








Bitterroot Valley Community College

Program Demand Gap Analysis:
Environmental Scan and
Review of Academic Programs

March 2022

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Emsi Burning Glass provides colleges and universities with labor market data that helps create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Emsi Burning Glass to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni's employment outcomes, and demonstrate their institution's economic impact on their region. Visit economicmodeling.com/higher-education to learn more or connect with us.

Executive Summary

Bitterroot Valley Community College (BVCC) is a public, two-year postsecondary educational institution in Montana. Although currently operating as Bitterroot College UM (BC UM) in Ravalli County (the state’s seventh most populous county), the institution will soon become an independent community college district in the county. With a targeted open date in Fall 2023, BVCC hopes to better prepare Ravalli County’s workforce for local demands, as well as demand in nearby counties. To further its goal of providing the county with well-trained and well-educated residents, BVCC continually pursues improvement in various forms. An up-to-date understanding of the county economy and the demand for skilled labor is vital to the planning efforts of the college as it seeks to create program offerings relevant to the requirements of an ever-changing workforce. BVCC partnered with Emsi Burning Glass, a leading provider of labor market data, to complete a program demand gap analysis, which assesses county job openings against educational program completions.

RECOMMENDATIONS

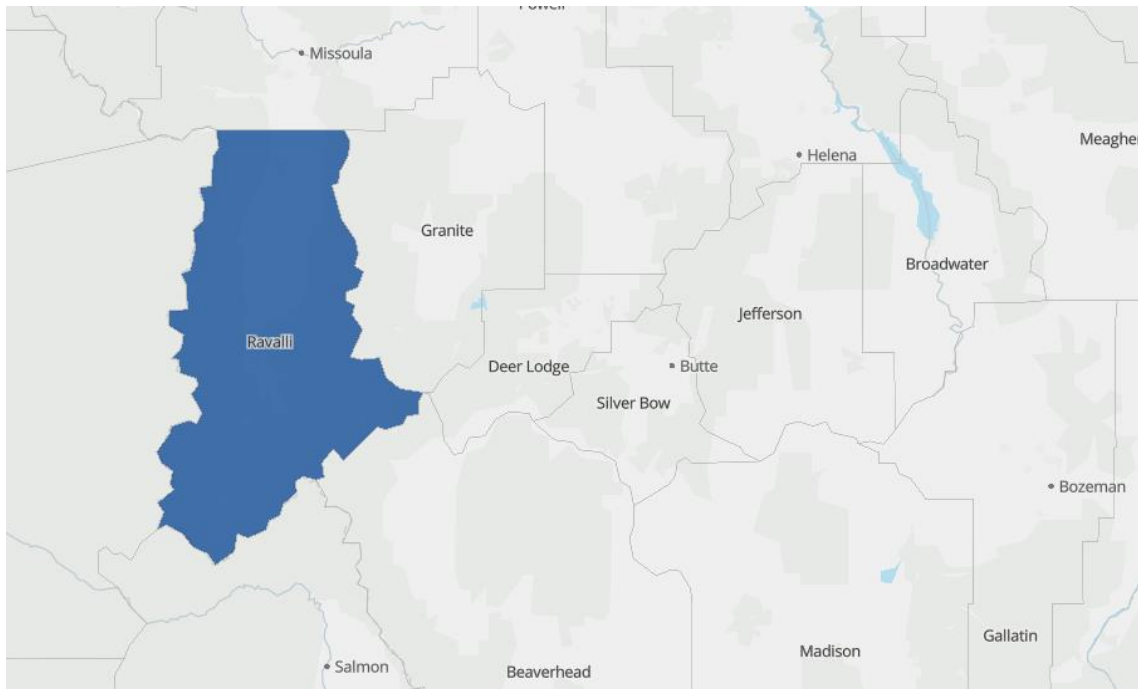
<p>HIGH DEMAND, LOW SUPPLY</p> <p><i>How can we expand these program opportunities?</i></p> <p>Certified Nurse Aide (NON-CREDIT) Bookkeeping Certification (NON-CREDIT)</p>	<p>HIGH DEMAND, HIGH SUPPLY</p> <p><i>Can we maintain focus on program quality & student success?</i></p> <p>Commercial Driver License (NON-CREDIT)</p>
<p>LOW DEMAND, LOW SUPPLY</p> <p><i>Should we reevaluate whether these programs are training for county demand, or demand outside the county?</i></p> <p>Front End Web Developer (NON-CREDIT) CompTIA A+ Virtual Computer Certification (NON-CREDIT) EKG Technician (NON-CREDIT)</p>	<p>LOW DEMAND, HIGH SUPPLY</p> <p><i>Are we connecting these programs to opportunities outside the county?</i></p> <p>Dental Assisting (NON-CREDIT) Boiler Operator (NON-CREDIT) Certified Phlebotomy Technician (NON-CREDIT) Certified Clinical Medical Assistant (NON-CREDIT)</p>

Source: Emsi Burning Glass program demand gap model.

INTRODUCTION

For purposes of the program demand gap analysis, BVCC serves the region of Ravalli County, which is located directly south of Missoula County. This report outlines the county's economy and uses the county's average annual projected job openings between 2020 and 2030 as a measurement of labor market demand. When job openings are compared to the county's supply of educational program completions, the analysis determines how well BVCC's program offerings satisfy county workforce demand. Please note that current programs will be labeled as offered by BC UM, since that is currently the name of the institution. However, program recommendations will reference BVCC, due to the upcoming transition mentioned in the second sentence of the Executive Summary. In addition, this report offers recommendations for new program development. In its entirety, the analysis is a starting point for BVCC as the college continues to develop programs using data-based decision-making strategies. The following figures and table display key findings of the analyses.

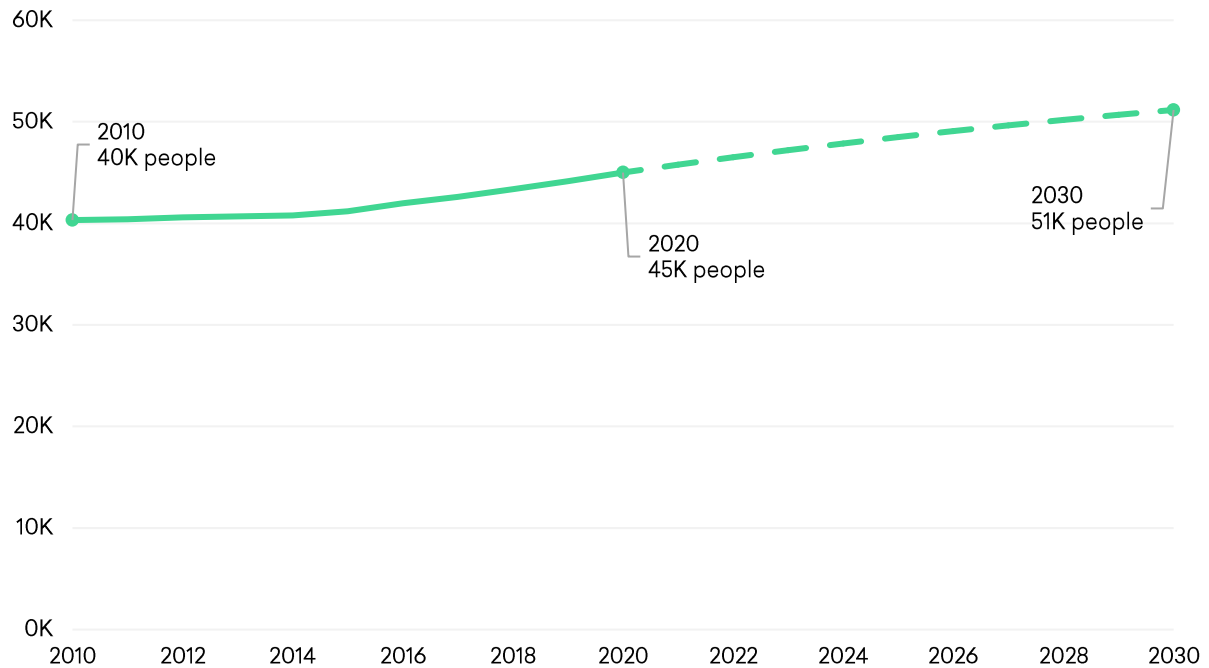
Figure 1: Map of Ravalli County



Source: Emsi Burning Glass Analyst. Region provided by BVCC.

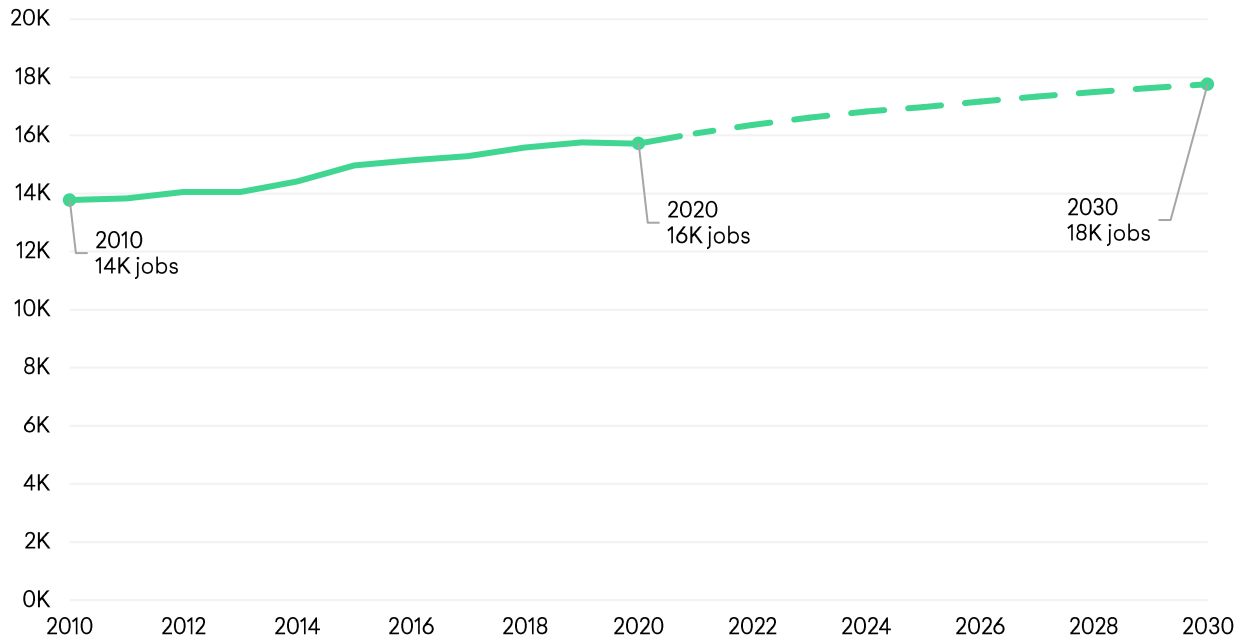
In 2010, 40,320 people lived in Ravalli County, and 51,170 people are projected to live in the county by 2030 (Figure 2). As shown in Figure 3, Ravalli County supported 13,770 jobs in 2010. By 2020, that number increased to 15,720 jobs for an increase of 14%. Due to data limitations, projections may not capture the impact of COVID-19 on future labor markets.

Figure 2: Historical and Projected Population in Ravalli County, 2010 to 2030



Source: Emsi Burning Glass demographics data, U.S. Census Bureau, U.S. Health Department.

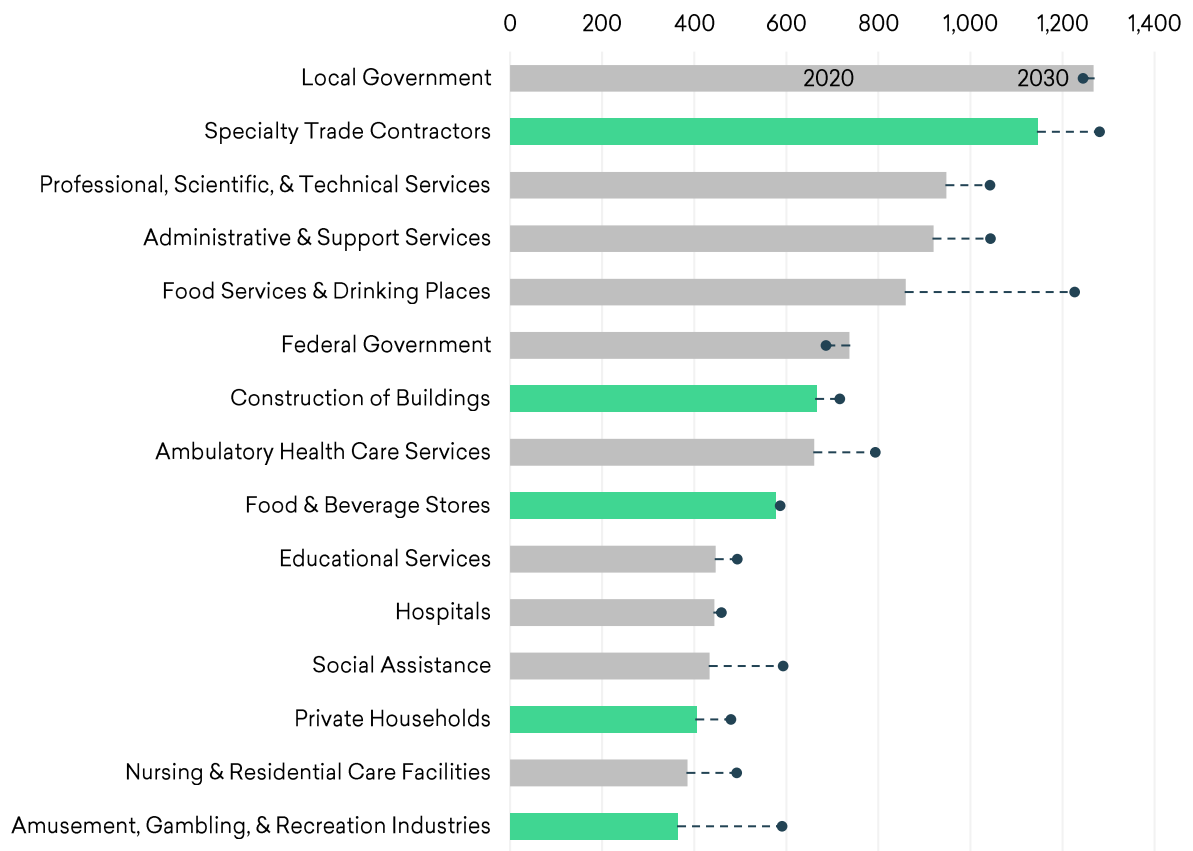
Figure 3: Historical and Projected Jobs in Ravalli County, 2010 to 2030



Source: Employees & Self-Employed 2021.4.

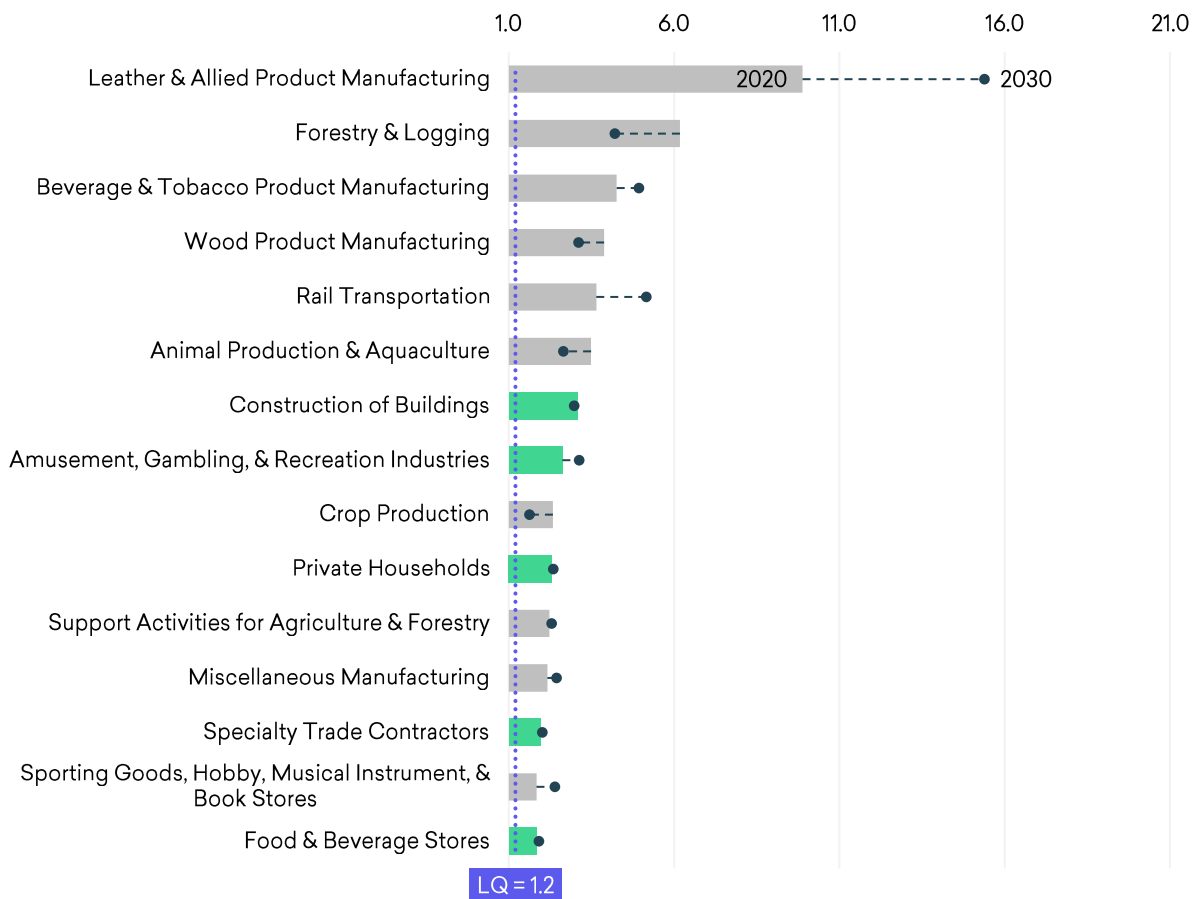
Figure 4 displays the top industry subsectors in terms of employment in Ravalli County, and Figure 5 shows the top industry subsectors in terms of employment concentrations, referred to as location quotients (LQs). High LQs (usually anything greater than 1.2) are an indication that the county has a comparative advantage or specialization in certain industry subsectors relative to the rest of the nation or potentially to other regions.

Figure 4: Top Industry Subsectors in Ravalli County by Jobs



Source: Employees & Self-Employed 2021.4.

Figure 5: Top Industry Subsectors in Ravalli County by Employment Concentration (LQ)



Source: Employees & Self-Employed 2021.4.

Note the green bars in the figures. Across all of Ravalli County’s industry subsectors, five are within the top 15 in terms of jobs with relatively high LQs. The appearance of these industry subsectors provides an indication of their strength in the county’s economy and offers the college insight into potential employment opportunities for its students. These industry subsectors, ranked by 2020 jobs, are:

- Specialty Trade Contractors;
- Construction of Buildings;
- Food & Beverage Stores;
- Private Households; and
- Amusement, Gambling, & Recreation Industries.

The data in Table 1 show several of the county’s socioeconomic indicators compared to those at the state and national level. Household income, reported as a median annual value, includes the income of all individuals in a household, 15 years and over, whether they are related to the householder or not. Per capita income is calculated as the mean income for every person in the area divided by the aggregate income of the total population.

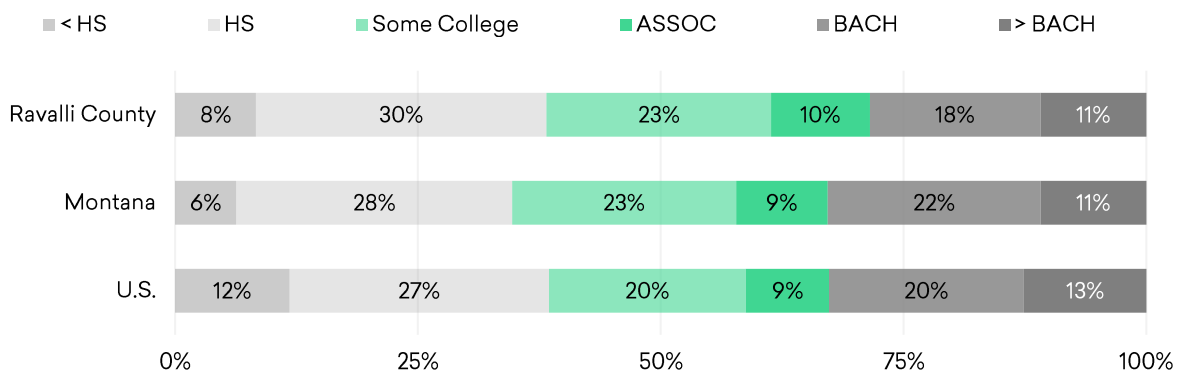
Table 1: Income, Unemployment, and Poverty Characteristics for Ravalli County

	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	PER CAPITA INCOME	POVERTY ALL PEOPLE
Ravalli County, MT	\$53,054	5.3%	\$29,761	12.3%
Montana	\$54,970	4.0%	\$31,151	13.1%
United States	\$62,843	5.3%	\$34,103	13.4%

Source: American Community Survey (ACS) 2019 five-year estimates from the U.S. Census Bureau Data. While the ACS 2019 five-year estimates provide the most recent figures related to the table, the U.S. Census website notes that 2020 five-year estimates will be available starting March 17, 2022.

Figure 6 displays the highest educational attainments of Ravalli County, Montana, and U.S. adults, without reference to gender and the major race and ethnic groups. Educational attainment data are useful for targeting specific population groups with less than or greater than average education levels.

Figure 6: Highest Educational Attainments of Adults in Ravalli County, Montana, and the U.S.



Numbers may not sum due to rounding.

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

PROGRAM DEMAND GAP ANALYSIS

The program demand gap analysis provides results across all of BC UM's non-credit and degree level programs, which have been classified by their formal CIP code.¹ The analysis connects the college's program completers with the availability of county job openings. For BC UM's non-credit programs, the analysis connects the college's completers with the availability of county job openings but without the additional reference to non-credit program completions from other postsecondary educational institutions in Ravalli County.

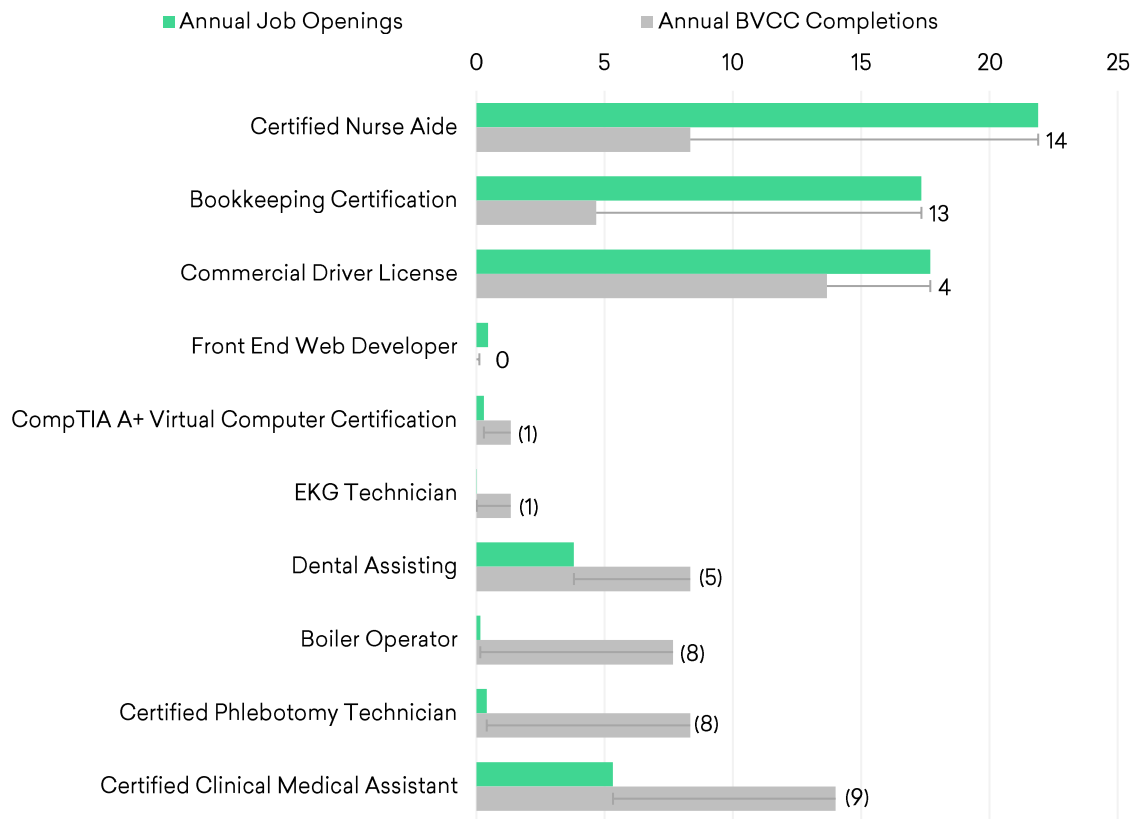
BC UM offers 10 non-credit programs, when grouped by their six-digit CIP codes. The non-credit programs can be designed for self-enrichment; however, BC UM offers them with workforce skills in mind. Using a customized non-credit program-to-occupation map, the 10 programs are analyzed using program demand gap analysis methods. The results of the analysis are an indication of the potential labor market demand for BC UM's non-credit programs, whether those programs are for people seeking employment or looking to learn new skills (Figure 7). The non-credit level programs with the three gaps are:

- Certified Nurse Aide (gap of 14; median hourly wage \$13.15)
- Bookkeeping Certification (gap of 13; median hourly wage \$15.80)
- Commercial Driver License (gap of four; median hourly wage \$20.95)

BC UM offers a General Studies program at the associate level and continuing a liberal arts program such as that at BVCC would likely be beneficial. Those in the county who are interested in saving money on their first two years of college would be provided an opportunity to receive a similar education for a reduced expense, prior to transferring elsewhere to complete a four-year degree. While difficult to project liberal arts career trajectories, BC UM and BVCC administrators should be aware that students can find success in a variety of business-related occupations. Using the Profile Analytics database, many liberal arts program completers are currently employed as retail salespersons and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in Ravalli County, and the college's liberal arts program serves as a starting point to students' future career goals.

¹CIP refers to the Classification of Instructional Program and was originally developed by the U.S. Department of Education's National Center for Education Statistics (NCES).

Figure 7: BC UM's Non-Credit Programs



Non-credit programs are grouped by their six-digit CIP code.
 Source: Emsi Burning Glass program demand gap model.

PROGRAM ADDITIONS

Fifty-one certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, many of which are related to construction & extraction occupations. At the associate degree level, there are fewer opportunities for new programs, due to low demand within Ravalli County. Nonetheless, there are three opportunities, all in healthcare practitioners & technical occupations. The three are Registered Nursing, Dental Hygienist, and Radiologic Technologist & Technician programs. Two of these potential programs are related to non-credit programs already offered at the college. BVCC should consider these programs, whether its focus is on job openings in Ravalli County or Montana. Given that demand for healthcare workers has experienced recent growth on a national level, it is important for BVCC to consult with local healthcare providers when attempting to specify county demand for these occupations. A Registered Nursing program could similarly be offered at the transfer-track degree level due to the gap in both associate degree and bachelor's degree education levels identified in the program demand gap analysis. For all

award levels, many program additions are related to the college’s current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the county’s current and projected labor market demand. A selection of these occupations, which have the most regional job openings by award level, appear in Table 2.

Table 2: Program Additions by Education Level

SOC TITLE	2020 JOBS	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE	ED. LEVEL
Home Health and Personal Care Aides	329	41	6	36	\$12.63	CERT
Carpenters	445	28	0	28	\$19.06	CERT
Office Clerks, General	349	27	0	27	\$14.63	CERT
Stockers and Order Fillers	167	24	0	24	\$13.28	CERT
Construction Laborers	259	18	0	18	\$15.86	CERT
First-Line Supervisors of Food Preparation and Serving Workers	96	14	0	14	\$16.57	CERT
First-Line Supervisors of Retail Sales Workers	175	12	0	12	\$15.27	CERT
Customer Service Representatives	117	11	0	11	\$14.79	CERT
Maintenance and Repair Workers, General	112	10	0	10	\$17.38	CERT
Teaching Assistants, Except Postsecondary	180	10	0	10	\$12.17	CERT
Dental Hygienists	20	1	0	1	\$37.67	ASSOC
Radiologic Technologists and Technicians	17	1	0	1	\$27.62	ASSOC

SOC refers to the Standard Occupational Classification system used to classify occupations. Average annual job openings represent regional data from 2020 to 2030. Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.



Introduction

An efficient labor market requires a seamless flow of skilled workers, the postsecondary educational institutions that educate and train them, and the employers that hire them. One factor behind workforce misalignment stems from when the needs of the employers evolve differently than the programs that train their workers. These misalignments may happen at different times and for different reasons:

- Employer training becomes more tailored and comprehensive;
- Businesses come and go, and certain educational programs become more or less pertinent to a specific region;
- Rapid advances in technology and business create curriculum needs that few educational institutions possess; and
- As economic conditions shift, businesses have different hiring requirements of their employees.

In light of these dynamics, an up-to-date understanding of the economy and the demand for skilled labor is vital to the planning efforts of colleges and universities seeking to adapt their program offerings to the requirements of an ever-changing workforce.

Bitterroot Valley Community College (BVCC), as a new college with its sights set on addressing local employer needs and providing learners with valuable skills, partnered with Emsi Burning Glass to gain better insight into economic conditions and workforce trends. Emsi Burning Glass is a labor market analytics firm, serving higher education, economic and workforce development, talent acquisition, and site selection. In this report, Emsi Burning Glass conducts an environmental scan of the county's economy, provides a program demand gap analysis of BVCC (currently BC UM) program offerings, and makes recommendations for new program development.

The program demand gap analysis is performed by assessing the supply and demand of skilled workers and identifying the educational programs that need to be adapted in order to fill any existing or future gaps. The analysis weighs the educational output of BC UM and other postsecondary educational institutions in the county against the number of job openings related to the college's program offerings to determine whether a deficit or an oversupply of skilled workers exists. The goal of the analysis is to provide BVCC with relevant data and information that it can use when solving problems and making decisions about future program development.

IMPORTANT NOTE

This analysis is intended to serve as a starting point for BVCC as the college discusses county workforce needs. A deficit (gap) or oversupply (surplus) of workers in a particular occupation category represents a potential problem for the county, making it important for each program and occupation group to be evaluated by the college on a case-by-case basis. The purpose of this analysis is, therefore, to initiate the conversation on evaluating program effectiveness. Once evaluated internally within the college, specific implications may be considered for programs with substantial gaps or surpluses.

It must be noted that our analysis does have its limitations in that only the education supply pipeline is considered. This is due to data availability at the county and institutional levels. However, other sources—unemployed workers, industry trained pipelines, workers migrating to the county, and job changers from other occupational categories—can also be a source of skilled workers. These types of considerations are useful when evaluating specific types of occupations. Publicly available data sources are limited in accounting for this, and consequently these labor sources are unavailable for Emsi Burning Glass analysis. Primary data collection methods (i.e., interviews and surveys) are among the only ways to obtain information on the other sources for skilled workers.

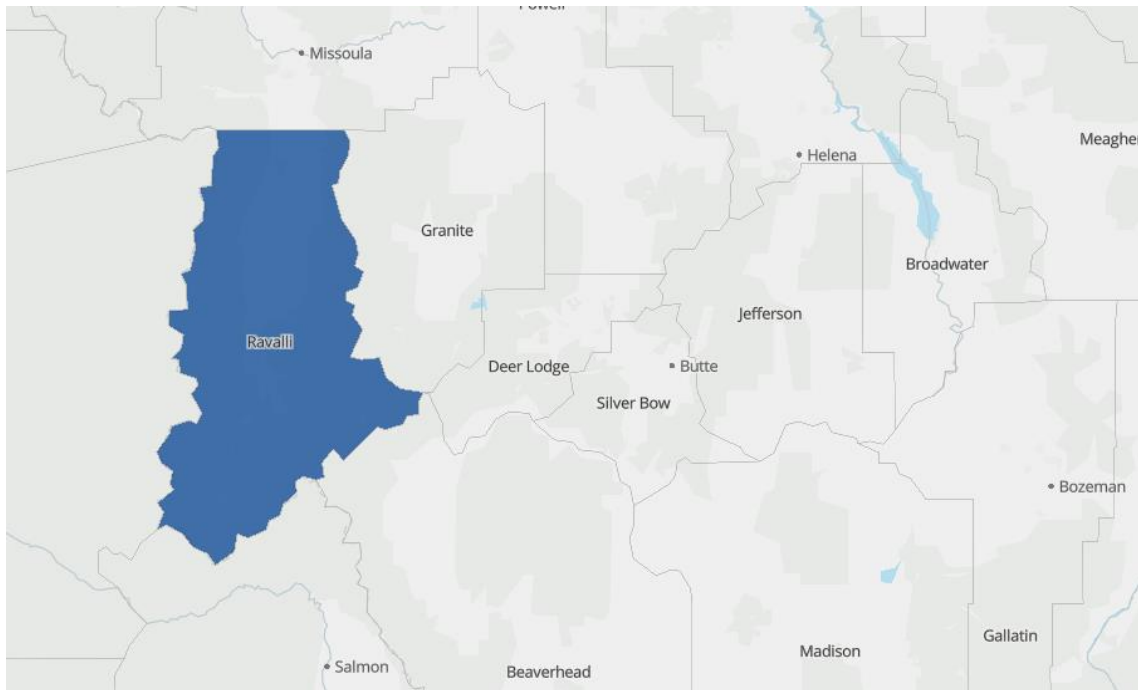


Environmental Scan

Before looking at the results of the program demand gap analysis, BVCC should first consider the economic structure of its region, defined in this report as Ravalli County in Montana (Figure 2.1). Identifying the driving industries within the county is an important first step for three reasons:

- it helps BVCC understand where the college should logically target its efforts
- it helps to reveal whether there are industries that may be overlooked as a result of recent economic growth
- it helps identify the top occupations within those key driving industries, and
- it gives the college a deeper understanding of the county's population characteristics and the socioeconomic background of current and future BVCC students.

Figure 2.1: Map of Ravalli County



Source: Emsi Burning Glass Analyst. Region provided by BVCC.

To these ends, this chapter provides an overview of Ravalli County total jobs and jobs within its industries, unemployed workers, commuting patterns, population demographics and socioeconomic indicators, and the highest educational attainments of its adult residents.

Tables and figures, in some cases, also present data in Montana and the U.S. Supporting data tables are found in Appendix 3.

