# Montana Employment and Labor Force Projections

## Job Growth from 2020 to 2030

Montana Department of
LABOR & INDUSTRY

# Montana Employment Projections:

## Job Growth from 2020 to 2030

**State of Montana**
Greg Gianforte, Governor

**Montana Department of Labor & Industry**
Laurie Esau, Commissioner

**Created by:**
Research & Analysis Bureau
Nick Holom, Economist
Rob Marvin, Graphic Designer

**For more information contact:**
Research & Analysis Bureau
P.O. Box 1728
Helena, MT 59624-1728
(406)444-4100
lmi.mt.gov

Montana Department of LABOR & INDUSTRY

## Table of Contents

## Executive Summary

Montana Department of Labor and Industry (MTDLI) works to develop and maintain a highly skilled workforce. Employment and labor force projections help achieve this goal by providing insight into the occupational and skill needs of the future workforce. Employers, educational institutions, and workforce organizations use projections to anticipate training needs, allowing them to plan and reduce work stoppages due to insufficient labor supply. These projections are also used by students and job seekers to investigate rewarding career paths. The 2020-2030 employment projections include the following highlights:

- Through 2030, Montana is expected to add 5,753 jobs annually. Over the next two years, growth is expected to be higher than normal due to recovery of employment losses in the base year of 2020 and stimulus spending from the American Recovery Act.

- Employment growth slows after 2022 due to a constrained worker supply.

- All of the regions in Montana are expected to have growth over the next 10 years, with the Southwest and Northwest regions growing faster than the rest of the state. Figure 1 shows a summary of statewide and regional employment growth.

**Figure 1: Statewide and Regional Projections Summary, 2020-2030**

| Region | Annual Change | Annual Growth Rate |
|---|---|---|
| Northwest | 1,772 | 1.1% |
| Southwest | 2,006 | 1.2% |
| North Central | 656 | 1.0% |
| South Central | 1,114 | 1.0% |
| Eastern | 205 | 0.6% |
| **Montana** | **5,753** | **1.1%** |

Source: Montana Department of Labor and Industry Employment Projections 2020-2030

- Total job openings are projected to be just over 61,200 openings each year, closely matching previous 2018-2028 projections of 61,400 openings annually.

- The industries expected to have the most growth in employment over the next ten years include health care and social assistance (15,200 new jobs), accommodation and food services (13,300 new jobs), and construction (5,600 new jobs).

## About Employment Projections

Every year, the Montana Department of Labor and Industry (MTDLI) produces employment projections in conjunction with the U.S. Department of Labor. Employment projections are produced over a two-year and ten-year time frame, by industry and occupation, and for the state and five sub-state regions. The MTDLI also produces labor force projections, but only for the state (not for regions). The labor force projections are estimated by age and gender to help provide insight into Montana's changing workforce demographics. Together, the employment and labor force projections are used by a variety of groups and individuals to help plan workforce development.

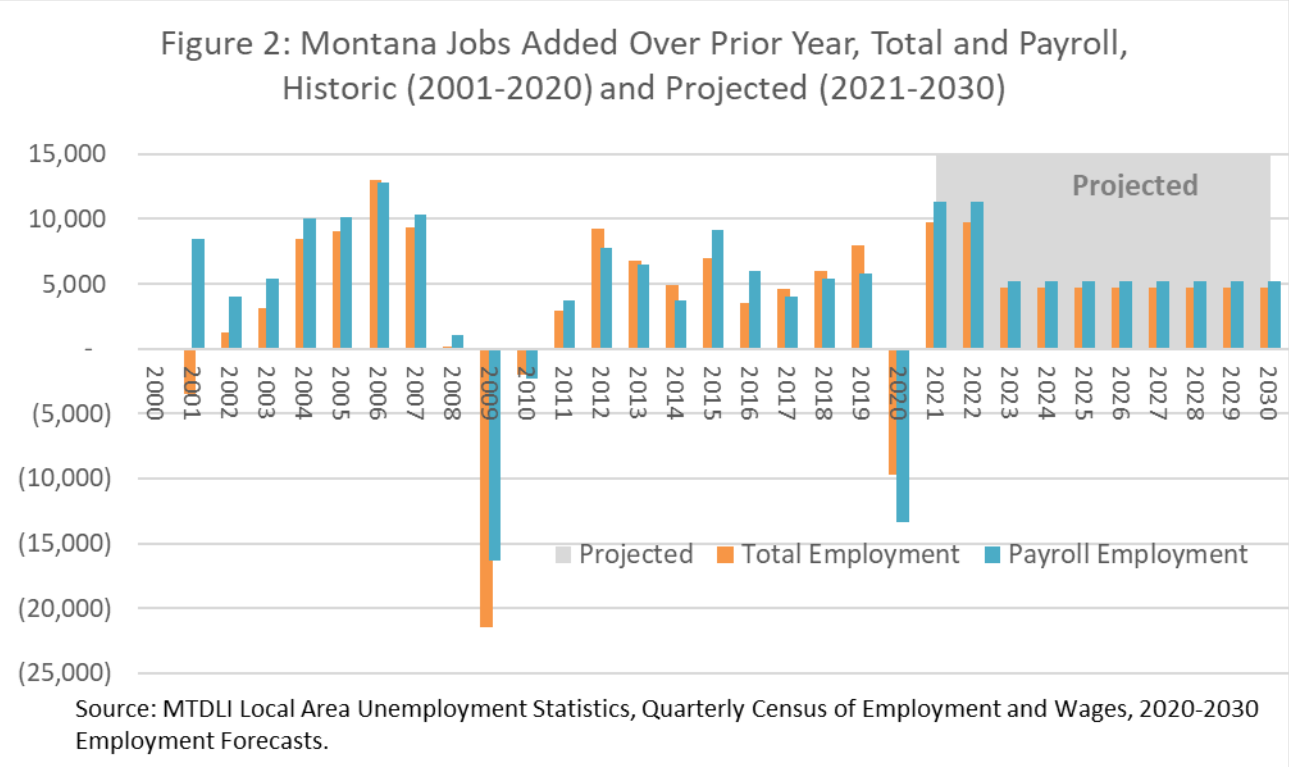
Employment forecasts are an estimate of the future demand for workers based on historical employment data and the knowledge that is available at the time of the forecast. Because the economy is constantly changing, the forecasts are not going to be exactly right. Instead, projections should be viewed as the most likely employment growth outcome given the current knowledge and information about the economy. Additionally, projections focus on long-term employment growth and labor force trends, rather than short-term and temporary fluctuations in the business cycle. Therefore, employment forecasts are published as a linear average over the two-year and ten-year period, even though the underlying forecast may include variations from that trend.

This report provides a broad overview of this year's statewide and regional projections along with commonly requested tables of high-demand jobs by specific categories (such as jobs requiring a bachelor's degree, jobs that pay higher than $65,000, and apprenticeable jobs). For detailed information on methodology, see Appendix A. For information of past forecast accuracy, see Appendix B. For a comparison of job postings data to job projections, see Appendix C.

## Overview of Montana's 2020-2030 Projections

Over the next two years, total employment in Montana is expected to grow by 9,720 jobs annually. Figure 2 shows actual and projected employment growth from 2001 to 2030. **Higher growth over the next two years is expected due to the recovery of jobs temporarily lost due to the pandemic recession and due to stimulus spending increasing consumer demand**. After Montana's employment recovers to it's pre-recession peak in 2021, total employment is expected to grow more slowly. The long-term estimated growth is slower due to a constrained labor force, with labor force participation continuing to decrease as more of Montana's population moves into retirement. Compared to the eight years (2011-2019) prior to the pandemic, which had total employment growth of 5,900 jobs per year on average, the eight years following the pandemic recovery (2022-2030) are expected to grow by an average of 4,700 jobs per year.

**Tight labor markets are the main factor constraining future employment growth**. As more workers retire with fewer workers available to fill the jobs they leave behind, businesses will have difficulty finding workers.




Source: MTDLI Local Area Unemployment Statistics, Quarterly Census of Employment and Wages, 2020-2030 Employment Forecasts.

**All regions of Montana are expected to have employment growth over the next 10 years.** Figure 3 shows that the Southwest region (including Bozeman, Helena, and Butte) is expected at an average annual rate of 1.2%, or about 2,006 jobs per year. Although this region is the fastest growing in the state, the projected growth is slightly lower than its average annual growth from 2011 to 2019. The Northwest region (including Missoula and Kalispell) is expected to grow second fastest at an average annual rate of 1.1% (approximately 1,772 jobs per year). Both regions had strong economic growth and

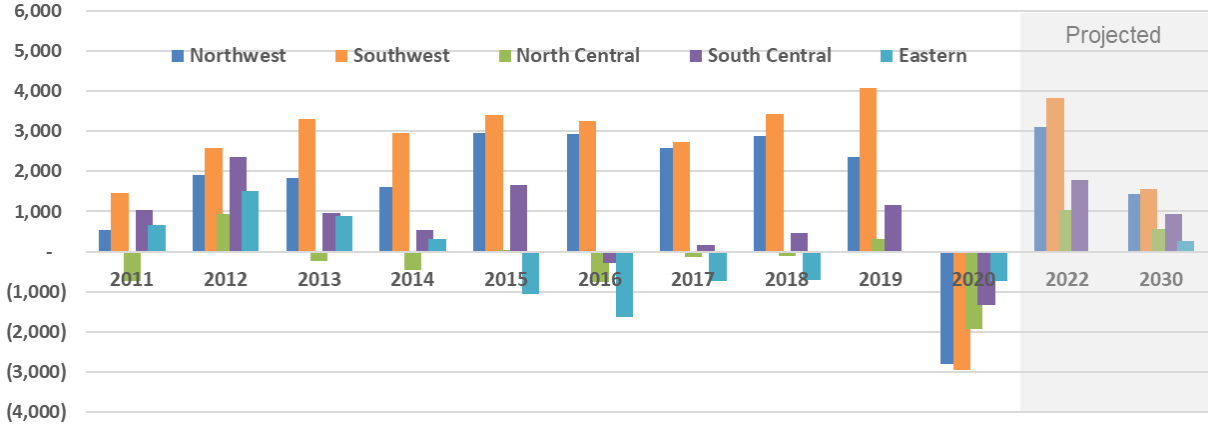
consistent job gains over the last several years. Job growth in the Southwest grew at an average annual rate of 2.3% (3,026 jobs) from 2011 to 2019. Over that time, the Northwest grew at an average annual rate of 1.7%, or 2,178 jobs per year. From 2011 to 2019, both regions had strong growth in construction, retail trade, accommodation and food service, professional services, and healthcare.

Jobs in the South-Central region (which includes Billings) are projected to grow at an annual average rate of 1% over the next ten years (1,114 jobs per year). Slightly slower growth in this region is expected due to changes in the mining and utilities industry. Colstrip units 1&2 retired in January 2020 and lower wage earnings from this industry will reduce demand for local consumer-driven businesses. However, even with these impacts, the region is expected to grow with gains in the health care and social assistance, education, construction, and accommodation and food service industries.

