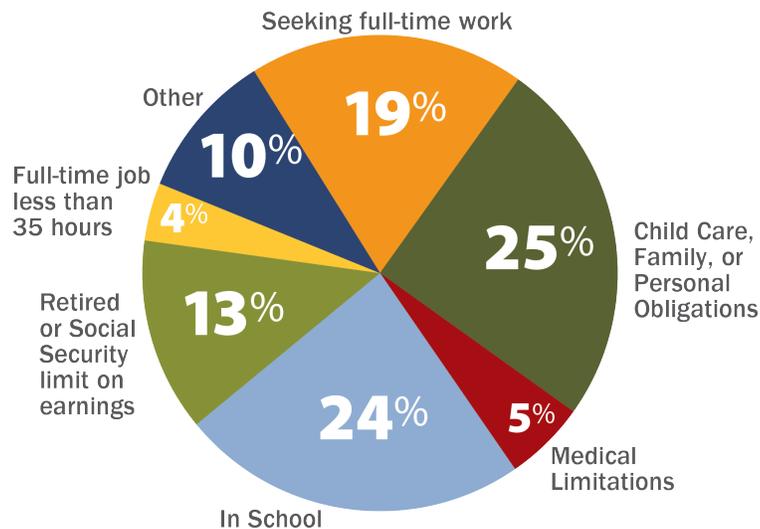


Source: MTDLI using 2016 CPS data through DataFerret.

Use Each Worker Effectively

Another solution to Montana's worker shortage is to make sure each worker is employed to his or her full potential, meaning both that part-time workers increase work hours and that productivity improvements increase the value of each work hour. Montana has a high share of part-time employment. Among Montana workers aged 16 to 64, roughly 21% work less than 35 hours per week – the ninth highest percent of part-time workers in the nation.¹⁷ While part-time jobs can be a benefit to semi-retired workers, students, and others who choose to only work part-time, actually increasing labor force participation, many other part-time workers may prefer full-time employment. Roughly 19% of part-time workers in 2016 indicated that they would prefer full-time work, as shown in **Figure 10**.

Figure 10: Reasons Given for Working Part-Time
By Montana Part-time Workers, 2016



Source: 2016 Current Population Survey data compiled with DataFerret

In addition, increasing labor productivity would reduce labor needs. Labor productivity refers to the amount of output created with each labor hour, increasing the efficiency of labor. Productivity gains benefit businesses through more efficient production, but also benefit workers through faster wage growth. Enhanced productivity is achievable through better workforce education that allows workers to continuously upgrade skills and knowledge, and by businesses learning about and implementing the latest innovative technologies and practices. Better productivity also requires networking with researchers who are identifying best practices, as well as communication with upstream and downstream businesses to identify ways to save labor hours.

Some productivity-enhancing investments will occur naturally in response to market forces. For example, as labor becomes more expensive, businesses will invest in productivity-enhancing machines and automation to allow each worker to produce more output. The new technologies will produce more output with fewer labor hours, re-deploying workers into more productive activities, and allowing economic growth to continue despite the labor shortage. Ultimately, Montana's growth depends on our ability to increase technology, productivity, and innovation.

Improving Education Systems

Montana's workforce and education systems continue to implement strategies to make worker training more affordable, accessible, and aligned with the needs of our economy. Businesses and workforce professionals need to encourage students to seek in-demand fields needed in our economy. Education organizations need to increase the efficiency and flexibility of training, allowing adults already in the labor force to learn new skills while still working, and allowing high schools students to get a head start on career exploration.

But the responsibility for a well-prepared workforce does not just fall on public institutions, workers, and students. When workers are in short supply, businesses must take on more responsibility to train workers, particularly with on-the-job training to learn job-specific skills that may not be needed in other businesses. In addition, the changing demographics of Montana's labor force means that experienced older workers are retiring and being replaced by younger workers with little job experience. In fact, only about 50% of Montana teens are in the labor force, meaning that there may be high school or college graduates that have never held a prior job.¹⁸ Both tight labor markets and a younger workforce increase the need for businesses to have an active on-the-job training program that allows workers to gain job experience quickly. Businesses must also have greater involvement in formal training systems, providing more work-based learning to perfect worker skills and working with the education systems to ensure that curriculums teach the right skills for the job. Efforts to improve Montana's labor force require the private and public sectors to collaborate. Together, these efforts will steadily increase the productivity levels of Montana's workforce so each worker can achieve their highest level of success.

Montana Registered Apprenticeship

Apprenticeships are a time-honored training model used to educate the next generation of Montana's workforce through union and non-union business sponsors. Since Governor Steve Bullock took office, apprenticeships have increased by 30%, and almost 90% of apprentices are still working in Montana.