POPULATION DEMOGRAPHICS

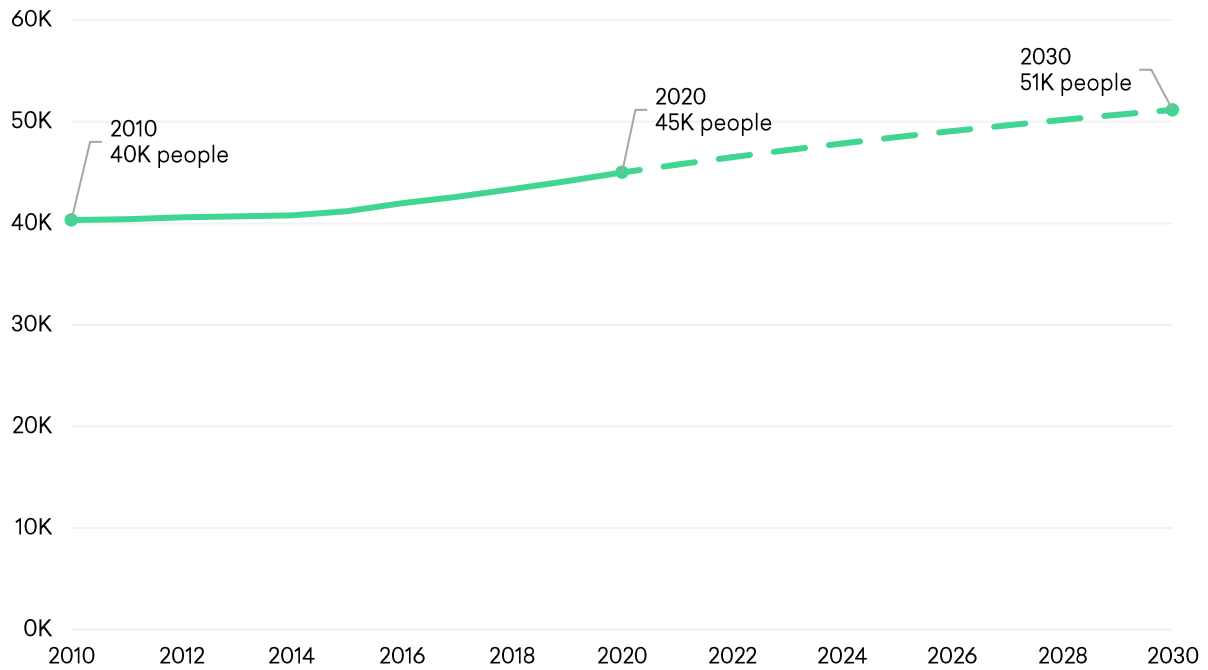
Population demographics can be used to anticipate the future demands of a regional labor market. For example, it is important to know if employers are adding new jobs because they need more workers or if there is a significant need for workers to fill vacancies left by retirees and those changing careers. Emsi Burning Glass's job openings, discussed in greater detail in the next chapter, reflect both job growth and replacement needs.

In this chapter, population data for the county, state, and the U.S. are shown, as well as race/ethnicity data for people 25 years and above living in Ravalli County. The data are based on Emsi Burning Glass's demographic data and publicly available sources from state and federal agencies, including annual population estimates and population projections from the U.S. Census Bureau and birth and mortality rates from the U.S. Health Department. Demographic information relies on the annual results of the American Community Survey.

Historical and projected changes in the county population are presented in the following figures. In 2010, 40,320 people lived in Ravalli County, and 51,170 people are projected to live in the county by 2030 (Figure 2.2). Using 2010 as the base year, this reflects a 26.9% growth rate (Figure 2.3). Montana's population is projected to increase by 18.7% over the same 20-year period, and the population in the U.S. is projected to increase by 13.1%. Figure 2.4 shows the year-over-year changes in population, by percent, for Ravalli County, Montana, and the U.S. The three regions are projected to grow by 1.7%, 1.1%, and 0.7% from 2021 to 2022, respectively.

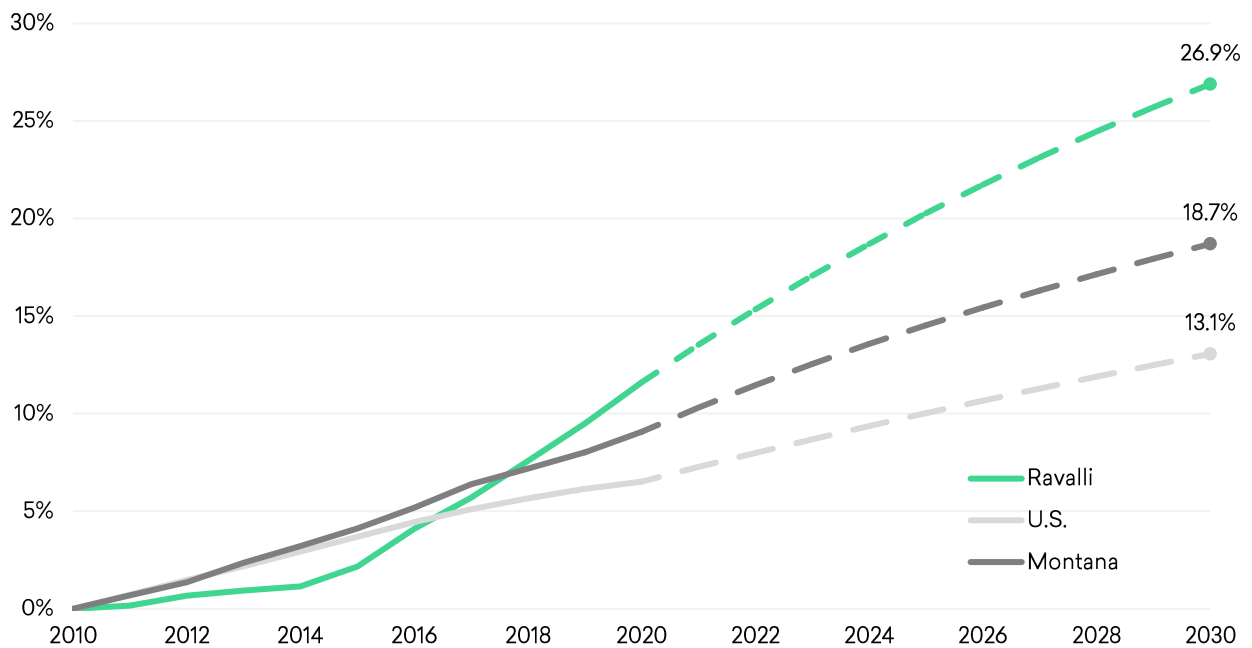
Table 2.1 separates the 2020 population, found in Figure 2.2, into three categories – younger than working age, working age, and older than working age. The Organization for Economic Co-operation and Development (OECD) defines working age as those aged 15 to 64 years. This breakout will similarly provide insight into the varying workforce capabilities per city and/or town in Ravalli County. Figure 2.5 shows a visual representation of the ZIP codes within the county that corresponded with the cities/towns mentioned in Table 2.1.

Figure 2.2: Historical and Projected Population in Ravalli County, 2010 to 2030



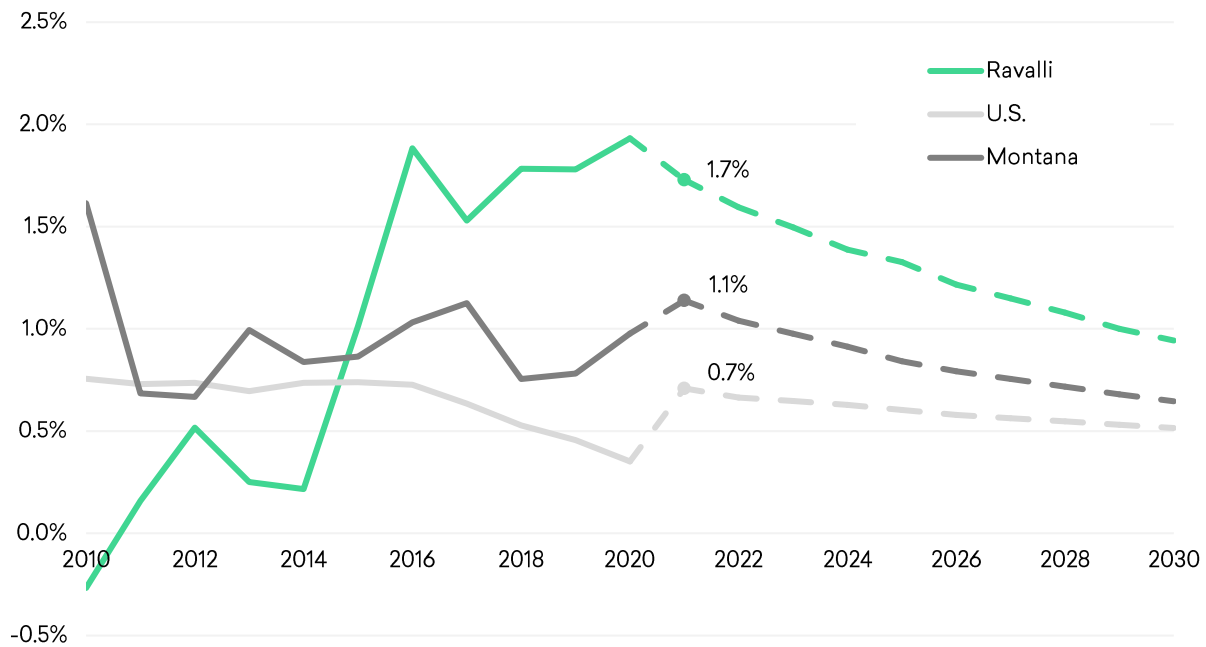
Source: Emsi Burning Glass demographics data, U.S. Census Bureau, U.S. Health Department.

Figure 2.3: Percent Population Change from 2010 to 2030 in Ravalli County, Montana, and the U.S.



Source: Emsi Burning Glass demographics data, U.S. Census Bureau, U.S. Health Department.

Figure 2.4: Annual Percent Population Change in Ravalli County, Montana, and the U.S., 2010 to 2030



Source: Emsi Burning Glass demographics data, U.S. Census Bureau, U.S. Health Department.

Table 2.1: 2020 Population by Working Age Classification in Ravalli County

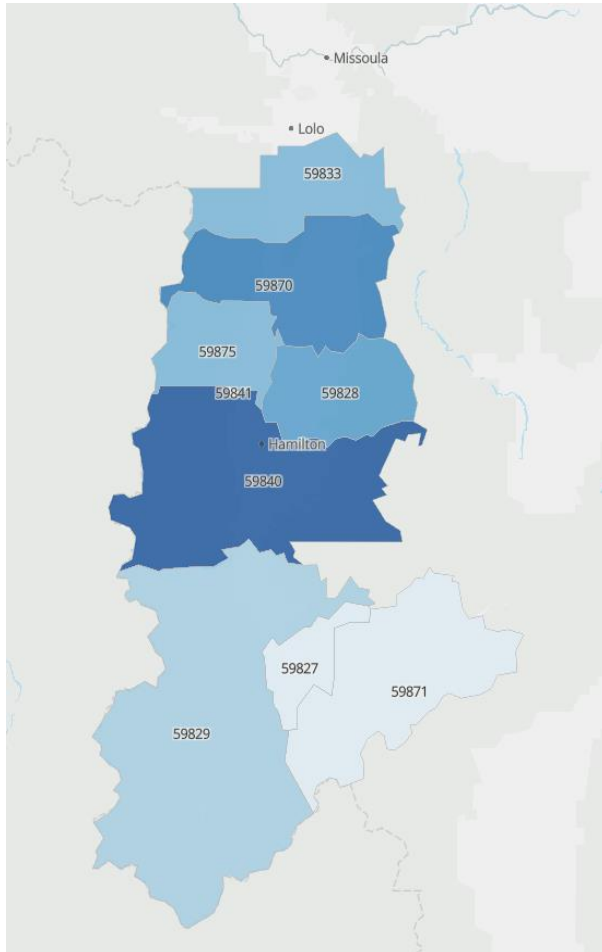
ZIP	City/Town Name*	YOUNGER THAN WORKING AGE	WORKING AGE**	OLDER THAN WORKING AGE
59840	Hamilton	2,191	8,590	4,599
59870	Stevensville	1,917	6,737	2,935
59828	Corvallis	785	3,947	1,400
59833	Florence	720	2,751	1,154
59875	Victor	715	2,193	1,216
59829	Darby	354	1,503	784
59871	Sula	36	186	122
59827	Conner	17	89	59
Total		6,735	25,997	12,270

Source: Emsi Burning Glass demographics data, U.S. Census Bureau, U.S. Health Department. Pinesdale, a town in Ravalli County, was excluded due to insufficient data.

*City/Town areas are determined by their corresponding ZIP code.

** The Organization for Economic Co-operation and Development (OECD) defines working age as those aged 15 to 64 years.

Figure 2.5: Cities and Towns in Ravalli County Detailed by ZIP Code (Shaded by 2020 Working Age Population)



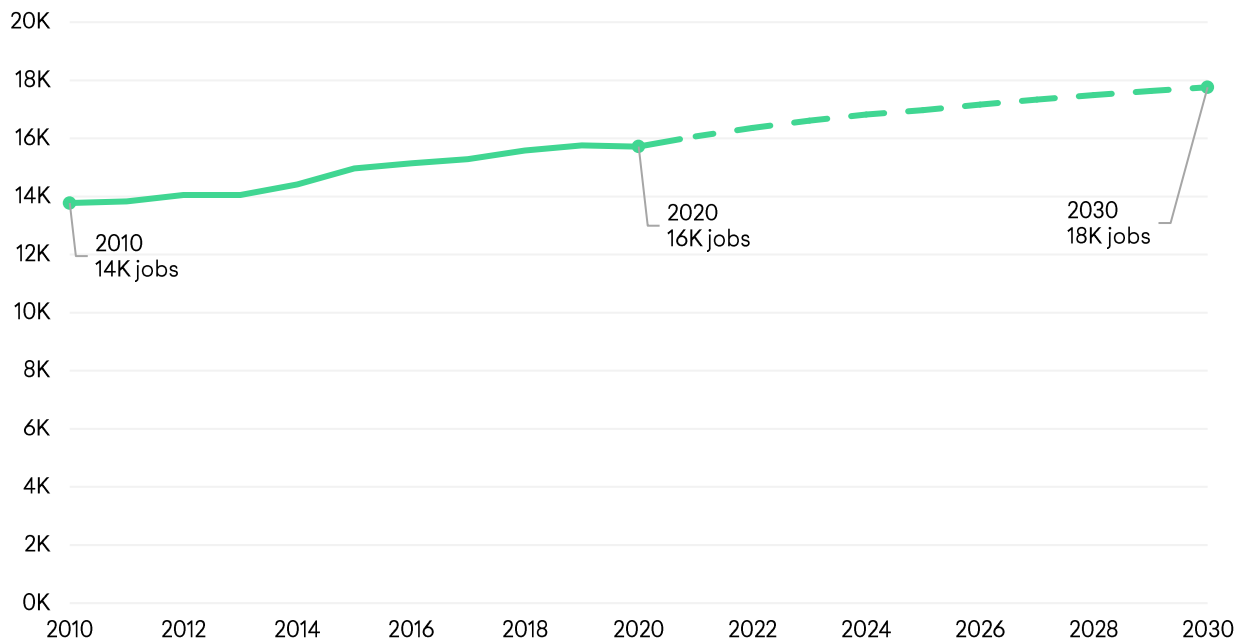
Source: Emsi Burning Glass Analyst.

TOTAL JOBS

Job counts and the changes in jobs over time provide insight into Ravalli County as an attractive region for job seekers, employers, and economic developers. Figure 2.6 shows county jobs from 2010 to 2030. In addition, Figures 2.7 and 2.8 present data on jobs in Ravalli County for the same time period but highlight the county's percent job change, using 2010 as a base year and showing year-over-year job change, respectively.

As shown in Figure 2.6, Ravalli County supported 13,770 jobs in 2010. By 2020, that number increased to 15,720 jobs for a 14% job increase. For context, Montana supported 542,080 jobs and the U.S. supported 158.3 million jobs in 2020.

Figure 2.6: Historical and Projected Jobs in Ravalli County, 2010 to 2030

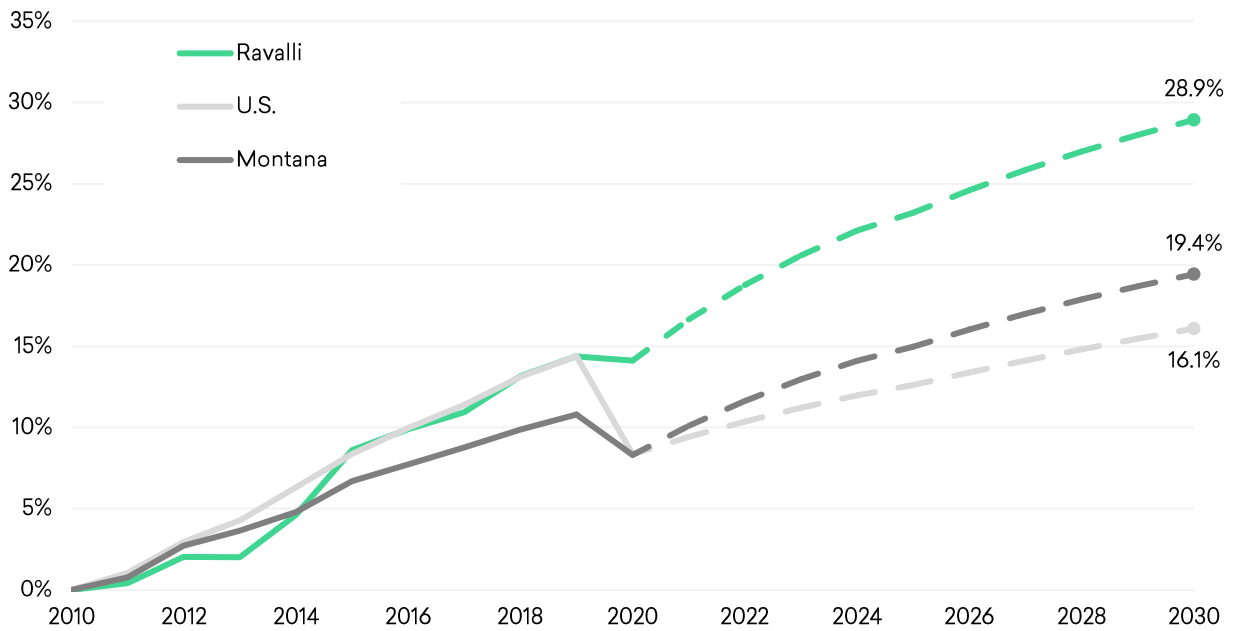


Source: Employees & Self-Employed 2021.4.

Figure 2.7 displays the historical and projected job change, by percent, for the county, state, and U.S. between 2010 and 2030, with 2010 serving as the base year. Ravalli County experienced consistent job growth from 2010 to 2019 - averaging 1.4% per year and totaling to 14.4% in 2019 from the base year. Ravalli County's job growth has historically been on par with that of the state and the U.S. Using Emsi's job projections, it appears this trend will continue, with Ravalli County outpacing the state and U.S. Job growth is expected to be roughly 14.8% in Ravalli County from 2020 to 2030, whereas Montana and the U.S. are expected to grow 11.1% and 7.7%, respectively, during the same timeframe. From 2010 to 2030, job growth in Ravalli County, Montana, and the U.S. are expected to be 28.9%, 19.4% and 16.1%, respectively.

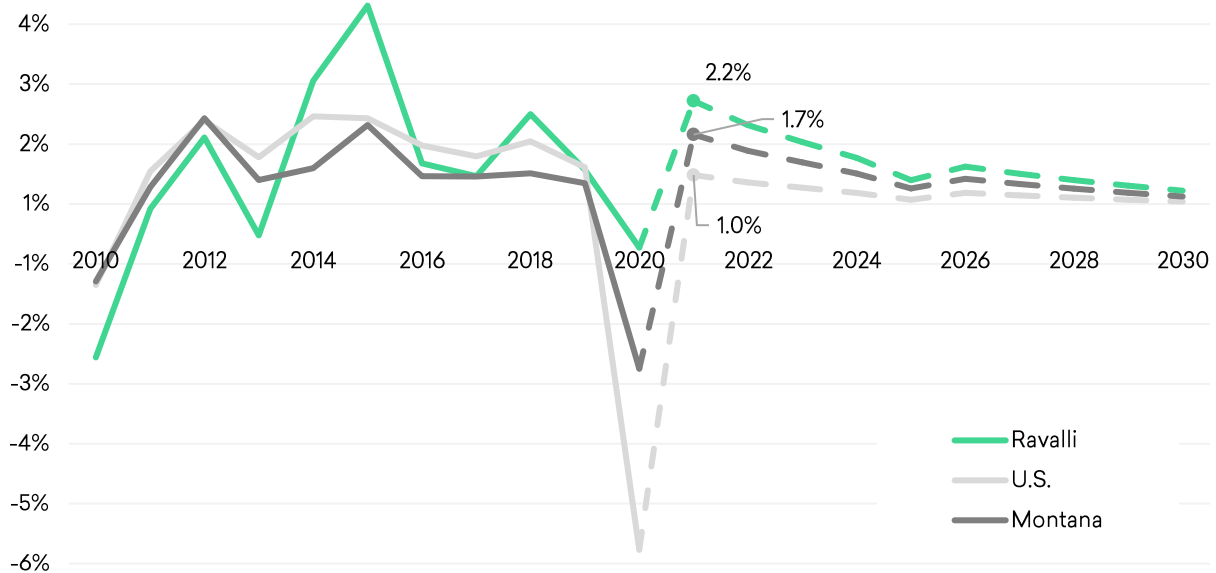
The regions' year-over-year job changes follow similar patterns, particularly from 2021 and onward (Figure 2.8). Ravalli County, Montana, and the U.S. averaged 1.2%, 1.0%, and 1.3% from 2010 to 2019. Unsurprisingly, the beginning of the COVID-19 pandemic in 2020 resulted in job loss. However, Ravalli County experienced job loss to a much lesser extent at only a 0.2% loss in 2020. Job growth rates (although not the number of jobs) rebounded to pre-pandemic levels in 2021. Jobs in Ravalli County increased by 2.2% between 2020 and 2021, and jobs in Montana and the U.S. increased by 1.7% and 1.0%, respectively.

Figure 2.7: Percent Job Change from 2010 to 2030 in Ravalli County, Montana, and the U.S.



Source: Employees & Self-Employed 2021.4.

Figure 2.8: Annual Percent Job Change in Ravalli County, Montana, and the U.S. from 2010 to 2030.



Source: Employees & Self-Employed 2021.4.

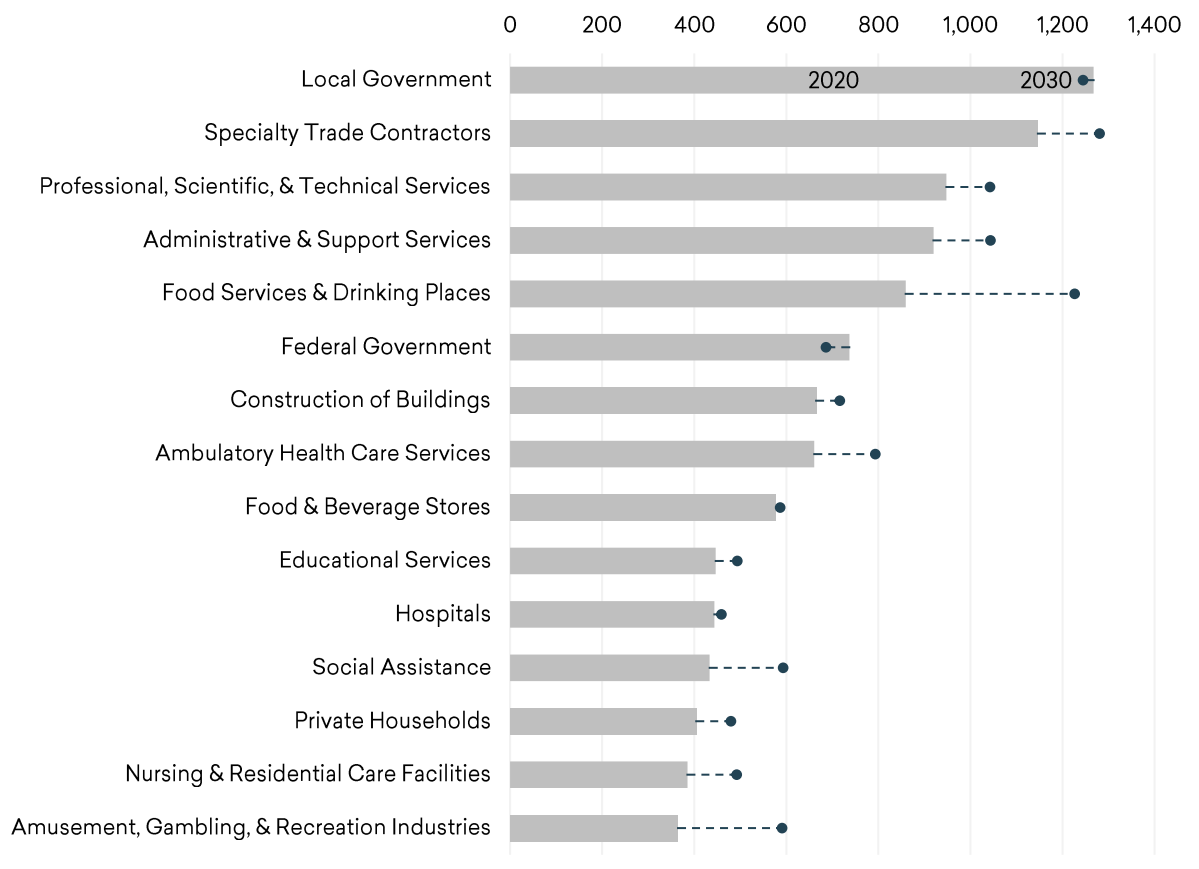
INDUSTRY COMPOSITION

Evaluating current and future employment by industry provides information on the county's economic diversity. Understanding the industry mix is important for drawing connections to the occupations and companies that are in-demand, and students are likely to find employment in the largest county industries. The North American Industry Classification System (NAICS) is the structure used by federal agencies to classify business establishments based on their production process (although the final product or service is usually similar for the firms in a given industry). NAICS applies a six-digit hierarchical coding system to organize nearly 1,000 detailed industries in the U.S. For the analysis in this section, Emsi Burning Glass has aggregated industries into their three-digit NAICS codes, referred to as industry subsectors.²

Figure 2.9 presents the 15 largest industry subsectors in Ravalli County, by their 2020 job counts, and also shows the industry subsectors' projected change over the next decade. The county supported 15,720 jobs in 2020, and by 2030, it is projected to add 2,040 new jobs for a 14.8% job increase. As shown in the figure, Local Government is the largest employer, with 1,270 jobs in 2020. The Specialty Trade Contractors and Professional, Scientific, & Technical Services industry subsectors are the next largest, with 1,150 and 950 jobs in 2020, respectively. As for growth, Food Services & Drinking Places is projected to add the most jobs of the top 15 industry subsectors, with a 10-year increase of 370 new jobs for a 42.7% job growth. On the other hand, two of the top 15 industry subsectors are expected to contract between 2020 and 2030 – Federal Government, with a 6.9% decrease, and Local Government, with a 2% decrease.

²In Emsi Burning Glass data, all establishments in the main NAICS hierarchy are private-sector only. Jobs in Educational Services and Ambulatory Health Care Services, for example, are not associated with local, state, or federal government jobs. Jobs for public school teachers and city firefighters are in Local Government, whereas college professors and forest firefighters are commonly employed by State Government. Mail carriers and transportation security screeners are examples of jobs in Federal Government.

Figure 2.9: Jobs by Industry Subsector in Ravalli County, 2020 and 2030



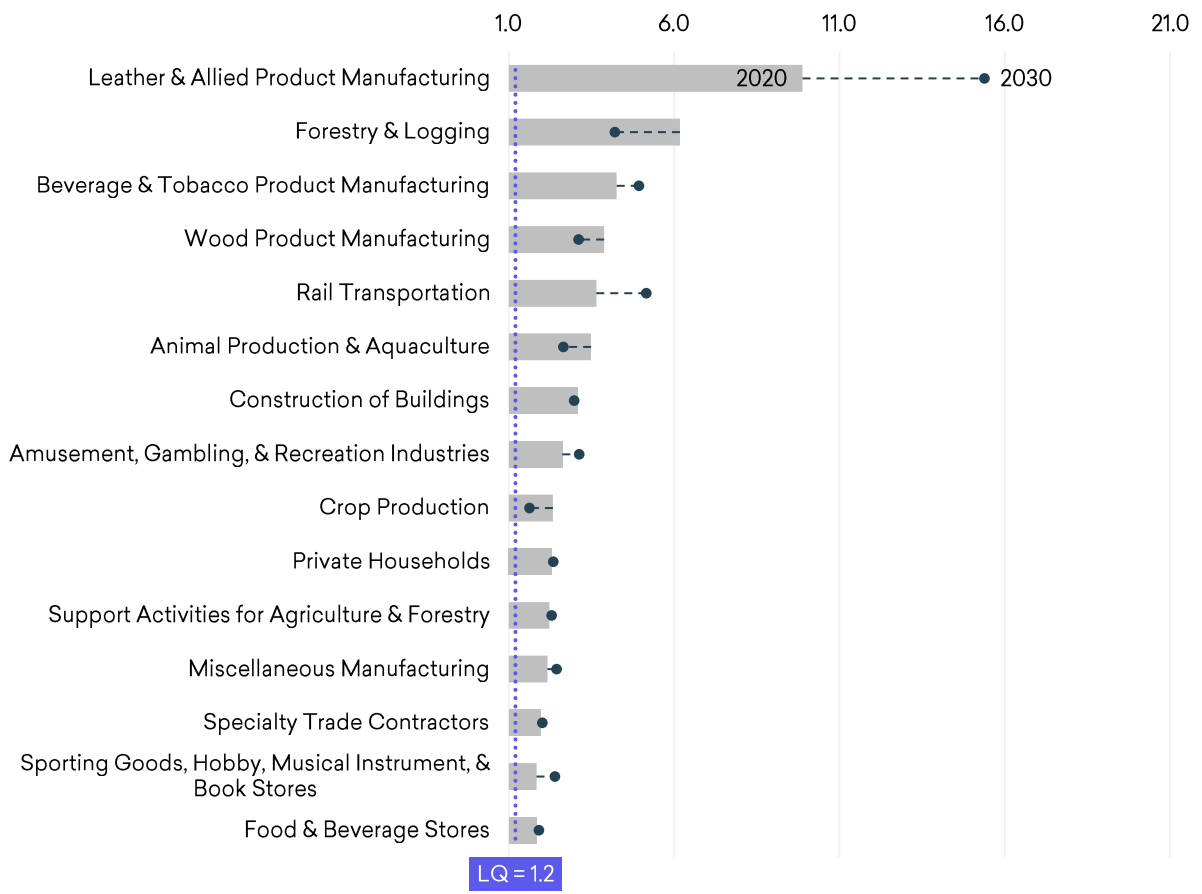
Source: Employees & Self-Employed 2021.4.

The employment concentration of Ravalli County's industry subsectors is measured by a location quotient (LQ). LQs are used to assess competitiveness by comparing the concentration of employment in an industry in the county against the employment concentration for that same industry in the U.S. An LQ equal to 1.0 means that the percentage of total employment comprised by an industry in Ravalli County matches the percentage of total employment of that industry in the U.S. An LQ greater than 1.0 means that the industry has a greater employment share relative to that of the U.S. High LQs, which are typically greater than 1.2, are an indication that the county has a comparative advantage or specialization in an industry.

The industry subsectors with the 15 highest LQs in Ravalli County are shown in Figure 2.10. The Leather & Allied Product Manufacturing industry subsector had the highest LQ in 2020 at 9.9. The industry subsector is expected to increase in employment concentration between 2020 and 2030 and remain the industry subsector with the largest LQ. The Forestry & Logging; Beverage & Tobacco Product Manufacturing; and Wood Product Manufacturing industry subsectors also have relatively large employment concentrations, with LQs of 6.2, 4.3, and 3.9 in 2020, respectively. As for 10-year growth, Leather & Allied Product

Manufacturing is projected to increase in LQ by 55.7% from an LQ of 9.9 to an LQ of 15.4, which is the largest percent increase among the top 15 industry subsectors in the figure. On the other hand, five industry subsectors are expected to drop in LQ between 2020 and 2030. Forestry & Logging has the largest percent decrease (31.9%). Despite the declines, all the county's top 15 industry subsectors will remain above the 1.2 high-LQ threshold.

Figure 2.10: Employment Concentration (LQ) by Industry Subsector in Ravalli County, 2020 and 2030



Source: Employees & Self-Employed 2021.4.

Industry earnings are defined as total wages, salaries, supplements (such as additional employee benefits), and proprietor income. Workers in various industry subsectors see different average wages, so identifying Ravalli County's top industries by earnings is another method of evaluating an industry's strength. Table 2.2 shows the county's top 15 industry subsectors in descending order of 2020 earnings, as well as additional jobs data.

Professional, Scientific, & Technical Services had the highest earnings in Ravalli County (\$88 million), which accounted for 9.3% of the county's total earnings (\$942 million). The next largest industry subsector was Local Government, bringing in 7.3% of the county's total earnings. Federal Government had the third largest earnings with 7.1% of the county's total

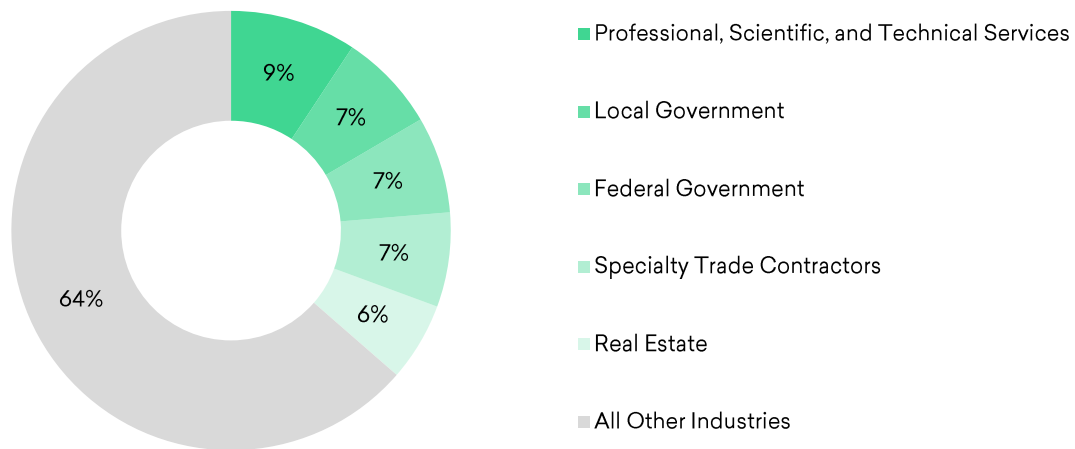
earnings. It could be argued that no one industry subsector accounted for a relatively large share of county earnings, as illustrated in Figure 2.10, an indication of the county's economic diversity. As illustrated in Figure 2.10, the largest five industry subsectors accounted for 36.4% of all earnings in the county.