The North-Central region is also expected to have similar growth to the South-Central region with 1% growth over the next ten years. The region had slower growth over the previous 10 years with a net loss in employment from 2011 to 2019 of roughly 127 jobs per year. The increased ability to work from home and continued in-migration is expected to benefit the area as both current and future residents seek out cheaper housing markets. The area is also expected to grow due to the recovery from the pandemic trough. Average growth over the next ten years is expected to be roughly 660 jobs per year, with growth in construction, health and education, and leisure activities industries.

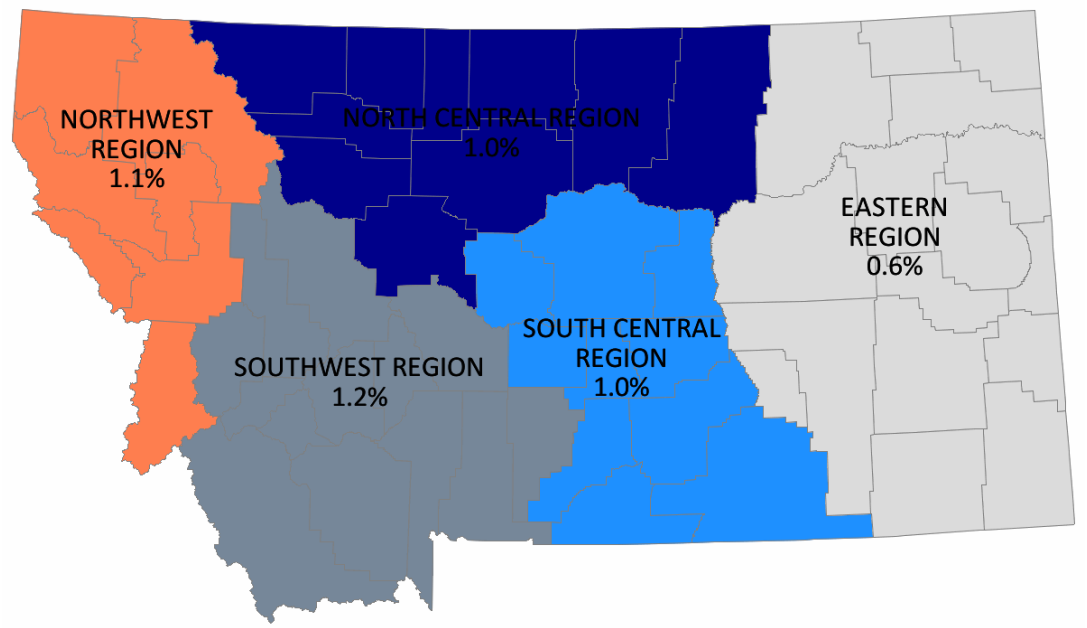
The Eastern region has also experienced slower growth than the rest of the state with an average decline in jobs of roughly 86 jobs per year from 2011 to 2019. Economic losses in the agricultural industry from 2016 to 2020 and continued decline in energy production due to low oil prices have contributed to lower spending and generally lower economic activity than in the past. Over the next ten years, moderate growth of 200 jobs per year is expected as the economy regains balance, and the agriculture industry posts stronger earnings.

Figure 3: Historical and Projected Annual Employment Growth by Region




Source: LAUS, 2020-2030 Employment Projections, MTDLI

**Figure 4: Projected Employment Growth by Region, 2020-**




Source: MT DLI, Occupational Employment Projections

## Industry Growth

Figure 5 shows Montana's long-term and projected employment growth rates by industry.[1] **Montana's largest industry, health care and social assistance, is also expected to add the most jobs in the future with roughly 2,260 jobs per year through 2022 and 1,330 jobs per year from 2022 to 2030.** The expected pace is slightly faster than the average annual job growth from 2010 to 2019 of roughly 1,200 jobs per year due to increased population. The pandemic-related losses in the healthcare industry of 830 jobs in 2020 are expected to be recovered by the end of 2021. The Northwest and Southwest regions are expected to have the most growth in the healthcare industry, with more moderate in the South Central region.

[1] The healthcare and social assistance industry and the educational services industry include both private and public employment. All other public employment is included in federal, state, or local government.

**Figure 5: Montana Compounding Annual Employment Growth, Historic and Projected**

| Industry | Long-term Annual Growth Rate 1990-2020 | 2015-2020 Annual Growth Rate | 2020-2022 Annual Growth Rate | 2022-2030 Annual Growth Rate | 2020-2022 Average Job Gain Per Year | 2022-2030 Average Job Gain Per Year |
|---|---|---|---|---|---|---|
| Healthcare | 2.14% | 1.21% | 3.08% | 1.63% | 2,260 | 1,330 |
| Accommodation and Food | 0.73% | -1.23% | 7.45% | 1.26% | 3,720 | 730 |
| Construction | 2.13% | 3.12% | 3.85% | 1.16% | 1,210 | 400 |
| Professional Services | 2.58% | 2.48% | 2.44% | 1.66% | 580 | 430 |
| Education | 0.50% | -0.51% | 0.91% | 1.05% | 350 | 430 |
| Retail Trade | 0.38% | -0.49% | 1.44% | 0.42% | 830 | 250 |
| Arts and Entertainment | 1.72% | -1.18% | 2.57% | 2.58% | 280 | 320 |
| Other Services | 0.78% | 0.07% | 3.33% | 1.18% | 590 | 230 |
| Admin and Support Services | 0.93% | 0.67% | 2.05% | 0.96% | 370 | 190 |
| Manufacturing | -0.41% | 1.34% | 0.99% | 0.93% | 200 | 200 |
| Local Government | 1.68% | 0.35% | 1.33% | 0.79% | 280 | 170 |
| Transportation and Warehousing | 0.86% | 0.42% | 1.22% | 0.72% | 200 | 120 |
| Wholesale Trade | 0.41% | -0.76% | 0.75% | 0.67% | 130 | 120 |
| State Government | 0.68% | -0.44% | 1.45% | 0.56% | 180 | 70 |
| Real Estate | 0.87% | 1.51% | 2.15% | 1.14% | 130 | 70 |
| Agriculture | 1.78% | 2.74% | 1.70% | 0.98% | 110 | 70 |
| Finance and Insurance | 0.90% | 1.21% | 0.16% | 0.15% | 30 | 20 |
| Mining | 1.44% | -3.82% | -0.45% | 0.32% | -30 | 20 |
| Management | 2.47% | -0.21% | 1.64% | 0.00% | 30 | 0 |
| Federal Government | -0.06% | 1.11% | -1.08% | 0.27% | -110 | 30 |
| Information | -1.53% | -1.82% | -0.12% | 0.00% | -10 | 0 |
| Postal Service | -1.53% | 0.11% | -0.24% | -0.29% | -5 | -6 |
| Utilities | -0.78% | -1.95% | -0.78% | -0.85% | -20 | -20 |
| **Total Payroll** | **0.94%** | **0.33%** | **2.43%** | **1.03%** | **11,340** | **5,170** |
| **Total Jobs** | **0.64%** | **0.49%** | **1.90%** | **0.88%** | **9,720** | **4,760** |

Source: MTDLI Industry Projections 2020-2030

Note: The healthcare and education industries include both private and public employment. All other public employment is included in government. Long-term growth for state government and management is from 2000 to 2020.

The accommodation and food services industry is projected to have the most growth in the near term as the industry recovers from the COVID-19 recession. Employment is expected to grow by approximately 3,700 jobs per year in 2021 and 2022, with growth tapering into the future to an average of 730 jobs per year through 2030. Growth in this industry is primarily induced by population growth and increased income levels increasing the demand for restaurants and hotels. However, this industry also has

struggled to replace the workers lost during the pandemic recession, and therefore is likely to adopt labor-saving automation and productivity enhancements in the next ten years.

Construction is expected to have the third highest job growth, adding approximately 1,200 jobs per year over the next two years. From 2010 to 2019, the construction industry grew by an average of 800 new jobs per year. Montana is experiencing currently high demand for housing, especially in the Northwest and Southwest regions of the state. Further, government spending on infrastructure is expected to increase in the next several years as the state allocates federal stimulus dollars to improving broadband, energy, and other projects. These influences are expected to speed construction employment growth in the next several years then slowing over the long-term as the stimulus dollars are exhausted.

The professional, scientific, and technical services industry is expected to be one of the fastest growing industries over the next ten years. Workers in this industry primarily provide accounting, legal, consulting, research, and other professional services, and generally require higher levels of education and training. This industry continues to grow rapidly in the Northwest, Southwest, and South-Central regions of Montana where large educational institutions help drive research efforts and provide trained workers.

## Occupational Demand

Montana is expected to have 5,800 new jobs every year. However, new jobs are just part of overall employment demand. Job openings occur for other reasons, such as workers exiting the labor force to retire or workers leaving one occupation for another occupation. **When considering all sources of job openings, 61,200 job openings are expected annually in Montana, with new jobs only accounting for 9.4% of the total.** Over half of these job openings (52% or roughly 32,000) are expected due to workers transferring to a new occupation.[2]

**Exits** refer to people who leave their job and exit the labor force, such as to retire or to enroll in school.

**Transfers** are workers who leave one occupation for a different occupation, like a career change or promotion.

Figure 7 shows the annual job openings expected over the next ten years due to new jobs, exits, and transfers by large occupational group. The largest occupational group by total openings is food-preparation and serving-related occupations. The new jobs in this occupation are driven by the increase in the accommodations and food service industry recovery mentioned in the previous industry section. However, the large number of exits and transfers can be explained by high levels of turnover in food

[2] The U.S. Department of Labor methodology defines job transfers as people moving from one major occupational group to a different major occupational group, focusing specifically on long-term career changes that may require skill upgrades for the departing worker and that creates job openings for new workers. The methodology does not count job openings when workers change job titles to a closely related occupation because such moves typically don't lead to opportunities for new workers. Instead, job changes at the detail level represent a fixed pool of workers shifting positions. For more information on methodology see https://www.bls.gov/opub/mlr/2020/article/occupational-separations-a-new-method-for-projecting-workforce-needs.htm

service occupations. Food preparation and serving-related occupations have lower annual average wages, and turnover among low-wage jobs is typically higher than turnover in high wage jobs as workers gain skills and move up the career ladder. In the recent past, tight labor market conditions have helped increase wages among food preparation and serving jobs, which should help to recruit new workers into these occupations and may reduce turnover.