Through this type of work-based-learning, apprentices are able to earn a paycheck while learning the technical and soft skills employers need to grow their operations. Apprentices who completed their training had average wages of \$59,600 in 2015, nearly \$20,000 more than the statewide average.

With over 1,000 business sponsors across the state offering apprenticeships in over 60 occupations, the expansion of apprenticeships is becoming a vital training method to address the retirements of Baby Boomers in Montana's economy.



As a business, it is simple to start your own apprenticeship program and grow your own workforce. You may even qualify for the Montana Apprenticeship Tax Credit that was signed into law by Governor Bullock, which offers a \$750 tax credit for each new apprentice hired, and \$1,500 for each new apprentice that is a veteran. Contact the Montana Registered Apprenticeship program at the Montana Department of Labor & Industry at 406-444-3556. You can also visit the Montana Registered Apprenticeship website at apprenticeship.dli.mt.gov.

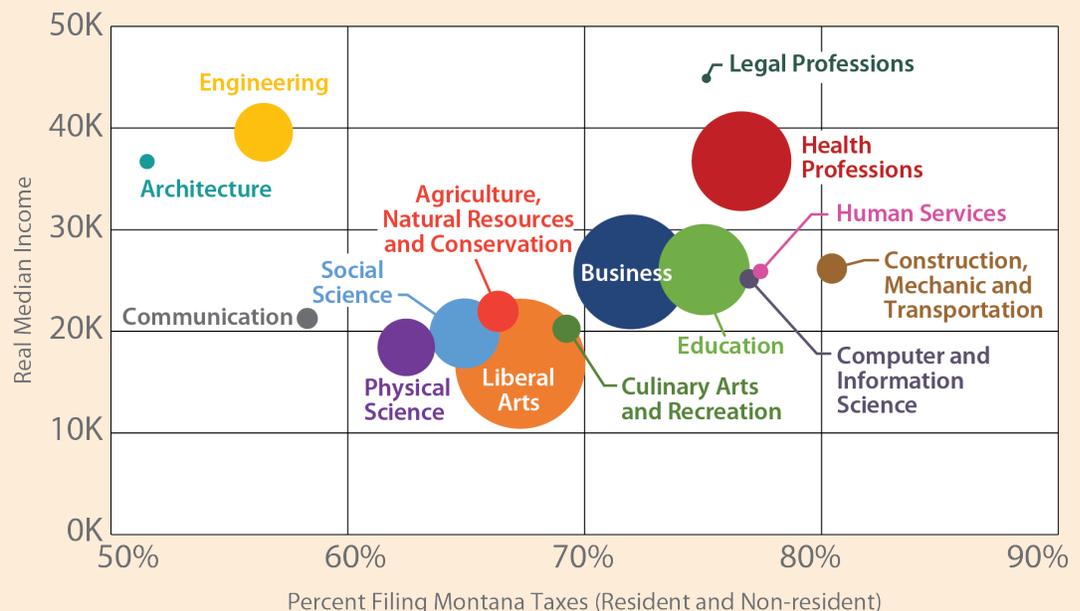
Aligning Education with the Economy

In the report “Meeting State Worker Demand: A Report on the Labor Market Outcomes for Montana Colleges,” the Montana Department of Labor & Industry examined whether graduates from Montana colleges were being trained in the right fields for Montana’s economy. The report found that our higher education system is not providing sufficient workers trained in social work, automotive service, computer and information science, and some healthcare jobs. However, too many workers are graduating with general studies degrees compared to the available jobs. The ‘general’ description may not provide employers with enough information to know whether a graduate is prepared to fill a job requiring specific skills, thus reducing employment opportunities. Businesses interested in obtaining more workers within the undersupplied fields may wish to work with their local two- or four-year colleges to strengthen the supply of workers, including offering internships and work visits to encourage more students to specialize in the needed field.

The report also includes the income levels and employment rates for graduates one year and five years after graduation, providing important information for students choosing career fields. The research found that graduates in the legal professions, engineering, and health professions had the highest income earned one year after graduation, while graduates in the construction, mechanic & transportation programs had the highest retention in the Montana workforce. Healthcare jobs offer both high wages and good employment possibilities within Montana. More information is available in the full report, available at lmi.mt.gov/Publications/PublicationsContainer/meeting-state-worker-demand.