Table 2.2: Industry Subsector Earnings in Ravalli County

NAICS TITLE	2020 EARNINGS (\$ MILLIONS)	% 2020 EARNINGS	2020 JOBS	2030 JOBS	JOB CHANGE	% JOB CHANGE
Professional, Scientific, and Technical Services	\$88	9.3%	948	1,043	95	3.2%
Local Government	\$68	7.3%	1,268	1,245	(23)	3.0%
Federal Government	\$67	7.1%	737	686	(51)	-18.8%
Specialty Trade Contractors	\$65	6.9%	1,147	1,281	134	183.8%
Real Estate	\$55	5.8%	165	152	(13)	-73.6%
Ambulatory Health Care Services	\$53	5.7%	661	793	133	271.5%
Administrative and Support Services	\$44	4.7%	920	1,044	124	-18.7%
Construction of Buildings	\$37	3.9%	665	716	51	127.1%
Hospitals	\$35	3.7%	444	459	15	3.5%
Food and Beverage Stores	\$18	1.9%	577	587	9	117.6%
Credit Intermediation and Related Activities	\$17	1.8%	263	241	(22)	93.1%
Merchant Wholesalers, Durable Goods	\$17	1.8%	195	206	11	486.1%
Animal Production and Aquaculture	\$16	1.7%	159	116	(43)	-27.0%
Food Services and Drinking Places	\$16	1.7%	859	1,226	367	129.9%
Crop Production	\$16	1.7%	191	144	(46)	-24.3%
All other industries	\$330	35.0%	6,521	7,819	1,298	19.9%
Total	\$942	100.0%	15,719	17,760	2,041	13.0%

Numbers may not sum due to rounding.
Source: Employees & Self-Employed 2021.4.

Figure 2.51: Top Five Industry Subsectors by Earnings in Ravalli County



Numbers may not sum due to rounding.
Source: Employees & Self-Employed 2021.4.

OCCUPATIONS WITHIN KEY INDUSTRY SUBSECTORS

Five industry subsectors are found in both Figure 2.9 and Figure 2.10 because they are large employers and have high LQs. Altogether, the industry subsectors represent 20% of Ravalli County's jobs. These industry subsectors, in descending order of 2020 jobs, are:

- Specialty Trade Contractors;
- Construction of Buildings;
- Food & Beverage Stores;
- Private Households; and
- Amusement, Gambling, & Recreation Industries.

Their appearance in the figures provides an indication of their relative strength in Ravalli County, and thus, we identified the most common occupations within the five industry subsectors, called a staffing pattern.³ The industry subsectors' staffing patterns provide insight into not only the county's labor market demand, but by extension, the demand for the college's program offerings.

The **Specialty Trade Contractors** industry subsector in the county supported 1,150 jobs in 2020 and had an LQ of 2.0. It is comprised of 19 industries at the six-digit NAICS code level.

³ The top occupations, in terms of the percent of total jobs in an industry, are identified using data from the National Occupational Employment Statistics program, projections from the National Industry-Occupation Employment Matrix, and Emsi Burning Glass's proprietary employment data.

The largest industry is the Site Preparation Contractors industry, with 13.5% of jobs in the industry subsector. The top occupation employed by the Specialty Trade Contractors industry subsector is carpenters, which constitutes 16.6% of the industry subsector's jobs. It is followed by construction laborers (12.4%) and painters, construction & maintenance (6.9%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- first-line supervisors of construction trades & extraction workers (\$25.70);
- electricians (\$22.74);
- operating engineers & other construction equipment operators (\$22.24);
- brickmasons & blockmasons (\$21.22); and
- heavy & tractor-trailer truck drivers (\$20.95).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$37.39);
- construction managers (\$24.95); and
- cost estimators (\$23.83).

The **Construction of Buildings** industry subsector in the county supported 660 jobs in 2020 and had an LQ of 3.1. It is comprised of six industries at the six-digit NAICS code level. The largest industry is the New Single-Family Housing Construction (except For-Sale Builders) industry, with 57.1% of jobs in the industry subsector. The top occupation employed by the Construction of Buildings industry subsector is carpenters, which constitutes 32.5% of the industry subsector's jobs. It is followed by construction laborers (15.0%) and construction managers (6.1%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- first-line supervisors of construction trades & extraction workers (\$25.70);
- electricians (\$22.74);
- operating engineers & other construction equipment operators (\$22.24);
- brickmasons & blockmasons (\$21.22); and
- plumbers, pipefitters, & steamfitters (\$20.36).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$37.39);
- project management specialists & business operations specialists, all other (\$31.63); and
- construction managers (\$24.95).

The **Food & Beverage Stores** industry subsector in the county supported 580 jobs in 2020 and had an LQ of 1.8. It is comprised of nine industries at the six-digit NAICS code level. The

largest industry is the Supermarkets & Other Grocery (except Convenience) Stores industry, with 83.8% of jobs in the industry subsector. The top occupation employed by the Food & Beverage Stores industry subsector is cashiers, which constitutes 25.1% of the industry subsector's jobs. It is followed by stockers & order fillers (16.8%) and butchers & meat cutters (8.7%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- first-line supervisors of production & operating workers (\$25.52);
- first-line supervisors of transportation & material moving workers, except aircraft cargo handling supervisors (\$21.96);
- pharmacy technicians (\$17.69);
- first-line supervisors of food preparation & serving workers (\$16.57); and
- butchers & meat cutters (\$16.05).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$37.39);
- first-line supervisors of office & administrative support workers (\$23.55); and
- sales & related workers, all other (\$20.52).

The **Private Households** industry subsector in the county supported 400 jobs in 2020 and had an LQ of 2.3. It is comprised of one industry at the six-digit NAICS code level – the Private Households industry. The top occupation employed by the Private Households industry subsector is maids & housekeeping cleaners, which constitutes 34.9% of the industry subsector's jobs. It is followed by childcare workers (30.7%) and home health & personal care aides (23.3%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- first-line supervisors of housekeeping & janitorial workers (\$21.38);
- chefs & head cooks (\$21.01);
- production workers, all other (\$18.89);
- licensed practical & licensed vocational nurses (\$18.17); and
- passenger vehicle drivers, except bus drivers, transit & intercity (\$17.82).

The top three highest paying occupations that require a bachelor's degree are:

- registered nurses (\$31.48);
- personal service managers, all other; entertainment & recreation managers, except gambling; & managers, all other (\$19.82); and
- property, real estate, & community association managers (\$15.68).

The **Amusement, Gambling, & Recreation Industries** industry subsector in the county supported 360 jobs in 2020 and had an LQ of 2.6. It is comprised of 10 industries at the six-

digit NAICS code level. The largest industry is the Golf Courses & Country Clubs industry, with 33.9% of jobs in the industry subsector. The top occupation employed by the Amusement, Gambling, & Recreation Industries industry subsector is waiters & waitresses, which constitutes 10.9% of the industry subsector's jobs. It is followed by landscaping & groundskeeping workers (9.8%) and exercise trainers & group fitness instructors (7.2%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- first-line supervisors of personal service & entertainment & recreation workers, except gambling services (\$18.84);
- exercise trainers & group fitness instructors (\$18.62);
- maintenance & repair workers, general (\$17.38);
- landscaping & groundskeeping workers (\$16.87); and
- first-line supervisors of food preparation & serving workers (\$16.57).

The two occupations that require a bachelor's degree are:

- general & operations managers (\$37.39); and
- personal service managers, all other; entertainment & recreation managers, except gambling; & managers, all other (\$19.82).

UNEMPLOYMENT

Unemployment data identify areas in which skills may mismatch with the county's current employment opportunities or where BVCC could provide appropriate training programs best suited to transitioning unemployed workers into in-demand occupations. The tables and figures in this section present unemployment in Ravalli County as the number of people unemployed by two-digit industry sector and by two-digit occupational group.⁴

Emsi Burning Glass industry- and occupation-specific unemployment estimates are derived from several federal sources. They are Characteristics of the Insured Unemployed (CIU) at the Department of Labor, Employment, & Training Administration; Local Area Unemployment Statistics (LAUS) from the Bureau of Labor Statistics (BLS); and the Current Population Survey (CPS) at the Census. Emsi Burning Glass final industry and occupation data, as well as state-specific data, are also used. The numbers and percentages reflect the 12 months (September 2020 through August 2021) preceding monthly average for

⁴ Industry data reported elsewhere in the analysis are at the three-digit NAICS code level, referred to as industry subsectors. Occupation data reported elsewhere are also at a more detailed level, simply referred to as occupations at the six-digit SOC code level.

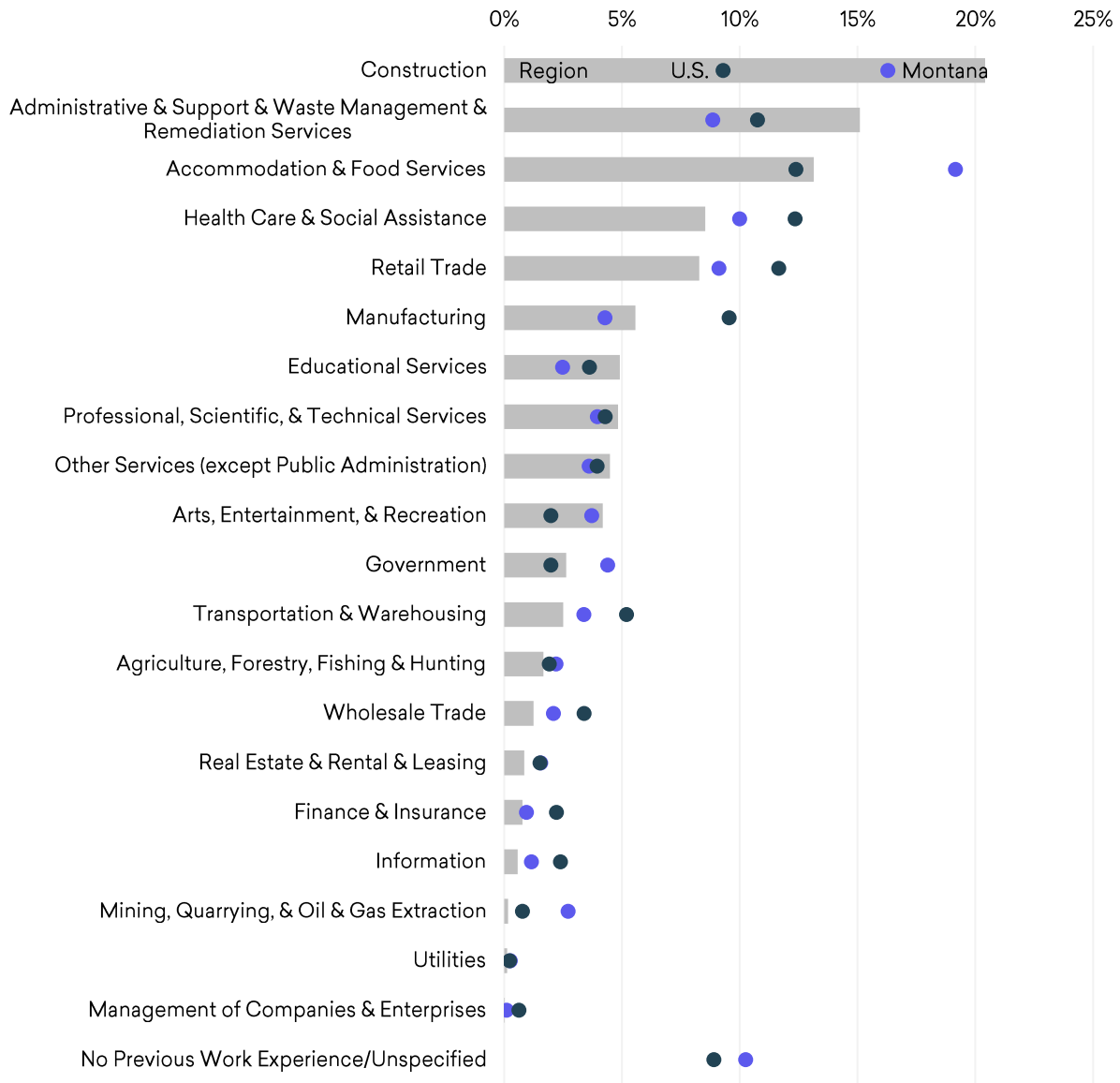
September 2021 and follow the same methodology as federal statistical agencies. It is possible that these figures have abnormal trends, due to the COVID-19 pandemic that began in March 2020. The unemployment rate is not provided because it is difficult to accurately determine the size of the labor force in an industry or occupation every month. However, it appears for the full county in a following section titled Socioeconomic Indicators. In this section, rather than the unemployment rate, the percent of all unemployed workers in Ravalli County, Montana, and the U.S. are provided.

Table 2.3: Unemployed Workers by Industry Sector in Ravalli County with State and National Comparisons

NAICS CODE	NAICS TITLE	COUNTY UNEMPLOYED	COUNTY% UNEMPLOYED	STATE% UNEMPLOYED	U.S.% UNEMPLOYED
23	Construction	172	20%	16%	9%
56	Administrative & Support & Waste Management & Remediation Services	127	15%	9%	11%
72	Accommodation & Food Services	111	13%	19%	12%
62	Health Care & Social Assistance	72	9%	10%	12%
44	Retail Trade	70	8%	9%	12%
31	Manufacturing	47	6%	4%	10%
61	Educational Services	41	5%	2%	4%
54	Professional, Scientific, & Technical Services	41	5%	4%	4%
81	Other Services (except Public Administration)	38	4%	4%	4%
71	Arts, Entertainment, & Recreation	35	4%	4%	2%
90	Government	22	3%	4%	2%
48	Transportation & Warehousing	21	3%	3%	5%
11	Agriculture, Forestry, Fishing & Hunting	14	2%	2%	2%
42	Wholesale Trade	10	1%	2%	3%
53	Real Estate & Rental & Leasing	7	1%	2%	2%
52	Finance & Insurance	7	1%	1%	2%
51	Information	5	1%	1%	2%
21	Mining, Quarrying, & Oil & Gas Extraction	1	0%	3%	1%
22	Utilities	1	0%	0%	0%
55	Management of Companies & Enterprises	0	0%	0%	1%
99	No Previous Work Experience/Unspecified	0	0%	10%	9%

Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding September 2021).

Figure 2.62: Unemployed Workers by Industry Sector in Ravalli County with State and National Comparisons



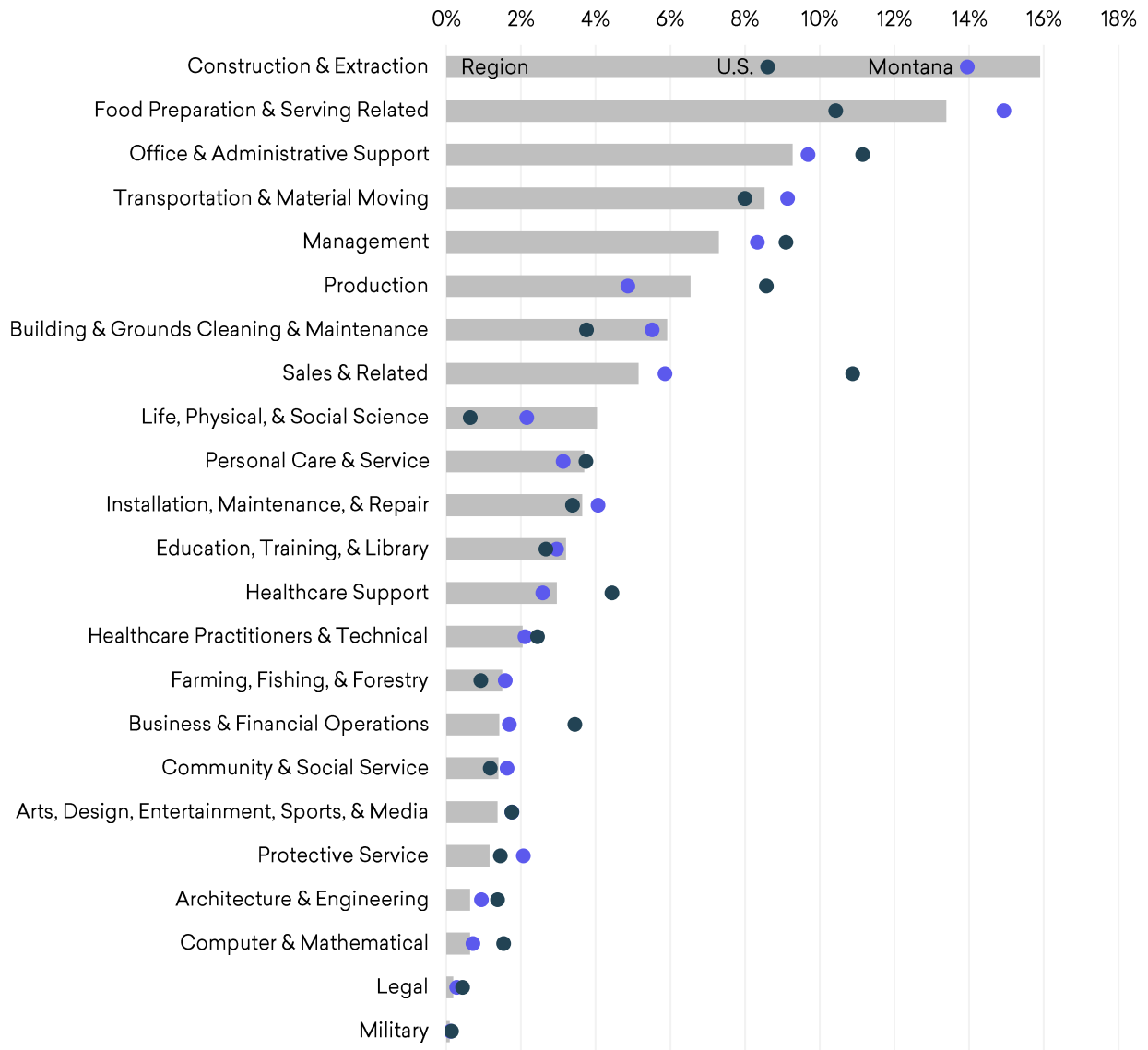
Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding September 2021).

Table 2.4: Unemployed Workers by Occupational Group in Ravalli County with State and National Comparisons

SOC CODE	SOC TITLE	COUNTY UNEMPLOYED	COUNTY% UNEMPLOYED	STATE% UNEMPLOYED	U.S. % UNEMPLOYED
47-0000	Construction & Extraction	134	16%	14%	9%
35-0000	Food Preparation & Serving Related	113	13%	15%	10%
43-0000	Office & Administrative Support	78	9%	10%	11%
53-0000	Transportation & Material Moving	72	9%	9%	8%
11-0000	Management	61	7%	8%	9%
51-0000	Production	55	7%	5%	9%
37-0000	Building & Grounds Cleaning & Maintenance	50	6%	6%	4%
41-0000	Sales & Related	43	5%	6%	11%
19-0000	Life, Physical, & Social Science	34	4%	2%	1%
39-0000	Personal Care & Service	31	4%	3%	4%
49-0000	Installation, Maintenance, & Repair	31	4%	4%	3%
25-0000	Education, Training, & Library	27	3%	3%	3%
31-0000	Healthcare Support	25	3%	3%	4%
29-0000	Healthcare Practitioners & Technical	17	2%	2%	2%
45-0000	Farming, Fishing, & Forestry	13	1%	2%	1%
13-0000	Business & Financial Operations	12	1%	2%	3%
21-0000	Community & Social Service	12	1%	2%	1%
27-0000	Arts, Design, Entertainment, Sports, & Media	12	1%	2%	2%
33-0000	Protective Service	10	1%	2%	1%
17-0000	Architecture & Engineering	5	1%	1%	1%
15-0000	Computer & Mathematical	5	1%	1%	2%
23-0000	Legal	2	0%	0%	0%
55-0000	Military	1	0%	0%	0%

Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months September 2021).

Figure 2.73: Unemployed Workers by Occupational Group in Ravalli County with State and National Comparisons



Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding September 2021).

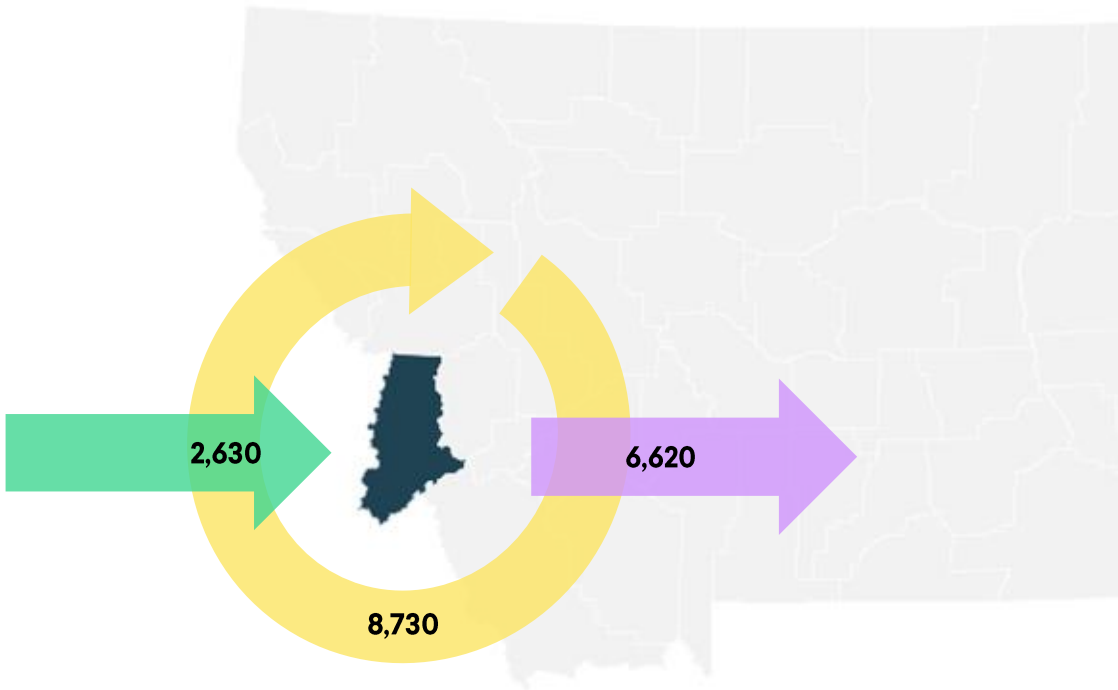
WORKFORCE COMMUTING PATTERNS

The Longitudinal Employer-Household Dynamics (LEHD) program⁵ at the U.S. Census Bureau provides information on the residential and employment locations of workers. Such data show the commuting patterns of county employees. More specifically, the LEHD data demonstrate the extent to which employees commute to Ravalli County for work and how many residents commute to surrounding communities for work. Workers from outside the county could be filling current employment gaps, or the county's residents could be out-commuting when there is a surplus of available jobs. The concepts of a "gap" and "surplus" are discussed in greater detail in the first section of Chapter 3.

Figure 2.14 presents the inflow and outflow of jobs to and from Ravalli County. LEHD data identify 11,360 jobs in the county, with 8,730 jobs filled by residents and 2,630 jobs filled by people living outside the county. In addition, 6,620 jobs are held by the county's residents outside Ravalli County. In other words, 6,620 residents commute outside the county for work. The job counts represent primary jobs, as opposed to all jobs, and differ slightly from job counts in the previous sections, which use Emsi Burning Glass's complete employment data (see industry data in Appendix 2). As shown in the figure, over twice as many workers out-commute than in-commute.

⁵ LEHD is an innovative program that uses modern statistical and computing techniques to combine federal and state administrative data on employers and employees with core Census Bureau censuses and surveys while protecting the confidentiality of people and firms that provide the data.

Figure 2.14: Ravalli County Job Inflow and Outflow

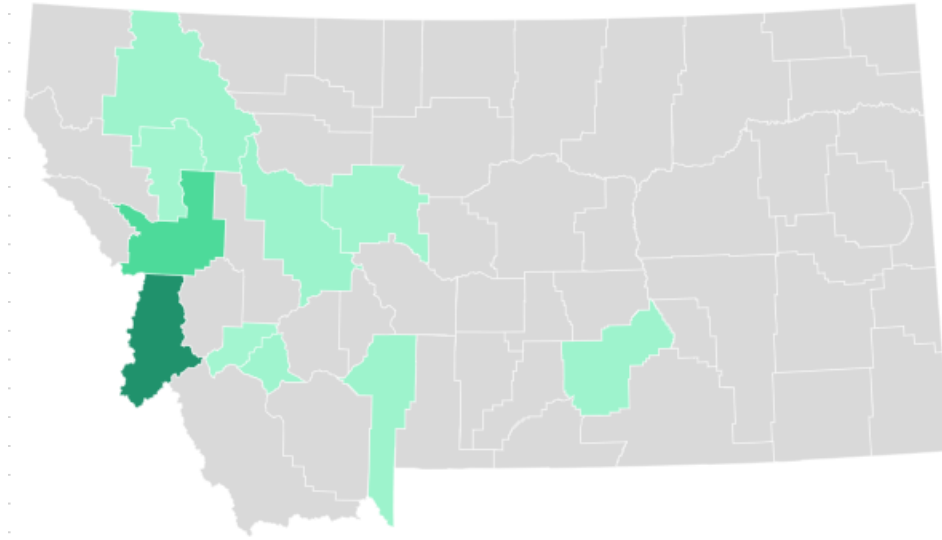


2,630	Employed in but living outside the county
8,730	Living and employed in the county
6,620	Living in the county but employed outside

Source: Census Bureau, Center for Economic Studies.

Figure 2.15 and Table 2.5 provide further insight into the places where the county's residents work. As shown in the figure, the county's residents are out-commuting to neighboring counties for work, but the greatest number of residents work in Ravalli County (57% of all jobs). Figure 2.16 and Table 2.6 also show commuting patterns, except the data highlight the counties in which the county's workers reside.

Figure 2.85: Counties where Ravalli County Residents Work



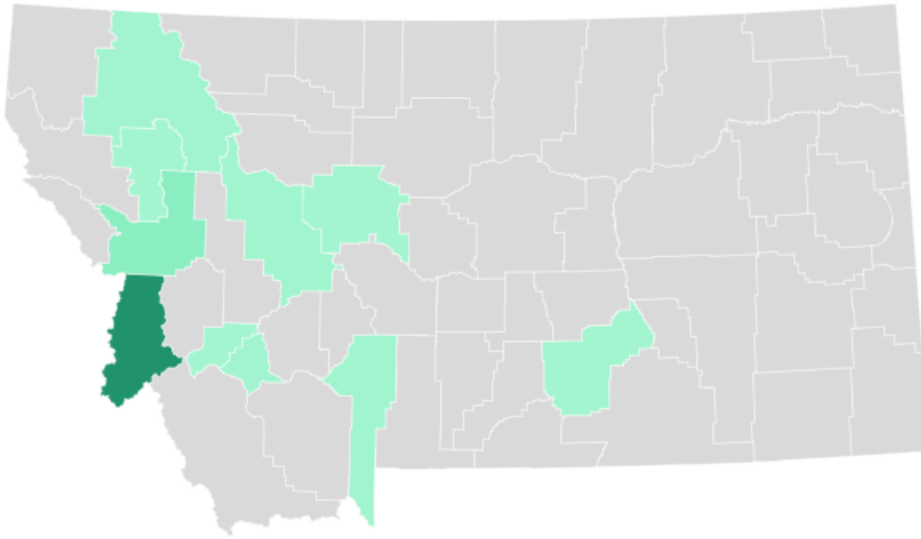
Source: Census Bureau, Center for Economic Studies,

Table 2.5: Counties where Ravalli County Residents Work

COUNTY OF EMPLOYMENT	JOBS	% JOBS
Ravalli County, MT	8,730	57%
Missoula County, MT	3,820	25%
Lewis and Clark County, MT	370	2%
Flathead County, MT	340	2%
Gallatin County, MT	320	2%
Yellowstone County, MT	280	2%
Silver Bow County, MT	220	1%
Cascade County, MT	170	1%
Lake County, MT	120	1%
Deer Lodge County, MT	60	0%
All Other Counties	910	6%
Total Primary Jobs, Residents	15,350	100%

Source: Census Bureau, Center for Economic Studies.

Figure 2.16: Counties where Ravalli County Workers Live



Source: Census Bureau, Center for Economic Studies.

Table 2.6: Counties where Ravalli County Workers Live

COUNTY OF RESIDENCE	JOBS	% JOBS
Ravalli County, MT	8,730	77%
Missoula County, MT	1,080	10%
Gallatin County, MT	190	2%
Lewis and Clark County, MT	160	1%
Silver Bow County, MT	130	1%
Flathead County, MT	120	1%
Yellowstone County, MT	90	1%
Cascade County, MT	60	1%
Deer Lodge County, MT	50	0%
Lake County, MT	40	0%
All Other Locations	700	6%
Total Primary Jobs, Workers	11,360	100%

Source: Census Bureau, Center for Economic Studies.

OCCUPATIONS OF COUNTY RESIDENTS

This section combines occupational data with employment information on Ravalli County residents. Essentially, the data identify the occupational groups that BVCC's programs should be targeting based upon the jobs of the county's residents. The final results, which appear in Tables 2.7 and 2.8, show which occupational groups are undersupplied or oversupplied by the county's residents, respectively. As for the source of the data, the number of jobs within an occupation is based on Emsi Burning Glass's industry data and staffing patterns, and we use data from LEHD Origin-Destination Employment Statistics (LODES) to determine how many Ravalli County residents are employed in the county's occupations. Specifically, the LODES originate from Origin and Destination (OD) data, Regional Area Characteristics (RAC), and Workforce Area Characteristics (WAC).

Biological technicians was the highest-ranked occupational group, in terms of its need for non-regional residents (Table 2.7). As shown, 57 residents of Ravalli County were employed in the occupational group in 2020, but the county supported 67 such workers. Therefore, 10 non-regional residents were employed in the occupational group in Ravalli County in 2020, accounting for 13.6% of the county's net in-commuters (Figure 2.17). Farmworkers & laborers, crop, nursery, & greenhouse and cabinetmakers & bench carpenters were the second and third highest-ranked occupational groups, with 10 and seven net in-commuters, respectively.

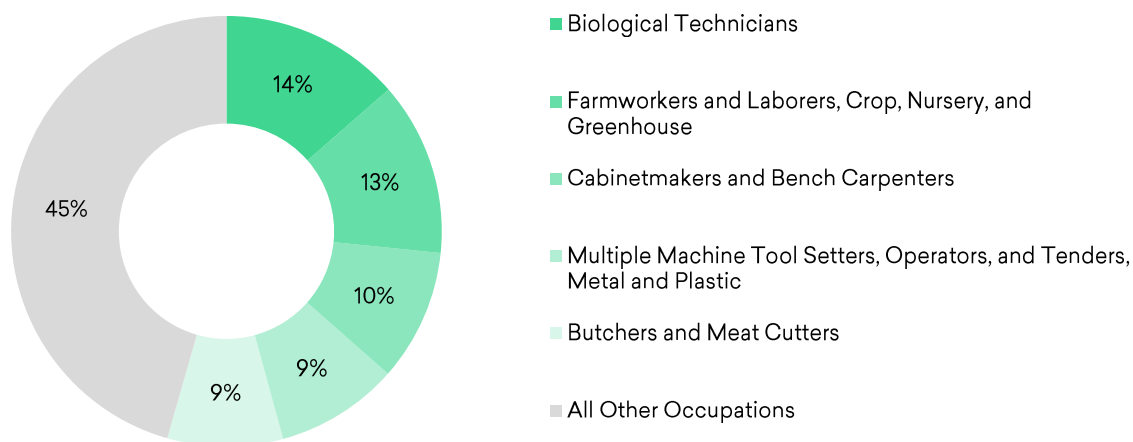
Table 2.7: Top Occupational Groups by Net In-Commuters for Jobs in Ravalli County

SOC CODE	SOC TITLE	2020 NET IN-COMMUTERS	2020 RESIDENT WORKERS	2020 JOBS	2030 JOBS	JOB CHANGE
19-4021	Biological Technicians	10	57	67	71	4
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	10	112	121	125	4
51-7011	Cabinetmakers and Bench Carpenters	7	50	57	52	(5)
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	7	16	23	26	2
51-3021	Butchers and Meat Cutters	6	47	53	54	1
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	6	39	45	49	5
19-1022	Microbiologists	4	27	31	32	0
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	3	33	36	48	13
51-9081	Dental Laboratory Technicians	3	16	19	21	3
19-1042	Medical Scientists, Except Epidemiologists	2	16	19	23	4

SOC CODE	SOC TITLE	2020 NET IN-COMMUTERS	2020 RESIDENT WORKERS	2020 JOBS	2030 JOBS	JOB CHANGE
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	2	17	19	21	2
11-3051	Industrial Production Managers	1	12	14	16	2
29-1298	Acupuncturists and Healthcare Diagnosing or Treating Practitioners, All Other	1	11	13	13	0
37-2021	Pest Control Workers	1	10	12	12	0
17-2112	Industrial Engineers	1	14	15	19	4

Source: Employees & Self-Employed 2021.4.

Figure 2.17: Top Five Occupational Groups by Net In-Commuters for Jobs in Ravalli County



Source: Employees & Self-Employed 2021.4.