**Figure 7: Annual Projected Occupational Demand 2020-2030 by Large Occupation Group**

| | Large Occupational Group | Annual Openings | | | | 2020 MT Annual Average Wage |
|---|---|---|---|---|---|---|
| | | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Food Preparation and Serving Related | 1,220 | 3,750 | 4,910 | 9,890 | $22,800 |
| 2 | Office and Administrative Support | 300 | 3,140 | 3,550 | 6,980 | $35,350 |
| 3 | Sales and Related | 250 | 2,820 | 3,760 | 6,830 | $29,470 |
| 4 | Transportation and Material Moving | 350 | 1,810 | 2,590 | 4,760 | $36,470 |
| 5 | Construction and Extraction | 370 | 1,140 | 2,440 | 3,940 | $48,320 |
| 6 | Building and Grounds Maintenance | 310 | 1,360 | 1,540 | 3,210 | $29,040 |
| 7 | Healthcare Support | 460 | 1,180 | 1,150 | 2,790 | $29,810 |
| 8 | Education, Training, and Library | 280 | 1,230 | 1,160 | 2,670 | $38,510 |
| 9 | Personal Care and Service | 220 | 1,110 | 1,210 | 2,540 | $25,430 |
| 10 | Business and Financial Operations | 260 | 700 | 1,370 | 2,330 | $59,750 |
| 11 | Healthcare Practitioners and Technical | 520 | 870 | 880 | 2,270 | $66,850 |
| 12 | Installation, Maintenance, and Repair | 230 | 720 | 1,310 | 2,260 | $45,920 |
| 13 | Management | 150 | 860 | 1,240 | 2,250 | $86,020 |
| 14 | Production | 130 | 750 | 1,240 | 2,130 | $37,850 |
| 15 | Community and Social Service | 210 | 350 | 600 | 1,160 | $39,500 |
| 16 | Protective Service | 80 | 420 | 480 | 990 | $46,680 |
| 17 | Arts, Entertainment, Sports, & Media | 30 | 360 | 540 | 940 | $33,830 |
| 18 | Farming, Fishing, and Forestry | 50 | 220 | 560 | 830 | $35,370 |
| 19 | Computer and Mathematical | 150 | 160 | 450 | 760 | $65,430 |
| 20 | Life, Physical, and Social Science | 70 | 160 | 520 | 740 | $55,790 |
| 21 | Architecture and Engineering | 70 | 200 | 360 | 640 | $69,800 |
| 22 | Legal | 40 | 120 | 170 | 330 | $59,350 |
| | **Total** | **5,750** | **23,450** | **32,040** | **61,240** | **$37,860** |

Source: MTDLI Employment Projections. 2020-2030

Other occupations with high-growth in new jobs include healthcare practitioners (520 annual openings from new jobs), healthcare support (460), construction and extraction (370), and transportation and material moving (350).

Figure 8 shows the top 10 detailed occupations by most job openings. The top five occupations include fast food and counter workers (2,730 annual openings), cashiers (2,450), retail salespersons (2,100), waiters and waitresses (2,090), and office clerks (1,460). In general, detailed occupations making the top ten list are large occupations employing many Montanans but with high turnover caused by the low-

The education and work experience listed is the minimum required to enter the profession as determined by the U.S. Department of Labor, Bureau of Labor Statistics. For occupations without a clear path to entry, the BLS determines the typical path based on the current minimum qualifications of workers filling those positions. At these minimums, the worker will likely be earning less than the average wage for the industry.

skill, low-wage nature of these jobs. All the top occupations require a high school education or less and on-the-job training of less than a year, except for bookkeeping, accounting, and auditing clerks (950 annual openings). Bookkeeping, accounting, and auditing clerks is also the highest paying occupation with a median annual wage of $36,900. All of Montana's top ten occupations make less than Montana's median wage of $37,860.

**Figure 8: Top Ten Detailed Occupations with the Most Job Openings, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Average Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Fast Food & Counter Workers | <HS | ST OJT | 270 | 1,250 | 1,200 | 2,730 | $22,740 |
| 2 | Cashiers | <HS | ST OJT | 90 | 1,180 | 1,180 | 2,450 | $23,760 |
| 3 | Retail Salespersons | <HS | ST OJT | 100 | 860 | 1,140 | 2,100 | $27,570 |
| 4 | Waiters and Waitresses | <HS | ST OJT | 250 | 730 | 1,110 | 2,090 | $19,980 |
| 5 | Office Clerks, General | HSE | ST OJT | 50 | 710 | 700 | 1,460 | $34,010 |
| 6 | Home Health & Personal Care Aides | HSE | ST OJT | 230 | 510 | 420 | 1,170 | $26,660 |
| 7 | Janitors & Cleaners, Except Maids | <HS | ST OJT | 100 | 500 | 500 | 1,100 | $28,910 |
| 8 | Cooks, Restaurant | <HS | MT OJT | 210 | 350 | 500 | 1,060 | $26,850 |
| 9 | Bookkeeping, Accounting, & Auditing Clerks | SC ND | MT OJT | 50 | 520 | 390 | 950 | $36,900 |
| 10 | Maids & Housekeeping Cleaners | <HS | ST OJT | 90 | 470 | 370 | 920 | $24,790 |

Source: MTDLI Employment Projections 2020-2030

Notes: <HS = less than high school diploma; HSE = High school diploma or equivalent; SC ND = Some college no degree; ST OJT = short-term on-the-job training; MT OJT = medium-term on-the-job training

## Occupational Demand – High Wage Jobs

Whether planning for their first career or looking to switch careers, many Montanans are interested in occupations that are high wage. Figures 9 and 10 show jobs with the most openings earning $45,000 to $65,000 and earning over $65,000, respectively. **Most jobs on these two high wage lists require more work experience and/or a higher level of education**. For example, first-line supervisors tend to require five or more years of experience at a minimum, electricians and plumbers require completion of an apprenticeship, and accountants and teachers require a bachelor's degree. Across the top occupations earning $45,000-$65,000, over half require less than a bachelor's degree.

**Figure 9: Jobs Earning Over $45,000-$65,000 with the Most Job Openings, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Average Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Heavy & Tractor-Trailer Truck Drivers | PS ND | ST OJT | 40 | 300 | 440 | 780 | $48,900 |
| 2 | Sales Representatives, Except Scientific Products | HSE | MT OJT | 160 | 310 | 240 | 710 | $53,910 |
| 3 | First-Line Supervisors of Office and Administrative Support Workers | HSE | <5 yrs | 90 | 140 | 360 | 590 | $51,240 |
| 4 | Project Management and Business Operations Specialists, Other | Bach | | 40 | 130 | 270 | 440 | $60,500 |
| 5 | Operating Engineers & Other Construction Equipment Operators | HSE | MT OJT | 20 | 160 | 250 | 430 | $50,740 |
| 6 | Accountants and Auditors | Bach | | 50 | 120 | 230 | 400 | $63,240 |
| 7 | Elementary School Teachers, Except Special Education | Bach | | 50 | 110 | 230 | 390 | $48,940 |
| 8 | Electricians | HSE | Appren | 40 | 110 | 230 | 380 | $60,560 |
| 9 | Plumbers, Pipefitters, & Steamfitters | HSE | Appren | 40 | 110 | 210 | 360 | $57,010 |
| 10 | Secondary School Teachers, Except Special and Career/Technical Education | Bach | | 50 | 140 | 160 | 350 | $50,720 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030
Notes: HSE = High school diploma or equivalent; PS ND = postsecondary nondegree award; Bach = Bachelor's degree; 5+ yrs = five or more years of experience; <5 yrs = less than five years of experience; ST OJT = short-term on-the-job training; MT OJT = medium-term on-the-job training; Appren = Apprenticeship

Figure 10 shows of occupations paying a median wage of over $65,000. The three occupations paying over $65,000 requiring only a high school education are all first-line supervisors, requiring work experience to qualify. Other notable occupations that have high demand over the next ten years include registered nurses (710 annual openings), general and operations managers (600), medical and health services managers (200), software engineers (190), lawyers (140) and civil engineers (120).

**Figure 10: Jobs Earning Over $65,000 with the Most Job Openings, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Average Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Registered Nurses | Bach | | 160 | 310 | 240 | 710 | $68,740 |
| 2 | General and Operations Managers | Bach | 5+ yrs | 90 | 140 | 360 | 600 | $87,810 |
| 3 | First-Line Supervisors of Construction Trades & Extraction Workers | HSE | 5+ yrs | 50 | 110 | 240 | 390 | $65,510 |
| 4 | Medical and Health Services Managers | Bach | <5 yrs | 60 | 50 | 90 | 200 | $90,370 |
| 5 | Personal Service, Entertainment, & Managers, All Other | Bach | <5 yrs | -30 | 86 | 140 | 200 | $82,390 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 | Software Developers and Software Quality Assurance Analysts and Testers | Bach | | 60 | 30 | 100 | 190 | $85,940 |
| 7 | First-Line Supervisors of Mechanics, Installers, and Repairers | HSE | <5 yrs | 20 | 60 | 100 | 180 | $68,570 |
| 8 | Lawyers | Phd or Prof | | 20 | 60 | 70 | 140 | $79,410 |
| 9 | Civil Engineers | Bach | | 10 | 30 | 80 | 120 | $76,520 |
| 10 | First-Line Supervisors of Non-Retail Sales Workers | HSE | <5 yrs | -20 | 50 | 80 | 110 | $72,340 |

Source: MTDLI Employment Projections 2020-2030. Notes: HSE = High school diploma or equivalent; Bach = Bachelor's degree; 5+ yrs = five or more years of experience; <5 yrs = less than five years of experience

## Occupational Demand – Education Level

**Most job openings in Montana are in occupations that require low level of education because low-skill, low-wage jobs tend to have higher levels of turnover as workers quickly gain skills and move up the job ladder**. Figure 11 shows worker demand and average wage by minimum education requirement for the occupation. Over the next ten years, 44,400 projected job openings annually, or 72.6% of all job openings, are expected in jobs requiring a high school education or less. Occupations that require some college or a bachelor's degree make up another 25% of annual openings (15,300 opening per year). Occupations that require an advanced degree make up only 2.5% of annual job openings.

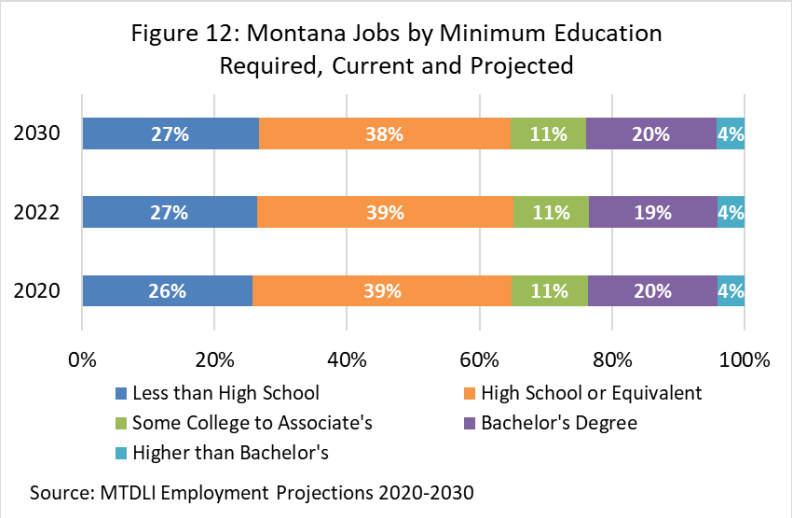
Wages increase with education level, with the average wage of occupations requiring a high school education at $40,860 compared to $66,940 for occupations requiring a bachelor's degree. Occupations requiring a master's degree or a professional/doctoral degree pay average wages of $74,950 and $113,800 respectively.

