

# Larimer Weld

## Job Vacancy Survey

<p>to this position to debug and repair electronic subassemblies in voltage instrument leading oscilloscopes and other meters. You will have an Associate Degree in Electrical Engineering with 2+ years of experience. Exp. in analog and power electronics. Salary commensurate with experience.</p>	<p>Understanding of fundamental math necessary. Pay according to experience. Health insurance and retirement benefits available after a trial period. Walk-ins and phone calls not accepted. Please send resume to: <b>PO 56 Lucerne, Co. 80646</b></p>	<p><b>SPECIALIST</b> The Fort Collins Coloradoan, a 260 employee Gannett newspaper, is accepting resumes/ applications for an Inside Classified Recruitment Specialist. This individual will be responsible for writing and developing proposals to new and existing clients, inputting &amp; scheduling of ads &amp; managing all contracts to fulfillment. A successful candidate will possess experience in the employment field and a 4 year degree is desired. Must be computer literate with the ability to type 55 wpm, have successful sales experience and professional presentation skills are a must. We offer</p>	<p>neyman, Immediate Openings. <b>Circle G Electric, 970 229-0392</b></p> <p><b>ENGINEERING GEOTECHNICAL ENGINEER</b> Please send resume to: Western Colorado Testing 529 25 1/2 Rd #B101 Grand Jct., CO 81505 (813)</p> <p><b>F R M C</b> biotech Inc 50 seeking nance &amp; fications</p>
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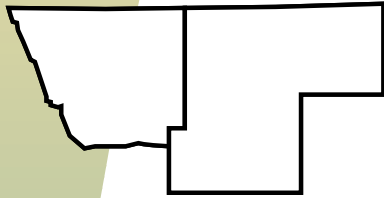
June 2002

Larimer and Weld Counties



**Workforce Research & Analysis**  
**Labor Market Information**  
**Colorado Department of Labor and Employment**





# Larimer/Weld Job Vacancy Survey

*Conducted  
March 12–29, 2002*

## **State of Colorado**

Bill Owens, *Governor*

## **Colorado Department of Labor & Employment**

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June 2002



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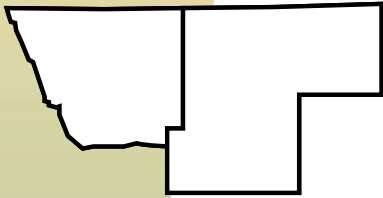
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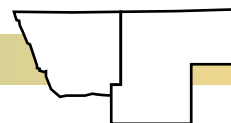


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# Introduction

The unemployment rate, along with the level and growth rate of employment, has been used as an indicator of labor market conditions for decades. While this indicator provides information about changes in the supply and demand for labor, it reveals nothing about the skills most sought after by employers. As such, individuals preparing themselves for the job market have done so with limited knowledge of what skills are necessary to successfully compete in the contemporary labor market. Employers have had an equally difficult time determining appropriate compensation levels due to a limited knowledge of what similar firms in their region are currently offering.

Job seekers and employers, as well as Workforce Centers and economic developers need more than a measure of demand for workers at a specific point in time. They also need a measure of where in the economy that demand is located and what education and experience levels are most preferred. The Colorado Department of Labor and Employment (CDLE) developed the Job Vacancy Survey (JVS) to meet this need. The JVS is designed to provide a snapshot estimate of job vacancies along with detailed information and analysis on accompanying wages, skill requirements and work experience.

The CDLE's survey unit collects original data by conducting phone interviews with a representative

**Colorado Job Vacancy Survey Regions**



sample of employers in a given region. The department's economists analyze the raw data, estimate the number of vacancies in the area and publish the report within weeks of the original data collection, providing a timely portrait of the employment situation.

The survey is funded by a grant from the U.S. Department of Labor's Employment and Training Administration. Labor Market Information's office of Workforce Research and Analysis produces this survey for each region in Colorado.

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## How to Use This Report

With the analysis of labor market conditions, many questions regarding labor demand and supply, as well as labor skills requirements, often arise...

- ◆ Is there a labor shortage in the region?
- ◆ If so, what types of labor are in short supply?
- ◆ Is there a shortage of skills?
- ◆ What skills are necessary to fill current vacancies?

The answers to these and similar questions are important in the decision-making processes of employers, employees, job seekers, trainers, and planning officials. While Labor Market Information (LMI) provides data on the local labor force supply, the Job Vacancy Survey complements this by providing information about the demand for labor and offers a more complete picture of local labor markets.

### Employers

The Job Vacancy Survey measures the area's current vacancies along with education and experience requirements. This report can serve as a strategic planning tool in the following areas:

#### ◆ *Employee Recruitment*—

If findings show that employers have had positions open for a significant period of time, and compensation is sufficient, it might indicate a shortage of applicants in the area. Therefore, recruitment efforts could be focused outside of the region in areas where the necessary skills are more likely to be found.

#### ◆ *Employee Training*—

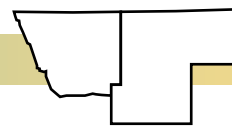
A firm may also choose to increase investment in training for their current employees instead of expanding recruitment efforts.

#### ◆ *Compensation and Benefits Planning*—

The Job Vacancy Survey provides wages offered for surveyed job openings. Tables in this report also detail current wages by occupation from Occupational Employment Statistics data. Together these pieces of information can be used to develop wage guidelines for compensation practices.

#### ◆ *New Site Selection*—

Employers considering relocating or expanding to the area can study the survey and determine how easily the company's employment needs will be met by reviewing current vacancies. Companies need a sufficient, qualified labor pool to operate. High labor demand within a particular industry segment along with indications of difficulty filling these positions should caution a firm requiring a similar labor profile.



## Job Seekers

The Job Vacancy Survey provides job seekers with a broad view of which industries are hiring, which occupations are in demand along with currently offered salaries and benefits, and what education and experience levels are required. This report is a roadmap that can be used to determine where the best paying jobs are given an individual's skills and level of education. Job seekers can also use Labor Market

Information's occupational projections, which provide a long-term outlook of occupational demand, along with the survey, which illustrates the current level of demand in the local job market to determine how current employment opportunities can contribute to their long-term career goals. Career minded individuals can tailor education, training, and work-experience to fit future high-demand positions.

## Workforce Centers

The Job Vacancy Survey is designed to aid Colorado's Workforce Centers and other job placement organizations. As Workforce Centers serve job seekers and employers, the report acts as a handy reference for information on current vacancies, position requirements, wages and benefits offered, seasonal employment trends, and dominant regional industries. Workforce Center representatives can increase placement success by directing job seekers toward high demand occupations and industries.

Public officials, educational institutions, and government agencies can use this survey information

to effectively apply resources to education, training, and job placement programs.

While this report is a picture of the area's current employment needs and historical seasonal patterns, other Labor Market Information products provide projections of occupational growth and anticipated openings ([www.coworkforce.com/lmi/oeo/oeo.htm](http://www.coworkforce.com/lmi/oeo/oeo.htm)). The projections highlight growing as well as declining occupations. Investments in the workforce can be directed toward occupations or industries that continuously contribute to the local economy or to those where there is a constant need for workers.

## Economic Developers

Economic development professionals can use the Job Vacancy Survey to track the labor situation in key industries and evaluate the area's economic growth and development potential. The survey results help determine where bottlenecks may occur should current vacancies persist. Economic developers can

also generate a comprehensive picture of the region by determining where current labor demand stands today, as identified by the survey, and where the local market is trending using Labor Market Information's employment projections.

## Caveats

The Job Vacancy Survey statistics are indicators of the demand for workers in the region and should not be interpreted as actual values. We rely on information from surveyed companies to obtain a representative sample of institutions and the occupations that fuel them. Not all surveyed firms participate; however, the employers who do participate enable the production of statistically reliable results.

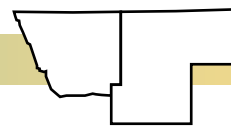
The study provides estimates of job openings for a point-in-time; they do not necessarily portray the distribution of job vacancies in the region. This report does not attempt to explain the cause of vacancies—whether these current vacancies are due to actual growth or to job turnover in an occupation. Readers should also keep in mind that the authors are not attempting to project the level of vacancies into the future. Be aware that events having occurred since the time period analyzed such as plant closings or the migration of people in and out of the area might

significantly affect the vacancy status of some occupations. Job openings are very dynamic—current openings are being filled, new positions are being created, and some roles are being phased-out.

Occupational demand is subject to seasonal changes and affected by business cycles. For example, the reader would want to be aware that a decrease in vacancies for construction workers from April to November could represent seasonal variations, not necessarily a long-term decrease in the demand for such workers. When several years of survey data have been collected, we may be able to identify patterns that more accurately reflect changing labor market conditions. Regional surveys are timed to make these comparisons possible.

Given the caveats, appropriate application by the user is a key element in this report being a useful tool for job vacancy analysis.





## Executive Summary

The third Larimer/Weld Job Vacancy Survey was conducted from March 12th through March 29th, 2002. During the survey period, government, large, and randomly selected small to mid-size employers with at least five employees were contacted in the region. Employers were asked if they were actively hiring at the time of the survey. Those answering yes were then asked a variety of questions about the positions they were seeking to fill.