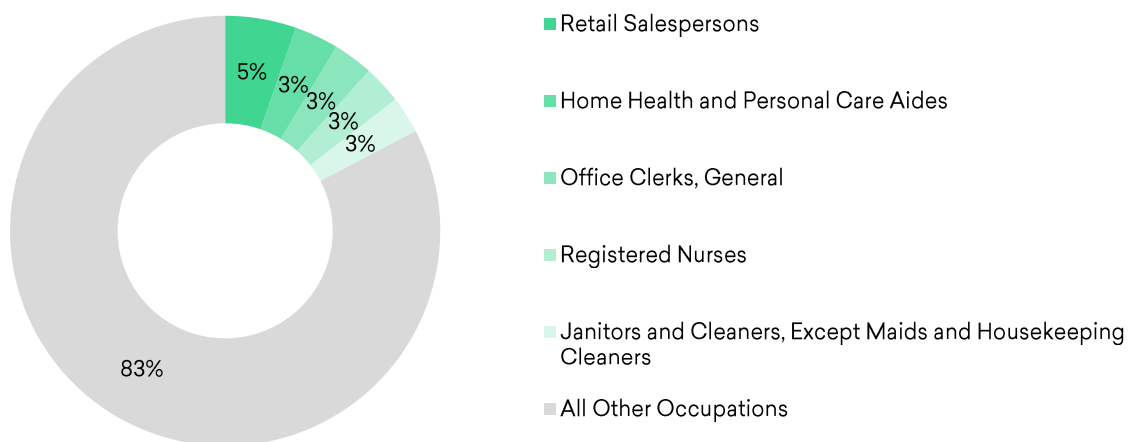
On the other hand, retail salespersons were the lowest-ranked occupational group, in terms of their need for non-regional residents (Table 2.8). As shown, 581 residents of Ravalli County were employed in the occupational group in 2020, but the county supported 378 such workers. Therefore, 203 residents were employed in the occupational group elsewhere in 2020, representing 5% of the county's net out-commuters (Figure 2.18). Home health & personal care aides and office clerks were the second and third ranked occupational groups, each with 3% of the county's net out-commuters, respectively. When the values in Table 2.7 and Table 2.8 are compared, there were significantly more net out-commuters than in-commuters.

Table 2.8: Top Occupational Groups by Net Out-Commuters for Jobs in Ravalli County

SOC CODE	SOC TITLE	2020 NET OUT-COMMUTERS	2020 RESIDENT WORKERS	2020 JOBS	2030 JOBS	JOB CHANGE
41-2031	Retail Salespersons	(203)	581	378	451	73
31-1128	Home Health and Personal Care Aides	(126)	455	329	410	81
43-9061	Office Clerks, General	(114)	463	349	356	7
29-1141	Registered Nurses	(110)	295	185	206	21
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	(106)	275	168	174	6
41-2011	Cashiers	(101)	442	342	315	(27)
43-4051	Customer Service Representatives	(90)	207	117	128	11
35-3023	Fast Food and Counter Workers	(87)	446	360	404	45
11-1021	General and Operations Managers	(83)	269	186	216	30
53-3032	Heavy and Tractor-Trailer Truck Drivers	(76)	292	216	212	(4)
43-3031	Bookkeeping, Accounting, and Auditing Clerks	(71)	319	248	248	1
53-7065	Stockers and Order Fillers	(61)	227	167	198	31
47-2061	Construction Laborers	(56)	315	259	297	37
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	(53)	197	144	144	(0)
41-1011	First-Line Supervisors of Retail Sales Workers	(53)	228	175	186	11

Source: Employees & Self-Employed 2021.4.

Figure 2.18: Top Five Occupational Groups by Net Out-Commuters for Jobs in Ravalli County



Source: Employees & Self-Employed 2021.4.

EDUCATIONAL ATTAINMENT

Educational attainment data are useful for targeting specific population groups with low education levels. The population and educational attainment numbers in this section are based on Emsi Burning Glass's demographic data and publicly available sources from state and federal agencies. Sources include annual population estimates and population projections from the U.S. Census Bureau and birth and mortality rates from the U.S. Health Department. In addition, demographic information relies on the annual results of the American Community Survey. Educational attainment data cover the population in Ravalli County aged 25 years or more, referred to as adults, and indicate the highest award level achieved.

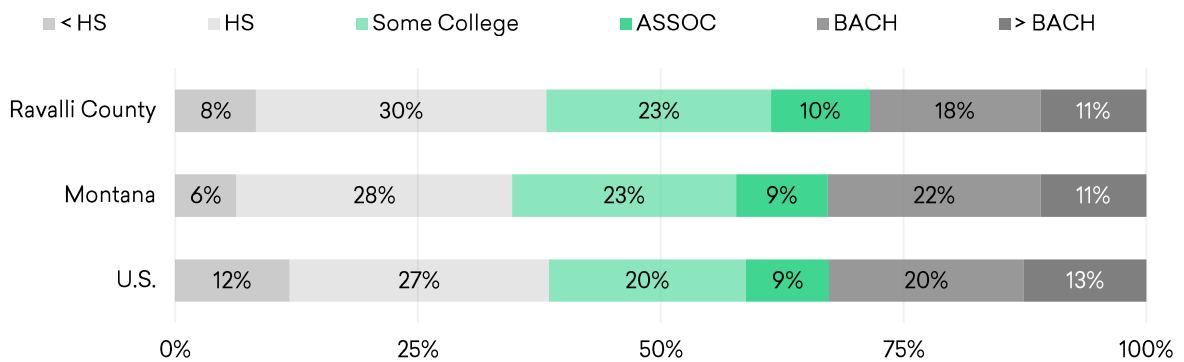
Demographic information is presented by gender and the major race and ethnic groups, and educational attainment data are broken out according to the following award categories:

- Less than a high school diploma (<HS);
- High school diploma or equivalent (HS);
- Some college;⁶
- Associate degree (Assoc);
- Bachelor's degree (Bach);
- Greater than a bachelor's degree (>Bach).

About 21,590 adults aged 25 to 64 live in Ravalli County, and Figure 2.19 displays their educational attainments, without reference to gender and the major race and ethnic groups. State and national data are also presented for context. In the county, 38.2% of adults have a high school diploma or less, which is more than the state average (34.7%) and the same as the national average (38.5%). Out of all the award categories in the figure, the people who are most likely to seek education and training from BVCC are those in the "Less than High School Diploma," "High School Diploma," and "Some College" categories. Together, these categories total 13,250 people, or 61.4% of the county's adults.

⁶ The "Some College" category includes individuals who attended college but did not successfully obtain a degree and individuals who have received a postsecondary vocational award or professional certification but did not receive an associate or bachelor's degree.

Figure 2.19: Highest Educational Attainments of Adults in Ravalli County, Montana, and the U.S.

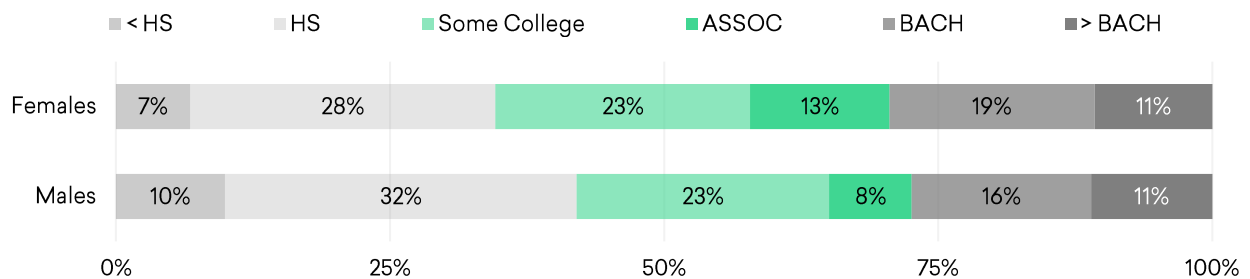


Numbers may not sum due to rounding.

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

Between female and male adults in Ravalli County, there is some variation in the distribution of their award categories, with females generally holding higher levels of education. Twenty-three percent of the county’s female adults and 23.0% of the county’s male adults have some college education but no degree, which represent 4,030 females and 3,810 males. Thirteen percent of female adults and eight percent of male adults in the county have an associate degree as their highest award level. This information appears in Figure 2.20.

Figure 2.20: Highest Educational Attainments of Adults in Ravalli County by Gender



Numbers may not sum due to rounding.

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

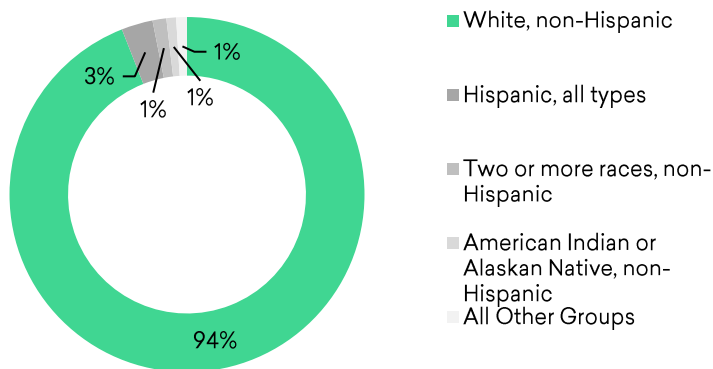
Table 2.9 and Figure 2.21 show the adults in Ravalli County by the major race and ethnic groups. As shown, 94.0% of the county’s adults are White, non-Hispanic. Another 2.9% of adults are Hispanic, all types, and 0.9% are Two or more races, non-Hispanic, the next largest groups. Altogether, less than 3% percent of the county’s adults are American Indian or Alaskan Native, non-Hispanic; Asian, non-Hispanic; Black, non-Hispanic; and Native Hawaiian or Pacific Islander, non-Hispanic.

Table 2.9: Adults in Ravalli County by Major Race and Ethnic Groups

GROUP	POPULATION	% POPULATION
White, non-Hispanic	31,838	94.0%
Hispanic, all types	968	2.9%
Two or more races, non-Hispanic	425	1.3%
American Indian or Alaskan Native, non-Hispanic	299	0.9%
Asian, non-Hispanic	223	0.7%
Black, non-Hispanic	85	0.3%
Native Hawaiian or Pacific Islander, non-Hispanic	24	0.1%
Total	33,862	100%

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

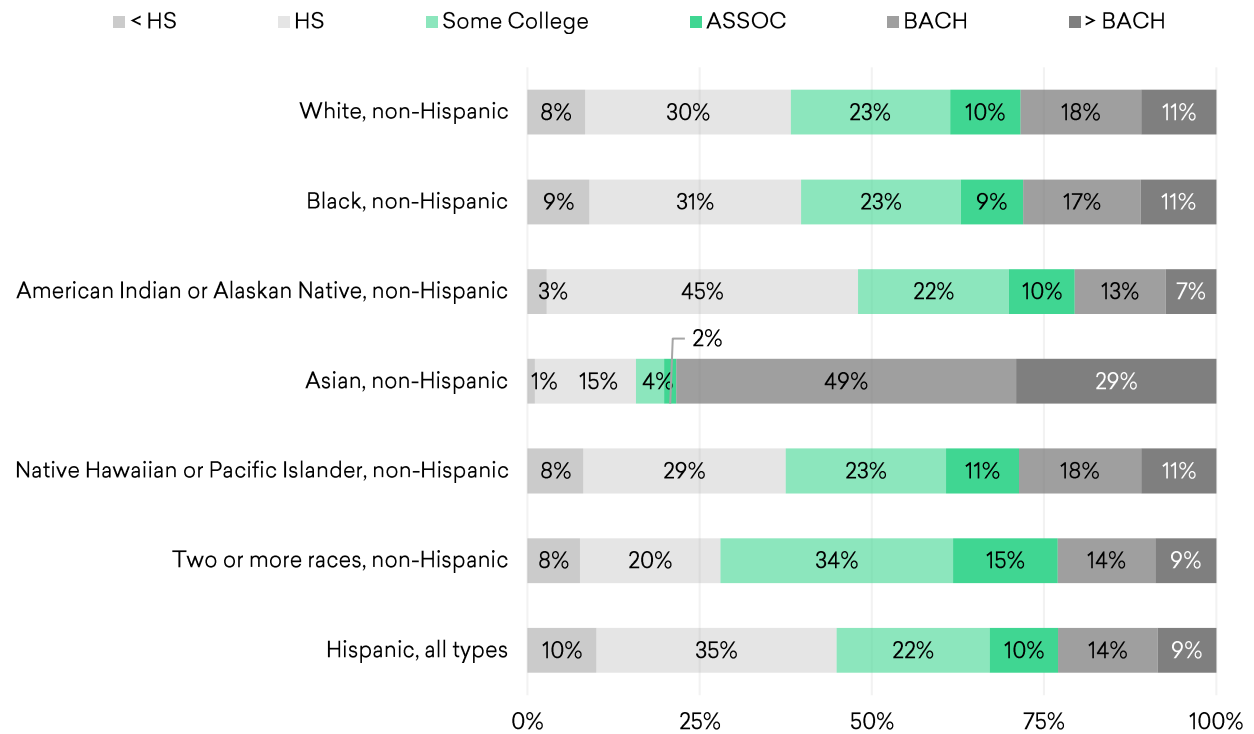
Figure 2.91: Adults in Ravalli County by Major Race and Ethnic Groups



Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

Figure 2.22 displays the highest educational attainment of Ravalli County's adults by their major race and ethnic groups. Asian, non-Hispanic adults have the highest percentage of adults with a postsecondary education (84.2%) among all the groups. However, the group accounts for a relatively small portion of the county's adults. Meanwhile, 61.8% of white, non-Hispanic adults have received at least some postsecondary education. American Indian or Alaskan Native, non-Hispanic adults and Hispanic, all types of adults have the lowest levels of educational attainment in the county. For these groups, only 52.0% and 55.1%, respectively, of the adults in the groups have had education beyond high school. Across all groups, these data suggest that there are many opportunities to increase the educational attainments of the county's adults, whether such actions involve outreach to local high schools or supporting BVCC students who plan to transfer into a bachelor's degree level program.

Figure 2.22: Highest Educational Attainments of Adults in Ravalli County by Major Race and Ethnic Groups



Numbers may not sum due to rounding.

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

SOCIOECONOMIC INDICATORS

Ravalli County's high job growth, productive industries, and growing population are positive economic attributes. The data in this section show several of the county's socioeconomic indicators by census county subdivision. Household income, reported as a median annual value, includes the income of all individuals in a household, 15 years and over, whether they are related to the householder or not. The unemployment rate and percentage of workers unemployed are annual estimates. Per capita income is calculated as the mean income for every person in the area divided by the aggregate income of the total population. Finally, data on poverty are also presented in this section. The data come directly from American Community Survey five-year estimates.

Table 2.10: Income, Unemployment, and Poverty Characteristics for Census County Subdivisions in Ravalli County

CENSUS COUNTY SUBDIVISION	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	PER CAPITA INCOME	POVERTY ALL PEOPLE
Ravalli County, Montana	\$53,054	5.3%	\$29,761	12.3%
Darby	\$44,706	12.1%	\$28,474	14.8%
Stevensville	\$62,045	6.3%	\$33,485	9.4%
Hamilton	\$48,655	4.5%	\$27,432	14.0%
Sula	\$54,107	4.0%	\$30,458	15.8%
Victor	\$46,403	1.9%	\$27,196	12.9%
Corvallis*	\$27,670	12.4%	\$14,968	18.8%

Source: American Community Survey (ACS) 2019 five-year estimates from the U.S. Census Bureau Data. While the ACS 2019 five-year estimates provide the most recent figures related to the table, the U.S. Census website notes that 2020 five-year estimates will be available starting March 17, 2022.

*Corvallis is recognized as a Census Designated Place, according to the U.S. Census Bureau Data.

Program Demand Gap Analysis

With the county's top industry subsectors and workforce in mind, the program demand gap analysis can now be conducted, answering the following question:

Where are there misalignments between the workforce demand and the supply of college completions?

This chapter outlines the deficit of BC UM's program completers to the workforce (gap), as well as the oversupply of completions to the workforce (surplus). The occupations directly related or mapped to the significant gaps are also displayed. Figure 3.1, below, provides a high level overview of BC UM's programs and their alignment with the Ravalli County workforce.

High demand, low supply programs are those that have a high number of annual job openings but lack of adequate county completers. These programs have large gaps and should be considered for expansion since there is a demand for people with these skill sets. Consideration should be given to the median hourly wage of the program.

High demand, high supply programs are those that have a high number of annual job openings as well as a high number of county completers. These programs are satisfying the county's labor market demands and are worth continuing offering.

Low demand, low supply programs are those that lack both annual job openings and completers in Ravalli County. Since there is not an apparent need for these skill sets in the county workforce, it is worth reevaluating the need for offering these programs.

Low demand, high supply programs are those that produce far more county completers than there are annual job openings. Large surpluses could suggest that completers are finding employment outside of the county. It may be beneficial to track where completers are finding work to evaluate the skills being sought by employers to better prepare completers for in-county employment.

Figure 3.1: Key Findings on BC UM's Program Alignment with the Ravalli County Workforce

<p>HIGH DEMAND, LOW SUPPLY</p> <p><i>How can we expand these program opportunities?</i></p> <p>Certified Nurse Aide (NON-CREDIT) Bookkeeping Certification (NON-CREDIT)</p>	<p>HIGH DEMAND, HIGH SUPPLY</p> <p><i>Can we maintain focus on program quality & student success?</i></p> <p>Commercial Driver License (NON-CREDIT)</p>
<p>LOW DEMAND, LOW SUPPLY</p> <p><i>Should we reevaluate whether these programs are training for county demand, or demand outside the county?</i></p> <p>Front End Web Developer (NON-CREDIT) CompTIA A+ Virtual Computer Certification (NON-CREDIT) EKG Technician (NON-CREDIT)</p>	<p>LOW DEMAND, HIGH SUPPLY</p> <p><i>Are we connecting these programs to opportunities outside the county?</i></p> <p>Dental Assisting (NON-CREDIT) Boiler Operator (NON-CREDIT) Certified Phlebotomy Technician (NON-CREDIT) Certified Clinical Medical Assistant (NON-CREDIT)</p>

Source: Emsi Burning Glass program demand gap model.

INTERPRETATION

The terms used in the analysis are as follows:

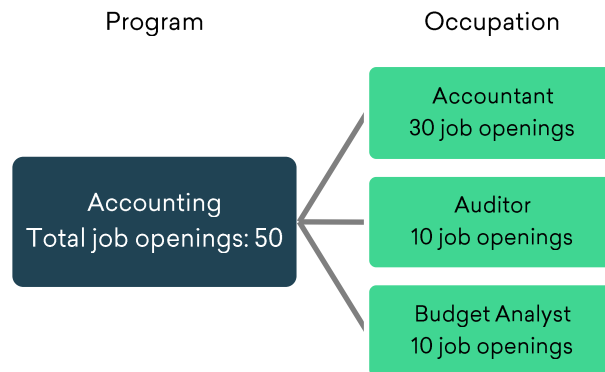
Gap Represents a deficit, or when there are more job openings in an occupation than there are completions. If left unaddressed, a gap may lead to missed opportunities for economic growth and put stress on local businesses to find the necessary talent elsewhere. Significant gaps translate into higher human resources costs and decreased efficiencies in the economic system. They also provide an opportunity for postsecondary educational institutions to develop new programs and/or strengthen their current programs.

Surplus Represents an oversupply, or when there are more completions than there are job openings in an occupation. If left unaddressed, significant surpluses may lead to higher unemployment rates or higher attrition rates—the college could be educating a workforce that is leaving the county after program completion because of a lack of job opportunities.

When reviewing the results of the analysis, consider that not all gaps or surpluses indicate necessary program adjustments. Due to labor market inefficiencies, it is common for most programs to face a certain level of gap or surplus. This means only significant gaps or surpluses should be reviewed or further developed. In the following sections, the program gaps and surpluses are discussed by award level and presented as figures and tables.

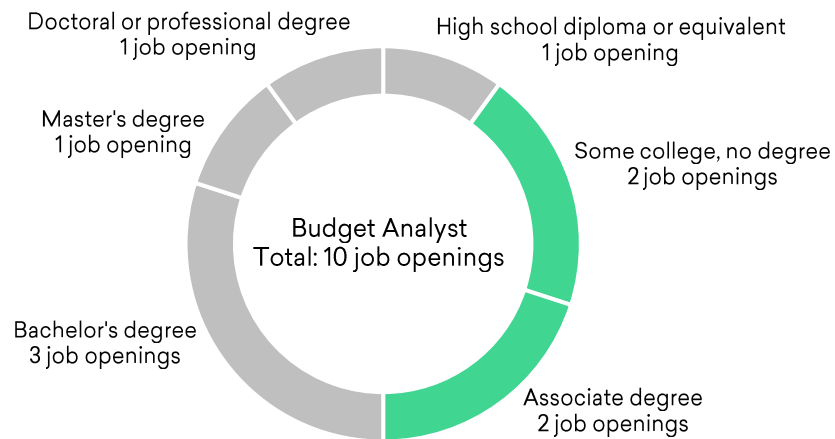
The figures show the gap between job demand and the supply of program completions. An explanation of job demand is warranted here, and a more detailed description can be found in Appendix 5. A program's job demand is measured as its total number of annual job openings, on average, from 2020 to 2030. The total is calculated as the sum of the county job openings for each occupation mapped to the program, as illustrated in Figure 3.2.

Figure 3.2: Example of One Program Mapped to Three Occupations



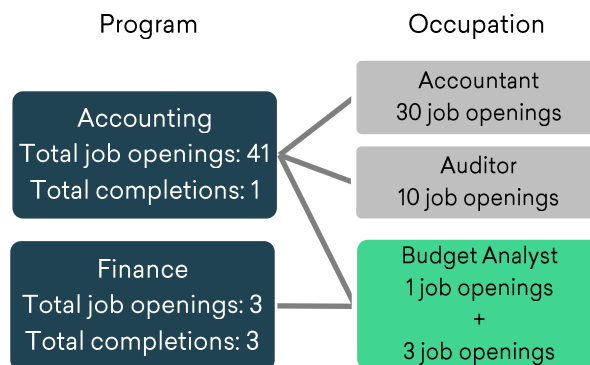
Furthermore, an occupation's job openings are not a gross measure of job openings available in the county. For every occupation, job openings have been weighted by the program's award level and one level below and account for the highest educational attainments of those employed in the position. The educational attainments in this chapter (and the following) are for adults less than 34 years, which differ from the previous chapter but better reflect the college's student population. Figure 3.3 illustrates how this methodology applies to an occupation's total job openings. For example, four job openings or 40% of total job openings are available to budget analysts at the associate degree level, seeing that there are a total of 10 job openings, 20% of those working in the occupation have an associate degree level of education, and another 20% have some college education and no degree.

Figure 3.3: Example of an Occupation's Weighted Job Openings by Award Level



Finally, job openings are de-duplicated and scaled across programs, when an occupation is mapped to more than one program. As illustrated in Figure 3.4, budget analysts, which have four total job openings, are mapped to two programs. However, the Finance program is three-times the size of the Accounting program, measured in terms of completions. Thus, one job opening is portioned to the Accounting program and three job openings to the Finance program.

Figure 3.4: Example of Two Programs with One Shared Occupation



Supply is shown as the average number of program completions in the county, by award level, between 2019 and 2021. BC UM is not the only postsecondary educational institution in Ravalli County reporting to IPEDS,⁷ the source of the completions data, although it is the only institution training for the programs under analysis. The gap, then, is the difference

⁷ IPEDS refers to the Integrated Postsecondary Education Data System, which gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid program.

between job openings and program completions. Appendix 4 has BC UM's program to occupation map with adjusted employment, and Appendix 5 identifies the certificate and degree-granting institutions in the Ravalli County.

A great amount of data is presented in the tables. The first set shows the gaps and surpluses across all the programs offered at BC UM by award level. The tables include the Classification of Instructional Program (CIP) code and title, the average annual number of job openings associated with the program (which have been de-duplicated using the process outlined in Appendix 5), the average annual program completions from BC UM, and the gap or surplus for Ravalli County. The programs' median hourly wage rates are specific to Ravalli County.

The second set of tables identify the occupations mapped to the programs with a significant gap or surplus, by award level, and show detailed occupational data. The tables include the CIP code, CIP title, and occupations mapped to the program, by their Standard Occupational Classification (SOC) codes and titles. The county job counts, by occupation, are shown for 2020 and 2030 with the change in jobs and average annual job openings for those years. The occupations' median hourly wage rates are specific to Ravalli County. See Appendix 6 for a complete list of job projections and Appendix 7 for unemployment information by industry and occupation.

NON-CREDIT PROGRAM ANALYSIS

The results that appear in this section present a view of BC UM's current non-credit programs projected to have a gap or surplus in Ravalli County. BC UM provided a crosswalk between the non-credit programs and the types of occupations non-credit program completers are likely to enter. In general, non-credit programs can be designed for self-enrichment, rather than higher education and the development of employable skills. However, BC UM confirmed that the non-credit programs offered were designed with workforce skills in mind. Using the customized program-to-occupation map, the non-credit programs were analyzed using the program demand gap analysis methods, detailed in Appendix 4.

The non-credit program analysis requires further discussion, which affect how its results are interpreted. First, students who take non-credit programs may complete more than one program over an academic year seeing that, typically, non-credit programs require less credit hours than the college's credit programs. Thus, completions data for the non-credit programs may contain duplication, which inflates the number of non-credit program supply.

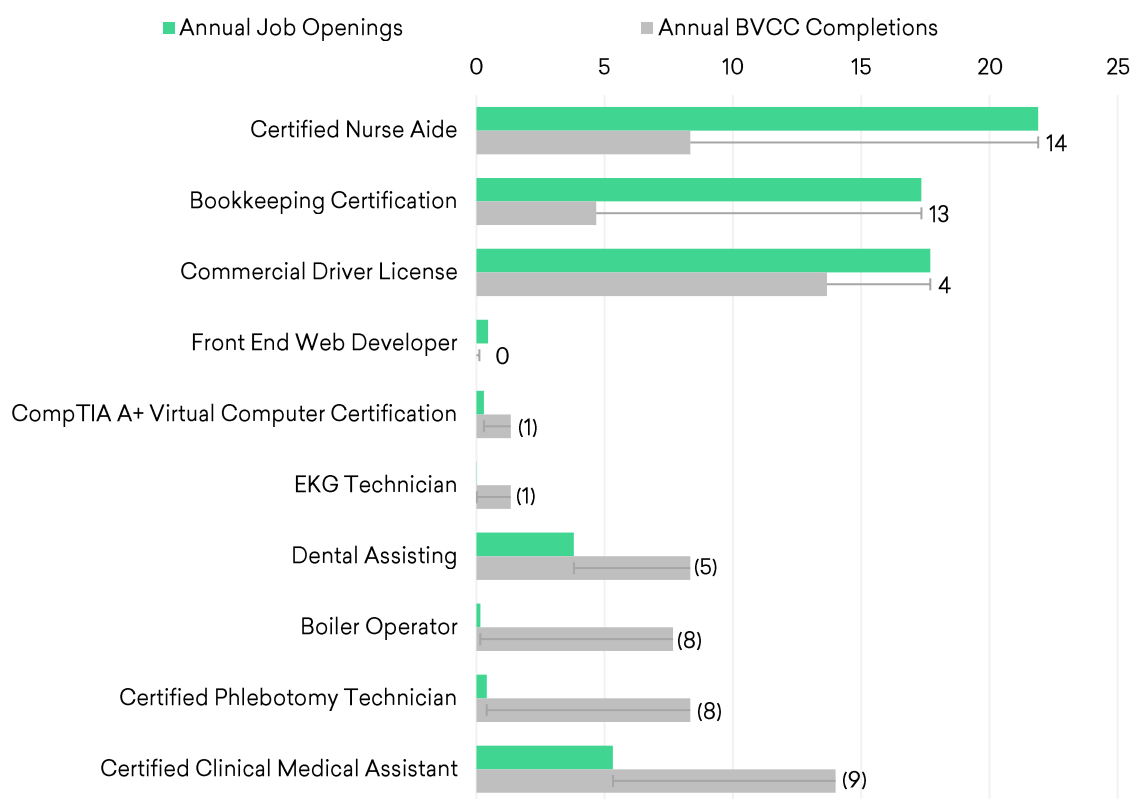
Second, the completions can fluctuate annually. Emsi Burning Glass uses a three-year average in the program demand gap analysis to normalize the fluctuations, but there could

be a gap or surplus between years. In this analysis, non-credit program completions are from academic years 2019 to 2021.

Third, completers of non-credit programs may already be employed (i.e., their employer requires continuing education to keep certain licenses up-to-date). It is up to the college to determine whether a program has a gap or surplus that is worth taking action to correct, based on a variety of sources of information beyond the scope of this report.

Finally, there may be other institutions or organizations in the county, on-line colleges in particular, that offer non-credit programs not analyzed in this report. The gaps and surpluses shown assume there are no other non-credit programs offered in Ravalli County.

Figure 3.5: BC UM's Non-Credit Programs



Source: Emsi Burning Glass gap model.

Ten non-credit programs are evaluated in this section, when the programs are classified by their six-digit CIP codes. Furthermore, the programs are aggregated by their six-digit CIP codes for the purposes of mapping occupations. The programs' job openings consider someone with a high school diploma level of education and some college education but no degree. Job openings have been weighted and scaled according to the mapped occupations and relative number of completions, respectively.

Of these programs, three have a gap, and eight non-credit programs have a surplus, as shown in Table 3.1. The Certified Nurse Aide non-credit program has the largest gap, with a gap of 14, while the Certified Clinical Medical Assistant non-credit program has the largest surplus of nine.

Table 3.1: Gaps and Surpluses for BC UM's Non-Credit Programs

PROGRAM TITLE	ANNUAL JOB OPENINGS	ANNUAL BVCC COMPLETIONS	GAP OR SURPLUS	MEDIAN HOURLY WAGE
Certified Nurse Aide	22	8	14	\$13.15
Bookkeeping Certification	17	5	13	\$15.80
Commercial Driver License	18	14	4	\$20.95
Front End Web Developer	0	<1	0	\$19.19
CompTIA A+ Virtual Computer Certification	0	1	(1)	\$28.56
EKG Technician	0	1	(1)	\$31.49
Dental Assisting	4	8	(5)	\$13.52
Boiler Operator	0	8	(8)	\$30.62
Certified Phlebotomy Technician	0	8	(8)	\$16.82
Certified Clinical Medical Assistant	5	14	(9)	\$16.30

Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.

The next step in the program demand gap analysis is to assess the occupations mapped to a non-credit program with a significant gap, focusing on the occupations' job openings, job counts, and median wage rates. As shown in Table 3.2, nursing assistants is the only occupation mapped to Certified Nurse Aide, the non-credit program with the largest gap. The median hourly wage rate of nursing assistants is \$13.15. For context, Montana's state minimum wage is \$8.75⁸ per hour, and the state's living wage is \$10.97 per hour for a household with one working adult and no children.⁹ Program expansion could be of interest, considering local job openings for nursing assistants, as well as the median hourly wage rate which exceeds that of the state's living wage. The data suggest that an expansion of the program is worth considering, particularly at the certificate level (the most demanded education level for that occupation).¹⁰

⁸ Montana's minimum wage as of January 1, 2021 is \$8.75 per hour. Source: Emsi Burning Glass Complete Employment Data.

⁹ Living wage calculations provided by Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology. See Appendix 8.

¹⁰ Further research must be conducted before making a final determination, such as top employer identification within the county; business surveys to verify the data; resume and job postings analysis to determine trending skills for individuals with

While the gaps are important for building or expanding BVCC's future programs, the surpluses are equally important. An analysis of the surplus programs ensures that the college is educating and training students with the skills the county's workforce requires. Six non-credit programs have a surplus. The Certified Clinical Medical Assistant program has the largest, with a surplus of nine. BC UM produces 14 annual completers for the five annual openings, resulting in the surplus. The Certified Phlebotomy Technician program and the Boiler Operator program also have surpluses, each with surpluses of eight. It is possible that BC UM completers of the surplus programs are finding employment outside Ravalli County – especially when contrasting the size of Ravalli County to nearby Missoula County.

Using Table 3.2, this step-by-step process of evaluating occupational gaps by their job openings, job counts, and median hourly wage rates can be applied to the other BC UM non-credit level programs. In general, occupations with high wages are more noteworthy than those with low wages. Also, if occupational forecasts are not positive, program development may not be a priority at this time. Keep in mind that there could be other sources of skilled workers filling the gaps, such as unemployed workers or workers from outside of Ravalli County. On the other hand, BC UM students completing programs may be finding employment opportunities outside of Ravalli County.

Table 3.2: Occupations Mapped to BC UM's Non-Credit Programs

SOC CODE	SOC TITLE	2020 JOBS	2030 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Certified Nurse Aide						
31-1131	Nursing Assistants	194	236	42	22	\$13.15
Bookkeeping Certification						
43-3031	Bookkeeping, Accounting, & Auditing Clerks	248	248	1	17	\$15.80
Commercial Driver License						
53-3032	Heavy & Tractor-Trailer Truck Drivers	216	212	(4)	18	\$20.95
Certified Clinical Medical Assistant						
31-9092	Medical Assistants	49	65	16	5	\$16.30
Dental Assisting						
31-9091	Dental Assistants	42	46	4	4	\$13.52
Front End Web Developer						
15-1257	Web Developers & Digital Interface Designers	21	22	2	0	\$19.19
CompTIA A+ Virtual Computer Certification						

similar educations; industry recommendations on curriculum development; and analysis of the strengths, weaknesses, and capacities of similar programs at other regional higher education institutions.

SOC CODE	SOC TITLE	2020 JOBS	2030 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
15-1231	Computer Network Support Specialists	7	8	1	0	\$28.56
EKG Technician						
29-2031	Cardiovascular Technologists & Technicians	0	0	0	0	\$31.49
Boiler Operator						
51-8021	Stationary Engineers & Boiler Operators	2	2	(0)	0	\$30.62
Certified Phlebotomy Technician						
31-9097	Phlebotomists	4	5	0	0	\$16.82

Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.

LIBERAL ARTS TRANSFER STUDENTS

A number of students attend BC UM with the intention of transferring to a four-year institution to receive a bachelor's degree. Given the locale, the four-year institution of choice is often the University of Montana, in neighboring Missoula County. Although these students study any number of topics at the college, a large portion of them receive an Associate of Arts in General Studies. In fact, over the past three years, 13 students, on average, have completed such a program, which accounts for 19.6% of BC UM's annual production of awards, including non-credit awards.

Once liberal arts students leave BC UM, their educational and career track is difficult to predict. They could attend a nearby four-year institution, and they could study any number of different programs that will ultimately determine their future careers. What can be shown is that over the next 10 years, jobs that require a bachelor's degree are projected to be in high demand. In any given year between 2020 and 2030, 440 county job openings will require a bachelor's degree level of education.

This section shows the top occupations mapped to liberal arts programs, using Emsi Burning Glass's Profile Analytics database, which contains more than 125 million profiles of people in the U.S. from all the major professional social media websites. To identify the top occupations, the Profile Analytics database is filtered in several ways. First, profiles include people who have an associate degree or a bachelor's degree level of education. Second, the profiles list liberal arts as the person's program of study. Liberal arts programs are classified as CIP codes 24.01, 30.00, and 30.99 at the four-digit level. Finally, the database includes profiles most recently updated, from as early as 2010. Using these search parameters, 263,200 profiles are found in the database, and the occupations in Table 3.3 represent the most common jobs of the liberal arts alumni.

As shown in the table, a considerable number of job openings are for retail salespersons, general & operations managers, and various other managers. Together, the three occupations account for 47% of all the liberal arts program's job openings. The profiles data also include various kinds of managers and supervisors, which are occupations with relatively higher wage rates.