**Figure 11: Worker Demand by Education Level, 2020-2030**

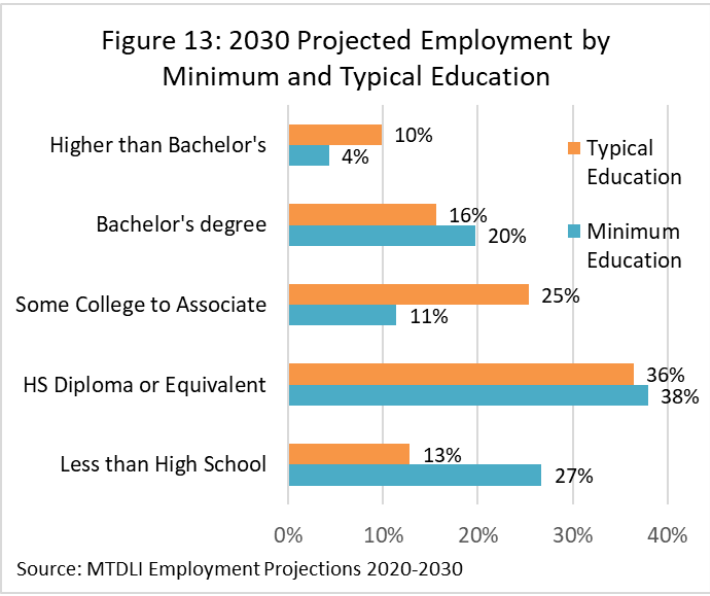
| Education Level | Annual Openings, 2020-2020 | | | | Annual Openings, 2020-2030 | | | | 2020 MT Annual Average Wage |
|---|---|---|---|---|---|---|---|---|---|
| | New Jobs | Exits | Transfers | Total Openings | New Jobs | Exits | Transfers | Total Openings | |
| Less than High School | 4,350 | 8,370 | 10,560 | 23,280 | 1,990 | 8,710 | 11,010 | 21,720 | $29,100 |
| HS Diploma or Equivalent | 2,650 | 8,470 | 12,060 | 23,180 | 1,610 | 8,710 | 12,410 | 22,720 | $40,860 |
| Some College to Associate | 950 | 2,390 | 2,980 | 6,320 | 650 | 2,480 | 3,090 | 6,210 | $42,670 |
| Bachelor's degree | 1,420 | 2,890 | 4,650 | 8,950 | 1,210 | 3,010 | 4,870 | 9,090 | $66,940 |
| Master's degree | 160 | 180 | 300 | 640 | 150 | 200 | 320 | 670 | $74,950 |
| Doctoral or Prof. degree | 180 | 330 | 330 | 850 | 150 | 350 | 340 | 850 | $113,800 |

Source: MTDLI Employment Projections 2020-2030

Montana's occupational distribution is mostly in occupations with lower education requirements. Figure 12 shows Montana's jobs by minimum education required for 2020, 2022, and 2030. The educational distribution of employment stays relatively stable over time, with occupations requiring a high school education or less making up approximately 65% of employment. Occupations requiring high school education or less make up a larger share of openings (72.6%) compared to employment (65%) because there is more turnover in lower wage, lower education occupations**. In 2030, more than 35% of workers will require some post-secondary education.**




Caution should be used when using minimum education requirements for workforce planning, however. **Minimum requirements provide the lowest training levels needed to enter an occupation, but additional education and training is likely needed to progress in the career and demonstrate mastery of job duties**. Instead of the minimum education requirements needed to enter the occupation, Figure 13 provides the typical education within each occupation to match the current workforce, making it clear that additional training is needed beyond the minimum to match the skills of the existing workforce. Employers who hire workers at the minimum requirements should expect to provide further training and skill upgrades before workers will match the productivity levels of the current and previous workforce.




Thirty-six percent of employment is in occupations where the worker typically has a high school diploma, while only 13% of employment is in occupations where the worker has less than a high school education. Further, occupations in which the worker has at least some college make up a larger share of employment compared to minimum educational requirements, suggesting that although minimum educational requirements might be lower, competition likely leads to workers receiving higher levels of education that exceed the minimum requirements of the job.

While most of Montana's employment requires a high school education or less, workforce planners devote a lot of attention to jobs that require postsecondary education because they require more preparation and training. In addition, **increasing education generally increases wages and has positive impacts on productivity that benefit Montana's economy**. Figure 14 shows Montana's top occupations requiring a bachelor's degree or higher by most job openings. The most in-demand occupation is registered nurses (710 annual openings), which pays a median wage of $68,740. Other top occupations requiring a degree, include occupations in education, such as substitute teachers (530), elementary teachers (350), and secondary school teachers (250).

**Figure 14: Most Job Openings for Jobs that Require a Bachelor's Degree or Higher, 2020-2030**

| | Occupation | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Registered Nurses | Bach | | 160 | 310 | 240 | 710 | $68,740 |
| 2 | General & Operations Managers | Bach | 5+ yrs | 90 | 140 | 360 | 590 | $87,810 |
| 3 | Substitute Teachers, Short-Term | Bach | | 40 | 280 | 220 | 530 | $21,970 |
| 4 | Project Management & Business Operations Specialists, Other | Bach | | 50 | 120 | 230 | 400 | $60,500 |
| 5 | Accountants and Auditors | Bach | | 40 | 110 | 210 | 360 | $63,240 |
| 6 | Elementary School Teachers, Except Special Education | Bach | | 50 | 140 | 160 | 350 | $48,940 |
| 7 | Coaches and Scouts | Bach | | 30 | 100 | 130 | 260 | $19,960 |
| 8 | Secondary School Teachers, Except Special & Technical Education | Bach | | 40 | 100 | 120 | 250 | $50,720 |
| 9 | Substance Abuse, Behavioral Disorder, and Mental Health Counselors | Bach | | 60 | 70 | 120 | 250 | $39,360 |
| 10 | Market Research Analysts and Marketing Specialists | Bach | | 40 | 40 | 120 | 200 | $55,800 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030
Notes: Bach = Bachelor's degree; 5+ yrs = five or more years of experience

For workers who are willing to complete some post-secondary education but don't want to commit to four years typically required for a bachelor's degree, there are many occupations requiring some post-secondary education, but less than a bachelor's degree. The most in-demand occupations in this category include bookkeeping, accounting, and auditing clerks requiring at least a year of on-the-job training, and paying a median wage of $36,700, slightly below Montana's median wage. The top three occupations in this category by median wage include truck drivers (780 openings, median wage of $48,900), licensed practical and licensed vocational nurses (210 openings, median wage of $46,210) and computer user support specialists (210 openings, median wage of $45,410).

**Figure 15: Jobs Requiring Some Postsecondary Education, but Less Than a Bachelor's Degree, 2020-2030**

| | Occupation | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Bookkeeping, Accounting, and Auditing Clerks | SC ND | MT OJT | 50 | 520 | 390 | 950 | $36,900 |
| 2 | Heavy and Tractor-Trailer Truck Drivers | PS ND | ST OJT | 40 | 300 | 440 | 780 | $48,900 |
| 3 | Nursing Assistants | PS ND | | 100 | 350 | 320 | 770 | $31,070 |
| 4 | Teaching Assistants, Except Postsecondary | SC ND | | 40 | 190 | 160 | 400 | $26,600 |
| 5 | Automotive Service Technicians and Mechanics | PS ND | ST OJT | 10 | 90 | 200 | 300 | $41,530 |
| 6 | LPNs | PS ND | | 40 | 80 | 90 | 210 | $46,210 |
| 7 | Computer User Support Specialists | SC ND | | 40 | 40 | 130 | 210 | $45,410 |
| 8 | Medical Assistants | PS ND | | 40 | 60 | 90 | 180 | $36,690 |
| 9 | Dental Assistants | PS ND | | 20 | 60 | 90 | 170 | $37,070 |
| 10 | Hairdressers and Cosmetologists | PS ND | | 10 | 70 | 60 | 140 | $24,360 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030
Notes: SC ND = Some college no degree; PS ND = Postsecondary nondegree award; Associate = Associate degree; ST OJT = short-term on-the-job training; MT OJT = medium-term on-the-job training

Many occupations in-demand occupations don't require less than a bachelor's degree and are high wage occupation. Figure 16 shows top occupations that make $45,000 or more and require a high school diploma or less. **Occupations in this category typically require some level of previous work experience, on-the-job training of one month to a year, or a registered apprenticeship credential**. Four out of these occupations are supervisor roles, supervising office and administrative workers, construction workers, mechanics and installers, and production and operating workers. Three of the top ten are sales occupations, with sales occupations in wholesale and manufacturing, services, and insurance. Electricians and plumbers pay high median wages of $60,000 and $57,000, respectively, and have the highest number of registered apprentices in Montana.

**Figure 16: Jobs Earning Over $45,000 that Require a High School Diploma or Less, 2020-2030**

| | Occupation | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Sales Representatives, Except Technical and Scientific Products | HSE | MT OJT | 40 | 130 | 270 | 440 | $53,910 |
| 2 | First-Line Supervisors of Office and Administrative Support Workers | HSE | <5 yrs | 20 | 160 | 250 | 430 | $51,240 |
| 3 | First-Line Supervisors of Construction Trades and Extraction Workers | HSE | 5+ yrs | 50 | 110 | 230 | 390 | $65,510 |
| 4 | Operating Engineers and Other Construction Equipment Operators | HSE | MT OJT | 40 | 110 | 230 | 380 | $50,740 |
| 5 | Electricians | HSE | Appren | 50 | 80 | 210 | 350 | $60,560 |
| 6 | Plumbers, Pipefitters, and Steamfitters | HSE | Appren | 40 | 80 | 190 | 300 | $57,010 |
| 7 | Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel | HSE | MT OJT | 30 | 50 | 160 | 240 | $48,520 |
| 8 | Insurance Sales Agents | HSE | MT OJT | 10 | 70 | 100 | 180 | $47,560 |
| 9 | First-Line Supervisors of Mechanics, Installers, and Repairers | HSE | <5 yrs | 20 | 60 | 100 | 180 | $68,570 |
| 10 | First-Line Supervisors of Production and Operating Workers | HSE | <5 yrs | 10 | 50 | 100 | 160 | $58,380 |

Source: MTDLI Employment Projections 2020-2030 Notes: HSE = High school diploma or equivalent; MT OJT = Medium-term on-the-job training; 5+ yrs = 5 or more years' experience; <5 yrs = less than 5 years of experience; Appren = Apprenticeship

Figure 17 shows in-demand occupations making $45,000 or more that require some post-secondary degree. Notable occupations not already mentioned previously include heating, air conditioning, and refrigeration mechanics and installers (130 annual openings and median wage of $46,250), paralegals and legal assistants (120 openings, and median wage of $46,940), firefighters (70 openings and median wage of $55,040), and web developers and digital interface designers (50 openings and median wage of $53,810).