A total of 1,962 employers responded to the survey out of 2,510 contacted (78% effective response rate). Of these, 51 are large employers (200 or more employees) 1,821 are from the small to mid-size category (5-199 employees), and 90 are government agencies. The major findings of the survey are as follows:

- ◆ It is estimated that a total of 3,070 jobs were open for hire in the Larimer/Weld Region during the survey period.
- ◆ Six hundred fifty jobs are estimated to be full-time temporary and 1,660 are full-time permanent positions.
- ◆ One hundred eighty jobs are estimated to be part-time temporary and 580 are part-time permanent positions.
- ◆ About 67% of the estimated job openings are in the Services and the Retail Trade industries.
- ◆ The overall average wage for all vacancies is \$14.00 per hour.
- ◆ Sixty-five percent of the openings require experience in the specific occupation or in a related occupation.
- ◆ Forty-seven percent of the job openings are either very difficult to fill or somewhat difficult to fill.
- ◆ Ninety-five percent of the surveyed employers contribute to medical insurance for their vacant positions.

## Larimer/Weld Region

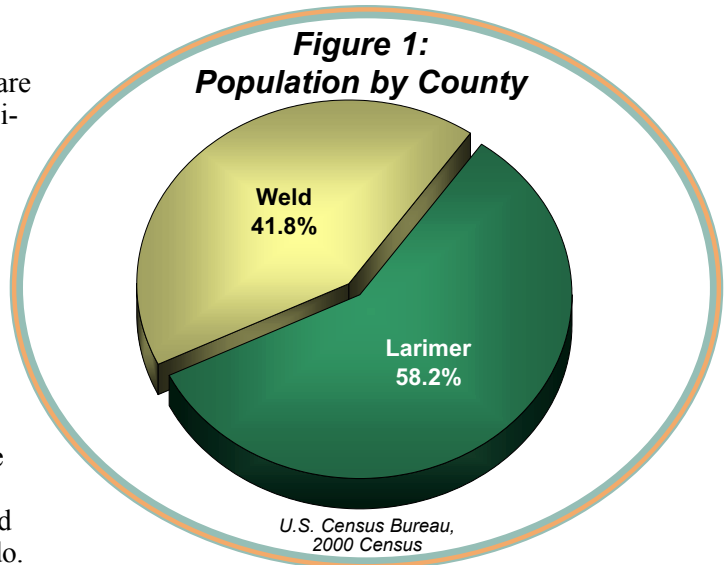
The Larimer/Weld Region, made up of Larimer and Weld counties, is located in north central Colorado. It encompasses a total of 6,644 square miles and has a population of more than 430,000 residents<sup>1</sup>. Larimer County with 2,640 square miles includes some of the finest irrigated farmland in the state, as well as vast stretches of scenic ranch lands, forests and high mountain peaks. Weld County covers an area of 4,004 square miles, making it the third largest county in the state. The land surface is fairly level in the east, with rolling prairies and low hills near the western border.

The regional economy is a diverse mix of agriculture, advanced technology, manufacturing and service firms. Weld County is the leading producer of cattle, grains and sugar beets in the state. It is also the second leading producer of oil and gas in the state of Colorado.

Institutions of higher learning play an important economic role in this area with the main campuses of two of the state's leading universities located in the region. Fort Collins in Larimer County is home to Colorado State University while the University of Northern Colorado is located in Greeley in Weld County.

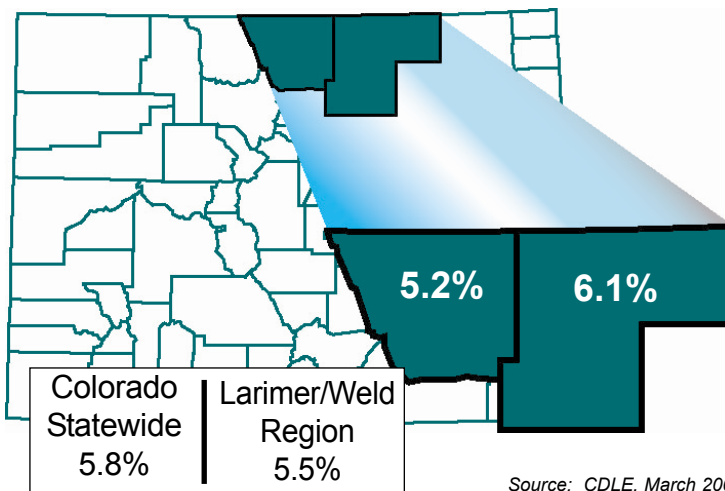
Larimer County accounts for 58% of the total population in the region (about 250,000 residents). From the 1990 to 2000 period, the county grew at the rate of

**Figure 1:  
Population by County**



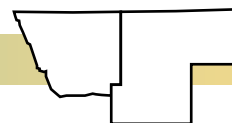
35%, almost 5% higher than the state's growth rate over the same period. Weld County, which accounts for 42% of the population experienced a growth rate of 37%, almost 7% above the state's growth rate. Within the counties, almost half of the population in Weld is concentrated in the city of Greeley. In Larimer County 47% of the population is centered in the city of Fort Collins.

**Figure 2: Unemployment Rates for March 2002**  
(Rates Not Seasonally Adjusted)

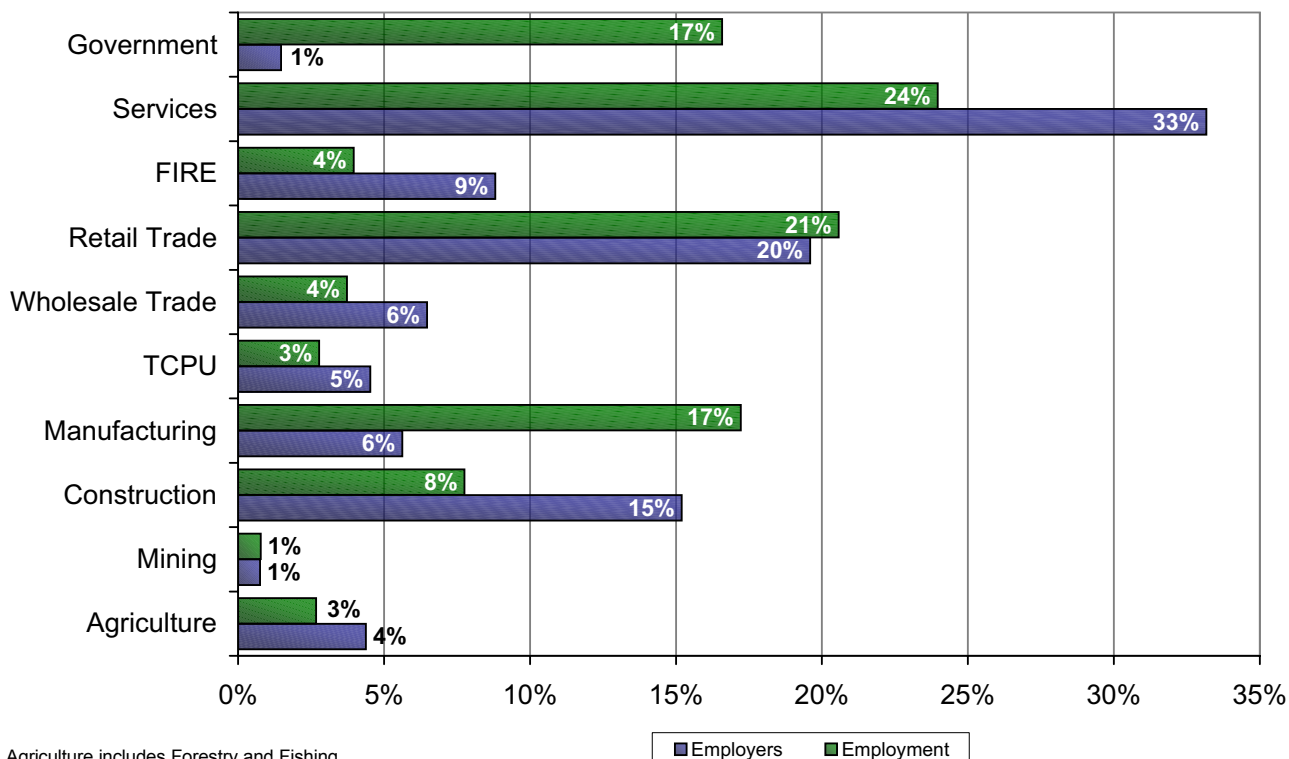


The region employed over 232,400 individuals from a labor force pool of about 246,000 people in March 2002. Of these, 62% were employed in Larimer County. The region's unemployment rate of 5.5% is lower than that of the state and the US rate of 5.7% for March 2002.

<sup>1</sup>US Census Bureau, Census 2000



**Figure 3: Larimer/Weld Employers and Employees (1st Quarter 2001)**



Agriculture includes Forestry and Fishing  
 FIRE—Finance, Insurance, and Real Estate  
 TCPU—Transportation, Communication and Public Utilities

Source: Colorado Employment and Wages (ES-202)