Table 3.3: Occupations Related to Liberal Arts Programs

SOC CODE	SOC TITLE	2020 JOBS	2030 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
41-2031	Retail Salespersons	378	451	73	65	\$11.25
11-1021	General & Operations Managers	186	216	30	20	\$37.39
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	178	216	37	18	\$19.82
43-4051	Customer Service Representatives	117	128	11	17	\$14.79
43-6014	Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	144	144	(0)	16	\$14.33
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	109	118	9	12	\$21.85
43-1011	First-Line Supervisors of Office & Administrative Support Workers	110	114	4	12	\$23.55
13-1198	Project Management Specialists and Business Operations Specialists, All Other	103	118	16	10	\$31.63
13-1071	Human Resources Specialists	69	81	12	8	\$22.23
21-1093	Social & Human Service Assistants	32	39	7	5	\$16.82
13-1111	Management Analysts	36	45	9	5	\$41.19
41-9022	Real Estate Sales Agents	51	48	(3)	4	\$19.73
25-3097	Teachers & Instructors, All Other	28	32	4	4	\$22.29
15-1232	Computer User Support Specialists	39	42	4	3	\$21.39
11-3031	Financial Managers	22	32	10	3	\$39.26
11-1011	Chief Executives	25	31	6	3	\$31.38
11-2022	Sales Managers	11	14	3	1	\$54.39
27-3031	Public Relations Specialists	11	13	2	1	\$23.89
11-2021	Marketing Managers	10	13	3	1	\$37.19
43-6011	Executive Secretaries & Executive Administrative Assistants	11	9	(1)	1	\$22.81

Source: Emsi Burning Glass gap model.

SUMMARY

At the non-credit level, all ten programs were evaluated, and three have gaps. Industry-specific employment credentials can be obtained during on-the-job training. However, the results of the analysis are an indication of the potential labor market demand for BC UM's non-credit programs, whether those programs are for people seeking employment or looking to learn new skills. The non-credit level programs with the three gaps are:

- Certified Nurse Aide (gap of 14; median hourly wage \$13.15)
- Bookkeeping Certification (gap of 13; median hourly wage \$15.80)
- Commercial Driver License (gap of four; median hourly wage \$20.95)

Continuing a liberal arts program, such as the current General Studies program at BC UM, could benefit those who are interested in saving money on their first two years of college. Although it is difficult to project liberal arts career trajectories, BC UM and BVCC administrators should be aware that students can find success in a variety of business-related occupations. Using the Profile Analytics database, many liberal arts program completers are currently employed as retail salespersons and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in Ravalli County, and the college's liberal arts program serves as a starting point to students' future career goals.



New Program Additions

Thus far, the analysis has centered around programs offered by BC UM. This chapter looks at workforce gaps that exist within occupations that the college does not currently train for and provides new program recommendations. For each award level, a table shows the occupations' current employment, projected percentage growth over the next decade, average annual projected job openings, average annual completers, gap, and median hourly wage rates. In addition, the figure in the certificate level section details the current annual wage rates for those employed in a selection of occupations.

Recommendations are based solely on the gap and whether or not the occupation looks promising (job growth, wages, etc.). These are initial findings and should serve as a starting point for further research. BVCC's administration will still need to undergo steps before deciding whether these programs would be a good fit for the college and the county. This future work could include surveying local employers, analyzing skills and similar programs offered elsewhere, calculating program specific economic impacts, and looking at capacity and capital requirements for building these programs.

ADDITIONS AT THE CERTIFICATE LEVEL

Fifty-one occupations have been identified as certificate level programmatic areas of opportunity, as shown in Table 4.1. The select occupations present unmet annual job openings within Ravalli County (i.e. they have a gap), their median hourly wage rates are greater than \$12.00, and the occupations typically require some college education but no degree for entry-level positions.

As shown, there is diversity in the types of occupations in the table, with a limited number of job openings in the county for some. Occupations with few job openings are included since occupations can be grouped together to form a program. The most represented occupational group in the table are construction & extraction occupations (SOC 47-0000), with six occupations and about 1,060 jobs in the county in 2020. The second most represented occupation group is office & administrative support, closely followed by installation, maintenance, & repair. BVCC should prioritize occupations that would result in the best employment outcomes for students.

The three non-supervisory opportunities with the highest median hourly wages are electrical power-line installers & repairers; aircraft mechanics & service technicians; and industrial machinery mechanics. Regarding supervisory occupations, those with the highest median hourly wages are first-line supervisors of mechanics, installers, & repairers; first-line supervisors of construction trades & extraction workers; and first-line supervisors of production & operating workers. There are also a number of opportunities for BVCC to support occupations experiencing positive employment growth over the next decade. The top three opportunities by percent job change from 2020 to 2030 are hotel, motel, & resort desk clerks; emergency medical technicians & paramedics; and telecommunications line installers & repairers.

Table 4.1: BVCC's Programmatic Areas of Opportunity at the Certificate Level

SOC TITLE	2020 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Home Health & Personal Care Aides	329	24.8%	41	0	36	\$12.63
Carpenters	445	2.6%	28	0	28	\$19.06
Office Clerks, General	349	2.1%	27	0	27	\$14.63
Stockers & Order Fillers	167	18.6%	24	0	24	\$13.28
Construction Laborers	259	14.3%	18	0	18	\$15.86
First-Line Supervisors of Food Preparation & Serving Workers	96	33.9%	14	0	14	\$16.57
First-Line Supervisors of Retail Sales Workers	175	6.2%	12	0	12	\$15.27
Customer Service Representatives	117	9.8%	11	0	11	\$14.79
Maintenance & Repair Workers, General	112	23.1%	10	0	10	\$17.38
Teaching Assistants, Except Postsecondary	180	1.9%	10	0	10	\$12.17
Plumbers, Pipefitters, & Steamfitters	99	13.0%	9	0	9	\$20.36
Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	144	(0.1%)	9	0	9	\$14.33
Electricians	81	30.3%	9	0	9	\$22.74
Cooks, Institution & Cafeteria	81	10.1%	8	0	8	\$12.32
First-Line Supervisors of Construction Trades & Extraction Workers	113	5.6%	8	0	8	\$25.70
Farmers, Ranchers, & Other Agricultural Managers	182	(39.5%)	8	0	8	\$15.18
Medical Secretaries & Administrative Assistants	108	14.0%	8	0	8	\$14.93
Automotive Service Technicians & Mechanics	105	4.5%	7	0	7	\$14.95
Receptionists & Information Clerks	54	29.6%	7	0	7	\$13.46

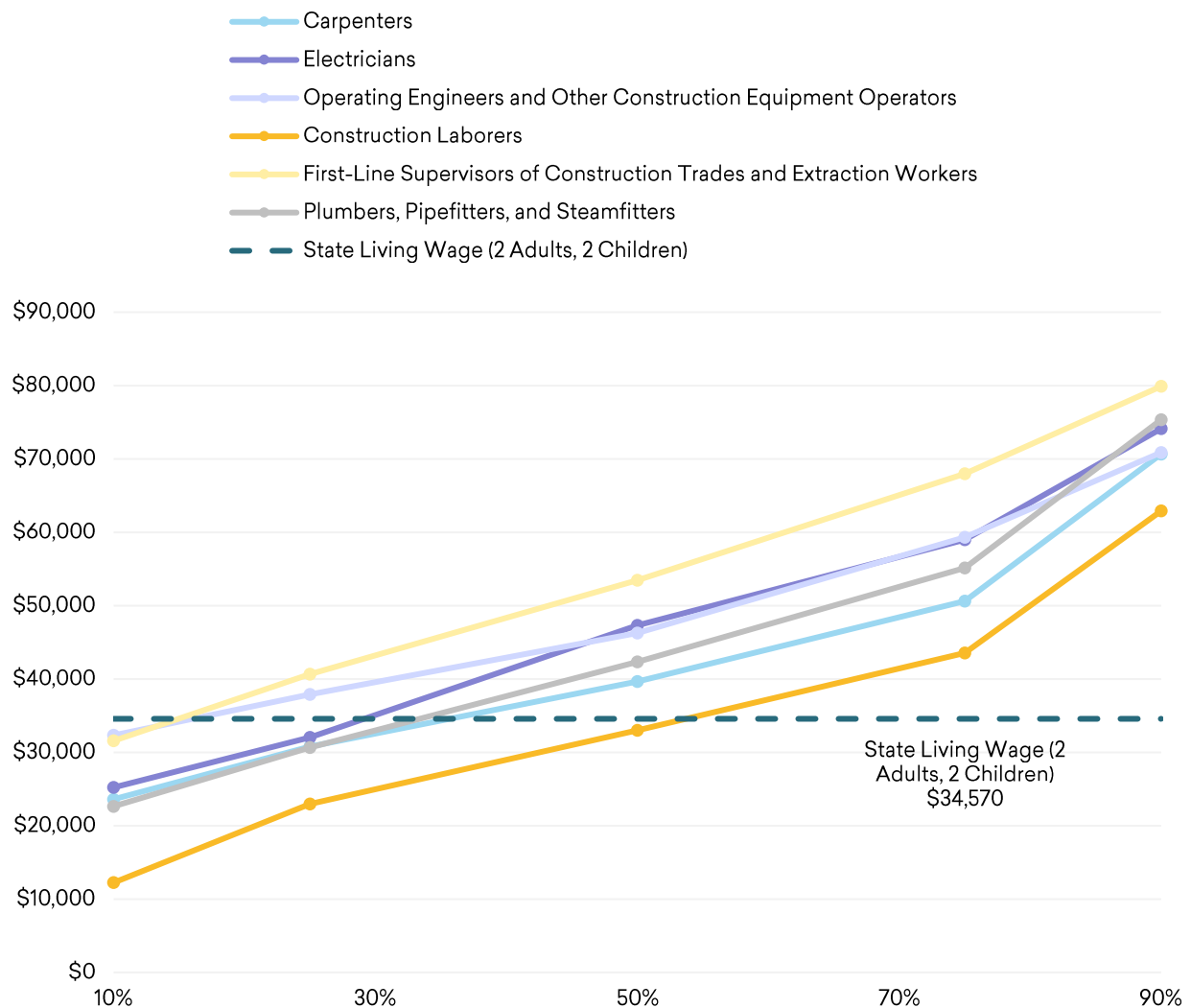
SOC TITLE	2020 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Licensed Practical & Licensed Vocational Nurses	70	22.4%	6	0	6	\$18.17
Hotel, Motel, & Resort Desk Clerks	21	127.6%	6	0	6	\$13.68
Operating Engineers & Other Construction Equipment Operators	66	5.7%	5	0	5	\$22.24
School Bus Monitors & Protective Service Workers, All Other	22	22.1%	5	0	5	\$16.10
Tellers	78	(25.3%)	5	0	5	\$13.63
Miscellaneous Assemblers & Fabricators	55	8.2%	5	0	5	\$14.53
First-Line Supervisors of Production & Operating Workers	64	13.4%	5	0	5	\$25.52
Veterinary Assistants & Laboratory Animal Caretakers	36	35.6%	5	0	5	\$17.00
Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	45	10.3%	4	0	4	\$13.52
First-Line Supervisors of Mechanics, Installers, & Repairers	53	14.8%	4	0	4	\$29.77
Industrial Truck & Tractor Operators	29	16.2%	3	0	3	\$19.13
Packaging & Filling Machine Operators & Tenders	38	20.9%	3	0	3	\$18.19
Veterinary Technologists & Technicians	54	34.6%	3	0	3	\$16.60
Machinists	30	30.7%	3	0	3	\$16.78
Heating, Air Conditioning, & Refrigeration Mechanics & Installers	36	13.5%	3	0	3	\$18.58
Counter & Rental Clerks	32	18.0%	3	0	3	\$12.22
Welders, Cutters, Solderers, & Brazers	36	2.9%	3	0	3	\$20.14
Refuse & Recyclable Material Collectors	24	17.9%	3	0	3	\$20.45
Inspectors, Testers, Sorters, Samplers, & Weighers	31	9.3%	3	0	3	\$19.80
Pharmacy Technicians	56	10.3%	3	0	3	\$17.69
Emergency Medical Technicians & Paramedics	28	54.5%	2	0	2	\$19.63
Aircraft Mechanics & Service Technicians	25	20.2%	2	0	2	\$26.53
Bus & Truck Mechanics & Diesel Engine Specialists	27	11.2%	2	0	2	\$22.06
Electrical Power-Line Installers & Repairers	26	10.8%	2	0	2	\$44.44
Multiple Machine Tool Setters, Operators, & Tenders, Metal & Plastic	23	10.3%	2	0	2	\$20.53
Massage Therapists	23	17.8%	2	0	2	\$17.71
Production Workers, All Other	17	35.3%	2	0	2	\$18.89

SOC TITLE	2020 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
First-Line Supervisors of Transportation & Material Moving Workers, Except Aircraft Cargo Handling Supervisors	22	15.7%	2	0	2	\$21.96
First-Line Supervisors of Farming, Fishing, & Forestry Workers	25	3.2%	2	0	2	\$19.86
First-Line Supervisors of Housekeeping & Janitorial Workers	18	30.1%	2	0	2	\$21.38
Telecommunications Line Installers & Repairers	14	36.6%	2	0	2	\$20.81
Industrial Machinery Mechanics	18	31.3%	2	0	2	\$25.36

Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.

Figure 4.1: Percentile Wage Rates of Construction & Extraction Occupations Identified as New Program Opportunities



Source: Employees & Self-Employed 2021.4.

The annual wage rates of the construction & extraction occupations from Table 4.1 are shown in Figure 4.1, with an emphasis on low and high wage-earners. For those people in Ravalli County employed as first-line supervisors of construction trades & extraction workers, annual wage rates are the highest, except for operating engineers and other construction equipment operators at the 10th percentile. Notably, the average difference between the lowest wage earners in that occupation (10th percentile) and the highest (90th percentile) is about \$48,000. For BVCC students, these results may indicate that time spent working as first-line supervisors of construction trades & extraction workers could lead to progressively higher wages throughout their careers. On the other hand, there is about a \$52,000

difference between the lowest and highest wage earners for construction laborers. Data on percentile wage rates highlight the occupations that should be incorporated into a new or existing BVCC program, for the benefit of students first coming into the county's labor market or those looking to change career paths.

ADDITIONS AT THE ASSOCIATE DEGREE LEVEL

Fewer occupations, compared to the previous section, have been identified as associate degree level programmatic areas of opportunity (Table 4.2). There are not as many occupations that specifically require such an education, and most have been considered in the previous chapter's analysis. Of the occupations in the table, all three are related to healthcare practitioners & technical occupations (SOC 29-0000), with about 220 jobs in the county. While the gaps for many of these occupations are smaller in size, these occupations provide critical healthcare services to residents in Ravalli County and completers could likely find employment in other areas of the state. Regarding program expansion, a Dental Hygienist program could expand upon the already-in-place Dental Assisting non-credit program at the college. A similar situation could be said for a Registered Nursing program respective to the current Certified Nurse Aide program. Furthermore, the college could consider developing a transfer-track degree level program in Registered Nursing, seeing that the county's highest demand for a bachelor's degree level of education pertains to registered nurses.

Table 4.2: BVCC's Programmatic Areas of Opportunity at the Associate Degree Level

SOC TITLE	2020 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Registered Nurses	185	11.6%	4*	0	4	\$31.48
Dental Hygienists	20	10.8%	1	0	1	\$37.67
Radiologic Technologists and Technicians	17	13.0%	1	0	1	\$27.62

*While annual demand at the associate degree level has been observed, demand at the bachelor's degree level is much more common.

Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.

ADDITIONS AT THE TRANSFER-TRACK DEGREE LEVEL

Transfer track programs were primarily evaluated by their ability to contribute to local needs at a certificate- or associate-level, while also preparing BVCC students for their next educational step. Taking both those factors into account, Registered Nursing has been

identified as a potential transfer-tracker degree. As shown in Table 4.3, within Ravalli County, there is a gap of 11 registered nurses. The median hourly wage rate is \$31.48, and the occupation typically requires a bachelor's degree level of education for entry-level positions. However, due to exogenous circumstances (such as an aging population and the changing needs of healthcare due to COVID-19), some regions are observing increased nursing demands at associate degree levels. It is recommended that local healthcare providers are consulted regarding employment demand for various education levels. Additionally, it is possible that the college could leverage the existing Certified Nurse Aide program to provide students a unique opportunity in which they are workforce ready as a nursing assistant, but still capable of studying towards registered nursing.

Table 4.3: BVCC's Programmatic Areas of Opportunity at the Transfer-Track Degree Level

SOC TITLE	2020 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS*	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Registered Nurses	185	11.6%	11	0	11	\$31.48

*Annual job openings refer to those requiring a bachelor's degree level of education

Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.

SUMMARY

Fifty-one certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, many of which are related to construction & extraction occupations. At the associate degree level, there are fewer opportunities for new programs, due to low demand within Ravalli County. Nonetheless, there are three opportunities, all in healthcare practitioners & technical occupations. The three are Registered Nursing, Dental Hygienist, and Radiologic Technologist & Technician programs. Two of these potential programs are related to non-credit programs already offered by the college. BVCC should consider these programs, whether its focus is on job openings in Ravalli County or Montana. Given that demand for healthcare workers has experienced recent growth on a national level, it is important for BVCC to consult with local healthcare providers when attempting to specify county demand for these occupations. A Registered Nursing program could similarly be offered at the transfer-track degree level due to the gap in both associate degree and bachelor's degree education levels identified in the program demand gap analysis. For all award levels, many program additions are related to the college's current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the county's current and projected labor market demand.



APPENDIX 1: Glossary of Terms

Associate Degree A degree granted for the successful completion of a sub-baccalaureate program of study, usually requiring at least two years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work-study program. For the program demand gap analysis, degrees of greater than two years but less than four, as defined by IPEDS, are included in the associate degree category.

Certificate A formal award certifying the satisfactory completion of a postsecondary education program. Certificates can be awarded at any level of postsecondary education and include awards below the associate degree level. For the program demand gap analysis, this includes awards of less than one year and greater than one year but less than two, as defined by IPEDS.

Gap represents a deficit, or when there are more job openings in a particular occupation than there are completions from higher education institutions in the county, region, state, etc. If left unaddressed, a gap may lead to missed opportunities for economic growth and put stress on local businesses to find the necessary talent elsewhere. Significant gaps translate into higher human resources costs and decreased efficiencies in the economic system. They also provide an opportunity for educational institutions to develop new programs and/or strengthen their current programs.

Industry Jobs Emsi Burning Glass industry data have various sources depending on the class of worker. Emsi Burning Glass primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns. Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, Bureau of Economic Analysis (BEA) State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. Self-Employed class of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. The Extended Proprietor class of worker is not included in the analysis. Projections for QCEW and non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

IPEDS The Integrated Postsecondary Education Data System (IPEDS) aggregates interrelated surveys conducted annually by the U.S. Department of Education's National Center for Education Statistics (NCES). IPEDS gathers information from every educational institution in the U.S. that participates in the federal student financial aid programs authorized by Title IV of the Higher Education Act of 1965. These educational institutions include research universities, state colleges and universities, private religious and liberal arts colleges, for-profit institutions, community and technical colleges, non-degree-granting institutions such as beauty colleges, and others.

Job Openings Job openings are a combination of job growth, which occurs when an employer experiences greater demand for its products and hires new employees to increase production, and replacement needs, which occurs when employees leave the workforce or change occupations. Throughout the program demand gap analysis, they represent the average number of projected openings between 2020 and 2030. Job openings are calculated for each occupation mapped to a program and are de-duplicated across programs mapped to the same occupation using Emsi Burning Glass's weighting methodology. For each award level, the number of openings is reported for that educational level and one education level below it.

Location Quotient (LQ) A comparative statistic used to calculate the relative employment concentration of an industry or occupation against the employment of the industry in a larger geographic region (i.e. a county's LQ relative to the U.S.). Industries with a higher location quotient (usually greater than 1.2) indicate that the smaller geographic region has a comparative advantage or specialization in the production of that good or service or has a high degree of specialization within its workforce.

NAICS The North American Industry Classification System (NAICS) organizes North American business establishments to better collect, analyze, and publish statistical data related to the business economy. NAICS is intended to classify an establishment's activity regardless of its ownership (public or private sector) or legal form of organization (proprietorship, partnership, corporation, for-profit, nonprofit, etc.). However, due to the realities of available data, Emsi Burning Glass treats establishments with public and private sector ownership differently. In Emsi Burning Glass data, all establishments in the main NAICS hierarchy are private sector only. Jobs in Educational Services and Ambulatory Health Care Service, for example, are not associated with local, state, or federal government jobs. Jobs for public school teachers and city firefighters are in Local Government, whereas college professors and forest firefighters are commonly employed by State Government. Mail carriers and transportation security screeners are examples of jobs in Federal Government. Thus, Emsi Burning Glass does not use the standard NAICS classification, which is similar to Current Employment Statistics (CES), Occupational Employment Statistics (OES), and BEA data sources.

New Program Additions New program additions are workforce gaps that exist for occupations the institution does not currently train for, based on the mapping of the institution's current programs. The award level recommended for the occupations is determined based by the level of education of workers currently employed in the occupation.

Program Completions For the program demand gap analysis, program completions are the average number of students, over a three-year period, who receive an award or degree for a program of study, as reported to IPEDS. An average over three years is used to control for upward or downward spikes in completions in any one year.

SOC The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of about 775 detailed occupations according to their occupational definition. To facilitate classification, detailed occupations are combined to form about 450 broad occupations, about 95 minor groups, and 23 major groups. Detailed occupations in the SOC with similar job duties, and in some cases skills, education, and/or training, are grouped together. There are a few minor differences between Emsi Burning Glass and standard SOC codes. Primarily, Emsi Burning Glass does not use detailed SOC codes for military occupations due to lack of good data and aggregates the occupations into one code, 55-9999. And, Emsi Burning Glass uses a single aggregate code (25-1099) for all postsecondary teachers due to lack of solid data and to remain consistent with the NIOEM, which uses a similar code. Emsi Burning Glass currently uses the OES's SOC 2017.

Staffing Patterns show the occupational makeup of an industry in percentages. For example, a simplified staffing pattern of the Hospitals industry subsector might show that 20% of its jobs are occupied by nurses, 15% by nursing assistants, 10% by general practitioners, 10% by surgeons, five percent by information technology support staff, five percent by janitors, one percent by chief executives, etc. Data are compiled from several sources, including Occupational Employment Statistics, NIOEM, and the American Community Survey. For the Self-Employed class of worker, the primary source is the American Community Survey with a small amount of information from Occupational Employment Statistics.

Surplus Represents an oversupply, or when there are more completers from county educational institutions than there are job openings in a particular occupation. If left unaddressed, significant surpluses may lead to higher unemployment rates or higher attrition rates—the institution could be educating a workforce that is leaving the region after program completion because of a lack of job opportunities. In the tables, values in parentheses represent a surplus.

Transfer-Track degrees are not a formal award level according to IPEDS. They are associate degrees, as defined by IPEDS, that prepare students to pursue a baccalaureate degree, as opposed to a two-year terminal degree. Transfer-track degrees are usually awarded as Associate of Arts (AA) or Associate of Science (AS) degrees, compared to terminal associate degrees, usually awarded as Associate of Applied Science (AAS) or Associate of Applied Arts (AAA) degrees.

APPENDIX 2: **About Emsi Burning Glass Data**

LABOR MARKET INFORMATION

Traditional labor market information (LMI) helps us to identify those occupations with good jobs and projected growth in the coming decade. This provides a robust, market-driven foundation upon which to build out programmatic recommendations. Emsi Burning Glass's data then allows us to map these occupations back to programs that train for them, and to extrapolate other occupational outcomes for potential graduates. Emsi Burning Glass data are used to calculate the projected number of annual job openings from 2020 to 2030. These projections account for openings due to job growth and openings due to replacement needs, such as when an employee retires or leaves the position. To capture a complete picture of industry employment, Emsi Burning Glass gathers and integrates economic, labor market, demographic, and educational data from over 40 government and private-sector sources. In doing so, Emsi Burning Glass creates a comprehensive and current database that includes both published data and detailed estimates, with full coverage of the U.S.

More specifically, Emsi Burning Glass combines covered employment data from the Quarterly Census of Employment and Wages (QCEW-produced by the Department of Labor) with total employment data in Regional Economic Information System (REIS-published by the BEA). The data are augmented with County Business Patterns (CBP) and Non-Employer Statistics (NES) published by the Census Bureau. Job projections are based on the latest-available Emsi Burning Glass industry data, 15-year past local trends in each industry, growth rates in statewide and, where available, sub-state area industry projections published by individual state agencies and, in part, growth rates in national projections from the Bureau of Labor Statistics (BLS).

Through this combination of data sources, Emsi Burning Glass is able to fill gaps in individual sources (such as suppressions), yielding a composite database that leverages the strengths of all its sources. Finally, Emsi Burning Glass's database is updated quarterly, providing the most up-to-date integrated information possible.

APPENDIX 3: Additional Jobs Data

INDUSTRY COMPOSITION

Table A3.1: Current and Projected Jobs by Industry Subsector in Ravalli County, 2020 and 2030

NAICS CODE	NAICS TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE
903	Local Government	1,268	1,245	(23)	(1.8%)
238	Specialty Trade Contractors	1,147	1,281	134	11.7%
541	Professional, Scientific, & Technical Services	948	1,043	95	10.0%
561	Administrative & Support Services	920	1,044	124	13.5%
722	Food Services & Drinking Places	859	1,226	367	42.7%
901	Federal Government	737	686	(51)	(6.9%)
236	Construction of Buildings	665	716	51	7.7%
621	Ambulatory Health Care Services	661	793	133	20.1%
445	Food & Beverage Stores	577	587	9	1.6%
611	Educational Services	447	494	47	10.5%
622	Hospitals	444	459	15	3.5%
624	Social Assistance	434	593	159	36.8%
814	Private Households	404	480	75	18.6%
623	Nursing & Residential Care Facilities	385	492	107	27.8%
713	Amusement, Gambling, & Recreation Industries	365	591	226	61.9%
811	Repair & Maintenance	296	307	11	3.7%
813	Religious, Grantmaking, Civic, Professional, & Similar Organizations	267	290	24	8.9%
522	Credit Intermediation & Related Activities	263	241	(22)	(8.2%)
812	Personal & Laundry Services	244	303	59	24.0%
444	Building Material & Garden Equipment & Supplies Dealers	218	215	(4)	(1.7%)
441	Motor Vehicle & Parts Dealers	206	238	32	15.6%
423	Merchant Wholesalers, Durable Goods	195	206	11	5.7%
332	Fabricated Metal Product Manufacturing	194	198	4	1.8%
111	Crop Production	191	144	(46)	(24.3%)
721	Accommodation	185	381	197	106.4%
484	Truck Transportation	178	168	(11)	(5.9%)

NAICS CODE	NAICS TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE
524	Insurance Carriers & Related Activities	168	193	25	14.6%
531	Real Estate	165	152	(13)	(7.7%)
321	Wood Product Manufacturing	161	143	(18)	(11.4%)
112	Animal Production & Aquaculture	159	116	(43)	(27.0%)
446	Health & Personal Care Stores	147	148	2	1.1%
339	Miscellaneous Manufacturing	134	165	32	23.5%
447	Gasoline Stations	130	77	(53)	(40.5%)
115	Support Activities for Agriculture & Forestry	124	150	25	20.5%
312	Beverage & Tobacco Product Manufacturing	118	158	39	33.3%
454	Nonstore Retailers	108	132	24	21.9%
451	Sporting Goods, Hobby, Musical Instrument, & Book Stores	94	118	24	25.4%
453	Miscellaneous Store Retailers	88	99	11	13.0%
902	State Government	86	67	(19)	(22.1%)
311	Food Manufacturing	85	95	10	11.9%
452	General Merchandise Stores	83	120	37	44.6%
482	Rail Transportation	76	105	29	38.3%
562	Waste Management & Remediation Services	74	95	21	28.0%
424	Merchant Wholesalers, Nondurable Goods	72	82	10	13.9%
488	Support Activities for Transportation	63	53	(10)	(15.7%)
711	Performing Arts, Spectator Sports, & Related Industries	61	60	(0)	(0.4%)
442	Furniture & Home Furnishings Stores	55	62	7	12.6%
221	Utilities	51	56	5	10.0%
485	Transit & Ground Passenger Transportation	50	112	62	124.7%
113	Forestry & Logging	48	34	(14)	(28.8%)
448	Clothing & Clothing Accessories Stores	46	72	26	57.4%
517	Telecommunications	46	62	16	36.0%
326	Plastics & Rubber Products Manufacturing	46	55	10	21.0%
325	Chemical Manufacturing	43	75	32	75.0%
523	Securities, Commodity Contracts, & Other Financial Investments & Related Activities	41	43	2	5.1%
337	Furniture & Related Product Manufacturing	38	32	(7)	(17.6%)
425	Wholesale Electronic Markets & Agents & Brokers	35	33	(2)	(5.4%)
327	Nonmetallic Mineral Product Manufacturing	35	32	(3)	(8.0%)
237	Heavy & Civil Engineering Construction	32	27	(6)	(17.3%)

NAICS CODE	NAICS TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE
316	Leather & Allied Product Manufacturing	27	38	10	37.5%
481	Air Transportation	23	30	7	28.6%
336	Transportation Equipment Manufacturing	22	30	7	33.5%
443	Electronics & Appliance Stores	21	11	(10)	(48.5%)
512	Motion Picture & Sound Recording Industries	20	25	5	24.0%
324	Petroleum & Coal Products Manufacturing	17	27	9	55.0%
212	Mining (except Oil & Gas)	17	23	6	32.6%
492	Couriers & Messengers	17	15	(2)	(11.4%)
518	Data Processing, Hosting, & Related Services	12	16	4	37.5%
551	Management of Companies & Enterprises	11	19	8	74.4%
511	Publishing Industries (except Internet)	11	12	1	9.7%
532	Rental & Leasing Services	10	11	1	10.0%
519	Other Information Services	7	7	0	3.7%
712	Museums, Historical Sites, & Similar Institutions	6	10	4	63.0%
213	Support Activities for Mining	5	12	7	150.9%
334	Computer & Electronic Product Manufacturing	5	8	3	60.4%
515	Broadcasting (except Internet)	5	4	(1)	(16.5%)
323	Printing & Related Support Activities	5	1	(4)	(80.3%)
315	Apparel Manufacturing	4	6	2	51.5%
333	Machinery Manufacturing	4	2	(2)	(44.1%)
114	Fishing, Hunting & Trapping	3	3	(1)	(21.6%)
313	Textile Mills	2	1	(1)	(28.2%)
525	Funds, Trusts, & Other Financial Vehicles	1	2	0	41.1%
314	Textile Product Mills	1	0	(0)	(36.0%)
335	Electrical Equipment, Appliance, & Component Manufacturing	1	0	(0)	(23.9%)
211	Oil & Gas Extraction	0	0	0	0
322	Paper Manufacturing	0	0	0	0.0%
331	Primary Metal Manufacturing	0	0	0	0.0%
483	Water Transportation	0	0	0	0
486	Pipeline Transportation	0	0	0	0.0%
487	Scenic & Sightseeing Transportation	0	0	0	0.0%
491	Postal Service	0	0	0	0.0%
493	Warehousing & Storage	0	0	0	0.0%

NAICS CODE	NAICS TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE
521	Monetary Authorities-Central Bank	0	0	0	0
533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	0	0	0	0.0%
Total		15,717	17,757	2,042	13.0%

Source: Employees & Self-Employed 2021.4.

Table A3.2: Employment Concentration (LQ) by Industry Subsector in Ravalli County, 2020 and 2030

NAICS CODE	NAICS TITLE	2020 LQ	2030 LQ
316	Leather & Allied Product Manufacturing	9.89	15.39
113	Forestry & Logging	6.18	4.21
312	Beverage & Tobacco Product Manufacturing	4.26	4.94
321	Wood Product Manufacturing	3.88	3.11
482	Rail Transportation	3.65	5.16
112	Animal Production & Aquaculture	3.49	2.65
236	Construction of Buildings	3.08	2.98
713	Amusement, Gambling, & Recreation Industries	2.62	3.13
111	Crop Production	2.33	1.62
814	Private Households	2.30	2.34
115	Support Activities for Agriculture & Forestry	2.23	2.29
339	Miscellaneous Manufacturing	2.17	2.44
238	Specialty Trade Contractors	1.95	2.01
451	Sporting Goods, Hobby, Musical Instrument, & Book Stores	1.84	2.39
445	Food & Beverage Stores	1.83	1.91
811	Repair & Maintenance	1.78	1.65
562	Waste Management & Remediation Services	1.61	1.74
324	Petroleum & Coal Products Manufacturing	1.57	2.22
444	Building Material & Garden Equipment & Supplies Dealers	1.57	1.52
901	Federal Government	1.49	1.34
454	Nonstore Retailers	1.48	1.52
446	Health & Personal Care Stores	1.45	1.45
332	Fabricated Metal Product Manufacturing	1.40	1.31
447	Gasoline Stations	1.39	0.83
721	Accommodation	1.31	2.14
442	Furniture & Home Furnishings Stores	1.24	1.29

NAICS CODE	NAICS TITLE	2020 LQ	2030 LQ
812	Personal & Laundry Services	1.22	1.22
623	Nursing & Residential Care Facilities	1.19	1.32
611	Educational Services	1.10	1.02
441	Motor Vehicle & Parts Dealers	1.06	1.13
484	Truck Transportation	1.04	0.90
561	Administrative & Support Services	1.02	1.01
114	Fishing, Hunting & Trapping	1.02	0.81
453	Miscellaneous Store Retailers	1.00	1.20
337	Furniture & Related Product Manufacturing	1.00	0.77
624	Social Assistance	0.99	1.01
522	Credit Intermediation & Related Activities	0.98	0.88
212	Mining (except Oil & Gas)	0.97	1.19
813	Religious, Grantmaking, Civic, Professional, & Similar Organizations	0.97	0.93
221	Utilities	0.94	1.03
903	Local Government	0.92	0.82
541	Professional, Scientific, & Technical Services	0.88	0.83
722	Food Services & Drinking Places	0.87	1.00
622	Hospitals	0.87	0.79
327	Nonmetallic Mineral Product Manufacturing	0.87	0.77
711	Performing Arts, Spectator Sports, & Related Industries	0.87	0.64
621	Ambulatory Health Care Services	0.84	0.82
488	Support Activities for Transportation	0.84	0.62
485	Transit & Ground Passenger Transportation	0.80	1.26
531	Real Estate	0.76	0.63
425	Wholesale Electronic Markets & Agents & Brokers	0.71	0.63
326	Plastics & Rubber Products Manufacturing	0.66	0.81
517	Telecommunications	0.65	0.96
525	Funds, Trusts, & Other Financial Vehicles	0.62	0.78
423	Merchant Wholesalers, Durable Goods	0.62	0.61
524	Insurance Carriers & Related Activities	0.57	0.58
311	Food Manufacturing	0.53	0.54
512	Motion Picture & Sound Recording Industries	0.52	0.42
325	Chemical Manufacturing	0.51	0.81

NAICS CODE	NAICS TITLE	2020 LQ	2030 LQ
481	Air Transportation	0.50	0.53
443	Electronics & Appliance Stores	0.46	0.27
448	Clothing & Clothing Accessories Stores	0.44	0.65
712	Museums, Historical Sites, & Similar Institutions	0.44	0.48
523	Securities, Commodity Contracts, & Other Financial Investments & Related Activities	0.40	0.37
315	Apparel Manufacturing	0.37	0.84
424	Merchant Wholesalers, Nondurable Goods	0.34	0.37
518	Data Processing, Hosting, & Related Services	0.32	0.38
237	Heavy & Civil Engineering Construction	0.30	0.22
452	General Merchandise Stores	0.28	0.42
515	Broadcasting (except Internet)	0.21	0.16
532	Rental & Leasing Services	0.20	0.20
213	Support Activities for Mining	0.19	0.35
313	Textile Mills	0.19	0.15
519	Other Information Services	0.18	0.14
492	Couriers & Messengers	0.16	0.12
902	State Government	0.16	0.12
336	Transportation Equipment Manufacturing	0.14	0.17
511	Publishing Industries (except Internet)	0.14	0.14
323	Printing & Related Support Activities	0.12	0.03
314	Textile Product Mills	0.06	0.04
551	Management of Companies & Enterprises	0.05	0.08
334	Computer & Electronic Product Manufacturing	0.04	0.07
333	Machinery Manufacturing	0.03	0.02
335	Electrical Equipment, Appliance, & Component Manufacturing	0.01	0.01
211	Oil & Gas Extraction	0.00	0.00
322	Paper Manufacturing	0.00	0.00
331	Primary Metal Manufacturing	0.00	0.00
483	Water Transportation	0.00	0.00
486	Pipeline Transportation	0.00	0.00
487	Scenic & Sightseeing Transportation	0.00	0.00
491	Postal Service	0.00	0.00
493	Warehousing & Storage	0.00	0.00

NAICS CODE	NAICS TITLE	2020 LQ	2030 LQ
521	Monetary Authorities-Central Bank	0.00	0.00
533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	0.00	0.00

Source: Employees & Self-Employed 2021.4.