**Figure 17: Jobs Earning Over $45,000 that Require Some Postsecondary Education, but Less Than a Bachelor's Degree, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Heavy and Tractor-Trailer Truck Drivers | PS ND | ST OJT | 40 | 300 | 440 | 780 | $48,900 |
| 2 | LPNs | PS ND | | 40 | 80 | 90 | 210 | $46,210 |
| 3 | Computer User Support Specialists | SC ND | | 40 | 40 | 130 | 210 | $45,410 |
| 4 | HVAC Mechanics & Installers | PS ND | LT OJT | 20 | 30 | 80 | 130 | $46,250 |
| 5 | Paralegals and Legal Assistants | Assoc | | 20 | 40 | 70 | 120 | $46,940 |
| 6 | Firefighters | PS ND | LT OJT | 10 | 20 | 40 | 70 | $55,040 |
| 7 | Dental Hygienists | Assoc | | 10 | 30 | 20 | 60 | $77,630 |
| 8 | Radiologic Technologists | Assoc | | 10 | 20 | 20 | 60 | $57,410 |
| 9 | Web Developers and Digital Interface Designers | Assoc | | 10 | 10 | 30 | 50 | $53,810 |
| 10 | Physical Therapist Assistants | Assoc | | 10 | 10 | 20 | 50 | $52,830 |

Source: MTDLI Employment Projections 2020-2030; Notes: SC ND = some college, no degree; PS ND = postsecondary nondegree; Assoc = Associate degree; ST OJT = Short-term on-the-job training; MT OJT = Medium-term on-the-job training; LT OJT = Long-term on-the-job training

## Occupational Demand – by Career Cluster

Projections are produced to help guide decision-making on whether universities and other training programs are meeting occupational demand. Career clusters are one popular framework used in career and technical education and by universities to understand connections between occupations and academic training. Classifying occupations by career cluster helps connect academic training to associated careers. Figure 18 shows occupational demand by career cluster.

By career cluster, the highest demand is projected in the hospitality and tourism cluster with 13,600 annual openings, followed by business management and administration (7,900 openings), marketing (7,300 openings), and transportation, distribution, and logistics (4,700 openings). Most jobs in hospitality and tourism require high school education or less, while more than a third of openings in business management and administration require some college or more.

**Figure 18: Montana Employment Projections by Career Cluster, 2020-2030**

| | | Annual Openings, 2020-2030 | | | |
|---|---|---|---|---|---|
| **Career Clusters** | **Education Level** | **New Jobs** | **Exits** | **Transfers** | **Total Openings** |
| Agriculture, Food & Natural Resources | <HS | 60 | 210 | 520 | 790 |
| | HSE | -40 | 500 | 480 | 940 |
| | Associate | . | . | . | . |
| | Bachelor's | 20 | 40 | 130 | 190 |
| *Total* | | *40* | *750* | *1,120* | *1,910* |
| Architecture & Construction | <HS | 200 | 640 | 1,300 | 2,140 |
| | HSE | 280 | 840 | 1,790 | 2,910 |
| | PS ND | 20 | 30 | 80 | 130 |
| | Associate | 10 | 30 | 40 | 70 |
| | Bachelor's | 50 | 140 | 260 | 440 |
| *Total* | | *550* | *1,680* | *3,470* | *5,700* |
| Arts, Audio/Video Technology & Communications | <HS | 0 | 40 | 40 | 80 |
| | HSE | -10 | 70 | 110 | 170 |
| | Bachelor's | 0 | 130 | 210 | 330 |
| | SC ND, PS ND, Associate | . | . | . | . |
| *Total* | | *-10* | *230* | *360* | *580* |
| Business Management & Administration | HSE | 170 | 2,180 | 2,580 | 4,930 |
| | SC ND | 50 | 520 | 390 | 960 |
| | Associate | 0 | 10 | 20 | 30 |
| | Bachelor's | 240 | 590 | 1,220 | 2,050 |
| *Total* | | *460* | *3,290* | *4,210* | *7,960* |
| Education & Training | HSE | 10 | 30 | 30 | 70 |
| | SC ND | 40 | 190 | 160 | 400 |
| | PS ND | 0 | 40 | 30 | 70 |
| | Associate | 10 | 30 | 40 | 80 |
| | Bachelor's | 210 | 880 | 880 | 1,970 |
| | Master's | 30 | 80 | 110 | 220 |
| | Phd or Prof | 50 | 130 | 130 | 300 |
| *Total* | | *330* | *1,390* | *1,380* | *3,110* |
| Finance | HSE, PS ND, Bachelor's | . | . | . | . |
| *Total* | | *.* | *.* | *.* | *.* |
| Government & Public Administration | HSE | 10 | 80 | 100 | 190 |
| | Bachelor's | . | . | . | . |

| | | | | | |
|---|---|---|---|---|---|
| | Master's | 0 | 0 | 10 | 10 |
| *Total* | | *20* | *90* | *100* | *210* |
| Health Science | HSE | 130 | 390 | 430 | 950 |
| | PS ND | 250 | 660 | 750 | 1,660 |
| | Associate | 70 | 110 | 120 | 310 |
| | Bachelor's | 250 | 410 | 370 | 1,030 |
| | Master's | 80 | 60 | 90 | 230 |
| | Phd or Prof | 80 | 140 | 110 | 340 |
| *Total* | | *870* | *1,770* | *1,870* | *4,500* |
| Hospitality & Tourism | <HS | 1,350 | 4,720 | 5,550 | 11,620 |
| | HSE | 210 | 650 | 1,160 | 2,020 |
| | PS ND | . | . | . | . |
| *Total* | | *1,560* | *5,370* | *6,710* | *13,640* |
| Human Services | <HS | . | . | . | . |
| | HSE | 370 | 1,140 | 1,090 | 2,600 |
| | PS ND | 20 | 130 | 110 | 260 |
| | Associate | 0 | 10 | 10 | 20 |
| | Bachelor's | 140 | 230 | 380 | 760 |
| | Master's | 30 | 50 | 90 | 170 |
| | Phd or Prof | 0 | 20 | 30 | 50 |
| *Total* | | *560* | *1,570* | *1,720* | *3,850* |
| Information Technology | SC ND | 40 | 40 | 130 | 210 |
| | Associate | 10 | 20 | 60 | 90 |
| | Bachelor's | . | . | . | . |
| *Total* | | *50* | *70* | *180* | *300* |
| Law, Public Safety, Corrections & Security | <HS | 10 | 90 | 50 | 150 |
| | HSE | 60 | 360 | 440 | 870 |
| | PS ND | . | . | . | . |
| | Associate | 20 | 40 | 70 | 130 |
| | Bachelor's | 10 | 10 | 30 | 50 |
| | Phd or Prof | 20 | 60 | 70 | 160 |
| *Total* | | *120* | *570* | *670* | *1,360* |
| Manufacturing | <HS | 10 | 80 | 100 | 190 |
| | HSE | 230 | 850 | 1,460 | 2,550 |
| | SC ND | 0 | 10 | 20 | 30 |
| | PS ND | 0 | 10 | 20 | 20 |
| | Associate | 10 | 40 | 70 | 120 |
| | *Bach* | -10 | 40 | 80 | 120 |
| *Total* | | *250* | *1,030* | *1,750* | *3,030* |

| | | | | | |
|---|---|---|---|---|---|
| Marketing | <HS | 220 | 2,160 | 2,510 | 4,890 |
| | HSE | 60 | 730 | 1,290 | 2,080 |
| | Bachelor's | 60 | 80 | 210 | 350 |
| *Total* | | *340* | *2,970* | *4,010* | *7,320* |
| Science, Technology, Engineering & Mathematics | Associate | 0 | 10 | 20 | 30 |
| | Bachelor's | 60 | 100 | 300 | 460 |
| | Master's | 10 | 10 | 20 | 30 |
| | Phd or Prof | 0 | 0 | 0 | 0 |
| *Total* | | *60* | *120* | *330* | *510* |
| Transportation, Distribution & Logistics | <HS | 130 | 720 | 880 | 1,730 |
| | HSE | 140 | 600 | 1,030 | 1,780 |
| | PS ND | 60 | 420 | 680 | 1,160 |
| | Associate | 0 | 0 | 10 | 10 |
| | Bachelor's | 0 | 10 | 20 | 20 |
| *Total* | | *340* | *1,750* | *2,620* | *4,710* |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030

**Total Job Openings – A Change in Methodology**

The U.S. Bureau of Labor Statistics recently changed its job openings methodology to better capture the dynamic workforce. The past methodology, known as the "replacements" methodology, was developed in the early 1990s and relied on movement between age cohorts to estimate people exiting an occupation. This method primarily captured job openings from retirements and deaths under the assumption that workers entered an occupation at a young age and worked in that occupation until retirement.

The new methodology, known as the "separations" methodology, updates this process to account for workers who have multiple occupations throughout their lifetimes. It uses longitudinal data from the Current Population Survey to estimate the probability of a worker leaving their job based on characteristics of that worker. The results are expressed as "Exits" (people who leave the labor force completely, possibly to retire, enroll in school, or take care of family), and "Transfers" (people who leave their job in one field to start a job in a different field). The 2017-2027 projections were the first year to use the separations methodology.

Total job openings are the sum of change (new jobs), exits, and transfers. The number of openings is significantly higher than in the past (61,200 annual openings for 2020-2030 compared with 17,500 for the 2016-2026 projections). This difference reflects that change in methodology rather than conceptual factors. Because of these changes, projections from the past that use the replacements methodology should not be compared with projections derived from the separations methodology. For a more technical explanation, please see https://www.bls.gov/emp/documentation/separations-methods.htm.

## Skills in Demand

Training workers for today's workforce requires preparation for a variety of skills, including technical, soft skills, and basic skills. Figure 19 shows he top skills by number of job openings that listed the skills as important. For basic skills, **the most in demand skills include active listening (49,000 annual job openings), speaking (47,700), and monitoring (37,300)**. Soft skills, or skills that allow a person to perform effectively and in harmony with other people, are also in high demand, with coordination in the highest demand (36,200), followed by social perceptiveness (36,000) and service orientation (35,800). Among technical skills, the top skills include operation monitoring (9,200), operation and control (8,500) and quality control analysis (6,400). Montana's workforce will need training in a variety of skills to prepare workers for in-demand careers.