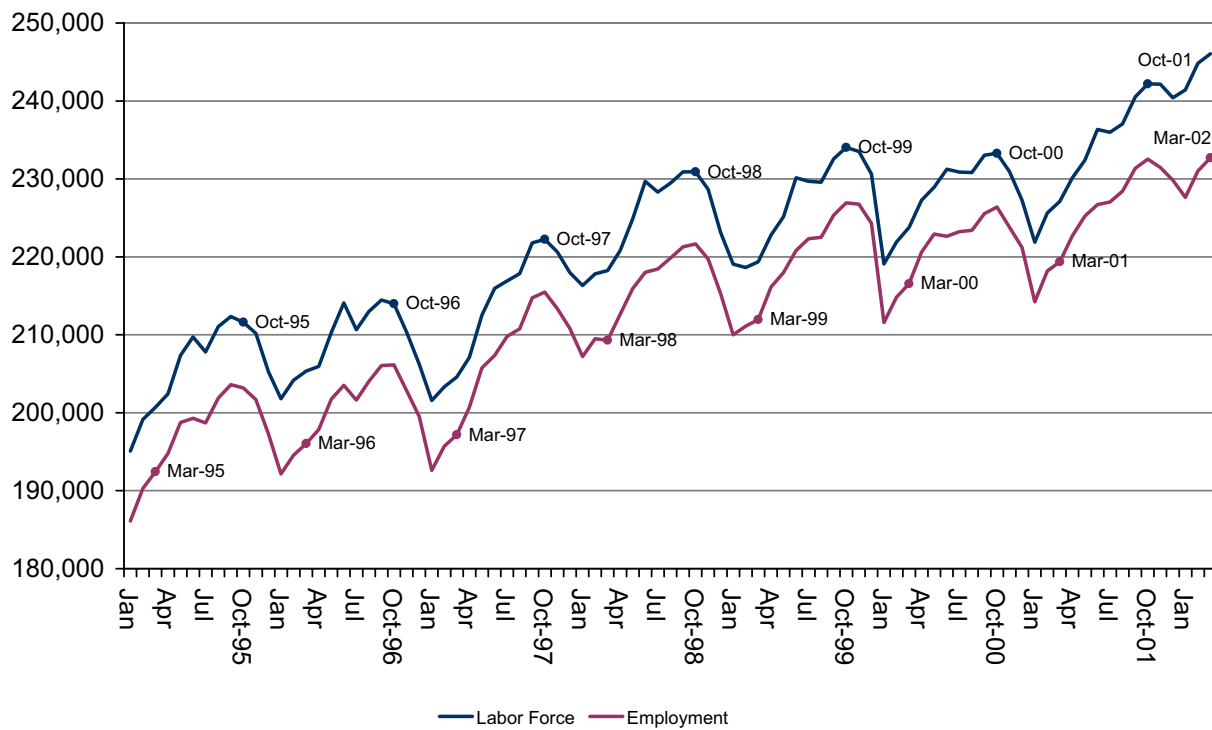
The ranking of employment by industry in the Larimer/Weld Region has remained stable over the past several years. Like the rest of the state, Services has the highest share (24%) followed by Retail Trade (21%). Government and Manufacturing each accounts for 17% of the total employment while Construction has 8%. Other industries' employment shares range from 1% in Mining to 4% in Finance, Insurance, and Real Estate (FIRE), and Wholesale Trade (Figure 3).

Although Weld County accounts for a smaller portion of the total employment in the region, the industry mix in the two counties is relatively similar. First quarter of 2001 statistics reveal that both counties have the highest concentration of firms in the Services industry followed by Retail Trade, Construction, and Finance, Insurance and Real Estate.

In Weld County the total number of individuals employed is highest in Services, followed by Manufacturing, Retail Trade, Government and Construction. In Larimer County, employment is concentrated in Services. Retail Trade is the second largest employment industry followed by Government, Manufacturing and Construction.

Larimer/Weld is dominated by a large number of firms with fewer than five employees. Although these firms account for 62% of all firms in the region, they account for only 11% of the total employment. Small to mid-size firms make up 36% of regional firms and 53% of employment. Large firms account for 22% of total employment and government entities account for 14%. Together, large firms and government entities account for about 2% of total firms in the region.

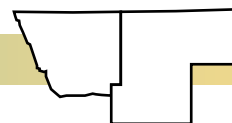
**Figure 4: Employment and Labor Force Trends in the Larimer/Weld Region**



Source: CDLE, Local Area Unemployment Statistics

Figure 4 shows the trend of the region's labor force and employment over time. The labor force and employment levels have increased since 1995. The figure also provides a visual historical representation of unemployment. Unemployment is represented by the gap between the labor force and employment lines; the larger the distance between the two lines, the greater the number of the unemployed.

Analysis of historical employment trends for the Larimer/Weld Region also reveals a seasonal trend in the region's labor market. Both the labor force and employment levels are at their lowest in January and peak in October. The Job Vacancy Survey is conducted semi-annually in spring and fall to measure demand for labor when employment is strong.



## The Job Vacancy Survey Sample

The third Larimer/Weld Job Vacancy Survey was conducted from March 12th through March 29th, 2002. For the purpose of this report, employers with five or more employees (6,181 in the region) are referred to as the “sample universe.” The sample universe accounts for approximately 89% of the total employment in the region.

The Job Vacancy Survey first separates employers in the sample universe into government and private industry classifications. Next, private firms are split into large (at least 200 employees) and small to mid-size

(from five to 199 employees). All government and large employers were contacted. The small to mid-size employers were then arranged by major industry divisions as defined by the *1987 Standard Industrial Classification Manual*. Attempts were made to contact a sufficient sample from each classification in order to provide statistically reliable results. Over the survey period a total of 1,962 employers, approximately 32% of the Larimer/Weld Region employers in the sample universe, responded to the survey. Out of these, 51 are large employers, 1,821 are small to mid-size employers and 90 are government agencies.

**Table 1: Industry Categories**

Government	
Public Administration	
Private Industry	
Goods Producing Industries	Service Producing Industries
Agriculture, Forestry, and Fishing (except Agricultural Services)	Transportation, Communications, and Public Utilities
Mining	Wholesale Trade
Construction	Retail Trade
Manufacturing	Finance, Insurance, and Real Estate Services (including Agricultural Services)

## Data Collection

Data for the Job Vacancy Survey are collected using a Computer Assisted Telephone Interview (CATI) process. While this system of data collection has been in use in the public sector for several years, Colorado is the first state in the nation to pioneer the use of CATI data collection for the Job Vacancy Survey.

Professional interviewers, trained in economic data collection processes, gather information from a call center located in the Colorado Department of Labor and Employment. This interview process results in increased control over the survey process, better accuracy and dependable results.

Employers are asked if they have job vacancies or open positions which they are actively seeking to fill.

Those that are actively hiring are then asked to provide more detail about each position—compensation offered, levels of education and experience required, and the employer’s perceived difficulty in filling the vacancy along with the number of days the position has been open. Employers are also asked if sign-on bonuses and health insurance coverage are offered for these positions. These data are collected in addition to the minimum and maximum wages in order to describe more fully the compensation offered.

The survey is conducted so as to ensure the statistical integrity of this report. When necessary, employers are contacted a second time to clarify responses.

## Vacancies: Industry, Size and Status

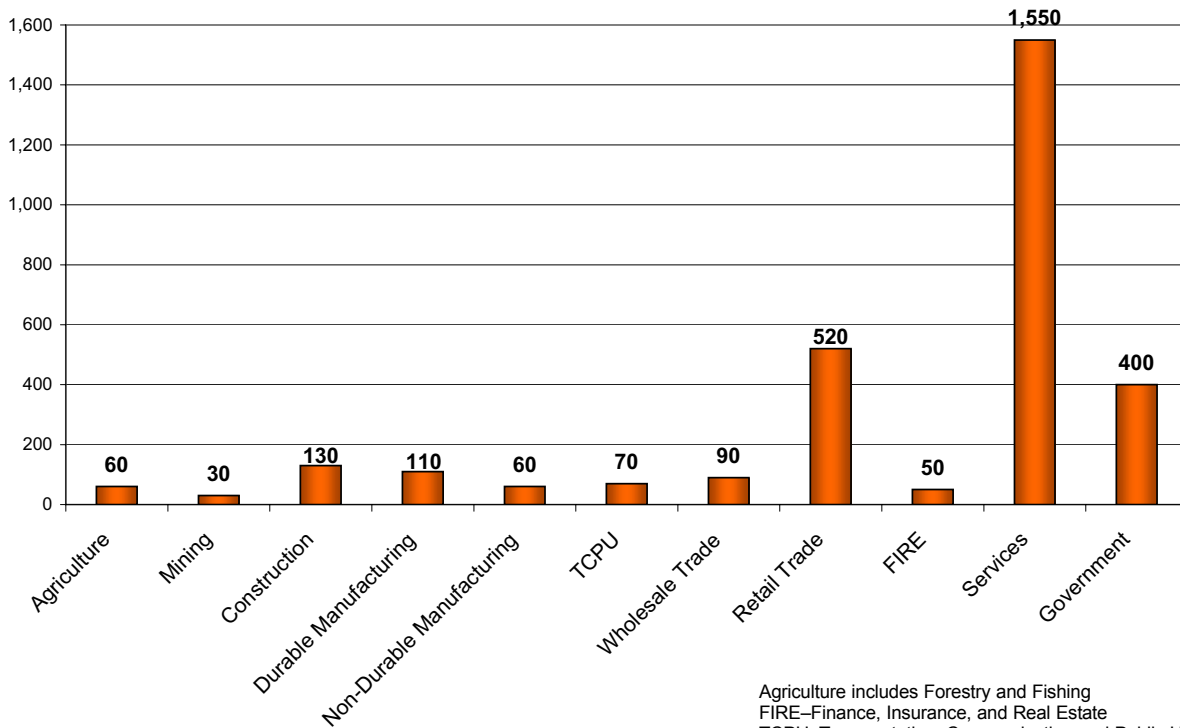
During the survey period, an estimated 3,070 vacancies were open for immediate hire by firms with at least five employees in the Larimer/Weld Region. With the overall regional employment estimated at approximately 172,460 people, this results in an estimated job vacancy rate of 1.8%. The Services and Retail Trade industries combined account for 67% of the 3,070 vacancies in the region, with the majority of those being in Services (see Figure 5).

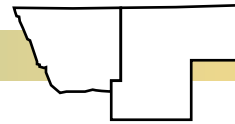
Of those vacancies within the Services industry, 67% occur in three major occupational groups:

Healthcare Practitioners and Technical (37%); Installation, Maintenance and Repair (19%); and Healthcare Support (11%). The majority of these vacancies were for registered nurses, telecommunication technicians, nursing assistants, orderlies and attendants.