INDUSTRY STAFFING PATTERNS

The following tables show the staffing patterns of the industry subsectors discussed in Chapter 2. The Entry Ed Level Column describes the typical award level required for an entry level position in the occupation. “None” or “<HS/GED” indicates that the occupation typically requires no formal educational credential; “HS/GED” refers to a high school diploma or its equivalent, a General Equivalency Development or General Equivalency Diploma test; “Cert” refers to a postsecondary nondegree award or some college education with no degree; and “Doctoral” refers to a doctoral or professional degree level of education. The other education classifications are straightforward.

Table A3.3: Employment Projections in Ravalli County for the Top 25 Occupations Related to the Specialty Trade Contractors Industry Subsector

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Carpenters	190	202	43	16.6%	\$19.06	HS/GED
Construction Laborers	143	159	31	12.4%	\$15.86	HS/GED
Painters, Construction and Maintenance	79	88	12	6.9%	\$16.71	HS/GED
Plumbers, Pipefitters, and Steamfitters	72	80	12	6.3%	\$20.36	HS/GED
Electricians	63	83	12	5.5%	\$22.74	HS/GED
First-Line Supervisors of Construction Trades and Extraction Workers	61	65	12	5.3%	\$25.70	HS/GED
Construction Managers	49	55	8	4.3%	\$24.95	BACH
Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	39	45	18	3.4%	\$19.82	BACH
Office Clerks, General	38	41	41	3.3%	\$14.63	CERT
Operating Engineers and Other Construction Equipment Operators	37	40	8	3.2%	\$22.24	HS/GED
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	24	28	4	2.1%	\$18.58	HS/GED
Cement Masons and Concrete Finishers	22	24	3	1.9%	\$20.00	HS/GED

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Bookkeeping, Accounting, and Auditing Clerks	20	21	28	1.7%	\$15.80	CERT
Drywall and Ceiling Tile Installers	18	23	3	1.6%	\$17.58	NONE
General and Operations Managers	15	18	20	1.3%	\$37.39	BACH
Cost Estimators	15	17	3	1.3%	\$23.83	BACH
Brickmasons and Blockmasons	15	12	2	1.3%	\$21.22	HS/GED
Heavy and Tractor-Trailer Truck Drivers	13	15	24	1.1%	\$20.95	HS/GED
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	12	12	16	1.0%	\$14.33	CERT
Tile and Stone Setters	11	11	1	0.9%	\$15.25	HS/GED
Roofers	10	12	2	0.9%	\$15.10	NONE
Glaziers	9	11	1	0.8%	\$19.46	HS/GED
Mechanical Door Repairers	9	9	1	0.8%	\$16.00	HS/GED
Structural Iron and Steel Workers	9	10	1	0.8%	\$16.60	HS/GED
Fence Erectors	8	9	1	0.7%	\$15.91	NONE

Source: Employees & Self-Employed 2021.4.

Table A3.4: Employment Projections in Ravalli County for the Top 25 Occupations Related to the Construction of Buildings Industry Subsector

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Carpenters	216	214	43	32.5%	\$19.06	HS/GED
Construction Laborers	100	119	31	15.0%	\$15.86	HS/GED
Construction Managers	40	48	8	6.1%	\$24.95	BACH
First-Line Supervisors of Construction Trades and Extraction Workers	39	39	12	5.9%	\$25.70	HS/GED
Painters, Construction and Maintenance	37	40	12	5.5%	\$16.71	HS/GED
Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	29	36	18	4.3%	\$19.82	BACH
Office Clerks, General	20	19	41	3.0%	\$14.63	CERT
Plumbers, Pipefitters, and Steamfitters	14	17	12	2.1%	\$20.36	HS/GED
Bookkeeping, Accounting, and Auditing Clerks	12	12	28	1.8%	\$15.80	CERT
Electricians	11	13	12	1.7%	\$22.74	HS/GED
General and Operations Managers	9	9	20	1.3%	\$37.39	BACH

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	7	7	16	1.1%	\$14.33	CERT
Cost Estimators	7	8	3	1.1%	\$23.83	BACH
Project Management Specialists and Business Operations Specialists, All Other	7	8	10	1.0%	\$31.63	BACH
Operating Engineers and Other Construction Equipment Operators	6	8	8	1.0%	\$22.24	HS/GED
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	6	7	4	0.9%	\$18.58	HS/GED
Roofers	6	7	2	0.9%	\$15.10	NONE
Drywall and Ceiling Tile Installers	6	6	3	0.9%	\$17.58	NONE
Tile and Stone Setters	6	5	1	0.8%	\$15.25	HS/GED
Cement Masons and Concrete Finishers	5	5	3	0.7%	\$20.00	HS/GED
Helpers--Carpenters	4	4	1	0.7%	\$15.24	HS/GED
Brickmasons and Blockmasons	4	4	2	0.6%	\$21.22	HS/GED
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	3	4	6	0.5%	\$22.98	BACH
Real Estate Sales Agents	3	3	4	0.5%	\$19.73	BACH
Maintenance and Repair Workers, General	3	4	14	0.5%	\$17.38	HS/GED

Source: Employees & Self-Employed 2021.4.

Table A3.5: Employment Projections in Ravalli County for the Top 25 Occupations Related to the Food & Beverage Stores Industry Subsector

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Cashiers	145	137	60	25.1%	\$10.78	HS/GED
Stockers and Order Fillers	97	111	32	16.8%	\$13.28	HS/GED
Butchers and Meat Cutters	50	51	7	8.7%	\$16.05	HS/GED
First-Line Supervisors of Retail Sales Workers	40	42	20	7.0%	\$15.27	CERT
Fast Food and Counter Workers	36	36	82	6.2%	\$9.93	HS/GED
Retail Salespersons	32	35	65	5.6%	\$11.25	CERT
Bakers	27	27	5	4.7%	\$11.17	CERT
Packers and Packagers, Hand	22	18	10	3.9%	\$9.58	HS/GED
Customer Service Representatives	12	12	17	2.1%	\$14.79	CERT
Food Preparation Workers	9	11	6	1.6%	\$10.55	CERT

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
First-Line Supervisors of Office and Administrative Support Workers	8	8	12	1.5%	\$23.55	BACH
General and Operations Managers	7	8	20	1.3%	\$37.39	BACH
First-Line Supervisors of Food Preparation and Serving Workers	7	7	20	1.3%	\$16.57	CERT
Pharmacy Technicians	7	8	5	1.2%	\$17.69	CERT
Bookkeeping, Accounting, and Auditing Clerks	6	6	28	1.1%	\$15.80	CERT
Pharmacists	6	6	2	1.1%	\$58.14	PHD
Shipping, Receiving, and Inventory Clerks	5	5	6	0.9%	\$13.86	HS/GED
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	5	5	3	0.9%	\$21.96	CERT
First-Line Supervisors of Production and Operating Workers	5	5	8	0.8%	\$25.52	HS/GED
Office Clerks, General	5	4	41	0.8%	\$14.63	CERT
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	5	5	23	0.8%	\$12.33	HS/GED
Laborers and Freight, Stock, and Material Movers, Hand	5	5	28	0.8%	\$13.74	HS/GED
Cooks, All Other	3	3	1	0.4%	\$16.02	HS/GED
Sales and Related Workers, All Other	2	2	2	0.4%	\$20.52	BACH
Light Truck Drivers	2	2	10	0.4%	\$14.65	HS/GED

Source: Employees & Self-Employed 2021.4.

Table A3.6: Employment Projections in Ravalli County for the Top 25 Occupations Related to the Private Households Industry Subsector

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Maids and Housekeeping Cleaners	141	156	44	34.9%	\$11.34	HS/GED
Childcare Workers	124	146	42	30.7%	\$9.92	CERT
Home Health and Personal Care Aides	94	124	60	23.3%	\$12.63	CERT
Nursing Assistants	7	9	30	1.8%	\$13.15	CERT
Crematory Operators and Personal Care and Service Workers, All Other	6	7	2	1.5%	\$15.06	CERT
Laborers and Freight, Stock, and Material Movers, Hand	4	5	28	1.0%	\$13.74	HS/GED
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	4	5	23	1.0%	\$12.33	HS/GED
Landscaping and Groundskeeping Workers	4	5	38	0.9%	\$16.87	HS/GED

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Licensed Practical and Licensed Vocational Nurses	2	3	7	0.6%	\$18.17	CERT
Registered Nurses	2	3	12	0.5%	\$31.48	BACH
Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	2	3	18	0.5%	\$19.82	BACH
Cooks, Institution and Cafeteria	2	2	13	0.4%	\$12.32	HS/GED
Cooks, Restaurant	1	2	31	0.3%	\$11.76	HS/GED
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1	1	16	0.2%	\$14.33	CERT
Animal Caretakers	1	1	12	0.2%	\$11.02	HS/GED
Chefs and Head Cooks	1	1	2	0.1%	\$21.01	CERT
Cooks, Fast Food	1	1	5	0.1%	\$9.74	HS/GED
Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	0	0	23	0.1%	\$17.82	CERT
Painters, Construction and Maintenance	0	0	12	0.1%	\$16.71	HS/GED
First-Line Supervisors of Housekeeping and Janitorial Workers	0	0	3	0.1%	\$21.38	HS/GED
Office Clerks, General	0	0	41	0.1%	\$14.63	CERT
Property, Real Estate, and Community Association Managers	0	0	2	0.1%	\$15.68	BACH
Construction Laborers	0	0	31	0.1%	\$15.86	HS/GED
Production Workers, All Other	0	0	3	0.1%	\$18.89	HS/GED
Bookkeeping, Accounting, and Auditing Clerks	0	0	28	0.1%	\$15.80	CERT

Source: Employees & Self-Employed 2021.4.

Table A3.7: Employment Projections in Ravalli County for the Top 25 Occupations Related to the Amusement, Gambling, & Recreation Industries Industry Subsector

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Waiters and Waitresses	40	64	66	10.9%	\$8.94	CERT
Landscaping and Groundskeeping Workers	36	52	38	9.8%	\$16.87	HS/GED
Exercise Trainers and Group Fitness Instructors	26	41	8	7.2%	\$18.62	CERT
Coaches and Scouts	24	33	10	6.7%	\$9.21	CERT
Bartenders	22	34	44	6.0%	\$9.55	CERT
Amusement and Recreation Attendants	19	34	8	5.1%	\$13.38	CERT

SOC TITLE	2020 JOBS	2030 JOBS	JOB OPENINGS	% JOBS IN INDUSTRY	MEDIAN HOURLY WAGE	ENTRY ED LEVEL
Cooks, Restaurant	16	28	31	4.3%	\$11.76	HS/GED
Gambling Dealers	12	22	4	3.2%	\$11.41	CERT
Fast Food and Counter Workers	11	16	82	3.1%	\$9.93	HS/GED
Cashiers	10	15	60	2.6%	\$10.78	HS/GED
Maintenance and Repair Workers, General	8	13	14	2.2%	\$17.38	HS/GED
Gambling and Sports Book Writers and Runners	8	13	2	2.1%	\$10.85	CERT
First-Line Supervisors of Personal Service and Entertainment and Recreation Workers, Except Gambling Services	7	11	4	2.0%	\$18.84	CERT
First-Line Supervisors of Food Preparation and Serving Workers	7	11	20	1.9%	\$16.57	CERT
Retail Salespersons	7	11	65	1.9%	\$11.25	CERT
Bookkeeping, Accounting, and Auditing Clerks	7	9	28	1.8%	\$15.80	CERT
Childcare Workers	6	9	42	1.7%	\$9.92	CERT
Recreation Workers	6	9	5	1.7%	\$14.34	CERT
General and Operations Managers	6	10	20	1.6%	\$37.39	BACH
Dishwashers	5	9	8	1.4%	\$9.79	HS/GED
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	5	7	23	1.4%	\$12.33	HS/GED
Dining Room and Cafeteria Attendants and Bartender Helpers	5	8	8	1.3%	\$9.37	HS/GED
Office Clerks, General	4	6	41	1.2%	\$14.63	CERT
Counter and Rental Clerks	4	6	5	1.1%	\$12.22	CERT
Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	4	5	18	1.0%	\$19.82	BACH

Source: Employees & Self-Employed 2021.4.

WORKFORCE COMMUTING PATTERNS

Table A3.8: Ravalli County Job Inflow and Outflow

COMMUTING PATTERN	JOBS	COMMUTE SHARE
EMPLOYMENT PATTERNS		
Employed in Ravalli County	11,360	100%
Employed in Ravalli County but living outside	2,630	23%

COMMUTING PATTERN	JOBS	COMMUTE SHARE
Employed and living in Ravalli County	8,730	77%
RESIDENTIAL PATTERNS		
Living in Ravalli County	15,350	100%
Living in Ravalli County but employed outside	6,620	43%
Living and employed in Ravalli County	8,730	57%

Source: Census Bureau, Center for Economic Studies.

EDUCATIONAL ATTAINMENT

Table A3.9: Highest Educational Attainments of Adults Aged 25 to 64 in Ravalli County

EDUCATION LEVEL	2015 ADULTS	2015 % ADULTS	2020 ADULTS	2020 % ADULTS	CHANGE
Less than high school diploma or equivalent	1,649	8%	1,796	8%	146
High school diploma or equivalent	6,930	34%	6,458	30%	(472)
Some college	5,276	26%	4,994	23%	(282)
Associate degree	1,654	8%	2,199	10%	545
Bachelor's degree	3,416	17%	3,793	18%	377
Graduate degree or higher	1,583	8%	2,351	11%	769
Total	20,508	100%	21,592	100%	1,084

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

Table A3.108: Highest Educational Attainments of Adults in Ravalli County by Gender

EDUCATION LEVEL	ADULT MALES	% ADULT MALES	ADULT FEMALES	% ADULT FEMALES
Less than high school diploma or equivalent	1,643	10%	1,173	7%
High school diploma or equivalent	5,299	32%	4,828	28%
Some college	3,806	23%	4,027	23%
Associate degree	1,245	8%	2,204	13%
Bachelor's degree	2,703	16%	3,246	19%
Graduate degree and higher	1,829	11%	1,859	11%
Total	16,524	100%	17,338	100%

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

Table A3.11: Highest Educational Attainments of Adults in Ravalli County by Major Race and Ethnic Groups

GROUP		<HS	HS	SOME COLLEGE	ASSOC	BACH	>BACH
White, non-Hispanic	Adults	2,666	9,502	7,375	3,246	5,581	3,469
	% Adults	8%	30%	23%	10%	18%	11%
Black, non-Hispanic	Adults	8	26	20	8	14	9
	% Adults	9%	31%	23%	9%	17%	11%
American Indian or Alaskan native, non-Hispanic	Adults	8	135	65	29	39	22
	% Adults	3%	45%	22%	10%	13%	7%
Asian, non-Hispanic	Adults	2	33	9	4	110	65
	% Adults	1%	15%	4%	2%	49%	29%
Native Hawaiian or Pacific Islander, non-Hispanic	Adults	2	7	6	3	4	3
	% Adults	8%	29%	23%	11%	18%	11%
Two or more races, non-Hispanic	Adults	33	87	143	65	60	38
	% Adults	8%	20%	34%	15%	14%	9%
Hispanic, all types	Adults	97	338	215	96	140	83
	% Adults	10%	35%	22%	10%	14%	9%

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.

APPENDIX 4: Program to Occupation Map

Table A4.1 displays the crosswalk between non-credit programs (CIP codes) and occupations (SOC codes) that Emsi Burning Glass uses to complete the program demand gap analysis. Also listed are the adjustment factors which are applied to the annual job openings for each occupation in each program, described in Appendix 5.

Table A4.1: Non-Credit Program to Occupation Map with Employment Adjustment Factors

CIP CODE	CIP TITLE	SOC CODE	SOC TITLE	% WORKFORCE WITH EDUCATION LEVEL AND ONE LEVEL BELOW		
				CERT	ASSOC	BACH
15.0503	Boiler Operator	51-8021	Stationary Engineers and Boiler Operators	65	38	25
52.0302	Bookkeeping Certification	43-3031	Bookkeeping, Accounting, and Auditing Clerks	62	50	32
51.0801	Certified Clinical Medical Assistant	31-9092	Medical Assistants	65	67	32
51.3902	Certified Nurse Aide	31-1131	Nursing Assistants	72	55	17
51.1009	Certified Phlebotomy Technician	31-9097	Phlebotomists	71	68	27
49.0205	Commercial Driver License	53-3032	Heavy and Tractor-Trailer Truck Drivers	74	39	11
11.1006	CompTIA A+ Virtual Computer Certification	15-1231	Computer Network Support Specialists	43	45	49
51.0601	Dental Assisting	31-9091	Dental Assistants	68	65	28
51.0902	EKG Technician	29-2031	Cardiovascular Technologists and Technicians	25	55	69
11.0801	Front End Web Developer	15-1257	Web Developers and Digital Interface Designers	25	27	64

Source: Emsi Burning Glass program demand gap model.

APPENDIX 5: Methodology

This appendix focuses on describing and understanding the methodology used in the program demand gap analysis. This requires data on both occupation demand (e.g., annual job openings) and education supply (e.g., number of postsecondary degree completions). These are then compared through an education “gap” analysis to determine whether an education program is potentially producing a surplus or shortage of workforce talent relative to the number of job openings. In this way, it is possible to see how the institution’s current programs are satisfying the county’s workforce needs.

SUPPLY AND DEMAND MODEL

Emsi Burning Glass builds a model using demand-side data (average annual projected job openings) and supply-side data (postsecondary education output) to compare workforce demand with education supply. The purpose of this analysis is to find the difference or “gap” between the annual job openings for an occupation and the number of people completing postsecondary degrees for that occupation, whether at BVCC or at another postsecondary institution in the county, making it possible to identify talent shortages or surpluses.

The first step involves the link between annual job openings for a SOC code and the number of completions for an education program, defined by its CIP code. The BLS provides information on the occupations that completers of specific CIP codes are more likely to enter. Specific connections have been refined through previous engagements with postsecondary institutions and state departments of labor. Some programs have direct occupational ties. For example, a physical therapist assistant is a specific occupation that requires specialized postsecondary training. In this case, one CIP code (Physical Therapy Technician/Assistant) maps to only one SOC code (physical therapist assistants). This provides an easy comparison of annual job openings for physical therapist assistants to the number of people completing the relevant program to see whether a talent shortage or surplus exists.

Unfortunately, this one-to-one mapping of a CIP code to a SOC code is not always the case. More often than not, an educational program maps to multiple occupations and an occupation maps to multiple educational programs at multiple award levels. For this reason, Emsi Burning Glass has pioneered a method of de-duplicating job openings, such that the potential sources of demand are not double-represented for any occupation. The details of this process are outlined in this chapter, under “De-duplication of Annual Openings.”

OCCUPATION DEMAND

Educational Level Adjustments

To capture occupation demand, Emsi Burning Glass uses a proprietary employment dataset that reflects total employment. Emsi Burning Glass uses the QCEW data source, which measures employment covered by unemployment insurance (UI). According to the BLS, “employment covered by these UI programs represents about 97% of all wage and salary civilian employment in the country.” Through a proprietary process, Emsi Burning Glass removes BLS local area employment suppressions to yield the best employment data available at local levels, using Emsi Burning Glass’s Employees & Self-Employed 2021.4 datarun.

In the datarun, Emsi Burning Glass calculates the number of county job openings for the occupations that require different levels of education for entry-level positions.¹¹ The BLS also provides educational attainment data of current workers, ages 16 years to 34 years, for each SOC code, broken out by their highest level of education attained. The data are presented as the percentage of workers in the SOC code with educational attainment ranging from less than a high school diploma to a doctoral degree level of education. Using these data, Emsi Burning Glass adjusts the annual job opening estimates for each SOC code to only incorporate the percentage of workers that correspond with BVCC’s program offerings.

For example, as shown in Table A5.1, three occupations are mapped to Accounting: accountants, auditors, and budget analysts. Among accountants, the majority of job openings (80%) are available to program completers with a master’s degree or bachelor’s degree level of education, less so for auditors. The weighted average of job openings, in the last row of the table, is calculated for each program and at each award level where BVCC has produced completions over the past three years. Not accounting for these dynamics in educational attainments would bias the programs’ demands by over-counting potential job opportunities for the completers.¹²

Table A5.1: Example of Educational Level Adjustments for a Program

PROGRAM	OCCUPATION	ASSOC AND ONE LEVEL BELOW	BACH AND ONE LEVEL BELOW	MAST AND ONE LEVEL BELOW	PHD AND ONE LEVEL BELOW
Accounting	Accountant	10%	65%	80%	25%
	Auditor	5%	70%	75%	20%

¹¹ See Appendix 1 for a description of the sources and processes of Emsi Burning Glass data.

¹² Given the changing dynamics and need for more education in the existing workforce (i.e., skills-biased technology change in many occupations and industry sectors), this assumption is considered conservative.

Budget analyst	15%	70%	80%	30%
Weighted average	10%	68%	78%	25%

De-Duplication of Annual Openings

Most programs are designed to train people for multiple occupational types, many of which are simultaneously linked with other educational programs. This presents a complexity when comparing supply and demand for any one program. For instance, the Accounting program is mapped to three different occupations: accountants, auditors, and budget analysts. If we focus on one of the occupations for this list—accountants—it is also mapped to three different educational programs, for example, Business, Medical Office Administration, and Commerce.

To ensure that double-counting does not occur, it is necessary to either realign the program groupings to eliminate the mapping of occupations to multiple programs or to determine what proportion of job openings should be compared with program completions. Emsi Burning Glass takes the second approach in this analysis, which has the advantage of maintaining program titles and descriptions in roughly the same format of the completion data originally delivered to Emsi Burning Glass. Emsi Burning Glass also uses a formula that favors programs with the largest completions, attributing a greater proportion of job openings to programs with a large number of completions by award level. This method utilizes the assumption that the higher output programs are likely feeding a higher degree of demand in Ravalli County.¹³ Appendix 4 contains the detailed mapping of each CIP code to all relevant occupations, by their six-digit SOC codes. A result of de-duplication is that in a region where a unique program, Commercial & Advertising Art for example, is larger than Graphic Design, it is assumed that completers of the Commercial & Advertising Art program will be offered a proportional, therefore larger number of job openings than students from the Graphic Design program.

Emsi Burning Glass also provides an alternative program demand gap analysis, which does not de-duplicate the average number of projected annual job openings based on the size of each program. Rather, the total number of job openings available for completers at each award level for each program is provided without further modification. Due to this modification, these numbers have not been de-duplicated, unlike the job openings shown in Chapter 3. As a result, job openings overstate the occupational demand for all

¹³ Note this adjustment is performed on a program-by-program basis without consideration of individual colleges or training providers. Therefore, a single program offered at one large institution has no advantage over a group of similar programs offered at several smaller educational providers given that the aggregate output of the smaller schools is near the output of the single larger school.

postsecondary program completers. While these figures have not been provided in this analysis, they are available upon request.

EDUCATION OUTPUT

There are several educational institutions in Ravalli County, some of which have programs similar to those offered at BVCC. Hence, completers at BVCC will be competing for some jobs with completers from other county institutions. Emsi Burning Glass determined education output by CIP codes and identified the number of completers for every award level within those CIP codes. To find the output for all public and private educational institutions in Ravalli County, Emsi Burning Glass uses data from the Integrated Postsecondary Educational System (IPEDS).¹⁴ These data are publicly available through the National Center for Educational Statistics. Completions data are averaged for a three-year period, 2018 through 2020, to smooth out any bumps in enrollment that may be unique to a particular academic year. Data gathered for BVCC from IPEDS were reviewed for accuracy by BVCC and updated with 2021 completions data.

The following tables display the completion breakdown by institution in Ravalli County at the award levels offered by BVCC. BVCC is one of two institutions in the county. Using a three-year average, BVCC students complete 68 non-credit programs every year, which (when including certificate level completions from the other college in the county) is 81.3% of the county's total completions.

Table A5.2: Non-Credit and Certificate Level Completions in Ravalli County by Postsecondary Institution

INSTITUTION	3-YEAR AVERAGE	% TOTAL
Bitterroot College UM	68	81.3%
Bitterroot School of Cosmetology	16	18.7%
Total	84	100%

Source: IPEDS.

¹⁴ These data come with inherent weaknesses. Primarily, numbers are only available for institutions that participate in or are applicants for any federal financial assistance program authorized by the Higher Education Act (HEA). Also, IPEDS does not collect data on non-credit courses and programs. Nevertheless, this system is the best source for collecting information on a broad range of educational institutions.

Table A5.3: Associate Degree Level Completions in Ravalli County by Postsecondary Institution

INSTITUTION	3-YEAR AVERAGE	% TOTAL
Bitterroot College UM	13	68.4%
Bitterroot School of Cosmetology	6	31.6%
Total	19	100%

Source: IPEDS.

APPENDIX 6: Employment Projections

Table A6.1: Employment Projections in Ravalli County by Occupation, 2020 and 2030

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Fast Food & Counter Workers	360	404	45	12.4%	82	\$9.93
Waiters & Waitresses	240	343	103	42.7%	66	\$8.94
Retail Salespersons	378	451	73	19.3%	65	\$11.25
Cashiers	342	315	(27)	(7.8%)	60	\$10.78
Home Health & Personal Care Aides	329	410	81	24.8%	60	\$12.63
Maids & Housekeeping Cleaners	241	311	70	29.0%	44	\$11.34
Bartenders	128	251	123	96.0%	44	\$9.55
Carpenters	445	457	12	2.6%	43	\$19.06
Childcare Workers	253	291	38	15.0%	42	\$9.92
Office Clerks, General	349	356	7	2.1%	41	\$14.63
Landscaping & Groundskeeping Workers	265	275	10	3.9%	38	\$16.87
Stockers & Order Fillers	167	198	31	18.6%	32	\$13.28
Construction Laborers	259	297	37	14.3%	31	\$15.86
Cooks, Restaurant	117	203	86	73.0%	31	\$11.76
Nursing Assistants	194	236	42	21.4%	30	\$13.15
Bookkeeping, Accounting, & Auditing Clerks	248	248	0	0.0%	28	\$15.80
Laborers & Freight, Stock, & Material Movers, Hand	159	203	44	27.6%	28	\$13.74
Heavy & Tractor-Trailer Truck Drivers	216	212	(4)	(2.0%)	24	\$20.95
Janitors & Cleaners, Except Maids & Housekeeping Cleaners	168	174	6	3.6%	23	\$12.33
Passenger Vehicle Drivers, Except Bus Drivers, Transit & Intercity	122	178	56	45.9%	23	\$17.82
Farmworkers & Laborers, Crop, Nursery, & Greenhouse	121	125	4	3.5%	21	\$12.00
General & Operations Managers	186	216	30	16.0%	20	\$37.39
First-Line Supervisors of Retail Sales Workers	175	186	11	6.2%	20	\$15.27
First-Line Supervisors of Food Preparation & Serving Workers	96	129	33	33.9%	20	\$16.57
Forest & Conservation Technicians	170	147	(23)	(13.5%)	19	\$18.65
Substitute Teachers, Short-Term	161	163	2	1.0%	19	\$9.85

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Personal Service Managers, All Other; Entertainment & Recreation Managers, Except Gambling; & Managers, All Other	178	216	37	21.0%	18	\$19.82
Elementary School Teachers, Except Special Education	232	222	(10)	(4.3%)	17	\$20.41
Teaching Assistants, Except Postsecondary	180	183	3	1.9%	17	\$12.17
Customer Service Representatives	117	128	11	9.8%	17	\$14.79
Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	144	144	0	0.0%	16	\$14.33
Farmers, Ranchers, & Other Agricultural Managers	182	110	(72)	(39.5%)	14	\$15.18
Maintenance & Repair Workers, General	112	138	26	23.1%	14	\$17.38
Medical Secretaries & Administrative Assistants	108	123	15	14.0%	14	\$14.93
Cooks, Institution & Cafeteria	81	89	8	10.1%	13	\$12.32
Registered Nurses	185	206	21	11.6%	12	\$31.48
Painters, Construction & Maintenance	120	133	12	10.3%	12	\$16.71
First-Line Supervisors of Construction Trades & Extraction Workers	113	119	6	5.6%	12	\$25.70
First-Line Supervisors of Office & Administrative Support Workers	110	114	4	3.4%	12	\$23.55
Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	109	118	9	8.0%	12	\$21.85
Plumbers, Pipefitters, & Steamfitters	99	112	13	13.0%	12	\$20.36
Hairdressers, Hairstylists, & Cosmetologists	95	107	12	12.7%	12	\$10.94
Electricians	81	105	24	30.3%	12	\$22.74
Animal Caretakers	60	77	17	28.4%	12	\$11.02
Automotive Service Technicians & Mechanics	105	110	5	4.5%	11	\$14.95
Project Management Specialists & Business Operations Specialists, All Other	103	118	16	15.1%	10	\$31.63
Military occupations	97	97	0	0.0%	10	\$15.51
Light Truck Drivers	81	87	6	7.7%	10	\$14.65
Packers & Packagers, Hand	61	70	9	14.0%	10	\$9.58
Coaches & Scouts	56	70	14	25.3%	10	\$9.21
Accountants & Auditors	92	101	10	10.4%	9	\$29.64
Biological Technicians	67	71	4	5.2%	9	\$20.67
Preschool Teachers, Except Special Education	55	77	21	38.7%	9	\$16.67
Receptionists & Information Clerks	54	70	16	29.6%	9	\$13.46

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Secondary School Teachers, Except Special & Career/Technical Education	106	106	0	0.0%	8	\$21.39
Construction Managers	92	106	14	15.2%	8	\$24.95
Insurance Sales Agents	71	79	8	10.9%	8	\$18.20
Human Resources Specialists	69	81	12	17.9%	8	\$22.23
Operating Engineers & Other Construction Equipment Operators	66	70	4	5.7%	8	\$22.24
First-Line Supervisors of Production & Operating Workers	64	72	9	13.4%	8	\$25.52
Medical Assistants	49	65	16	31.9%	8	\$16.30
Farmworkers, Farm, Ranch, & Aquacultural Animals	49	45	(4)	(8.3%)	8	\$12.13
Veterinary Assistants & Laboratory Animal Caretakers	36	48	13	35.6%	8	\$17.00
Dishwashers	35	50	16	45.0%	8	\$9.79
Laundry & Dry-Cleaning Workers	34	53	19	57.2%	8	\$12.53
Exercise Trainers & Group Fitness Instructors	33	51	17	52.1%	8	\$18.62
Dining Room & Cafeteria Attendants & Bartender Helpers	26	47	21	79.0%	8	\$9.37
Hotel, Motel, & Resort Desk Clerks	21	48	27	127.6%	8	\$13.68
Amusement & Recreation Attendants	21	38	17	83.7%	8	\$13.38
Tellers	78	58	(20)	(25.3%)	7	\$13.63
Software Developers & Software Quality Assurance Analysts & Testers	70	88	18	25.4%	7	\$44.29
Licensed Practical & Licensed Vocational Nurses	70	85	16	22.4%	7	\$18.17
Miscellaneous Assemblers & Fabricators	55	59	4	8.2%	7	\$14.53
Butchers & Meat Cutters	53	54	1	2.0%	7	\$16.05
Middle School Teachers, Except Special & Career/Technical Education	85	82	(3)	(3.2%)	6	\$23.56
Shipping, Receiving, & Inventory Clerks	55	58	2	4.4%	6	\$13.86
Veterinary Technologists & Technicians	54	72	19	34.6%	6	\$16.60
First-Line Supervisors of Mechanics, Installers, & Repairers	53	60	8	14.8%	6	\$29.77
Billing & Posting Clerks	53	57	4	7.5%	6	\$15.81
Parts Salespersons	45	50	5	12.0%	6	\$12.71
Dental Assistants	42	46	4	9.4%	6	\$13.52
Market Research Analysts & Marketing Specialists	41	53	12	28.1%	6	\$27.69
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	36	46	11	30.2%	6	\$22.98