**Figure 19: Annual Job Openings by Skill, 2020-2030**

| Skill Type | Skill | Description | Annual Openings |
|---|---|---|---|
| Basic | Active Listening | Giving full attention to what other people are saying and asking questions when appropriate. | 49,040 |
| | Speaking | Talking to others to convey information effectively | 47,700 |
| | Monitoring | Monitoring and assessing performance of self, individuals, or organizations | 37,320 |
| | Critical Thinking | Using logic and reasoning to identify the strengths and weaknesses of alternative solutions | 37,170 |
| | Reading Comprehension | Understanding written sentences and paragraphs in work related documents | 34,250 |
| Soft Skills | Coordination | Adjusting actions in relation to other's actions | 36,200 |
| | Social Perceptiveness | Being aware of others' reactions and understanding why they react as they do | 35,970 |
| | Service Orientation | Actively looking for ways to help people | 35,790 |
| | Time Management | Managing one's own time and the time of others | 34,830 |
| | Judgment and Decision Making | Considering the relative costs and benefits of potential actions to choose the most appropriate one | 24,330 |
| Technical | Operation Monitoring | Watching gauges, dials, or other indicators to make sure a machine is working properly | 9,200 |
| | Operation and Control | Controlling operations of equipment or systems | 8,450 |
| | Quality Control Analysis | Conducting tests and inspections of products, services, or processes to evaluate quality or performance | 6,380 |

| | | | |
|---|---|---|---|
| | Troubleshooting | Determining what is causing an operating error and deciding what to do about it | 5,110 |
| | Equipment Maintenance | Performing routine maintenance on equipment and determining when and what kind of maintenance is needed | 3,740 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030

**Software skills are becoming increasingly important as knowledge work increases and computers take on more tasks**. Spreadsheet software skills are the number one skill in demand (54,500 annual openings), followed by office suite software (37,500), and word processing software (31,700). Other high-demand software skills include YouTube and Facebook, as well as customer relationship management software and human resources software.

**Figure 20: Annual Job Openings by Software Skill, 2020-2030**

| Software Type | Example | Annual Openings |
|---|---|---|
| Spreadsheet software | Microsoft Excel | 54,450 |
| Office suite software | Microsoft Office | 37,500 |
| Word processing software | Microsoft Word | 31,700 |
| Presentation software | Microsoft PowerPoint | 29,250 |
| Web page creation and editing software | Facebook | 22,840 |
| Electronic mail software | Microsoft Outlook | 16,580 |
| Document management software | Adobe Systems Adobe Acrobat | 13,820 |
| Accounting software | Intuit QuickBooks | 12,530 |
| Video creation and editing software | YouTube | 11,460 |
| Project management software | Microsoft Project | 11,340 |
| Desktop publishing software | Adobe Systems Adobe InDesign | 8,170 |
| Computer aided design CAD software | Autodesk AutoCAD | 8,080 |
| Operating system software | Apple macOS | 7,720 |
| Customer relationship management CRM software | Salesforce software | 7,700 |
| Human resources software | ADP Workforce Now | 6,750 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030

## Healthcare Occupations in High Demand

Montanan's largest industry, health care and social assistance, is also expected have the most growth in from 2020 to 2030. In 2020, approximately 18% of all private payroll employment was in the healthcare industry. **The two factors contributing to increased demand for healthcare workers include Montana's aging population demanding more healthcare and continued in-migration to Montana**. Montana's healthcare industry is expected to grow by 1,520 jobs per year on average over the next 10 years. Figure 9 shows the top 10 healthcare jobs by most annual openings. The occupation with the most openings is home health and personal care aides which requires a high school education and short-term on-the-job training and pays approximately $26,660. **Most of the top occupations in health care at least require some post-secondary education, but many don't require a bachelor's degree or higher.**

The highest paying occupations among those most in-demand include pharmacists (60 annual openings and median wage of $122,160), physician assistants (70 annual openings and median wage of $118,760), and nurse practitioners (70 annual openings and median wage of $114,970).

**Figure 21: Top 20 Healthcare Jobs with the Most Annual Openings, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Home Health & Personal Care Aides | HSE | ST OJT | 230 | 510 | 420 | 1,170 | $26,660 |
| 2 | Nursing Assistants | PS ND | | 100 | 350 | 320 | 770 | $31,070 |
| 3 | Registered Nurses | Bach | | 160 | 310 | 240 | 710 | $68,740 |
| 4 | LPNs | PS ND | | 40 | 80 | 90 | 210 | $46,210 |
| 5 | Medical Assistants | PS ND | | 40 | 60 | 90 | 180 | $36,690 |
| 6 | Dental Assistants | PS ND | | 20 | 60 | 90 | 170 | $37,070 |
| 7 | Medical Records Specialists, & Health Technicians, All Other | PS ND | | 20 | 40 | 60 | 120 | $42,020 |
| 8 | Pharmacy Technicians | HSE | MT OJT | 10 | 40 | 60 | 110 | $36,780 |
| 9 | Veterinary Assistants and Laboratory Animal Caretakers | HSE | ST OJT | 10 | 30 | 50 | 90 | $27,800 |
| 10 | Physical Therapists | Phd or Prof | | 30 | 30 | 30 | 90 | $81,440 |
| 11 | Clinical Laboratory Technologists & Technicians | Bach | | 20 | 30 | 30 | 70 | $57,650 |
| 12 | Phlebotomists | PS ND | | 10 | 20 | 30 | 70 | $31,510 |
| 13 | Physician Assistants | Master's | | 30 | 10 | 30 | 70 | $118,760 |
| 14 | Nurse Practitioners | Master's | | 30 | 20 | 20 | 70 | $114,970 |
| 15 | Dental Hygienists | Associate | | 10 | 30 | 20 | 60 | $77,630 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 16 | Pharmacists | Phd or Prof | | 0 | 30 | 30 | 60 | $122,160 |
| 17 | Massage Therapists | PS ND | | 10 | 30 | 20 | 60 | $40,070 |
| 18 | Radiologic Technologists | Associate | | 10 | 20 | 20 | 60 | $57,410 |
| 19 | Veterinary Technologists and Technicians | Associate | | 10 | 20 | 30 | 50 | $32,210 |
| 20 | EMTs | PS ND | | 10 | 10 | 30 | 50 | $32,050 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030
Notes: HSE = High school diploma or equivalent; PS ND = Postsecondary nondegree award; Assoc = Associate degree; Bach = Bach degree; Master's = Master's degree; PhD/Prof = Doctoral or professional degree; ST OJT = short-term on-the-job training; MT OJT = medium-term on-the-job training

The healthcare industry is also expected to have high demand for many occupations that don't provide healthcare services. Figure 21 shows the top 20 non-healthcare occupations within the healthcare industry. Over the next ten years, the most in-demand occupation in this group is medical secretaries with 500 annual openings and a median wage of $32,880. This occupation requires a high school education and on-the-job training of one month to a year. Other occupations in this field include substance abuse, behavioral disorder, and mental health counselors (250 openings and median wage of $39,360), and medical and health services managers (200 openings and median wage of $90,370).

**Figure 22: Top 20 Non-Healthcare Jobs within the Healthcare Industry, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Medical Secretaries | HSE | MT OJT | 70 | 220 | 220 | 500 | $32,880 |
| 2 | Substance Abuse, Behavioral Disorder, & Mental Health Counselors | Bach | | 60 | 70 | 120 | 250 | $39,360 |
| 3 | Medical and Health Services Managers | Bach | <5 yrs | 60 | 50 | 90 | 200 | $90,370 |
| 4 | Social and Human Service Assistants | HSE | ST OJT | 40 | 60 | 100 | 200 | $31,840 |
| 5 | Childcare Workers | HSE | ST OJT | 30 | 370 | 320 | 720 | $22,860 |
| 6 | Cooks, Institution and Cafeteria | <HS | ST OJT | 30 | 160 | 230 | 420 | $27,950 |
| 7 | Maids and Housekeeping Cleaners | <HS | ST OJT | 90 | 470 | 370 | 920 | $24,790 |
| 8 | Billing and Posting Clerks | HSE | MT OJT | 20 | 60 | 90 | 170 | $36,410 |
| 9 | Child, Family, and School Social Workers | Bach | | 20 | 30 | 60 | 120 | $39,670 |
| 10 | Food Servers, Non-restaurant | <HS | ST OJT | 20 | 80 | 80 | 180 | $22,760 |
| 11 | Office Clerks, General | HSE | ST OJT | 50 | 710 | 700 | 1,460 | $34,010 |
| 12 | Bookkeeping, Accounting, and Auditing Clerks | SC ND | MT OJT | 50 | 520 | 390 | 950 | $36,900 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13 | Social and Community Service Managers | Bach | <5 yrs | 20 | 20 | 30 | 60 | $60,730 |
| 14 | Recreation Workers | HSE | ST OJT | 30 | 90 | 130 | 240 | $27,770 |
| 15 | Healthcare Social Workers | Master's | Intern | 10 | 20 | 40 | 70 | $51,310 |
| 16 | General and Operations Managers | Bach | 5+ yrs | 90 | 140 | 360 | 590 | $87,810 |
| 17 | Janitors and Cleaners, Except Maids and Housekeeping Cleaners | <HS | ST OJT | 100 | 500 | 500 | 1,100 | $28,910 |
| 18 | Maintenance and Repair Workers, General | HSE | MT OJT | 70 | 160 | 240 | 470 | $36,970 |
| 19 | Receptionists and Information Clerks | HSE | ST OJT | 20 | 110 | 130 | 260 | $28,110 |
| 20 | Mental Health and Substance Abuse Social Workers | Master's | Intern | 10 | 10 | 20 | 50 | $37,000 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030. Notes: <HS = less than high school diploma; HSE = High school diploma or equivalent; Bach = Bachelor's degree; Master's = Master's degree; Phd/Prof = Doctoral or professional degree; <5 yrs = less than five years of experience; ST OJT = short-term on-the-job training; MT OJT = medium-term on-the-job training

## Occupational Demand – STEM

Figure 23 shows the demand for occupations requiring knowledge of science, technology, engineering, and math (STEM) subjects. Projected openings are shown by discipline, domain, and occupation type. STEM professions typically pay higher wages and require post-secondary education. Across all disciplines, the average wage is above $70,000. Math is the number one discipline by total openings (2,980 annual openings), followed by computer science (2,610), and biology (1,760). Health is the most in-demand domain with 2,110 annual openings over the next 10 years. Research and development, design, or practitioner is the most in-demand occupation type in the STEM field with 2,070 annual openings.

**Figure 23: Worker Demand for Science, Technology, Engineering, and Math Jobs, 2020-2030**

| | | Annual Openings, 2020-2020 | | | | Annual Openings, 2020-2030 | | | | 2020 MT Annual Average Wage |
|---|---|---|---|---|---|---|---|---|---|---|
| | Career Field | New Jobs | Exits | Transfers | Total Openings | New Jobs | Exits | Transfers | Total Openings | |
| Discipline | Math | 730 | 940 | 1,380 | 3,040 | 540 | 990 | 1,450 | 2,980 | $70,100 |
| | Computer Science | 650 | 810 | 1,210 | 2,670 | 490 | 850 | 1,270 | 2,610 | $74,605 |
| | Biology | 530 | 580 | 720 | 1,830 | 390 | 610 | 760 | 1,760 | $76,537 |
| | Chemistry | 260 | 300 | 530 | 1,090 | 210 | 320 | 560 | 1,090 | $76,383 |
| | Engineering | 140 | 260 | 550 | 950 | 120 | 270 | 570 | 960 | $72,287 |
| | Physics | 180 | 230 | 410 | 810 | 140 | 240 | 430 | 800 | $75,987 |
| | Economics & Accounting | 110 | 130 | 220 | 460 | 90 | 140 | 240 | 470 | $87,963 |
| Domain | Health | 720 | 730 | 760 | 2,220 | 510 | 780 | 820 | 2,110 | $71,230 |
| | Life & Physical Science, Engineering, Math | 170 | 320 | 750 | 1,240 | 150 | 330 | 780 | 1,260 | $70,940 |
| | Architecture | . | . | . | . | . | . | . | . | $67,569 |
| | Social Science | . | . | . | . | . | . | . | . | $58,670 |
| Occupation Type | R&D, Design, or Practitioner | 560 | 660 | 920 | 2,130 | 410 | 690 | 960 | 2,070 | $76,551 |
| | Technologist & Technician | 220 | 310 | 460 | 990 | 150 | 320 | 490 | 960 | $46,828 |
| | Managerial | 90 | 60 | 140 | 290 | 80 | 70 | 150 | 300 | $96,029 |
| | Sales | . | . | . | . | . | . | . | . | $73,457 |
| | Post second. Teaching | . | . | . | . | . | . | . | . | $68,929 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030

## Occupational Demand - Apprenticeships

Apprenticeship has continued to grow as a popular way to build a skilled workforce and help individuals earn while they learn. Partnerships with business sponsors around the state help to fill openings for jobs that are most in demand. Figure 23 shows the top ten occupations in-demand over the next ten years that have already been apprenticed in Montana. Top occupations by total openings include restaurant cooks (1,060 annual openings and median wage of $26,850), bookkeeping, accounting, and auditing clerks (950 annual openings and median wage of $36,900), and truck drivers (780 annual openings and median wage of $48,900).