Government agencies and Construction account for another 17% of estimated vacancies by industry. The highest vacancy rates were reported by large firms in the Services industry (5.4%) and Mining industry (8.6%).

**Figure 5: Estimated Vacancies by Industry**



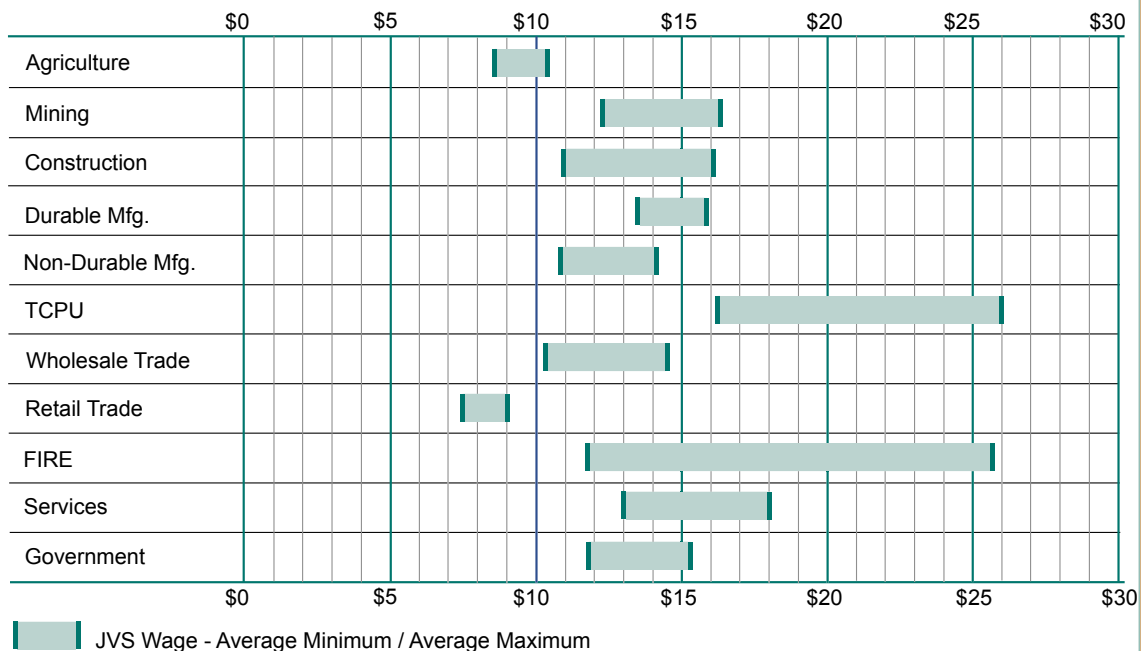


Wages reflect the labor supply and demand situation along with the skill and experience requirements for the position. In this survey employers were asked to provide the minimum and maximum wages offered for reported vacancies.

While the overall average wage in the region is \$14.00 per hour, vacancies in TCPU and FIRE offer

relatively higher wages. Those major occupational groups in the TCPU industry include: Transportation and Material Moving; Architecture and Engineering; Production; and Management. In the FIRE industry major occupational groups include: Business and Financial Operations; Management; Sales and Related; Community and Social Services; and Installation, Maintenance and Repair.

**Figure 6: Average Wages by Industry**



Agriculture includes Forestry and Fishing  
 FIRE—Finance, Insurance, and Real Estate  
 TCPU—Transportation, Communication and Public Utilities

The survey segments employers into government, large and small to mid-size based on ownership and the number of individuals they employ. Results show that more than 50% of all vacancies are in the small to mid-size firms. These firms also account for 97% of all employers in the region and 60% of the employment.

Large firms account for only 1% of the firms but account for 22% of the regional employment and 30% of the vacancies. Government, on the other hand, makes up the remaining 2% of the employers, 18% of the employment and 13% of the vacancies.

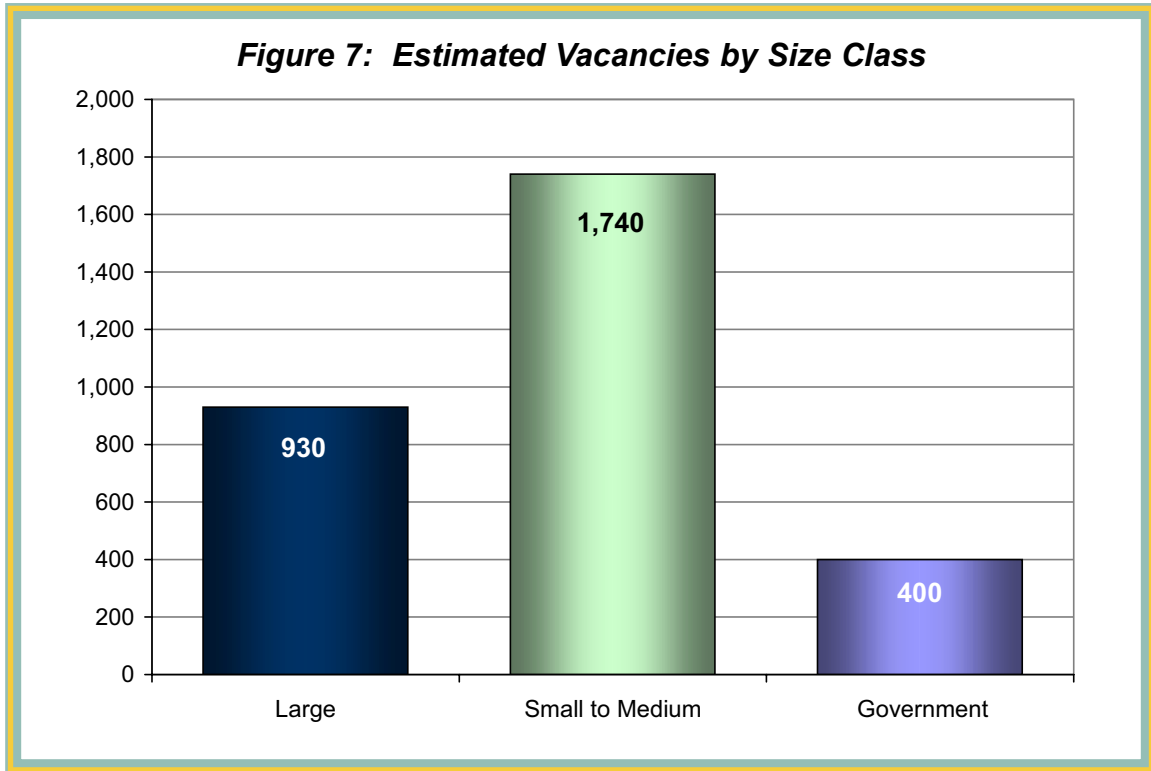
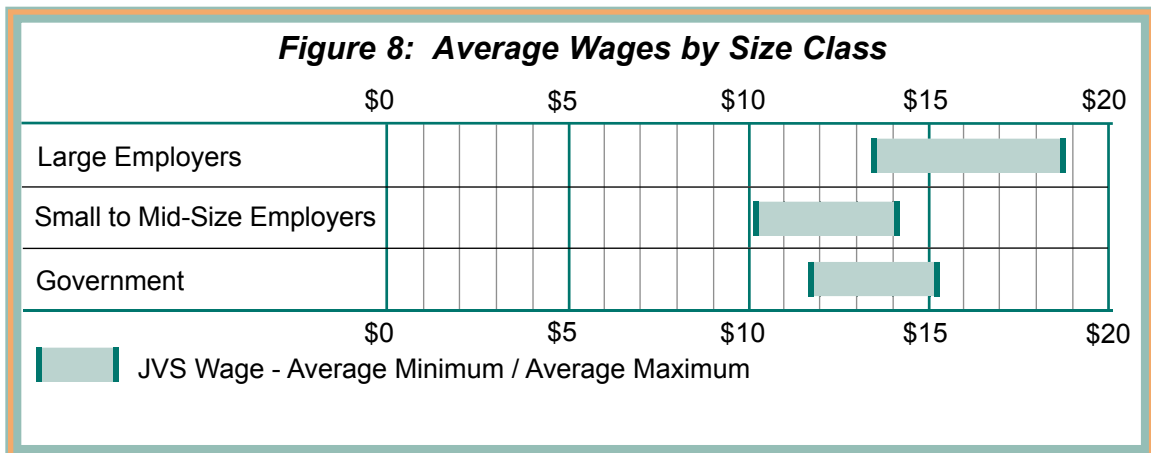
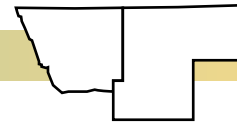


Figure 8 shows average wages offered for surveyed vacancies. Large employers offer the highest wages averaging approximately \$4.00 per hour higher than those offered by small to mid-size firms and about