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Food Servers, Nonrestaurant	28	37	10	34.8%	6	\$10.85
Food Preparation Workers	24	35	11	44.6%	6	\$10.55
School Bus Monitors & Protective Service Workers, All Other	22	26	5	22.1%	6	\$16.10
Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop	16	29	13	83.9%	6	\$8.76
Cabinetmakers & Bench Carpenters	57	52	(5)	(8.3%)	5	\$14.46
Pharmacy Technicians	56	61	6	10.3%	5	\$17.69
Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	45	49	5	10.3%	5	\$13.52
Packaging & Filling Machine Operators & Tenders	38	46	8	20.9%	5	\$18.19
Management Analysts	36	45	9	25.2%	5	\$41.19
Bakers	36	38	2	6.4%	5	\$11.17
Self-Enrichment Teachers	32	40	8	24.6%	5	\$14.03
Social & Human Service Assistants	32	39	7	22.8%	5	\$16.82
Counter & Rental Clerks	32	38	6	18.0%	5	\$12.22
Machinists	30	39	9	30.7%	5	\$16.78
Cooks, Fast Food	30	33	3	8.7%	5	\$9.74
Recreation Workers	23	32	9	36.8%	5	\$14.34
Real Estate Sales Agents	51	48	(3)	(6.4%)	4	\$19.73
Biological Scientists, All Other	45	44	(1)	(1.7%)	4	\$38.69
Police & Sheriff's Patrol Officers	44	48	5	11.0%	4	\$23.02
Installation, Maintenance, & Repair Workers, All Other	40	41	1	2.0%	4	\$18.12
Substance Abuse, Behavioral Disorder, & Mental Health Counselors	38	36	(2)	(6.3%)	4	\$23.53
First-Line Supervisors of Non-Retail Sales Workers	37	41	4	11.5%	4	\$21.51
Clergy	37	39	2	5.1%	4	\$21.23
Buyers & Purchasing Agents	37	38	2	4.1%	4	\$21.42
Information & Record Clerks, All Other	37	35	(1)	(4.0%)	4	\$17.30
Heating, Air Conditioning, & Refrigeration Mechanics & Installers	36	41	5	13.5%	4	\$18.58
Welders, Cutters, Solderers, & Brazers	36	37	1	2.9%	4	\$20.14
Medical & Health Services Managers	34	45	11	32.8%	4	\$42.03
Inspectors, Testers, Sorters, Samplers, & Weighers	31	34	3	9.3%	4	\$19.80
Industrial Truck & Tractor Operators	29	34	5	16.2%	4	\$19.13

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Tire Repairers & Changers	29	31	2	6.5%	4	\$13.95
Emergency Medical Technicians & Paramedics	28	44	15	54.5%	4	\$19.63
Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders	28	33	5	16.7%	4	\$16.19
Tutors & Teachers & Instructors, All Other	28	32	4	15.7%	4	\$22.29
First-Line Supervisors of Personal Service & Entertainment Workers, Except Gambling Services	26	33	7	27.4%	4	\$18.84
Physical Therapist Assistants	25	34	9	36.9%	4	\$25.38
Driver/Sales Workers	25	33	7	27.6%	4	\$15.57
First-Line Supervisors of Farming, Fishing, & Forestry Workers	25	26	1	3.2%	4	\$19.86
Cleaners of Vehicles & Equipment	24	30	6	25.0%	4	\$13.03
Refuse & Recyclable Material Collectors	24	28	4	17.9%	4	\$20.45
Security Guards	12	25	14	120.1%	4	\$14.09
Gambling Dealers	12	23	11	89.3%	4	\$11.41
Veterinarians	41	54	13	31.6%	3	\$44.55
Postal Service Mail Carriers	41	37	(4)	(9.3%)	3	\$22.71
Computer User Support Specialists	39	42	4	9.2%	3	\$21.39
Education Administrators, Kindergarten through Secondary	35	35	0	0.0%	3	\$35.34
Claims Adjusters, Examiners, & Investigators	31	34	3	11.1%	3	\$31.43
Microbiologists	31	32	0	0.0%	3	\$51.14
Cost Estimators	29	32	2	8.3%	3	\$23.83
Graphic Designers	28	32	4	12.6%	3	\$19.13
Bus & Truck Mechanics & Diesel Engine Specialists	27	30	3	11.2%	3	\$22.06
Cement Masons & Concrete Finishers	27	29	2	7.0%	3	\$20.00
Kindergarten Teachers, Except Special Education	27	26	(1)	(4.7%)	3	\$22.19
Inspectors, Testers, Sorters, Samplers, & Weighers	26	34	3	9.3%	3	\$19.80
Chief Executives	31	31	6	24.1%	3	\$31.38
Aircraft Mechanics & Service Technicians	25	30	5	20.2%	3	\$26.53
First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers	25	25	0	0.0%	3	\$24.13
Drywall & Ceiling Tile Installers	24	29	5	20.8%	3	\$17.58

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Photographers	24	27	3	13.4%	3	\$16.22
Massage Therapists	23	27	4	17.8%	3	\$17.71
Multiple Machine Tool Setters, Operators, & Tenders, Metal & Plastic	23	26	2	10.3%	3	\$20.53
Financial Managers	22	32	10	45.8%	3	\$39.26
First-Line Supervisors of Transportation & Material Moving Workers, Except Aircraft Cargo Handling Supervisors	22	26	4	15.7%	3	\$21.96
Dental Laboratory Technicians	19	21	3	14.2%	3	\$11.79
First-Line Supervisors of Housekeeping & Janitorial Workers	18	24	6	30.1%	3	\$21.38
Agricultural Workers, All Other	18	16	(1)	(6.2%)	3	\$13.56
Production Workers, All Other	17	23	6	35.3%	3	\$18.89
Jewelers & Precious Stone & Metal Workers	16	25	10	61.1%	3	\$15.01
Forest & Conservation Workers	16	16	0	0.0%	3	\$14.15
Demonstrators & Product Promoters	12	15	3	21.9%	3	\$14.74
Pharmacists	53	53	0	0.0%	2	\$58.14
Lawyers	51	46	(5)	(9.5%)	2	\$30.55
Property, Real Estate, & Community Association Managers	33	31	(2)	(4.9%)	2	\$15.68
Physical Therapists	31	41	9	30.2%	2	\$39.27
Medical Dosimetrists, Medical Records Specialists, & Health Technologists & Technicians, All Other	30	32	2	7.1%	2	\$17.57
Transportation Security Screeners	30	26	(4)	(12.2%)	2	\$23.09
Loan Officers	26	25	(1)	(4.2%)	2	\$29.40
Clinical Laboratory Technologists & Technicians	24	26	2	7.1%	2	\$30.31
Personal Financial Advisors	23	25	3	12.2%	2	\$34.75
Educational, Guidance, & Career Counselors & Advisors	23	25	2	9.6%	2	\$24.25
Mobile Heavy Equipment Mechanics, Except Engines	23	25	2	8.1%	2	\$22.37
Computer Occupations, All Other	22	25	3	15.9%	2	\$36.80
Natural Sciences Managers	22	23	1	5.4%	2	\$52.17
Highway Maintenance Workers	22	23	1	3.3%	2	\$20.35
Special Education Teachers, Kindergarten & Elementary School	22	22	0	0.0%	2	\$16.50
Directors, Religious Activities & Education	22	19	(3)	(13.3%)	2	\$9.93
Web Developers & Digital Interface Designers	21	22	2	8.3%	2	\$19.19

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Postal Service Clerks	21	19	(3)	(12.4%)	2	\$24.40
Zoologists & Wildlife Biologists	20	19	(1)	(3.5%)	2	\$32.35
Nurse Practitioners	19	30	12	63.1%	2	\$52.78
Medical Scientists, Except Epidemiologists	19	23	4	23.5%	2	\$50.18
Child, Family, & School Social Workers	19	22	3	15.9%	2	\$20.43
Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	19	21	2	12.6%	2	\$37.28
Compliance Officers	19	20	1	5.6%	2	\$38.08
Social Workers, All Other	19	19	0	0.0%	2	\$19.43
Woodworking Machine Setters, Operators, & Tenders, Except Sawing	19	17	(2)	(8.8%)	2	\$17.85
Brickmasons & Blockmasons	19	16	(3)	(14.6%)	2	\$21.22
Industrial Machinery Mechanics	18	24	6	31.3%	2	\$25.36
Training & Development Specialists	18	22	4	21.5%	2	\$32.37
Fundraisers	18	21	3	16.8%	2	\$20.27
Computer & Information Systems Managers	18	20	3	14.7%	2	\$46.79
Automotive Body & Related Repairers	18	20	1	8.1%	2	\$17.99
Insurance Claims & Policy Processing Clerks	18	19	1	6.8%	2	\$18.69
Tax Preparers	18	18	0	0.0%	2	\$19.82
Musicians & Singers	18	18	0	0.0%	2	\$17.76
Interviewers, Except Eligibility & Loan	18	17	(1)	(7.7%)	2	\$14.03
Healthcare Social Workers	17	20	2	13.3%	2	\$20.98
Roofers	17	20	3	18.3%	2	\$15.10
Physician Assistants	16	22	7	42.9%	2	\$53.91
Speech-Language Pathologists	16	21	5	34.3%	2	\$32.95
Computer Systems Analysts	16	19	3	18.5%	2	\$31.64
Civil Engineers	16	17	1	5.9%	2	\$35.53
Paralegals & Legal Assistants	16	15	(0)	0.0%	2	\$17.22
Logging Equipment Operators	16	13	(3)	(18.2%)	2	\$16.31
Rehabilitation Counselors	15	22	7	48.8%	2	\$20.86
Railroad Conductors & Yardmasters	15	20	6	38.2%	2	\$27.93
Crematory Operators & Personal Care & Service Workers, All Other	15	18	3	19.1%	2	\$15.06
Community & Social Service Specialists, All Other	15	17	2	13.3%	2	\$21.60

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Manicurists & Pedicurists	15	16	1	7.0%	2	\$10.71
Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors	15	14	(2)	(11.4%)	2	\$18.05
Chemical Technicians	14	19	5	33.4%	2	\$27.99
Telecommunications Line Installers & Repairers	14	19	5	36.6%	2	\$20.81
Food Service Managers	14	19	4	29.8%	2	\$18.00
Helpers--Installation, Maintenance, & Repair Workers	14	16	1	10.0%	2	\$12.37
Court, Municipal, & License Clerks	14	15	1	6.0%	2	\$15.81
Door-To-Door Sales Workers, News & Street Vendors, & Related Workers	14	14	0	0.0%	2	\$9.31
Locomotive Engineers	13	18	5	39.2%	2	\$38.28
Social & Community Service Managers	13	17	4	27.1%	2	\$32.04
Environmental Scientists & Specialists, Including Health	13	15	2	16.5%	2	\$36.84
Residential Advisors	13	15	2	15.4%	2	\$16.63
Animal Trainers	13	14	1	8.9%	2	\$10.25
Agricultural Equipment Operators	13	13	0	0.0%	2	\$13.08
Social Science Research Assistants	12	12	0	0.0%	2	\$19.04
Pest Control Workers	12	12	0	0.0%	2	\$14.93
Farm Equipment Mechanics & Service Technicians	11	15	4	35.1%	2	\$20.91
Mixing & Blending Machine Setters, Operators, & Tenders	11	13	2	21.7%	2	\$18.09
Tree Trimmers & Pruners	11	11	0	0.0%	2	\$16.99
Chefs & Head Cooks	10	16	6	58.3%	2	\$21.01
Sales & Related Workers, All Other	10	13	2	22.1%	2	\$20.52
Helpers--Production Workers	10	13	2	24.1%	2	\$14.82
Production, Planning, & Expediting Clerks	9	14	5	57.8%	2	\$23.34
Telecommunications Equipment Installers & Repairers, Except Line Installers	9	13	4	38.4%	2	\$21.94
Shoe & Leather Workers & Repairers	9	13	5	56.9%	2	\$12.73
Gambling & Sports Book Writers & Runners	8	13	5	67.2%	2	\$10.85
Ushers, Lobby Attendants, & Ticket Takers	5	8	2	45.3%	2	\$10.05
Physicians, All Other; & Ophthalmologists, Except Pediatric	29	34	5	15.6%	1	\$121.86
Dental Hygienists	20	22	2	10.8%	1	\$37.67

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Radiologic Technologists & Technicians	17	19	2	13.0%	1	\$27.62
Tile & Stone Setters	17	17	0	0.0%	1	\$15.25
Mechanical Door Repairers	17	16	(2)	(9.8%)	1	\$16.00
Family Medicine Physicians	16	19	3	22.1%	1	\$114.00
Dispatchers, Except Police, Fire, & Ambulance	16	15	(2)	(9.4%)	1	\$15.66
Loan Interviewers & Clerks	16	14	(1)	(8.2%)	1	\$17.14
Industrial Engineers	15	19	4	23.1%	1	\$45.64
Industrial Production Managers	14	16	2	13.6%	1	\$47.29
Dentists, General	14	15	1	8.7%	1	\$51.53
Librarians & Media Collections Specialists	14	14	0	0.0%	1	\$26.00
Mechanical Engineers	13	16	3	20.5%	1	\$35.44
Electrical & Electronics Repairers, Commercial & Industrial Equipment	13	14	1	4.4%	1	\$31.35
Sheet Metal Workers	13	14	1	7.2%	1	\$18.58
Acupuncturists & Healthcare Diagnosing or Treating Practitioners, All Other	13	13	0	0.0%	1	\$48.15
Writers & Authors	13	12	(1)	(7.2%)	1	\$19.11
Financial & Investment Analysts, Financial Risk Specialists, & Financial Specialists, All Other	12	16	4	32.7%	1	\$31.82
Securities, Commodities, & Financial Services Sales Agents	12	14	2	16.8%	1	\$23.83
Conservation Scientists	12	12	0	0.0%	1	\$28.74
Therapists, All Other	12	12	0	0.0%	1	\$23.79
Instructional Coordinators	12	12	0	0.0%	1	\$23.41
Real Estate Brokers	12	11	(1)	(10.1%)	1	\$24.75
Cargo & Freight Agents	12	7	(5)	(41.0%)	1	\$18.68
Sales Managers	11	14	3	30.2%	1	\$54.39
Public Relations Specialists	11	13	2	15.2%	1	\$23.89
Engineers, All Other	11	12	1	5.1%	1	\$40.28
Glaziers	11	12	1	12.0%	1	\$19.46
Detectives & Criminal Investigators	11	11	0	0.0%	1	\$46.04
Psychologists, All Other	11	11	0	0.0%	1	\$43.91
Clinical, Counseling, & School Psychologists	11	10	(1)	(5.9%)	1	\$26.31
Property Appraisers & Assessors	11	10	(1)	(6.8%)	1	\$18.05

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
File Clerks	11	10	(2)	(13.5%)	1	\$10.84
Executive Secretaries & Executive Administrative Assistants	11	9	(1)	(9.7%)	1	\$22.81
Occupational Therapists	10	13	3	32.9%	1	\$38.84
Marketing Managers	10	13	3	30.5%	1	\$37.19
Respiratory Therapists	10	12	2	20.1%	1	\$26.42
Art Directors	10	12	2	17.6%	1	\$24.11
Computer Numerically Controlled Tool Operators	10	12	2	18.5%	1	\$20.77
Interpreters & Translators	10	12	2	15.3%	1	\$19.69
Structural Iron & Steel Workers	10	12	2	15.5%	1	\$16.60
Molding, Coremaking, & Casting Machine Setters, Operators, & Tenders, Metal & Plastic	10	12	2	24.9%	1	\$10.52
Legislators	10	11	1	11.0%	1	\$12.71
Tailors, Dressmakers, & Custom Sewers	10	11	1	7.9%	1	\$7.51
Environmental Engineers	10	10	0	0.0%	1	\$46.97
Fence Erectors	10	10	0	0.0%	1	\$15.91
Library Technicians	10	10	0	0.0%	1	\$14.00
Rolling Machine Setters, Operators, & Tenders, Metal & Plastic	10	9	(1)	(12.6%)	1	\$23.06
Meeting, Convention, & Event Planners	9	12	3	31.6%	1	\$17.43
Computer Network Architects	9	11	1	13.6%	1	\$47.70
Electrical Engineers	9	11	1	14.0%	1	\$44.85
Reservation & Transportation Ticket Agents & Travel Clerks	9	11	2	27.2%	1	\$13.42
Technical Writers	9	10	1	9.4%	1	\$35.19
Network & Computer Systems Administrators	9	10	1	6.0%	1	\$31.31
Calibration Technologists & Technicians & Engineering Technicians, Except Drafters, All Other	9	10	1	7.1%	1	\$29.03
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders	9	10	1	14.2%	1	\$18.74
Meat, Poultry, & Fish Cutters & Trimmers	9	10	2	20.5%	1	\$15.82
Helpers--Pipelayers, Plumbers, Pipefitters, & Steamfitters	9	10	1	10.8%	1	\$15.45
Soil & Plant Scientists	9	9	0	0.0%	1	\$37.24
Title Examiners, Abstractors, & Searchers	9	8	(1)	(10.7%)	1	\$20.62
Payroll & Timekeeping Clerks	9	8	(1)	(8.9%)	1	\$19.38

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Human Resources Assistants, Except Payroll & Timekeeping	9	8	(1)	(5.9%)	1	\$17.10
Furniture Finishers	9	8	(0)	0.0%	1	\$16.61
Order Clerks	9	7	(2)	(21.1%)	1	\$15.62
Sewing Machine Operators	8	12	3	41.4%	1	\$12.75
Postsecondary Teachers, General	8	11	3	43.4%	1	\$32.84
Environmental Science & Protection Technicians, Including Health	8	10	2	20.0%	1	\$20.15
Chemists	8	9	1	14.5%	1	\$32.32
Occupational Health & Safety Specialists	8	9	1	19.3%	1	\$28.75
Merchandise Displayers & Window Trimmers	8	9	1	17.1%	1	\$13.53
Surgical Technologists	8	8	0	0.0%	1	\$22.19
Woodworkers, All Other	8	8	0	0.0%	1	\$13.22
Sawing Machine Setters, Operators, & Tenders, Wood	8	6	(2)	(19.3%)	1	\$19.18
Legal Secretaries & Administrative Assistants	8	5	(3)	(34.9%)	1	\$13.47
Logisticians	7	10	3	36.1%	1	\$40.53
Commercial Pilots	7	10	2	32.8%	1	\$30.40
Motorcycle Mechanics	7	10	2	33.2%	1	\$16.76
Human Resources Managers	7	9	2	33.3%	1	\$42.53
Public Safety Telecommunicators	7	9	1	16.9%	1	\$19.47
Electronics Engineers, Except Computer	7	8	1	16.3%	1	\$35.30
Computer Network Support Specialists	7	8	1	14.2%	1	\$28.56
Avionics Technicians	7	8	1	8.9%	1	\$25.65
Mechanical Engineering Technologists & Technicians	7	8	2	26.1%	1	\$23.45
Counselors, All Other	7	8	0	0.0%	1	\$22.75
Outdoor Power Equipment & Other Small Engine Mechanics	7	8	1	20.6%	1	\$19.43
Interior Designers	7	8	1	18.8%	1	\$18.99
Office & Administrative Support Workers, All Other	7	8	1	13.0%	1	\$14.20
Fine Artists, Including Painters, Sculptors, & Illustrators	7	8	1	9.5%	1	\$6.86
Transportation, Storage, & Distribution Managers	7	7	0	0.0%	1	\$47.88
Atmospheric & Space Scientists	7	7	0	0.0%	1	\$40.25
Budget Analysts	7	7	0	0.0%	1	\$33.06

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Construction & Building Inspectors	7	7	0	0.0%	1	\$17.32
Agricultural & Food Science Technicians	7	7	0	0.0%	1	\$16.60
Helpers--Carpenters	7	7	0	0.0%	1	\$15.24
Data Entry Keyers	7	7	0	0.0%	1	\$13.31
Tax Examiners & Collectors, & Revenue Agents	7	6	(1)	(12.4%)	1	\$23.81
Cutting, Punching, & Press Machine Setters, Operators, & Tenders, Metal & Plastic	7	6	(0)	0.0%	1	\$18.55
Bill & Account Collectors	7	6	(1)	(17.2%)	1	\$18.02
Computer, Automated Teller, & Office Machine Repairers	7	6	(1)	(11.7%)	1	\$16.17
Mail Clerks & Mail Machine Operators, Except Postal Service	7	6	(0)	0.0%	1	\$11.01
New Accounts Clerks	7	5	(2)	(25.8%)	1	\$12.79
Control & Valve Installers & Repairers, Except Mechanical Door	6	7	1	24.4%	1	\$37.67
Correctional Officers & Jailers	6	7	0	0.0%	1	\$20.14
Etchers & Engravers	6	7	1	17.2%	1	\$18.90
Motor Vehicle Operators, All Other	6	7	2	28.8%	1	\$16.42
Editors	6	7	1	14.8%	1	\$15.84
Couriers & Messengers	6	7	1	16.3%	1	\$13.21
Social Scientists & Related Workers, All Other	6	6	0	0.0%	1	\$38.74
Pesticide Handlers, Sprayers, & Applicators, Vegetation	6	6	0	0.0%	1	\$24.38
Designers, All Other	6	6	0	0.0%	1	\$16.29
Fallers	6	5	(2)	(27.1%)	1	\$32.92
Office Machine Operators, Except Computer	6	4	(2)	(26.7%)	1	\$12.01
Miscellaneous First-Line Supervisors, Protective Service Workers	5	7	1	21.4%	1	\$32.53
Firefighters	5	7	2	34.7%	1	\$23.19
Motorboat Mechanics & Service Technicians	5	7	2	35.1%	1	\$19.32
Miscellaneous Entertainers & Performers, Sports & Related Workers	5	7	2	42.9%	1	\$17.33
Insulation Workers, Floor, Ceiling, & Wall	5	7	2	36.3%	1	\$15.74
Automotive & Watercraft Service Attendants	5	7	2	30.2%	1	\$13.16
Food Preparation & Serving Related Workers, All Other	5	7	3	57.5%	1	\$12.12
Lodging Managers	5	7	2	42.1%	1	\$10.55

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Railroad Brake, Signal, & Switch Operators & Locomotive Firers	5	6	2	34.5%	1	\$30.63
Metal-Refining Furnace Operators & Tenders	5	6	2	32.3%	1	\$16.94
Skincare Specialists	5	6	1	20.1%	1	\$12.67
News Analysts, Reporters, & Journalists	5	6	0	0.0%	1	\$10.32
Upholsterers	5	6	1	10.5%	1	\$9.74
Airline Pilots, Copilots, & Flight Engineers	5	5	0	0.0%	1	\$39.06
Compensation, Benefits, & Job Analysis Specialists	5	5	0	0.0%	1	\$30.09
Forensic Science Technicians	5	5	0	0.0%	1	\$28.71
Precision Instrument & Equipment Repairers, All Other	5	5	0	0.0%	1	\$20.13
Water & Wastewater Treatment Plant & System Operators	5	5	0	0.0%	1	\$18.91
Cooks, All Other	5	5	0	0.0%	1	\$16.02
Cutting & Slicing Machine Setters, Operators, & Tenders	5	5	0	0.0%	1	\$14.97
Molders, Shapers, & Casters, Except Metal & Plastic	5	5	0	0.0%	1	\$12.70
Helpers--Painters, Paperhangers, Plasterers, & Stucco Masons	5	5	0	0.0%	1	\$11.87
Travel Agents	5	4	(1)	(17.6%)	1	\$16.55
Logging Workers, All Other	5	3	(1)	(25.2%)	1	\$20.36
Telemarketers	5	3	(2)	(35.0%)	1	\$11.11
Administrative Services Managers	4	7	2	51.6%	1	\$40.88
Rail-Track Laying & Maintenance Equipment Operators	4	6	2	38.4%	1	\$27.30
Helpers--Electricians	4	6	1	33.4%	1	\$18.16
Tour & Travel Guides	4	6	2	48.9%	1	\$14.36
Rail Car Repairers	4	5	1	37.1%	1	\$27.90
Community Health Workers	4	5	1	15.5%	1	\$24.93
Maintenance Workers, Machinery	4	5	2	41.4%	1	\$22.83
Healthcare Support Workers, All Other	4	5	1	23.0%	1	\$18.81
Miscellaneous Construction & Related Workers	4	5	0	0.0%	1	\$17.19
Phlebotomists	4	5	0	0.0%	1	\$16.82
Food Batchmakers	4	5	1	37.5%	1	\$16.65
Cleaning, Washing, & Metal Pickling Equipment Operators & Tenders	4	5	0	0.0%	1	\$15.70
Graders & Sorters, Agricultural Products	4	4	0	0.0%	1	\$11.66

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Helpers, Construction Trades, All Other	4	4	0	0.0%	1	\$11.10
Curators	3	4	1	29.6%	1	\$23.35
Religious Workers, All Other	3	4	1	34.2%	1	\$14.89
Aircraft Service Attendants & Transportation Workers, All Other	3	4	1	23.3%	1	\$14.03
Funeral Attendants	3	4	1	35.8%	1	\$12.20
Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers	2	5	3	159.6%	1	\$13.41
Passenger Attendants	2	3	1	61.5%	1	\$12.26
Cooks, Short Order	1	6	5	764.0%	1	\$12.05
Chiropractors	9	10	1	9.5%	0	\$27.97
Anesthesiologists	8	9	1	19.1%	0	\$81.64
General Internal Medicine Physicians	7	8	1	10.6%	0	\$78.77
Surgeons, Except Ophthalmologists	7	7	0	0.0%	0	\$96.89
Financial Examiners	7	7	0	0.0%	0	\$32.53
Computer Programmers	7	6	(1)	(14.1%)	0	\$39.30
Postmasters & Mail Superintendents	7	6	(1)	(14.0%)	0	\$35.78
Architects, Except Landscape & Naval	7	6	(1)	(15.7%)	0	\$29.76
First-Line Supervisors of Police & Detectives	6	7	1	11.7%	0	\$29.17
Optometrists	6	6	0	0.0%	0	\$48.17
Probation Officers & Correctional Treatment Specialists	6	6	0	0.0%	0	\$23.52
Nurse Anesthetists	5	6	1	25.6%	0	\$78.53
Computer Hardware Engineers	5	6	0	0.0%	0	\$46.97
Database Administrators & Architects	5	6	0	0.0%	0	\$35.79
Exercise Physiologists	5	6	1	14.5%	0	\$18.60
Power Distributors & Dispatchers	5	5	0	0.0%	0	\$57.29
Civil Engineering Technologists & Technicians	5	5	0	0.0%	0	\$23.66
Recreational Therapists	5	5	0	0.0%	0	\$23.56
Opticians, Dispensing	5	5	0	0.0%	0	\$20.21
Mechanical Drafters	5	4	(1)	(19.0%)	0	\$27.69
Lighting Technicians & Media & Communication Equipment Workers, All Other	5	4	(1)	(16.8%)	0	\$21.46
Mental Health & Substance Abuse Social Workers	5	4	(1)	(23.3%)	0	\$19.59

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Brokerage Clerks	5	4	(1)	(27.6%)	0	\$18.56
Carpet Installers	5	4	(1)	(12.3%)	0	\$16.05
Switchboard Operators, Including Answering Service	5	4	(1)	(22.9%)	0	\$11.57
Public Relations & Fundraising Managers	4	5	1	22.2%	0	\$46.44
Audiologists	4	5	1	17.0%	0	\$38.09
Diagnostic Medical Sonographers	4	5	1	19.4%	0	\$34.96
Special Education Teachers, Secondary School	4	5	1	19.0%	0	\$27.92
Audio & Video Technicians	4	5	1	12.8%	0	\$18.75
Health Education Specialists	4	5	0	0.0%	0	\$18.42
Dietitians & Nutritionists	4	5	1	22.2%	0	\$18.23
Eligibility Interviewers, Government Programs	4	5	0	0.0%	0	\$18.23
Floor Layers, Except Carpet, Wood, & Hard Tiles	4	5	1	23.8%	0	\$17.66
Weighers, Measurers, Checkers, & Samplers, Recordkeeping	4	5	0	0.0%	0	\$14.70
Home Appliance Repairers	4	5	0	0.0%	0	\$11.47
Obstetricians & Gynecologists	4	4	0	0.0%	0	\$85.68
Pediatricians, General	4	4	0	0.0%	0	\$75.69
Data Scientists & Mathematical Science Occupations, All Other	4	4	0	0.0%	0	\$42.25
Training & Development Managers	4	4	0	0.0%	0	\$42.04
Electrical & Electronic Engineering Technologists & Technicians	4	4	0	0.0%	0	\$34.69
Anthropologists & Archeologists	4	4	0	0.0%	0	\$30.93
Arbitrators, Mediators, & Conciliators	4	4	0	0.0%	0	\$30.46
Credit Analysts	4	4	0	0.0%	0	\$28.17
Electric Motor, Power Tool, & Related Repairers	4	4	0	0.0%	0	\$25.50
Producers & Directors	4	4	0	0.0%	0	\$25.07
Architectural & Civil Drafters	4	4	0	0.0%	0	\$23.10
Security & Fire Alarm Systems Installers	4	4	0	0.0%	0	\$19.00
Credit Counselors	4	4	0	0.0%	0	\$16.99
Set & Exhibit Designers	4	4	0	0.0%	0	\$14.47
Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders, Metal & Plastic	4	4	0	0.0%	0	\$13.09
Craft Artists	4	4	0	0.0%	0	\$4.75

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Credit Authorizers, Checkers, & Clerks	4	3	(0)	0.0%	0	\$18.73
Electronic Equipment Installers & Repairers, Motor Vehicles	4	3	(1)	(32.0%)	0	\$14.01
Fishing & Hunting Workers	4	3	(0)	0.0%	0	\$13.51
Helpers--Brickmasons, Blockmasons, Stonemasons, & Tile & Marble Setters	4	3	(1)	(27.4%)	0	\$11.94
Building Cleaning Workers, All Other	4	2	(2)	(46.6%)	0	\$12.84
Mining & Geological Engineers, Including Mining Safety Engineers	3	4	0	0.0%	0	\$64.90
Physicists	3	4	0	0.0%	0	\$56.19
Purchasing Managers	3	4	1	42.3%	0	\$53.76
Insulation Workers, Mechanical	3	4	1	19.4%	0	\$23.42
Athletic Trainers	3	4	1	25.7%	0	\$20.86
Private Detectives & Investigators	3	4	1	52.9%	0	\$20.86
Actors	3	4	1	26.3%	0	\$18.75
Furnace, Kiln, Oven, Drier, & Kettle Operators & Tenders	3	4	1	26.7%	0	\$17.24
Paper Goods Machine Setters, Operators, & Tenders	3	4	1	20.1%	0	\$13.88
Floral Designers	3	4	1	22.3%	0	\$11.39
Special Effects Artists & Animators	3	4	0	0.0%	0	\$10.24
Psychiatrists	3	3	0	0.0%	0	\$86.01
Architectural & Engineering Managers	3	3	0	0.0%	0	\$49.87
Crane & Tower Operators	3	3	0	0.0%	0	\$30.60
Surveyors	3	3	0	0.0%	0	\$23.77
Electrical & Electronics Drafters	3	3	0	0.0%	0	\$23.72
Media & Communication Workers, All Other	3	3	0	0.0%	0	\$20.60
Excavating & Loading Machine & Dragline Operators, Surface Mining	3	3	0	0.0%	0	\$19.46
Reinforcing Iron & Rebar Workers	3	3	0	0.0%	0	\$15.83
Music Directors & Composers	3	3	0	0.0%	0	\$12.85
Artists & Related Workers, All Other	3	3	0	0.0%	0	\$12.33
Audiovisual Equipment Installers & Repairers	3	3	0	0.0%	0	\$12.21
Printing Press Operators	3	2	(1)	(23.9%)	0	\$17.49
Surveying & Mapping Technicians	3	2	(0)	0.0%	0	\$16.04
Aerospace Engineers	2	3	1	36.0%	0	\$51.34
Signal & Track Switch Repairers	2	3	1	33.5%	0	\$33.77

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Electrical & Electronics Installers & Repairers, Transportation Equipment	2	3	1	42.5%	0	\$32.87
Information Security Analysts	2	3	1	32.7%	0	\$32.84
Transportation Inspectors	2	3	1	54.5%	0	\$28.68
Urban & Regional Planners	2	3	0	0.0%	0	\$25.88
Marriage & Family Therapists	2	3	1	60.7%	0	\$22.79
Health Information Technologists, Medical Registrars, Surgical Assistants, & Healthcare Practitioners & Technical Workers, All Other	2	3	1	46.6%	0	\$22.59
Medical Equipment Preparers	2	3	0	0.0%	0	\$22.14
Court Reporters & Simultaneous Captioners	2	3	1	35.6%	0	\$21.12
Education & Childcare Administrators, Preschool & Daycare	2	3	1	61.0%	0	\$19.22
Advertising Sales Agents	2	3	0	0.0%	0	\$14.83
Locksmiths & Safe Repairers	2	3	1	51.8%	0	\$12.98
Medical Transcriptionists	2	3	1	27.9%	0	\$8.81
Compensation & Benefits Managers	2	2	0	0.0%	0	\$53.10
Nuclear Engineers	2	2	0	0.0%	0	\$50.18
Bioengineers & Biomedical Engineers	2	2	0	0.0%	0	\$40.11
Sailors & Marine Oilers	2	2	0	0.0%	0	\$32.94
Operations Research Analysts	2	2	0	0.0%	0	\$32.76
Captains, Mates, & Pilots of Water Vessels	2	2	0	0.0%	0	\$32.24
Special Education Teachers, Preschool	2	2	0	0.0%	0	\$31.25
Education Administrators, All Other	2	2	0	0.0%	0	\$30.64
Stationary Engineers & Boiler Operators	2	2	0	0.0%	0	\$30.62
Film & Video Editors	2	2	0	0.0%	0	\$24.74
Landscape Architects	2	2	0	0.0%	0	\$24.55
Foresters	2	2	0	0.0%	0	\$22.89
Educational Instruction & Library Workers, All Other	2	2	0	0.0%	0	\$22.75
Earth Drillers, Except Oil & Gas; & Explosives Workers, Ordnance Handling Experts, & Blasters	2	2	0	0.0%	0	\$20.39
Structural Metal Fabricators & Fitters	2	2	0	0.0%	0	\$19.23
Tapers	2	2	0	0.0%	0	\$17.78
Life, Physical, & Social Science Technicians, All Other	2	2	0	0.0%	0	\$17.54