Workforce Outcomes by Program Category

One Year After Graduation



Source: Watson et al, 2017

Improve Worker Safety

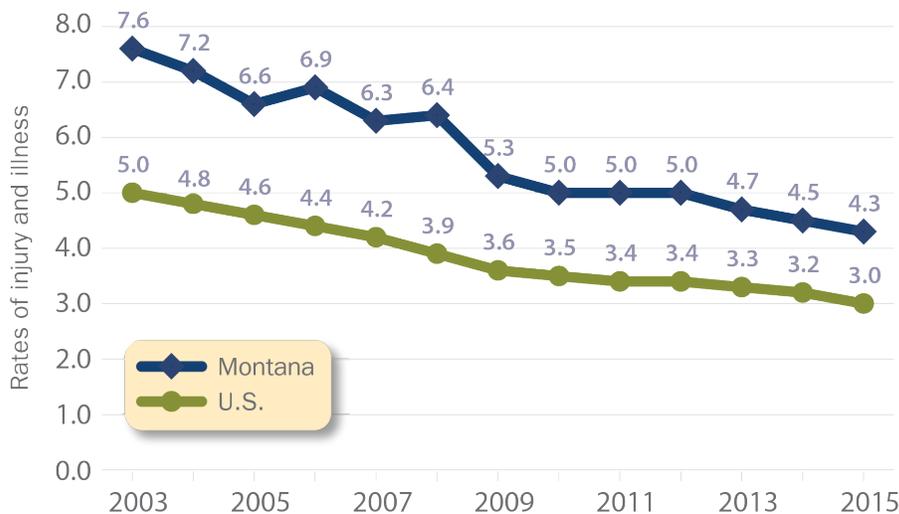
Over the last decade, Montana has been one of the most dangerous states to work in the United States, even reaching the undesirable top rank in 2008 with the highest rate of work-related injuries and illnesses among all states, with 6.4 injuries and illnesses occurring for every 100 full-time workers.¹⁹ Montana's high worker injury rate exacerbates the workforce shortage because injured employees must take time off work to recover. High injury rates could also dissuade workers from moving to Montana to work, ultimately reducing our worker supply.

Montana has made much-needed gains in worker safety, and is now a less dangerous place to work than it was a decade before.

Montana has made much-needed gains in worker safety, and is now a less dangerous place to work than it was a decade before, as shown in **Figure 11**. In 2015, Montana dropped to 4.3 cases of injury or illness for every 100 full-time workers. Even with these improvements, Montana is still among the five most dangerous states for workers. Montana must continue its commitment to improved worker health and safety and ensure every worker returns home safely at the end of the day.

Figure 11: Non-Fatal Work-related injuries and illnesses

Incidence rates per 100 full-time workers in Montana and the U.S., 2003-2015



Source: Occupational Injuries and Illnesses (SOII), BLS

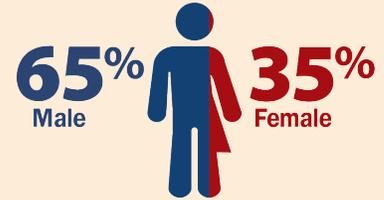
Montana must continue its commitment to improved worker health and safety and ensure every worker returns home safely at the end of the day.

Worker Safety at a Glance - 2015

» Injury Rates by Industry



Male workers accounted for 65% of injuries with lost work days.



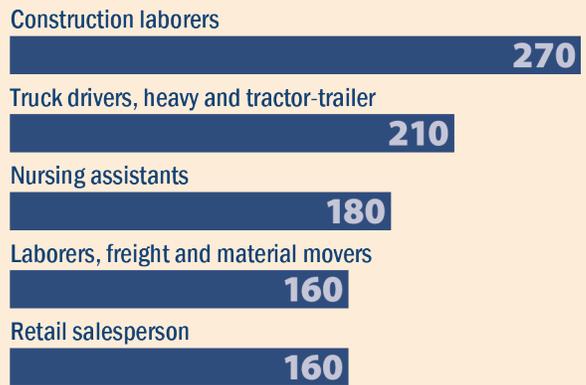
The industry with Montana's highest injury rate was manufacturing, with 7.0 non-fatal work-related injuries reported per 100 full-time workers.



Construction laborers had the highest number of injuries and illnesses at 270, while truck drivers (heavy and tractor-trailer) totaled 210 incidents, and nursing assistants had 180.

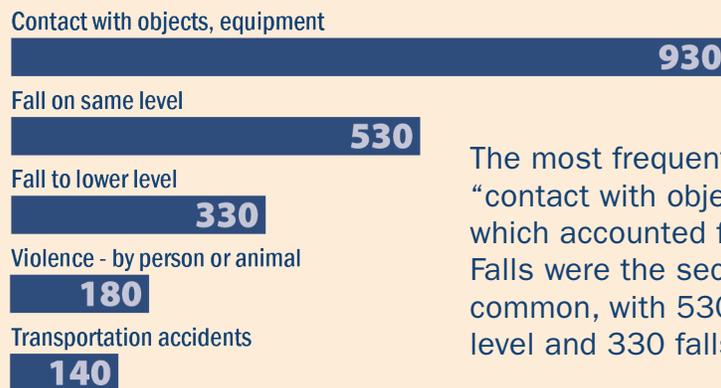
» Injuries by Occupation

Injuries with lost work days only



» Injuries by Event or Exposure

Injuries with lost work days only



The most frequent injury event was "contact with objects or equipment," which accounted for 930 incidents. Falls were the second and third most common, with 530 falls on the same level and 330 falls to a lower level.