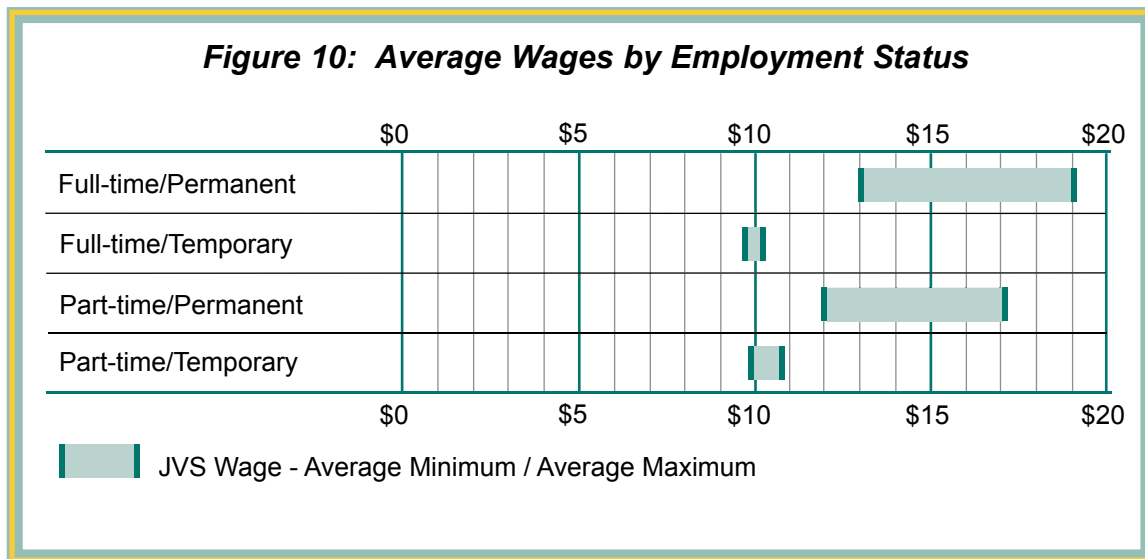
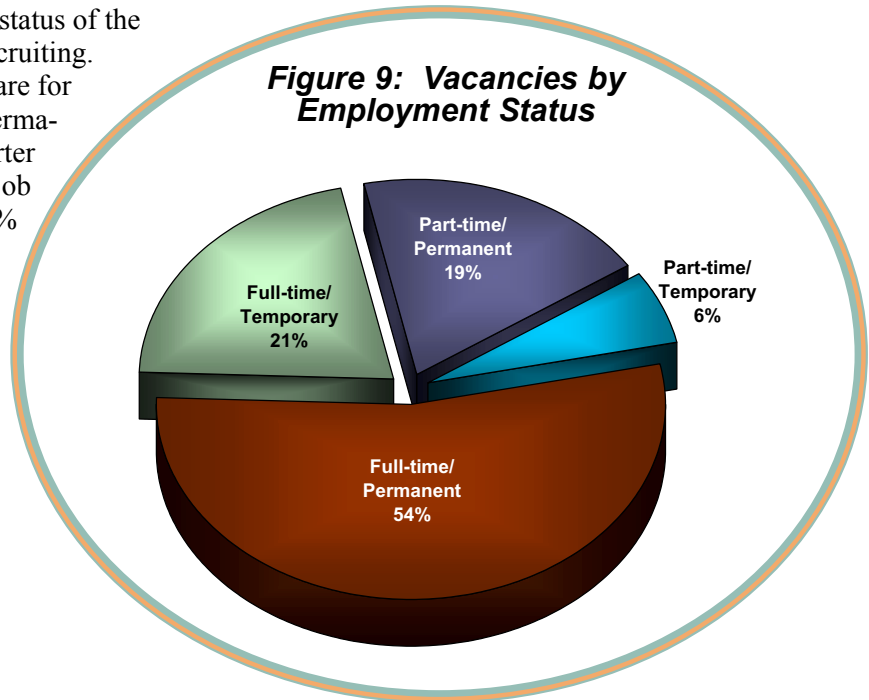
\$2.60 higher than government agencies. Each of these employer size categories represents a range of industries and occupations.







Employers are also asked to state the status of the vacancies for which they are actively recruiting. Results show that 75% of all vacancies are for full-time positions, 54% of which are permanent. Part-time positions make up a quarter of all vacancies, with 19% of part-time job openings for permanent positions and 6% for temporary jobs (*Figure 9*).



In general, full-time/permanent positions pay more than part-time and temporary positions. Results of this survey show that permanent positions pay almost \$5.15

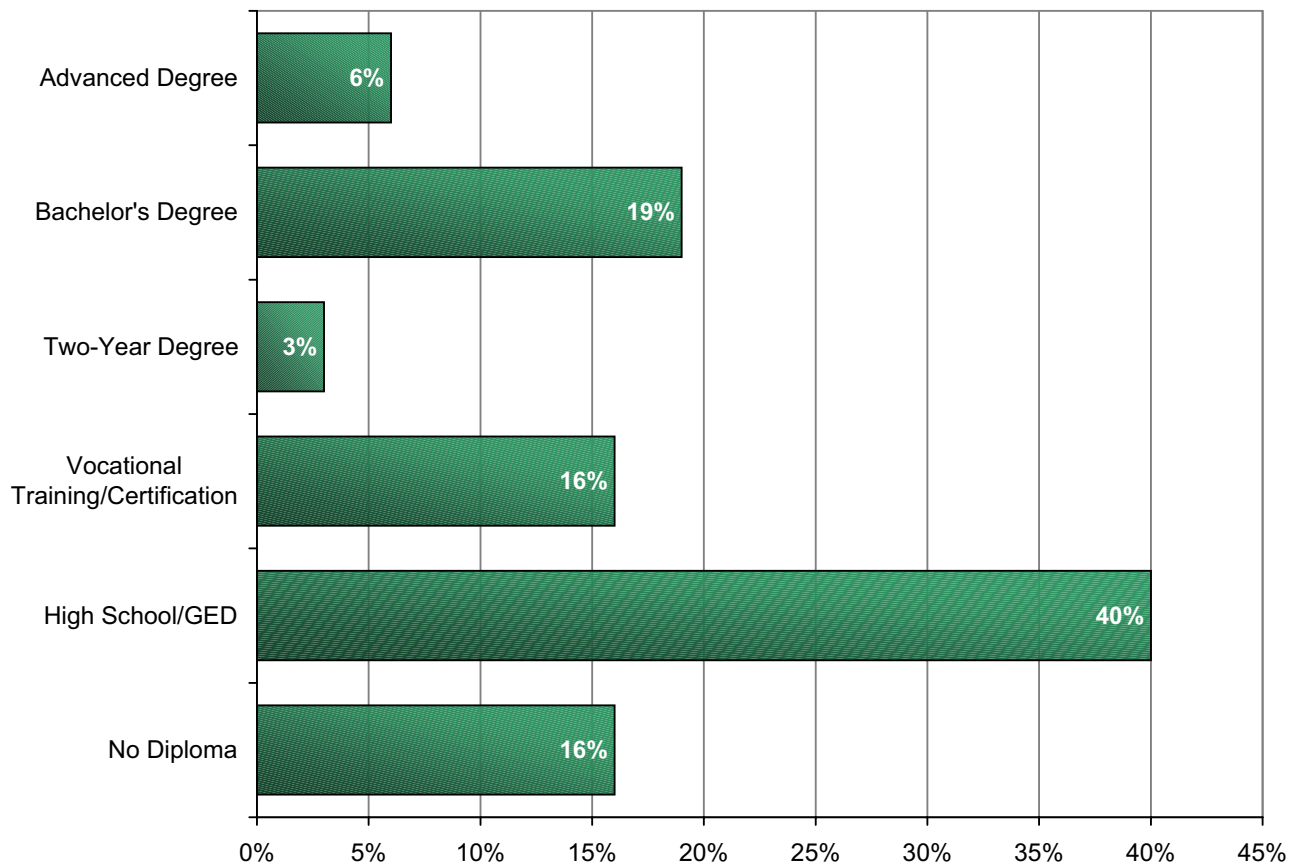
more per hour than temporary positions. Average wages are consistently higher for permanent positions regardless of the position's full or part-time status.

## Vacancies: Education and Experience Requirements

**D**uring periods of high unemployment, a typical assumption might be that there are too many qualified candidates and too few job openings. The reality is that even in recessions there are many employers who cannot find qualified candidates to fill their open positions. A region's overall labor force is

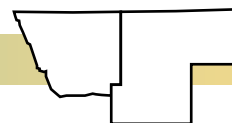
made up of multiple smaller labor groups defined by skills, experience and education; only a certain number of qualified candidates can compete for any given job. It is important, therefore, that job seekers have accurate information regarding what types of education and experience are in high demand.

**Figure 11: Vacancies by Education**

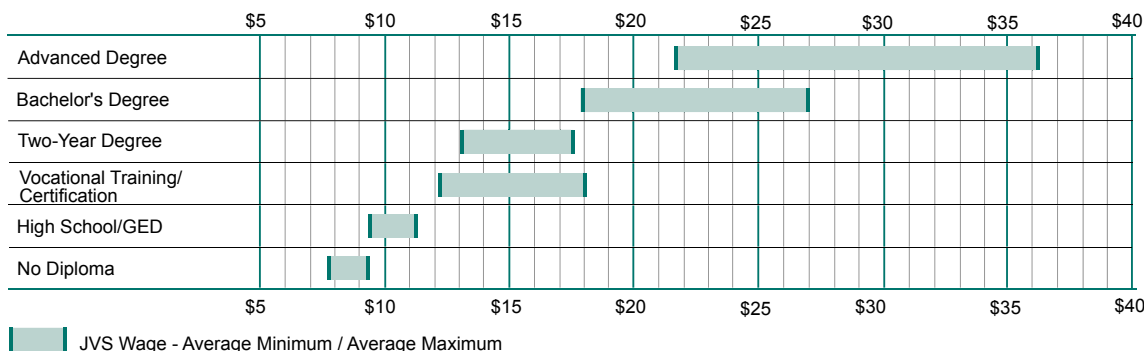


Employers were asked what level of education is required of an applicant in order to be considered for a particular vacancy. Over half of the positions reported by employers in the Larimer/Weld Region require no post-secondary education. Forty percent of all positions require high school/GED, while a quarter require at

least a bachelor's degree. Those requiring a bachelor's degree fall in the the major occupational groups of: Management; Business and Financial Operations; Life, Physical and Social Science; Healthcare Practitioners and Technical; Office and Administrative Support; and Production.