**Figure 24: Montana's Apprenticeable Occupations with the Most Projected Job Openings, 2020-2030**

| Occupation | | Min Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Cooks, Restaurant | <HS | MT OJT | 210 | 350 | 500 | 1,060 | $26,850 |
| 2 | Bookkeeping & Auditing Clerks | SC ND | MT OJT | 50 | 520 | 390 | 950 | $36,900 |
| 3 | Heavy & Tractor-Trailer Truck Drivers | PS ND | ST OJT | 40 | 300 | 440 | 780 | $48,900 |
| 4 | Nursing Assistants | PS ND | | 100 | 350 | 320 | 770 | $31,070 |
| 5 | Childcare Workers | HSE | ST OJT | 30 | 370 | 320 | 720 | $22,860 |
| 6 | Registered Nurses | Bach | | 160 | 310 | 240 | 710 | $68,740 |
| 7 | Carpenters | HSE | Appren | 30 | 210 | 430 | 680 | $44,960 |
| 8 | Construction Laborers | <HS | ST OJT | 70 | 190 | 410 | 670 | $39,200 |
| 9 | Maintenance and Repair Workers, General | HSE | MT OJT | 70 | 160 | 240 | 470 | $36,970 |
| 10 | Operating Engineers & Other Operators | HSE | MT OJT | 40 | 110 | 230 | 380 | $50,740 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030
Notes: <HS = less than high school diploma; HSE = High school diploma or equivalent; SC ND = Some college no degree; PS ND = Postsecondary nondegree award; ST OJT = short-term on-the-job training; MT OJT = medium-term on-the-job training; Appren = Apprenticeship

Apprenticeship training continues to grow in Montana. However, there are still many occupations that are apprenticeable by U.S. standards that have yet to be apprenticed in Montana. Figure 25 shows the top STEM occupations not yet apprenticed in Montana. **The most in-demand occupation is conservation scientists (60 openings) followed by biological technicians (60) and mechanical engineers (50).** These occupations represent an opportunity for Montana to expand apprenticeship into new fields and develop additional pathways for workers to high paying occupations.

**Figure 25: U.S. Apprenticeable Occupations in a STEM field with the Most Projected Job Openings, 2020-2030**

| | Occupation | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Conservation Scientists | Bach | | 10 | 10 | 40 | 60 | $68,740 |
| 2 | Biological Technicians | PS ND | | 0 | 10 | 40 | 60 | $46,210 |
| 3 | Mechanical Engineers | Bach | <5 yrs | 10 | 10 | 30 | 50 | $90,370 |
| 4 | Environmental Scientists & Specialists | HSE | MT OJT | 0 | 10 | 30 | 40 | $36,780 |
| 5 | Sales Reps, Technical & Scientific Products | Bach | 5+ yrs | 0 | 10 | 20 | 40 | $103,010 |
| 6 | Opticians, Dispensing | Bach | | 0 | 20 | 10 | 40 | $70,330 |
| 7 | Life, Physical, and Social Science Technicians, All Other | Associate | | 0 | 10 | 20 | 30 | $57,410 |
| 8 | Surveying and Mapping Technicians | Bach | | 0 | 10 | 20 | 20 | $34,920 |
| 9 | Industrial Engineers | Bach | | 10 | 10 | 10 | 20 | $72,430 |
| 10 | Soil and Plant Scientists | PS ND | | 0 | 0 | 10 | 20 | $48,990 |

Source: Montana Department of Labor and Industry Employment Projections. 2020-2030
Notes: HSE = High school diploma or equivalent; SC ND = Some college no degree; PS ND = Postsecondary nondegree award; Associate = Associate degree; Bachelor's = Bachelor's degree; 5+ yrs = five or more years of experience; <5 yrs = less than five years of experience; MT OJT = medium-term on-the-job training

## Telework Occupations

Telework provides a great opportunity to bring more high-paying jobs to rural communities in Montana. Approximately a third of jobs in Montana are currently able to be telework positions. Figure 26 shows the telework capable occupations with the most annual openings. Office clerks tops the list with 1,460 openings followed by bookkeeping, accounting and auditing clerks (950) and customer service representatives (640). As Montana continues to find ways to engage workers around the state in the labor force, increasing telework opportunities may help employers find workers more easily.

**Figure 26: Top 10 Telework Capable Jobs, 2020-2030**

| Occupation | | Minimum Requirements | | Annual Openings | | | | 2020 MT Annual Median Wage |
|---|---|---|---|---|---|---|---|---|
| | | Edu. | Work Exp. | New Jobs | Exits | Transfers | Total Openings | |
| 1 | Office Clerks, General | HSE | ST OJT | 50 | 710 | 710 | 1,460 | $34,010 |
| 2 | Bookkeeping, Accounting, & Auditing Clerks | SC ND | MT OJT | 50 | 520 | 390 | 950 | $36,900 |
| 3 | Customer Service Representatives | HSE | ST OJT | 20 | 240 | 380 | 640 | $34,680 |
| 4 | General and Operations Managers | Bach | | 100 | 140 | 360 | 600 | $87,810 |
| 5 | Substitute Teachers, Short-Term | Bach | | 40 | 280 | 220 | 530 | $21,970 |
| 6 | Administrative Assistants, Except Legal, Medical, and Executive | HSE | ST OJT | 10 | 260 | 250 | 520 | $34,340 |
| 7 | Medical Secretaries | HSE | MT OJT | 70 | 220 | 220 | 500 | $32,880 |
| 8 | First-Line Supervisors of Office and Administrative Support Workers | HSE | | 20 | 160 | 250 | 430 | $51,240 |
| 9 | Project Management Specialists and Business Operations Specialists, All Other | Bach | | 50 | 120 | 230 | 400 | $60,500 |
| 10 | Accountants and Auditors | Bach | | 40 | 110 | 210 | 360 | $63,240 |

Source: Montana Department of Labor and Industry Employment Projections, 2020-2030. Telework capable definition provided by BLS, augmenting work by Dingel and Neiman (2020).
Notes: HSE = High school diploma or equivalent; SC ND = Some college no degree; PS ND = Postsecondary nondegree award; Associate = Associate degree; Bachelor's = Bachelor's degree; 5+ yrs = five or more years of experience; <5 yrs = less than five years of experience; MT OJT = medium-term on-the-job training

## Conclusion

Montana continues to post a strong recovery from the pandemic recession, and over the next year Montana is expected to regain its pre-recession level of employment. However, long-term growth is expected to taper with continued labor force tightness due to retirements and other long-standing issues such as childcare shortages. As Montana's educational institutions and training programs look to the future, this publication highlights key occupations expected to be in demand, and areas of focus for training workers. Further, individuals looking to make a career change, or just starting their career, may use this publication to inform decisions, and find pathways to careers in high wage and in-demand occupations.

## Appendix A - Methodology

The Research and Analysis Bureau of the Montana Department of Labor & Industry produces projections of employment growth by industry and occupation, and of labor force growth by gender and age group. For both projection types, the Department uses the methodologies recommended by the U.S. Department of Labor, ensuring accurate and consistent methodology across timelines and the most updated practices used among states.

## Employment Projections

The employment projections are produced as a part of a contract with the Employment and Training Administration of the U.S. Department of Labor using the nationally recommended methodology for employment forecasts and the programs provided by the Projections Managing Partnership. The employment projections are published on the state labor market information website at www.lmi.mt.gov, and are also published nationally on the Employment and Training Administration's website at www.projectionscentral.com. More information on the state employment projections program can be found at https://www.doleta.gov/business/projections/StateEmpProjProgram.cfm.

The projections are based on historic employment data from January 1990 to December 2020. The primary data source for the Montana industry employment projections is the Quarterly Census of Employment and Wages (QCEW), which is published jointly by the Bureau of Labor Statistics and the Montana Department of Labor & Industry. The QCEW covers payroll employment in Montana and is considered the most accurate data source because it is an actual count of employment from the wage records reported to Unemployment Insurance. The QCEW data is aggregated into the North American Industrial Classification System (NAICS) industries. For Montana's statewide industry employment projections, three-digit NAICS industries are used, while regional forecasts are produced at the two-digit NAICS level.

All industries include only private employment except for the healthcare and education industries, which includes both public and private employment. Therefore, the government industry includes all public employment except for workers in the healthcare and education industries. The treatment of public healthcare and education employment is consistent with national recommendations from the Employment and Training Administration of the U.S. Department of Labor.

Industry forecasts are developed by comparing various functional forms of time series models, which use past employment trends to predict employment in the future, with fit and analyst insight determining the appropriate model. Fit is determined using historic data, a holdout period, and by comparing the first six months of forecast to the Current Employment Statistics (CES). The CES is an employer-based survey of employment that is published one month after the employment occurred, creating a six-month lag between the publication of CES employment and the more accurate QCEW data used to forecast employment. These six months of CES estimates are compared to the first six months of forecast to evaluate the fit of the time series forecasting model.

For certain industries, such as oil and gas mining and government, structural models are developed that utilize forecasted explanatory variables or leading indicators, including energy price forecasts,

population projections, or job openings. Because of the increased unknown error introduced into the forecast from the use of forecasted explanatory variables, these structural models are primarily used to inform analyst opinion on which time series model is most appropriate. Industry projections are compared against the Montana forecasts developed by IHS Global Insight and against other publicly available employment forecasts.

The total employment level is also estimated using a time series model, and using combined time series and structural models to determine the robustness of the estimate and its sensitivity to differing economic scenarios. Data from the Local Area Unemployment Statistics (LAUS) is used to produce the total employment projection. The LAUS data is a model-based estimate that utilizes the national Current Population Survey to calculate the labor force and employment in Montana. Conceptually, the difference between the LAUS total employment estimate and the QCEW payroll employment number is the level of self-employment in Montana. Therefore, the difference between the two forecasts becomes the forecast for self-employment in Montana. The total employment and payroll employment forecasts are estimated using both a top-down and bottom-up approach with manual adjustment for internal consistency of forecasts.