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Painting, Coating, & Decorating Workers	2	2	0	0.0%	0	\$16.04
Rock Splitters, Quarry	2	2	0	0.0%	0	\$15.69
Plasterers & Stucco Masons	2	2	0	0.0%	0	\$15.36
Stonemasons	2	2	0	0.0%	0	\$14.58
Grinding & Polishing Workers, Hand	2	2	0	0.0%	0	\$13.76
Psychiatric Technicians	2	2	0	0.0%	0	\$13.40
Slaughterers & Meat Packers	2	2	0	0.0%	0	\$13.35
Watch & Clock Repairers	2	2	0	0.0%	0	\$11.95
Musical Instrument Repairers & Tuners	2	2	0	0.0%	0	\$10.58
Shampooers	2	2	0	0.0%	0	\$8.95
Judges, Magistrate Judges, & Magistrates	2	1	(0)	0.0%	0	\$82.88
Word Processors & Typists	2	1	(1)	(47.6%)	0	\$14.43
Barbers	2	1	(1)	(27.5%)	0	\$12.13
Machine Feeders & Offbearers	2	1	(0)	0.0%	0	\$12.13
Health & Safety Engineers, Except Mining Safety Engineers & Inspectors	1	2	1	43.6%	0	\$32.26
Geological & Hydrologic Technicians	1	2	0	0.0%	0	\$29.25
Lathe & Turning Machine Tool Setters, Operators, & Tenders, Metal & Plastic	1	2	0	0.0%	0	\$17.91
Agents & Business Managers of Artists, Performers, & Athletes	1	2	0	0.0%	0	\$16.91
Material Moving Workers, All Other	1	2	1	48.4%	0	\$16.73
Camera Operators, Television, Video, & Film	1	2	0	0.0%	0	\$16.67
Coin, Vending, & Amusement Machine Servicers & Repairers	1	2	1	79.5%	0	\$15.36
Dancers	1	2	1	86.3%	0	\$15.33
Parking Attendants	1	2	1	103.6%	0	\$13.91
Ambulance Drivers & Attendants, Except Emergency Medical Technicians	1	2	1	84.4%	0	\$10.93
Automotive Glass Installers & Repairers	1	2	0	0.0%	0	\$10.56
Chemical Engineers	1	1	0	0.0%	0	\$56.36
Education Administrators, Postsecondary	1	1	0	0.0%	0	\$40.27
Plant & System Operators, All Other	1	1	0	0.0%	0	\$34.61
Air Traffic Controllers	1	1	0	0.0%	0	\$34.08
Funeral Home Managers	1	1	0	0.0%	0	\$33.96

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Insurance Underwriters	1	1	0	0.0%	0	\$33.29
Subway & Streetcar Operators	1	1	0	0.0%	0	\$32.09
Continuous Mining Machine Operators	1	1	0	0.0%	0	\$31.24
Physical Scientists, All Other	1	1	0	0.0%	0	\$28.78
Special Education Teachers, All Other	1	1	0	0.0%	0	\$28.66
Career/Technical Education Teachers, Secondary School	1	1	0	0.0%	0	\$26.86
Special Education Teachers, Middle School	1	1	0	0.0%	0	\$26.38
Rail Yard Engineers, Dinkey Operators, & Hostlers	1	1	0	0.0%	0	\$25.57
Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders	1	1	0	0.0%	0	\$21.66
Environmental Engineering Technologists & Technicians	1	1	0	0.0%	0	\$20.36
Paving, Surfacing, & Tamping Equipment Operators	1	1	0	0.0%	0	\$20.22
Communications Equipment Operators, All Other	1	1	0	0.0%	0	\$20.20
Museum Technicians & Conservators	1	1	0	0.0%	0	\$19.87
Legal Support Workers, All Other	1	1	0	0.0%	0	\$19.19
Solar Photovoltaic Installers	1	1	0	0.0%	0	\$18.83
Forging Machine Setters, Operators, & Tenders, Metal & Plastic	1	1	0	0.0%	0	\$17.93
Pipelayers	1	1	0	0.0%	0	\$17.72
Helpers--Roofers	1	1	0	0.0%	0	\$16.76
Athletes & Sports Competitors	1	1	0	0.0%	0	\$16.74
Septic Tank Servicers & Sewer Pipe Cleaners	1	1	0	0.0%	0	\$16.65
Wind Turbine Service Technicians	1	1	0	0.0%	0	\$16.47
Extruding & Drawing Machine Setters, Operators, & Tenders, Metal & Plastic	1	1	0	0.0%	0	\$16.25
Floor Sanders & Finishers	1	1	0	0.0%	0	\$15.51
Food Processing Workers, All Other	1	1	0	0.0%	0	\$15.48
Fashion Designers	1	1	0	0.0%	0	\$15.47
Psychiatric Aides	1	1	0	0.0%	0	\$15.29
Umpires, Referees, & Other Sports Officials	1	1	0	0.0%	0	\$14.83
Broadcast Technicians	1	1	0	0.0%	0	\$14.40
Plating Machine Setters, Operators, & Tenders, Metal & Plastic	1	1	0	0.0%	0	\$14.11
Proofreaders & Copy Markers	1	1	0	0.0%	0	\$13.42

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders	1	1	0	0.0%	0	\$12.28
Print Binding & Finishing Workers	1	1	0	0.0%	0	\$12.12
Sewers, Hand	1	1	0	0.0%	0	\$6.30
Broadcast Announcers & Radio Disc Jockeys	1	0	(0)	0.0%	0	\$15.23
Paperhangers	1	0	(0)	0.0%	0	\$14.66
Tool Grinders, Filers, & Sharpeners	1	0	(0)	0.0%	0	\$11.83
Chemical Equipment Operators & Tenders	0	3	3	6970.6%	0	\$16.30
Petroleum Pump System Operators, Refinery Operators, & Gaugers	0	2	2	5989.5%	0	\$43.91
Bus Drivers, Transit & Intercity	0	2	2	1238.0%	0	\$18.24
Gambling Service Workers, All Other	0	2	1	439.4%	0	\$13.76
Gambling Change Persons & Booth Cashiers	0	2	2	1860.3%	0	\$12.53
Physical Therapist Aides	0	2	2	405.6%	0	\$12.03
Baggage Porters & Bellhops	0	2	1	2003.7%	0	\$11.70
Pressers, Textile, Garment, & Related Materials	0	2	2	550.8%	0	\$11.67
Podiatrists	0	1	0	0.0%	0	\$55.43
Transit & Railroad Police	0	1	0	0.0%	0	\$32.80
Service Unit Operators, Oil & Gas	0	1	1	2734.2%	0	\$29.72
Boilermakers	0	1	0	0.0%	0	\$29.70
Occupational Therapy Assistants	0	1	1	886.9%	0	\$24.23
Roustabouts, Oil & Gas	0	1	1	4784.1%	0	\$21.15
Pump Operators, Except Wellhead Pumps	0	1	0	0.0%	0	\$20.98
Gambling Managers	0	1	0	0.0%	0	\$18.17
Cutters & Trimmers, Hand	0	1	0	0.0%	0	\$17.75
Financial Clerks, All Other	0	1	0	0.0%	0	\$17.47
Recreational Vehicle Service Technicians	0	1	0	0.0%	0	\$16.35
Extruding & Forming Machine Setters, Operators, & Tenders, Synthetic & Glass Fibers	0	1	1	611.4%	0	\$16.02
Industrial Engineering Technologists & Technicians	0	1	0	0.0%	0	\$15.95
First-Line Supervisors of Gambling Service Workers	0	1	1	1770.7%	0	\$13.01
Concierges	0	1	1	495.5%	0	\$12.45
Gambling Cage Workers	0	1	0	0.0%	0	\$12.40

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Locker Room, Coatroom, & Dressing Room Attendants	0	1	1	489.9%	0	\$12.22
Postal Service Mail Sorters, Processors, & Processing Machine Operators	0	1	1	6553500.0%	0	\$0.00
Orthodontists	0	0	0	0.0%	0	\$90.65
Oral & Maxillofacial Surgeons	0	0	0	0.0%	0	\$90.00
Dentists, All Other Specialists	0	0	0	0.0%	0	\$71.81
Astronomers	0	0	0	0.0%	0	\$63.96
Computer & Information Research Scientists	0	0	0	0.0%	0	\$54.87
Materials Scientists	0	0	0	0.0%	0	\$53.13
Nurse Midwives	0	0	0	0.0%	0	\$48.51
Petroleum Engineers	0	0	0	0.0%	0	\$48.07
Actuaries	0	0	0	0.0%	0	\$47.69
Mathematicians	0	0	0	0.0%	0	\$47.15
Sales Engineers	0	0	0	0.0%	0	\$46.97
Nuclear Power Reactor Operators	0	0	0	0.0%	0	\$45.02
Nuclear Technicians	0	0	0	0.0%	0	\$44.98
Political Scientists	0	0	0	0.0%	0	\$44.82
Economists	0	0	0	0.0%	0	\$41.93
Marine Engineers & Naval Architects	0	0	0	0.0%	0	\$41.30
Biochemists & Biophysicists	0	0	0	0.0%	0	\$40.35
Radiation Therapists	0	0	0	0.0%	0	\$39.37
Electrical & Electronics Repairers, Powerhouse, Substation, & Relay	0	0	0	0.0%	0	\$38.47
Elevator & Escalator Installers & Repairers	0	0	0	0.0%	0	\$38.31
Geoscientists, Except Hydrologists & Geographers	0	0	0	0.0%	0	\$37.54
Industrial-Organizational Psychologists	0	0	0	0.0%	0	\$37.40
Life Scientists, All Other	0	0	0	0.0%	0	\$36.76
Power Plant Operators	0	0	0	0.0%	0	\$36.63
Gas Plant Operators	0	0	0	0.0%	0	\$36.08
Flight Attendants	0	0	0	0.0%	0	\$35.02
Nuclear Medicine Technologists	0	0	0	0.0%	0	\$34.72
Hydrologists	0	0	0	0.0%	0	\$34.68
Geographers	0	0	0	0.0%	0	\$34.15

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Statisticians	0	0	0	0.0%	0	\$33.73
Magnetic Resonance Imaging Technologists	0	0	0	0.0%	0	\$33.09
Emergency Management Directors	0	0	0	0.0%	0	\$32.99
Ship Engineers	0	0	0	0.0%	0	\$32.88
Materials Engineers	0	0	0	0.0%	0	\$32.03
Insurance Appraisers, Auto Damage	0	0	0	0.0%	0	\$31.77
Cardiovascular Technologists & Technicians	0	0	0	0.0%	0	\$31.49
First-Line Supervisors of Fire Fighting & Prevention Workers	0	0	0	0.0%	0	\$31.41
Labor Relations Specialists	0	0	0	0.0%	0	\$30.49
Hoist & Winch Operators	0	0	0	0.0%	0	\$29.99
Orthotists & Prosthetists	0	0	0	0.0%	0	\$29.44
Makeup Artists, Theatrical & Performance	0	0	0	0.0%	0	\$29.35
Loading & Moving Machine Operators, Underground Mining	0	0	0	0.0%	0	\$29.13
Epidemiologists	0	0	0	0.0%	0	\$28.57
Morticians, Undertakers, & Funeral Arrangers	0	0	0	0.0%	0	\$28.40
Food Scientists & Technologists	0	0	0	0.0%	0	\$28.20
Millwrights	0	0	0	0.0%	0	\$28.15
Administrative Law Judges, Adjudicators, & Hearing Officers	0	0	0	0.0%	0	\$28.04
Costume Attendants	0	0	0	0.0%	0	\$27.35
Fire Inspectors & Investigators	0	0	0	0.0%	0	\$27.29
Sociologists	0	0	0	0.0%	0	\$27.02
Occupational Health & Safety Technicians	0	0	0	0.0%	0	\$26.86
Career/Technical Education Teachers, Middle School	0	0	0	0.0%	0	\$26.78
Judicial Law Clerks	0	0	0	0.0%	0	\$26.72
Rotary Drill Operators, Oil & Gas	0	0	0	0.0%	0	\$26.54
Underground Mining Machine Operators & Extraction Workers, All Other	0	0	0	0.0%	0	\$26.54
Gas Compressor & Gas Pumping Station Operators	0	0	0	0.0%	0	\$25.48
Archivists	0	0	0	0.0%	0	\$25.37
Computer Numerically Controlled Tool Programmers	0	0	0	0.0%	0	\$24.98
Riggers	0	0	0	0.0%	0	\$24.97

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Sound Engineering Technicians	0	0	0	0.0%	0	\$24.81
Animal Scientists	0	0	0	0.0%	0	\$24.78
Farm & Home Management Educators	0	0	0	0.0%	0	\$24.67
Cartographers & Photogrammetrists	0	0	0	0.0%	0	\$24.54
Dredge Operators	0	0	0	0.0%	0	\$24.50
Historians	0	0	0	0.0%	0	\$24.24
Wellhead Pumpers	0	0	0	0.0%	0	\$24.16
Advertising & Promotions Managers	0	0	0	0.0%	0	\$23.73
Rail Transportation Workers, All Other	0	0	0	0.0%	0	\$23.72
Commercial Divers	0	0	0	0.0%	0	\$23.44
First-Line Supervisors of Correctional Officers	0	0	0	0.0%	0	\$23.34
Statistical Assistants	0	0	0	0.0%	0	\$23.25
Pile Driver Operators	0	0	0	0.0%	0	\$22.92
Radio, Cellular, & Tower Equipment Installers & Repairs	0	0	0	0.0%	0	\$22.73
Parking Enforcement Workers	0	0	0	0.0%	0	\$22.70
Bridge & Lock Tenders	0	0	0	0.0%	0	\$22.64
Patternmakers, Wood	0	0	0	0.0%	0	\$22.61
Derrick Operators, Oil & Gas	0	0	0	0.0%	0	\$22.33
Engine & Other Machine Assemblers	0	0	0	0.0%	0	\$22.19
Hearing Aid Specialists	0	0	0	0.0%	0	\$21.65
Tool & Die Makers	0	0	0	0.0%	0	\$21.65
Tank Car, Truck, & Ship Loaders	0	0	0	0.0%	0	\$21.34
Motorboat Operators	0	0	0	0.0%	0	\$21.28
Traffic Technicians	0	0	0	0.0%	0	\$21.19
Aerospace Engineering & Operations Technologists & Technicians	0	0	0	0.0%	0	\$20.98
Embalmers	0	0	0	0.0%	0	\$20.61
Electro-Mechanical & Mechatronics Technologists & Technicians	0	0	0	0.0%	0	\$20.46
Procurement Clerks	0	0	0	0.0%	0	\$20.35
Layout Workers, Metal & Plastic	0	0	0	0.0%	0	\$20.18
Fabric & Apparel Patternmakers	0	0	0	0.0%	0	\$20.16
Hazardous Materials Removal Workers	0	0	0	0.0%	0	\$20.07
Medical Equipment Repairers	0	0	0	0.0%	0	\$20.07

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Aircraft Structure, Surfaces, Rigging, & Systems Assemblers	0	0	0	0.0%	0	\$19.95
Airfield Operations Specialists	0	0	0	0.0%	0	\$19.77
Ophthalmic Medical Technicians	0	0	0	0.0%	0	\$18.86
Terrazzo Workers & Finishers	0	0	0	0.0%	0	\$18.75
Milling & Planing Machine Setters, Operators, & Tenders, Metal & Plastic	0	0	0	0.0%	0	\$18.67
Semiconductor Processing Technicians	0	0	0	0.0%	0	\$18.44
Agricultural Inspectors	0	0	0	0.0%	0	\$18.20
Entertainment Attendants & Related Workers, All Other	0	0	0	0.0%	0	\$18.15
Desktop Publishers	0	0	0	0.0%	0	\$18.07
Forest Fire Inspectors & Prevention Specialists	0	0	0	0.0%	0	\$18.01
Prepress Technicians & Workers	0	0	0	0.0%	0	\$17.79
Medical Appliance Technicians	0	0	0	0.0%	0	\$17.62
Conveyor Operators & Tenders	0	0	0	0.0%	0	\$17.62
Survey Researchers	0	0	0	0.0%	0	\$17.61
Food & Tobacco Roasting, Baking, & Drying Machine Operators & Tenders	0	0	0	0.0%	0	\$17.57
Aircraft Cargo Handling Supervisors	0	0	0	0.0%	0	\$17.50
Cooks, Private Household	0	0	0	0.0%	0	\$17.43
Log Graders & Scalers	0	0	0	0.0%	0	\$17.07
Telephone Operators	0	0	0	0.0%	0	\$17.06
Models	0	0	0	0.0%	0	\$16.88
Animal Breeders	0	0	0	0.0%	0	\$16.45
Heat Treating Equipment Setters, Operators, & Tenders, Metal & Plastic	0	0	0	0.0%	0	\$16.25
Photographic Process Workers & Processing Machine Operators	0	0	0	0.0%	0	\$16.19
Correspondence Clerks	0	0	0	0.0%	0	\$16.01
Commercial & Industrial Designers	0	0	0	0.0%	0	\$15.97
Choreographers	0	0	0	0.0%	0	\$15.92
Drafters, All Other	0	0	0	0.0%	0	\$15.72
Adhesive Bonding Machine Operators & Tenders	0	0	0	0.0%	0	\$15.70
Model Makers, Wood	0	0	0	0.0%	0	\$15.69
Gambling Surveillance Officers & Gambling Investigators	0	0	0	0.0%	0	\$15.34
Ophthalmic Laboratory Technicians	0	0	0	0.0%	0	\$15.22

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Crossing Guards & Flaggers	0	0	0	0.0%	0	\$14.76
Library Assistants, Clerical	0	0	0	0.0%	0	\$14.73
Refractory Materials Repairers, Except Brickmasons	0	0	0	0.0%	0	\$14.61
Metal Workers & Plastic Workers, All Other	0	0	0	0.0%	0	\$14.51
Textile, Apparel, & Furnishings Workers, All Other	0	0	0	0.0%	0	\$14.08
Helpers--Extraction Workers	0	0	0	0.0%	0	\$13.76
Pharmacy Aides	0	0	0	0.0%	0	\$13.73
Textile Winding, Twisting, & Drawing Out Machine Setters, Operators, & Tenders	0	0	0	0.0%	0	\$13.37
Shoe Machine Operators & Tenders	0	0	0	0.0%	0	\$13.25
Textile Bleaching & Dyeing Machine Operators & Tenders	0	0	0	0.0%	0	\$13.10
Dietetic Technicians	0	0	0	0.0%	0	\$13.03
Motion Picture Projectionists	0	0	0	0.0%	0	\$12.49
Grounds Maintenance Workers, All Other	0	0	0	0.0%	0	\$12.06
Cooling & Freezing Equipment Operators & Tenders	0	0	0	0.0%	0	\$11.53
Manufactured Building & Mobile Home Installers	0	0	0	0.0%	0	\$11.44
Camera & Photographic Equipment Repairers	0	0	0	0.0%	0	\$11.39
Fiberglass Laminators & Fabricators	0	0	0	0.0%	0	\$10.92
Teaching Assistants, Postsecondary	0	0	0	0.0%	0	\$10.47
Orderlies	0	0	0	0.0%	0	\$10.21
Bicycle Repairers	0	0	0	0.0%	0	\$10.19
Timing Device Assemblers & Adjusters	0	0	0	0.0%	0	\$10.14
Textile Cutting Machine Setters, Operators, & Tenders	0	0	0	0.0%	0	\$5.98
Farm Labor Contractors	0	0	0	0.0%	0	\$0.00
Agricultural Engineers	0	0	0	0.0%	0	\$0.00
Prosthodontists	0	0	0	0.0%	0	\$0.00
Genetic Counselors	0	0	0	0.0%	0	\$0.00
Occupational Therapy Aides	0	0	0	0.0%	0	\$0.00
Bailiffs	0	0	0	0.0%	0	\$0.00
Fish & Game Wardens	0	0	0	0.0%	0	\$0.00
Animal Control Workers	0	0	0	0.0%	0	\$0.00

SOC TITLE	2020 JOBS	2030 JOBS	CHANGE	% CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
Meter Readers, Utilities	0	0	0	0.0%	0	\$0.00
Roof Bolters, Mining	0	0	0	0.0%	0	\$0.00
Coil Winders, Tapers, & Finishers	0	0	0	0.0%	0	\$0.00
Food Cooking Machine Operators & Tenders	0	0	0	0.0%	0	\$0.00
Drilling & Boring Machine Tool Setters, Operators, & Tenders, Metal & Plastic	0	0	0	0.0%	0	\$0.00
Pourers & Casters, Metal	0	0	0	0.0%	0	\$0.00
Model Makers, Metal & Plastic	0	0	0	0.0%	0	\$0.00
Patternmakers, Metal & Plastic	0	0	0	0.0%	0	\$0.00
Foundry Mold & Coremakers	0	0	0	0.0%	0	\$0.00
Textile Knitting & Weaving Machine Setters, Operators, & Tenders	0	0	0	0.0%	0	\$0.00
Chemical Plant & System Operators	0	0	0	0.0%	0	\$0.00
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders	0	0	0	0.0%	0	\$0.00
Tire Builders	0	0	0	0.0%	0	\$0.00

Source: Employees & Self-Employed 2021.4.

APPENDIX 7: Unemployment

Data on unemployment give researchers an idea of where skills mismatches may exist in the county. Unemployment data can also provide important context when identifying the training programs that are best suited to transitioning unemployed workers into in-demand occupations.

The tables and figures present the number of people unemployed by two-digit industry sector and by two-digit occupational group¹⁵ in Ravalli County. Data reflect the average values for the 12 months preceding Monthly Average for the 12 Months Preceding September 2021 and follow the same methodology used by federal statistical agencies to determine the number of workers in an industry or occupation who are not currently employed. The unemployment rate is not provided because it is difficult to accurately determine the size of the labor force in an industry or occupation every month. Rather than the unemployment rate, the percent of all unemployed workers in the county, state, and U.S. are provided.

Table A7.1: Unemployed Workers by Industry Sector in Ravalli County with State and National Comparisons

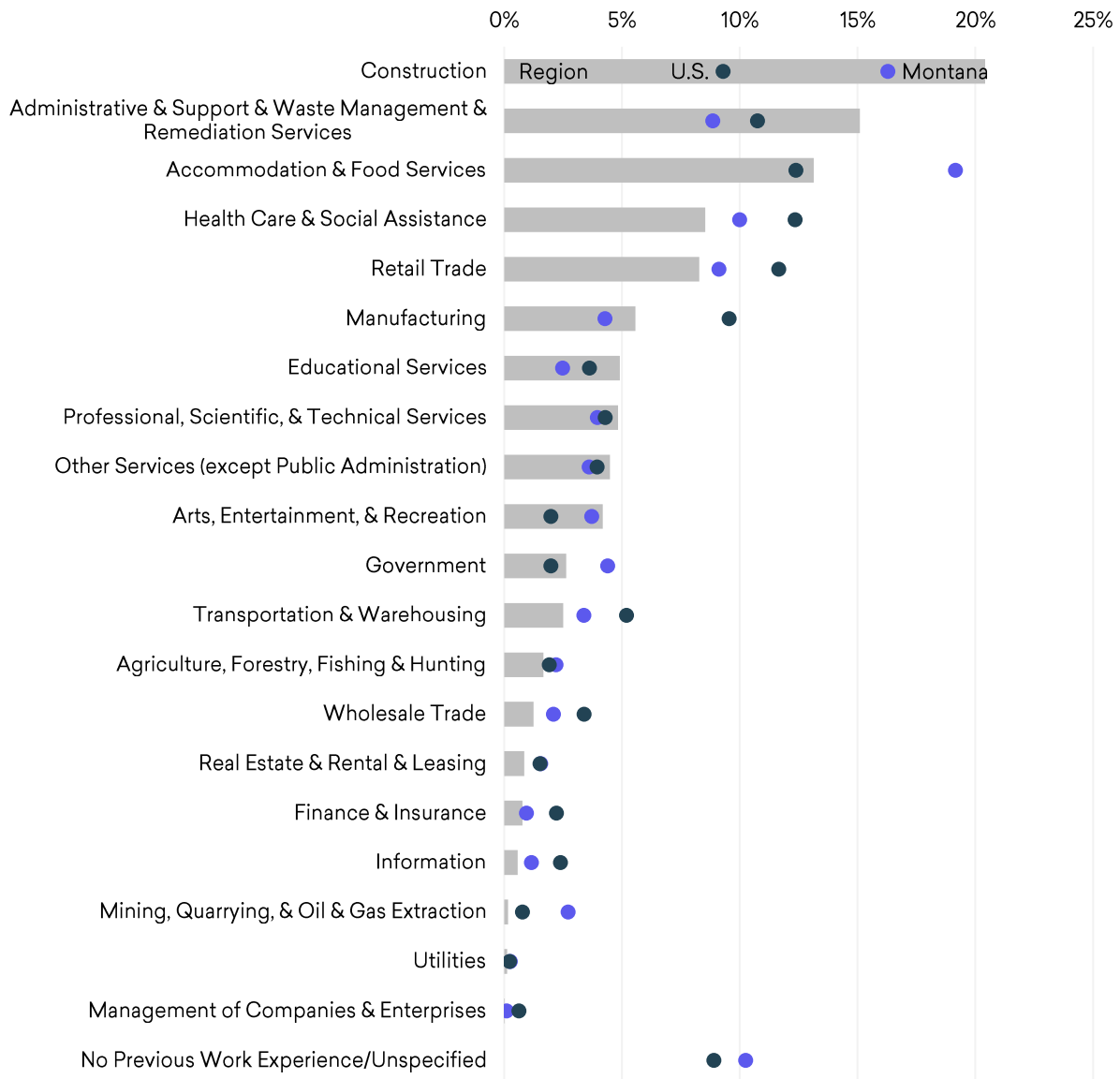
NAICS CODE	NAICS TITLE	COUNTY UNEMPLOYED	COUNTY% UNEMPLOYED	STATE% UNEMPLOYED	U.S.% UNEMPLOYED
23	Construction	172	20%	16%	9%
56	Administrative & Support & Waste Management & Remediation Services	127	15%	9%	11%
72	Accommodation & Food Services	111	13%	19%	12%
62	Health Care & Social Assistance	72	9%	10%	12%
44	Retail Trade	70	8%	9%	12%
31	Manufacturing	47	6%	4%	10%
61	Educational Services	41	5%	2%	4%
54	Professional, Scientific, & Technical Services	41	5%	4%	4%
81	Other Services (except Public Administration)	38	4%	4%	4%
71	Arts, Entertainment, & Recreation	35	4%	4%	2%
90	Government	22	3%	4%	2%
48	Transportation & Warehousing	21	3%	3%	5%

¹⁵ Unemployment by industry data is only available at the two-digit level whereas the industry data reported elsewhere in this analysis is at the three-digit level.

NAICS CODE	NAICS TITLE	COUNTY UNEMPLOYED	COUNTY% UNEMPLOYED	STATE% UNEMPLOYED	U.S.% UNEMPLOYED
11	Agriculture, Forestry, Fishing & Hunting	14	2%	2%	2%
42	Wholesale Trade	10	1%	2%	3%
53	Real Estate & Rental & Leasing	7	1%	2%	2%
52	Finance & Insurance	7	1%	1%	2%
51	Information	5	1%	1%	2%
21	Mining, Quarrying, & Oil & Gas Extraction	1	0%	3%	1%
22	Utilities	1	0%	0%	0%
55	Management of Companies & Enterprises	0	0%	0%	1%
99	No Previous Work Experience/Unspecified	0	0%	10%	9%

Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding Monthly Average for the 12 Months Preceding September 2021).

Figure A7.1: Unemployed Workers by Industry Sector in Ravalli County with State and National Comparisons



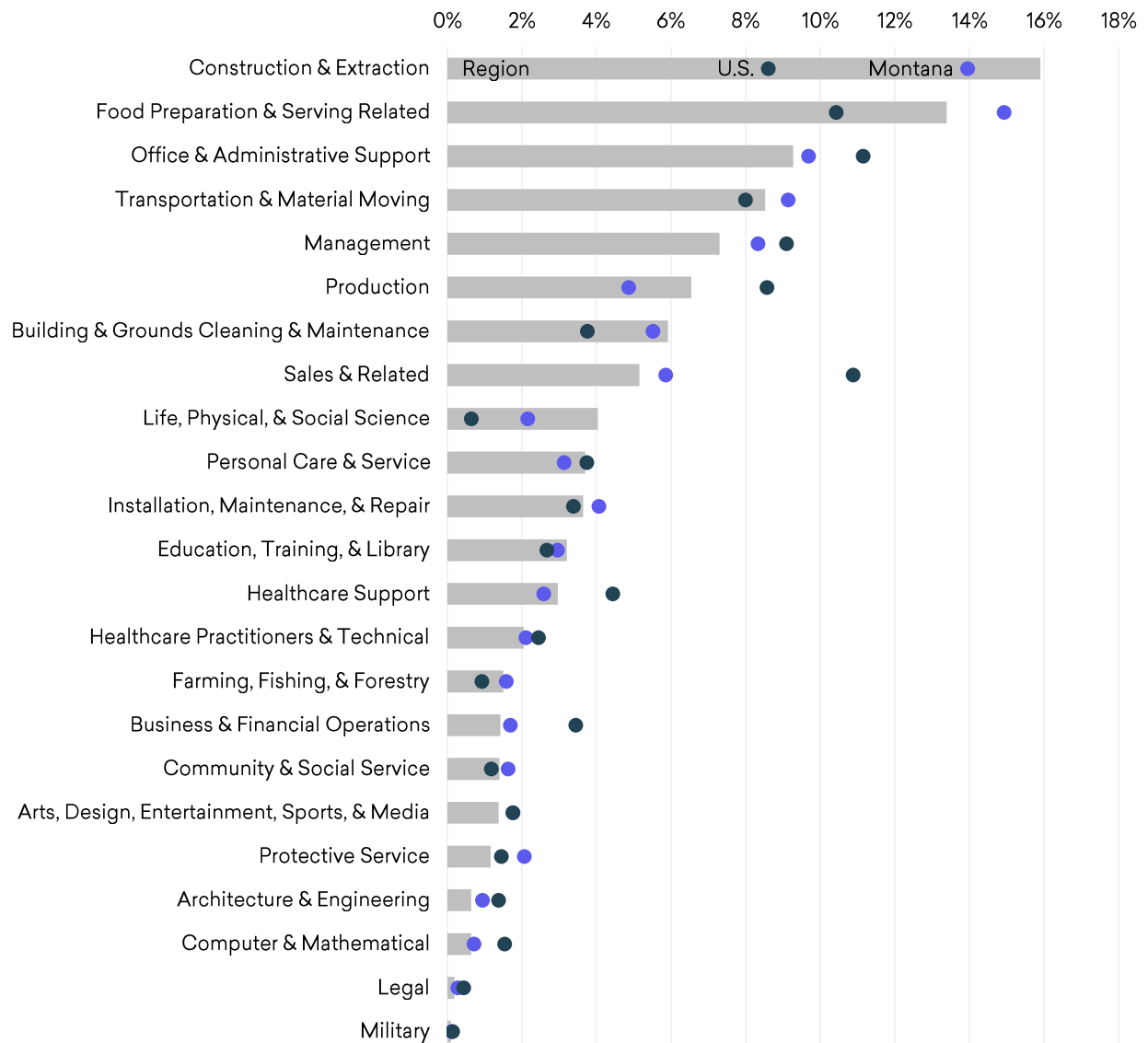
Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding Monthly Average for the 12 Months Preceding September 2021).

Table A7.2: Unemployed Workers by Occupational Group in Ravalli County with State and National Comparisons

SOC CODE	SOC TITLE	COUNTY UNEMPLOYED	COUNTY % UNEMPLOYED	STATE % UNEMPLOYED	U.S. % UNEMPLOYED
47-0000	Construction & Extraction	134	16%	14%	9%
35-0000	Food Preparation & Serving Related	113	13%	15%	10%
43-0000	Office & Administrative Support	78	9%	10%	11%
53-0000	Transportation & Material Moving	72	9%	9%	8%
11-0000	Management	61	7%	8%	9%
51-0000	Production	55	7%	5%	9%
37-0000	Building & Grounds Cleaning & Maintenance	50	6%	6%	4%
41-0000	Sales & Related	43	5%	6%	11%
19-0000	Life, Physical, & Social Science	34	4%	2%	1%
39-0000	Personal Care & Service	31	4%	3%	4%
49-0000	Installation, Maintenance, & Repair	31	4%	4%	3%
25-0000	Education, Training, & Library	27	3%	3%	3%
31-0000	Healthcare Support	25	3%	3%	4%
29-0000	Healthcare Practitioners & Technical	17	2%	2%	2%
45-0000	Farming, Fishing, & Forestry	13	1%	2%	1%
13-0000	Business & Financial Operations	12	1%	2%	3%
21-0000	Community & Social Service	12	1%	2%	1%
27-0000	Arts, Design, Entertainment, Sports, & Media	12	1%	2%	2%
33-0000	Protective Service	10	1%	2%	1%
17-0000	Architecture & Engineering	5	1%	1%	1%
15-0000	Computer & Mathematical	5	1%	1%	2%
23-0000	Legal	2	0%	0%	0%
55-0000	Military	1	0%	0%	0%

Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding Monthly Average for the 12 Months Preceding September 2021).

Figure A7.2: Unemployed Workers by Occupational Group in Ravalli County with State and National Comparisons



Source: Emsi Burning Glass Total Unemployment (Averages for the 12 months preceding Monthly Average for the 12 Months Preceding September 2021).

APPENDIX 8: Living Wage

As shown in the following tables, the living wage is the hourly rate that an individual must earn to support his or her family as a sole income provider working full-time or 2,080 hours annually. Part-time is defined as less than 35 hours per week of work. State minimum wage rates are the same for all individuals, regardless of the number of dependents in the household. Values are reported per adult in the household. The poverty rate is typically reported as gross annual income and has been adjusted to an hourly wage rate.

Table A8.1: Living Wage Calculations for Ravalli County

ADULTS IN HOUSEHOLD	CHILDREN IN HOUSEHOLD	LIVING WAGE	POVERTY WAGE	MINIMUM WAGE
One adult	No children	\$10.77	\$6.00	\$8.75
	One child	\$23.92	\$8.13	-
	Two children	\$30.06	\$10.25	-
	Three children	\$38.67	\$12.38	-
Two adults, one working	No children	\$17.94	\$8.13	-
	One child	\$22.54	\$10.25	-
	Two children	\$25.22	\$12.38	-
	Three children	\$29.20	\$14.50	-
Two adults	No children	\$8.97	\$4.06	-
	One child	\$13.39	\$5.13	-
	Two children	\$16.44	\$6.19	-
	Three children	\$20.13	\$7.25	-

Source: Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology, <http://livingwage.mit.edu>. Minimum wage provided by the U.S. Department of Labor.

Table A8.2: Living Wage Calculations for the State

ADULTS IN HOUSEHOLD	CHILDREN IN HOUSEHOLD	LIVING WAGE	POVERTY WAGE	MINIMUM WAGE
One adult	No children	\$10.97	\$6.00	\$8.75
	One child	\$24.28	\$8.13	-
	Two children	\$30.42	\$10.25	-
	Three children	\$38.88	\$12.38	-
Two adults, one working	No children	\$18.34	\$8.13	-
	One child	\$22.89	\$10.25	-
	Two children	\$25.58	\$12.38	-
	Three children	\$29.41	\$14.50	-
Two adults	No children	\$9.17	\$4.06	-
	One child	\$13.57	\$5.13	-
	Two children	\$16.62	\$6.19	-
	Three children	\$20.24	\$7.25	-

Source: Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology, <http://livingwage.mit.edu>. Minimum wage provided by the U.S. Department of Labor.