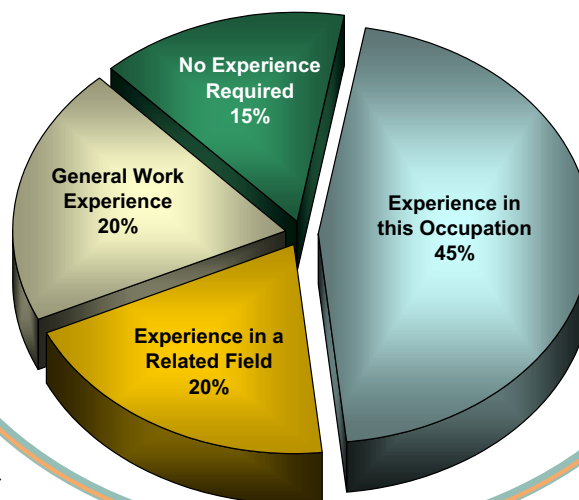
**Figure 12: Average Wages by Education**



On average, employers pay higher wages when requiring higher levels of educational attainment (Figure 12). The highest average minimum wage rate difference (\$4.50 per hour) was found between requiring a two-year degree and completing a bachelor's. Job vacancies requiring a bachelor's degree offer

wages almost twice as high as those requiring a high school diploma. The requirement of vocational training or certification increases the wage rate by \$2.80 per hour from a high school diploma/GED requirement. In addition to increasing average wage, the wage range broadens with increasing levels of education.

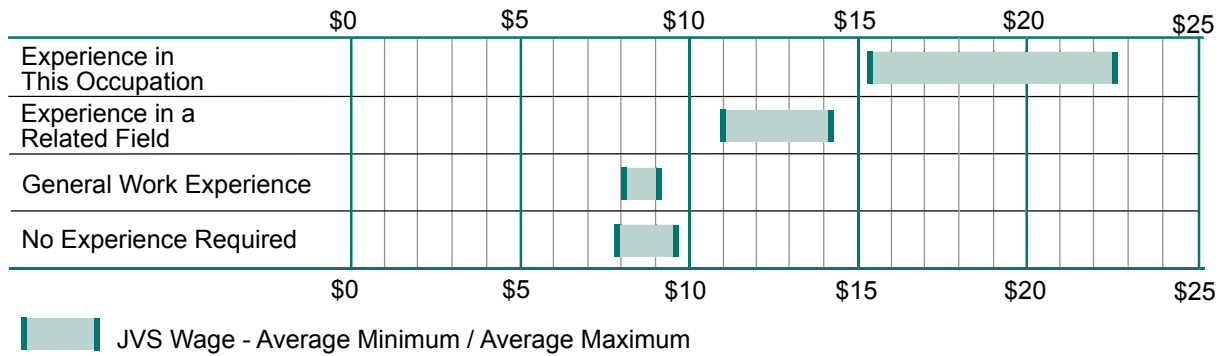
**Figure 13: Vacancies by Experience**



Employers require the applicant to have experience in the occupation or a related field for 65% of all job vacancies. Major occupational groups represented by that 65% include: Management; Business and Financial Operations; Life, Physical and Social Science; Community and Social Services; Education, Training and Library; Healthcare Practitioners and Technical; Healthcare Support; and Office and Administrative Support.

Thirty-five percent of the reported job openings require either no prior experience or general work experience (Figure 13).

**Figure 14: Average Wages by Experience**



Similar to increasing levels of education, employers are willing to offer higher wages for job openings requiring more experience. Vacancies that require experience in a related field offer on average \$4.00 per hour more than those requiring general work experience. Employers are willing to pay an additional \$6.40

per hour for positions that require a higher level of experience within the occupation. This is a total of \$10.40 per hour above the average wage for vacancies associated with only the general work experience requirement.

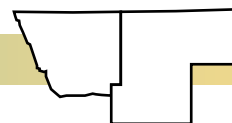
**Table 2: Experience Requirements by Educational Level**

	No Experience	General Work Experience	Experience in a Related Field	Experience in This Occupation
<b>No Diploma</b>	73%	18%	10%	13%
<b>High School Diploma/GED</b>	12%	38%	17%	34%
<b>Vocational Training/Certification</b>	3%	4%	33%	60%
<b>Two-Year Degree</b>	0%	5%	56%	40%
<b>Bachelor's Degree</b>	0%	3%	17%	81%
<b>Advanced Degree</b>	0%	6%	19%	75%

Note: Percentages based on each educational category.

Survey results show vacancy experience requirements increase with educational requirements. A majority of positions requiring vocational training or

higher levels of education also require experience in a related field or in the specific occupation (*Table 2*).

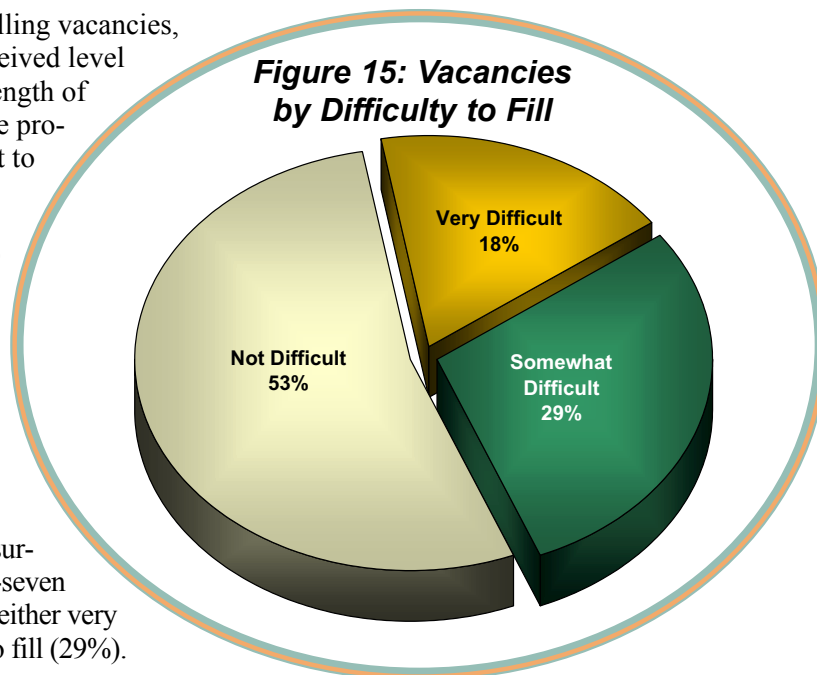


# Vacancies: Difficulty to Fill

To estimate the level of difficulty in filling vacancies, employers are asked about their perceived level of difficulty in filling a job and the length of time that a position has been open. If a large proportion of vacancies in a region are difficult to fill, it may signal one of the following:

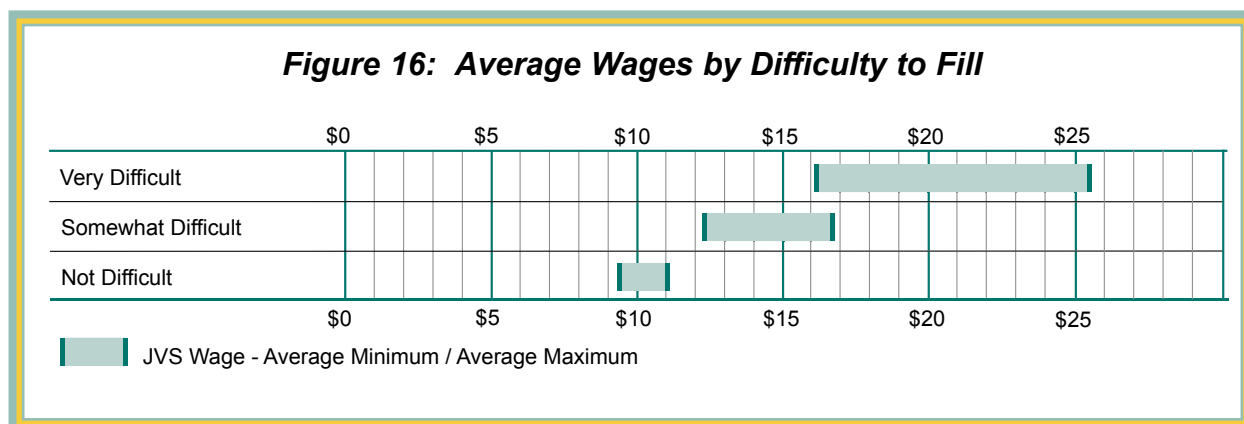
- ◆ too few specifically skilled workers to satisfy the labor demand,
- ◆ a need for alternate employer recruitment efforts,
- ◆ a mismatch between jobs offered and work desired by job seekers,
- ◆ unattractive compensation.

Survey results show that a majority of the surveyed vacancies are not difficult to fill. Forty-seven percent of all vacancies were perceived to be either very difficult to fill (18%), or somewhat difficult to fill (29%).