Once industry forecasts are finalized, the industry employment is disaggregated into occupations using a third data source, the Occupational Employment Statistics (OES). The OES is a survey-based employment estimate that categorizes employment by occupation. The OES provides staffing patterns for each industry, which are used to disaggregate the industry projections into each occupation. For example, if registered nurses are currently 12% of the healthcare industry and 3% of the education industry, the forecast for the occupation of registered nurses would sum 12% of the expected employment in healthcare and 3% of the expected employment in education.

However, this process is complicated by change factors, which adjust the staffing patterns for expected changes in occupational mix in the upcoming ten years. The change factors are calculated at the national level by the Bureau of Labor Statistics with some occupations edited at the state level to adapt to Montana's economic conditions. Change factors adjust the current staffing patterns for predicted changes in future business practices. For example, if registered nurses comprise 12% of the healthcare industry in the current timeframe, but are expected to comprise 14% of the healthcare industry in future years, the change factor would slowly change the amount of projected healthcare employment dedicated to registered nurses over the ten-year time frame.

The self-employed staffing pattern is developed following the averages of the state and national occupational data adjusted for the likelihood of the occupation being self-employed. The staffing pattern is automatically generated using national and state level data, but is also manually adjusted using analyst insight. Analysts base those adjustments on self-employed occupation data from the Current Population Survey, data on farmers from the U.S. Department of Agriculture, and the Bureau of Economic Analysis's personal income accounts.

## Forecast Error

The Montana Department of Labor & Industry does not produce error ranges for the employment forecasts, although greater consistency is one of the criteria used when selecting the appropriate time series model for each industry. Some industries and occupations have fairly stable growth paths that can be predicted with a great deal of certainty, while other industries are more susceptible to changing economic conditions. Employment growth in healthcare has continued a very steady pace over the last twenty years as Montana's population has aged and consumers have continued to demand more healthcare services. The constant steady growth gives greater confidence in the forecasted employment levels. In contrast, employment in the mining industry varies considerably with changing global prices for oil, energy, and commodities. Price changes at the global level are often difficult to predict, making the employment forecast for this industry fairly uncertain.

Further, forecasting error will be greater in the self-employed estimates compared to other industries because of the use of the LAUS data. The LAUS data series is a model-based estimate (rather than an actual count from the QCEW data used for other industries), which includes estimation error in the historic data. The estimation error is magnified as the employment is projected into the future, resulting in a fairly wide error range in the self-employed forecasts. There is also forecasting error in other industries, but the error range is smaller because the historic data is an actual count and therefore does not include historic estimation error. The occupational projections include the most uncertainty because both the industry projection and the OES estimate include some error. Regardless, uncertain occupational projections provide better expectations of future growth than the alternative of no forecast estimates.

Knowing about forecast uncertainty helps to interpret the employment forecasts more appropriately. As an example, the 2020-2030 employment forecasts suggested there will be about 710 openings annually for registered nurses. In comparison, we expect only 170 openings per year for dental assistants. While neither figure is likely to be exactly correct, it is clear that there is a greater demand for nurses than dental assistants (although both occupations are growing). The greater demand for nurses will persist even if the economy undergoes a structural shift or experiences a large recession. The relative demand of occupations is more stable and of greater certainty than the numerical demand.

Additional caveats are important to understand the projections as well. The employment projections do not account for current unfilled positions, but for the new job openings that are expected in the future. For example, if there were currently 500 unfilled openings for welders in Montana, and roughly 60 openings are expected next year, the worker demand here only presents the 60 openings expected, not the total 520 openings available for workers in the next year. In general, occupations with longer training times and faster expected growth will also be the occupations with current unfilled demand.

## Appendix B – Accuracy of Past Forecasts

The uncertainty of the COVID pandemic led to a larger error in forecasts from 2019 to 2020. Under normal conditions, Montana's total employment projections have been off by less than 1% while 2019 was off by 3.33%. On an industry basis, industries that were less affected by the pandemic had smaller errors, such as agriculture and forestry, while industries that were expected to fair more poorly at the time of forecasts, such as retail trade, arts, entertainment, and recreation, and accommodation and food service, performed better than expected with a quicker recovery into the later part of the year.

**Figure 25: Accuracy of 2019-2029 One Year After Forecast**

| Industry | 2019-2029 Projections for 2020 | Actual 2020 | Difference | % Difference |
|---|---|---|---|---|
| Agriculture & Forestry | 6,164 | 6,221 | 57 | 0.92% |
| Mining | 6,232 | 6,235 | 2 | 0.04% |
| Utilities | 2,750 | 2,790 | 40 | 1.47% |
| Construction | 30,343 | 30,862 | 519 | 1.71% |
| Manufacturing | 20,098 | 20,449 | 350 | 1.74% |
| Wholesale Trade | 17,015 | 16,900 | (115) | -0.68% |
| Retail Trade | 54,907 | 57,252 | 2,345 | 4.27% |
| Transportation | 15,887 | 16,034 | 146 | 0.92% |
| Information | 5,875 | 5,800 | (75) | -1.28% |
| Finance & Insurance | 16,142 | 16,073 | (69) | -0.43% |
| Real Estate | 5,824 | 5,948 | 124 | 2.12% |
| Professional Services | 23,747 | 23,541 | (205) | -0.86% |
| Management | 1,762 | 2,042 | 279 | 15.85% |
| Admin & Waste Services | 17,308 | 18,029 | 722 | 4.17% |
| Educational Services | 39,306 | 38,681 | (625) | -1.59% |
| Healthcare & Social Assistance | 72,354 | 72,470 | 116 | 0.16% |
| Arts, Entertainment, & Recreation | 9,924 | 10,809 | 885 | 8.92% |
| Accommodation & Food Services | 45,885 | 48,112 | 2,227 | 4.85% |
| Other Services | 17,344 | 17,297 | (47) | -0.27% |
| Local Government | 20,442 | 20,473 | 31 | 0.15% |
| State Government | 12,284 | 12,429 | 145 | 1.18% |
| Federal Government | 9,491 | 9,820 | 329 | 3.46% |
| Postal Service | 2,105 | 2,101 | (4) | -0.21% |
| Payroll Employment | 453,191 | 468,279 | 15,088 | 3.33% |
| Total Employment | 489,875 | 508,095 | 18,220 | 3.72% |

Source: MT DLI. QCEW and 2019-2029 Employment Projections

## Appendix C – Job Postings Data

Though MTDLI primarily uses employment projections to analyze future worker demand, other sources of data such as job postings data from the MontanaWorks.gov website also provide useful insight about the current demand for workers. MTDLI provides a Job Postings dashboard updated weekly that shows top occupations by number of openings across Montana. Figure 26 shows that when comparing the top occupations by projected annual job openings compared to the job openings from the MontanaWorks website, at least some occupations in the top ten match between the two sources.

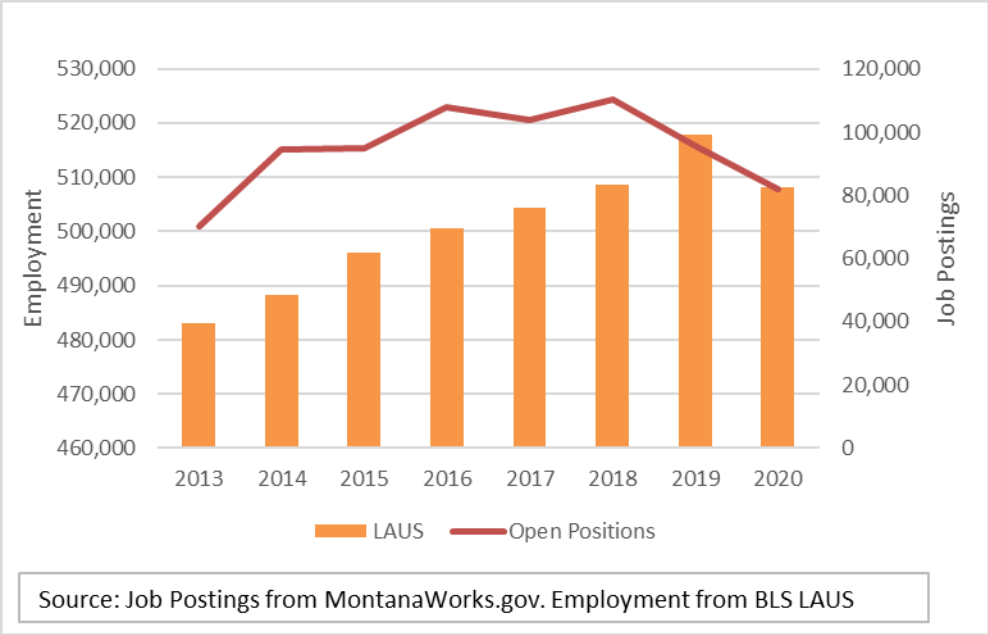
**Figure 26: Top Ten Occupations for Job Postings and Projections, 2020**

| Job Postings Occupations | Rank | Projections Occupations |
|---|---|---|
| Retail Salespersons | 1 | Fast Food and Counter Workers |
| Cashiers | 2 | Cashiers |
| First-Line Supervisors/Managers of Retail Sales Workers | 3 | Retail Salespersons |
| Medical and Health Services Managers | 4 | Waiters and Waitresses |
| Customer Service Representatives | 5 | Office Clerks, General |
| LPNs | 6 | Home Health and Personal Care Aides |
| Truck Drivers, Light or Delivery Services | 7 | Janitors and Cleaners, Except Maids and Housekeeping Cleaners |
| Social and Human Service Assistants | 8 | Cooks, Restaurant |
| First-Line Supervisors/Managers of Office and Administrative Support Workers | 9 | Bookkeeping, Accounting, and Auditing Clerks |
| Janitors and Cleaners, Except Maids and Housekeeping Cleaners | 10 | Maids and Housekeeping Cleaners |

Source: Job postings from MontanaWorks.gov, Projections from the MT DLI.

MontanaWorks job postings data isn't used to project labor demand for a few reasons. First, online job postings tend to overrepresent high-skilled occupations that require a college education. Job postings data may also be affected by factors not related to economic growth. For example, job openings for a particular occupation may be overrepresented if finding the right match for that occupation takes multiple attempts, resulting in a duplicate count for the same opening. Another concern is that jobs may be posted in a variety of places such as other online job boards, newspapers, university job boards, or workers may be acquired by word-of-mouth and networking. Without the entire universe of data on job openings from other sources, using job postings data is likely biased and not representative of the actual composition of jobs and occupations available. Further, job postings totals are correlated, but not highly correlated with total employment growth, as shown in Figure 27.

**Figure 27: MontanaWorks.gov Job Postings compared with Total Employment, 2013-2020**




Source: Job Postings from MontanaWorks.gov. Employment from BLS LAUS

Montana Department of
LABOR & INDUSTRY

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