Source: Survey of Occupational Injuries and Illnesses (SOII), MTDLI, and BLS. Private recordable injuries only.

Montana's Growth Expected to Continue

Montana's economic growth is continuing, but businesses are feeling the effects of a constrained labor supply. The western half of Montana experienced robust job and wage growth to push the state growth higher. The decline in oil prices has affected our state, slowing growth in the eastern region of Montana, but the state's overall economic resiliency and industry diversity has made it possible to overcome these challenges. Montanans have once again shown our mettle in lifting the state's economy to superior growth despite losses in oil-impacted areas.

During the next few years, Montana will meet many economic challenges, including accepting opportunities in the energy industry and addressing workforce shortages. Governor Bullock and the Montana Department of Labor & Industry will continue to address the worker shortage and other issues faced by the Montana economy and will celebrate our workforce development successes. The Governor and Department will continue developing partnerships between the private, nonprofit, and public sectors by expanding apprenticeships and work-based learning opportunities to make sure workers receive the training and skills needed to move Montana forward. Montanans will continue to work together to actively plan, implement, and promote these tools to lead our state to greater prosperity.

The Montana Department of Labor & Industry will continue to share best practices for employee retention and follow data-driven solutions to strengthen the workforce. All of these strategies are important for Montana to compete and lead in a global market with rising labor costs. With actions designed to improve training, hiring, and retention practices, Montana will meet our upcoming challenges and continue to outperform the nation and other states in our economic growth.



Endnotes

1. According to the National Bureau of Economic Research, the organization that determines the official timing of the business cycle. www.nber.org. Expansions are typically measured using GDP, although many different economic metrics are used by the NBER to determine the timing of business cycles.
2. Rudebush, Glenn D. "Will the Economic Recovery Die of Old Age?" Federal Reserve Bank of San Francisco. Available at <http://www.frbsf.org/economic-research/publications/economic-letter/2016/february/will-economic-recovery-die-of-old-age/>. Although the average business cycle is seven years, the duration of an expansion does not increase the likelihood of recession. However, economic theory suggests that recessions can be caused by cumulative over-exuberance about future growth, which has not occurred in the current recovery due to the slow pace of growth.
3. Personal Income Statistics, Bureau of Economic Analysis (BEA).
4. Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics (BLS) and Montana Department of Labor & Industry (MTDLI)
5. Southeast Montana Development Corporation and KLJ. 2017. "Colstrip Economic Diversification Strategy: Growing Montana One Job at a Time" May 2017. Funded by grants from the Economic Development Administration and the Montana Department of Commerce.
6. Powell, Walter and Snellman, Kaisa. 2004. "The Knowledge Economy" Annual Review of Sociology. 2004. 30: 199-220.
7. Gross Domestic Product by State, BEA.
8. Quarterly Census of Employment and Wages (QCEW), BLS and MTDLI.
9. QCEW, BLS and MTDLI. Real wages adjusted by CPI-U.
10. Current Population Survey, U.S. Census.
11. Business Employment Dynamics, BLS. 2015 average for business creation rates. QWI beginning of quarter employment by firm size 2016Q3.
12. 2016-2026 Employment forecasts, MTDLI.
13. Population Projections, U.S. Census.
14. Bradley, Chris. 2015. "Will Montana Face a Worker Shortage?" Montana Economy at a Glance, Montana Department of Labor & Industry. Available at <http://lmi.mt.gov/Publications/PublicationsContainer/will-montana-face-a-worker-shortage>.
15. Wagner, Barbara. 2016. "Equal Pay Day: Examining the Evidence for the Gender Wage Gap" Economy at a Glance, April 2016. Available at lmi.mt.gov/portals/135/publications/LMI-Pubs/articles/2016/0416-EqualPayDay.pdf.
16. Watson, Amy et al. 2017. "Meeting State Worker Demand: A Report on the Labor Market Outcomes of Montana Colleges" Montana Department of Labor & Industry. Available at lmi.mt.gov/Publications/PublicationsContainer/meeting-state-worker-demand.
17. 2015 ACS 5-Year Estimates, U.S. Census Bureau.
18. LAUS, BLS & MTDLI.
19. Occupational Injuries and Illnesses, MTDLI and BLS.



Research and Analysis Bureau

P O. Box 1728

Helena, MT 59624-1728

Phone: (406) 444-4200

www.lmi.mt.gov

10 copies of this public document were produced at an estimated cost of \$2.22 per copy, for a total of \$22.20, which includes \$22.20 for printing and \$0.00 for distribution.