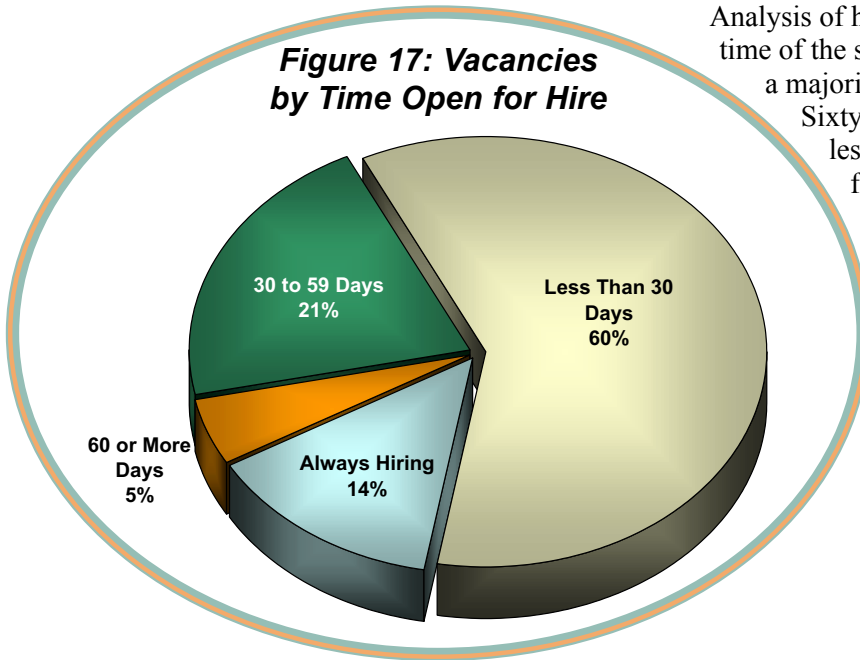


In this survey, vacancies that are considered difficult to fill tend to offer higher wages—those considered very difficult to fill offer an average minimum wage of \$16.20 per hour, while those that are not difficult to fill offer an average maximum wage of \$11.00.

Occupations considered very difficult to fill are found in: Management; Business and Financial Operations; Healthcare Practitioners and Technical; Healthcare Support; and Education, Training and Library.

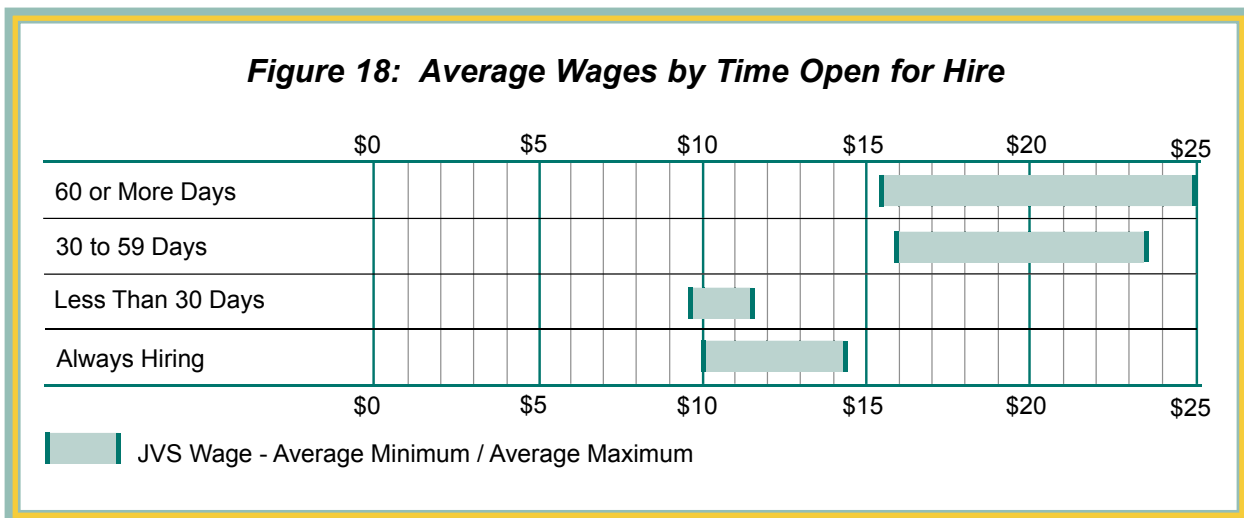


**Figure 17: Vacancies by Time Open for Hire**



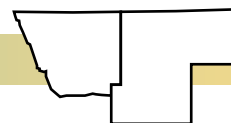
Analysis of how long vacancies had been open at the time of the survey further reinforce the assertion that a majority of positions are not difficult to fill. Sixty percent of vacancies had been open for less than 30 days. Only 5% had been open for 60 days or more.

**Figure 18: Average Wages by Time Open for Hire**



Positions open for 60 days or more offer the highest wages—in line with the idea that many of these positions require specialized skills and experience for which employers are willing to offer higher compensation. They include: Business and

Financial Operations; Healthcare Practitioners and Technical; Management; Education, Training and Library; Sales and Related; Office and Administration Support; and Production occupations.



# Vacancies: Additional Compensation

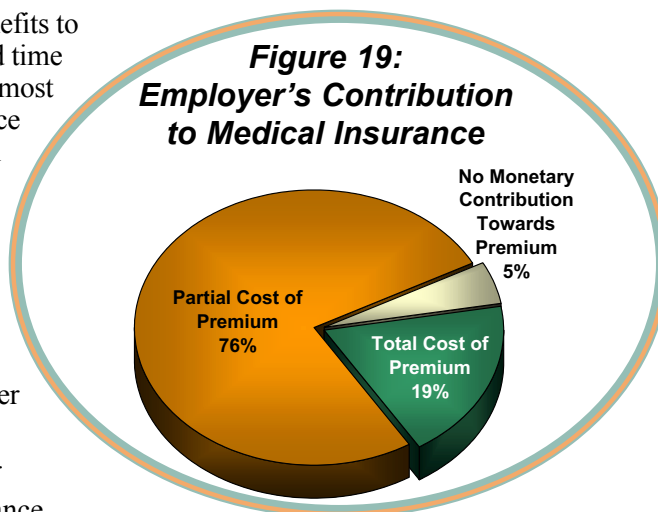
## Medical Insurance

Employers frequently offer compensation related benefits to recruit qualified candidates. These may include paid time off, transportation, or parking vouchers. One of the most common benefits offered to employees is medical insurance through an employer’s group plan. Employers may pay all or part of the monthly insurance premiums for their employees. In this survey, a majority of employers reporting job vacancies are offering to pay either partial or full insurance premiums for open positions.

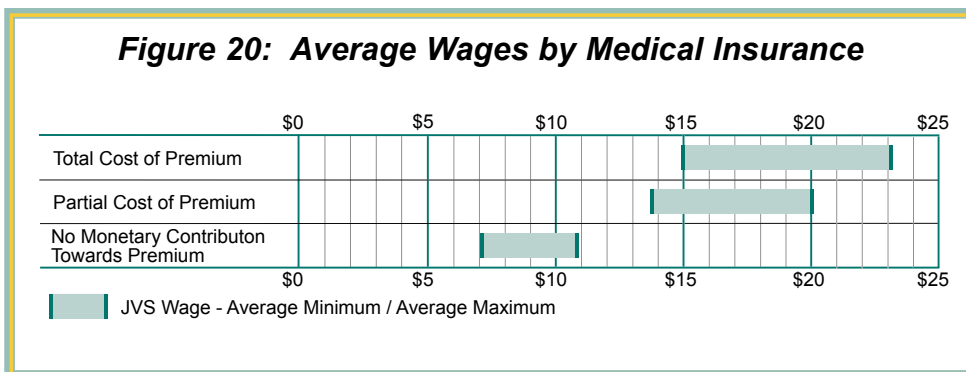
Survey results reveal a positive relationship between wages and employer’s contributions to medical insurance premiums (Figure 20). As higher paying jobs require higher levels of education and experience, employers offer better medical insurance packages to attract qualified candidates.

Businesses that pay the total cost of the medical insurance premium offer an average wage of \$19.10 per hour for the reported vacancies. At the other end of the spectrum, positions where no monetary contribution is offered towards the insurance premium pay an average wage of \$9.00 per hour.

**Figure 19: Employer’s Contribution to Medical Insurance**

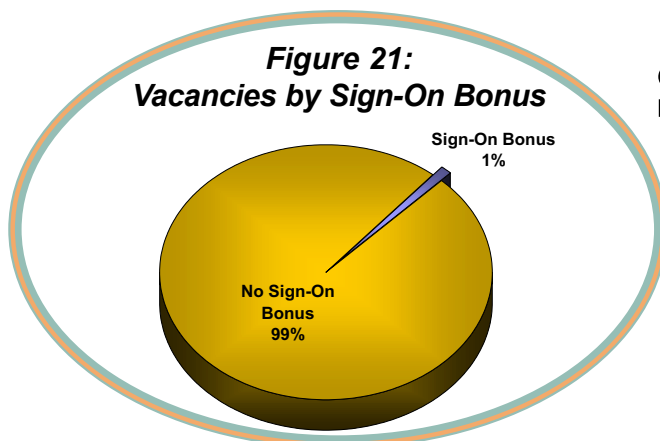


**Figure 20: Average Wages by Medical Insurance**



## Sign-On Bonus

**Figure 21: Vacancies by Sign-On Bonus**



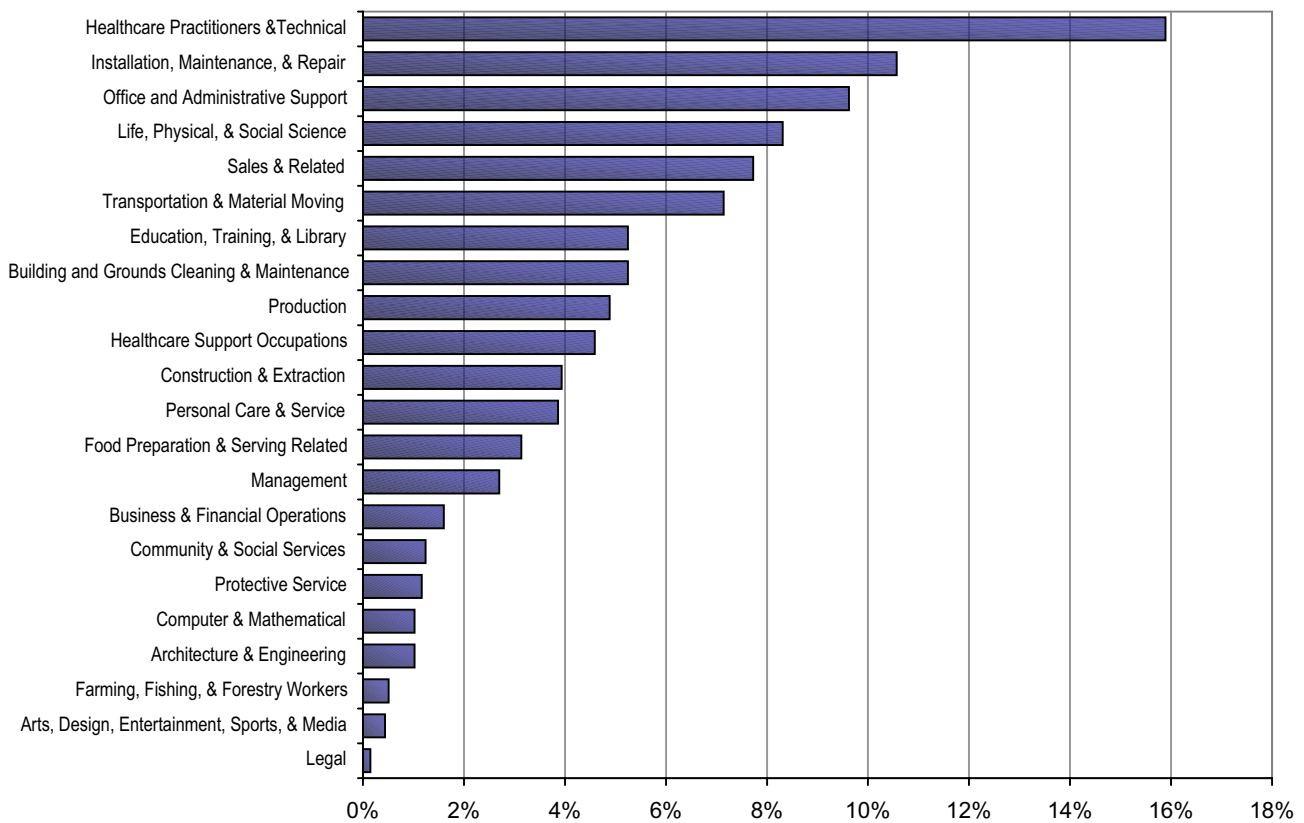
Sign-on bonuses became popular lore in the 1990s when a tight labor market existed in many occupational sectors. It is unclear whether the actual size and frequency of sign-on bonuses deserve the hype. Three out of 306 employers responding to this question offer a sign-on bonus that averaged \$1,171. Jobs that offer a sign-on bonus are found in: Healthcare Support; Sales and Related; and Healthcare Practitioners; and Technical occupations.

# Occupations

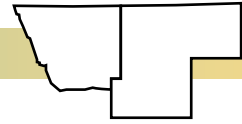
In order to compare the results of this survey to other sources of employment statistics, all reported vacancies were assigned a Standard Occupational Classification (SOC) Code and results reported for the major occupational groups as defined by the *Standard*

*Occupational Classification Manual, 2000*. Although the number of vacancies varies greatly between major occupational groups, most are concentrated in the Services and Retail Trade industries as shown in *Figure 5* on page 10.

**Figure 22: Vacancies by Major Occupational Group**



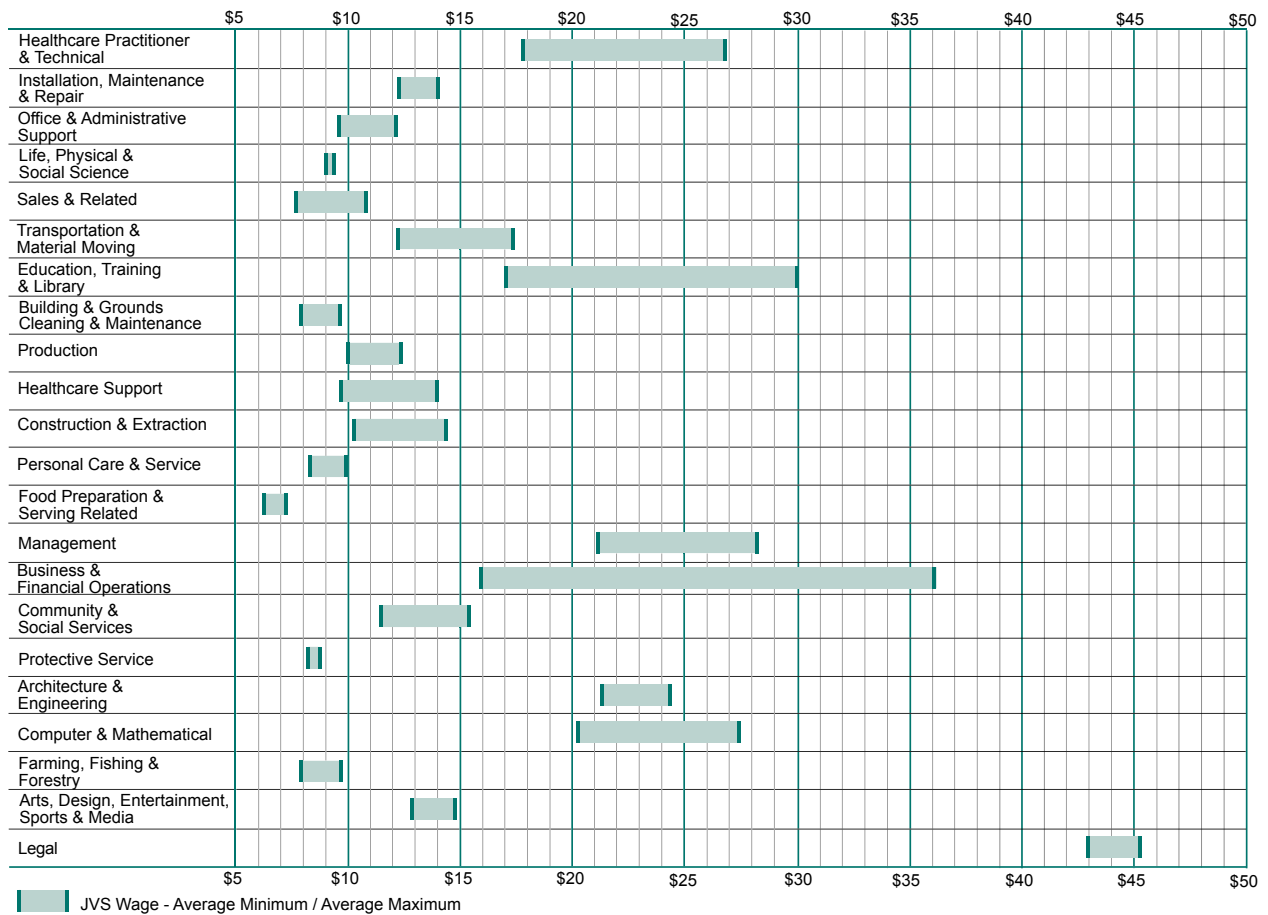




Legal; Business and Financial Operations; Management; Computer and Mathematical; Education, Training and Library; Architecture and Engineering; Healthcare Practitioner and Technical occupations command the highest wages. These occupational groups also require higher levels of education and experience. Lower wages with less variation between

the minimum and maximum are offered for major occupational groups with the least educational requirements. Such groups include Food Preparation and Serving Related, Protective Service, Personal Care and Service, as well as Building and Grounds Cleaning and Maintenance.

**Figure 23: Average Wages by Major Occupational Group**



**Table 3: Job Vacancy Survey Occupations with OES Wages**

SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
11-0000	Management Occupations	†		\$14.70	\$27.12	\$33.33	\$12.69	\$17.39	\$23.85	\$33.08	\$47.26
11-1011	Chief Executives	L	†	\$26.55	\$49.76	\$61.37	\$23.90	\$32.04	\$52.08	\$71.93	\$74.56
11-1021	General and Operations Managers	M	\$21.20	\$14.55	\$28.71	\$35.79	\$12.81	\$16.58	\$23.48	\$38.56	\$54.19
11-2021	Marketing Managers	M	\$25.20	\$12.67	\$20.83	\$24.91	\$12.00	\$13.38	\$17.64	\$26.21	\$37.55
11-2022	Sales Managers	L	\$16.40	\$14.71	\$29.23	\$36.48	\$10.62	\$18.63	\$28.08	\$34.74	\$45.83
11-3011	Administrative Services Managers	L	\$25.50	\$11.19	\$20.34	\$24.93	\$10.30	\$12.58	\$20.79	\$26.42	\$32.51
11-3031	Financial Managers	L	\$16.90	\$17.14	\$32.05	\$39.50	\$16.05	\$20.38	\$26.95	\$39.66	\$59.12
* 11-3042	Training and Development Managers	L	†	†	†	†	†	†	†	†	†
11-3051	Industrial Production Managers	M	\$39.70	\$17.70	\$27.86	\$32.95	\$14.74	\$20.86	\$25.36	\$29.16	\$35.68
11-3061	Purchasing Managers	L	\$25.50	\$17.41	\$24.73	\$28.39	\$13.73	\$19.34	\$22.07	\$31.67	\$36.39
11-3071	Transportation, Storage, and Distribution Managers	M	\$13.20	\$11.65	\$21.31	\$26.14	\$10.28	\$12.95	\$19.82	\$24.63	\$34.08
11-9021	Construction Managers	M	\$22.60	\$21.68	\$29.14	\$32.87	\$18.38	\$23.83	\$26.91	\$33.03	\$47.79
11-9032	Education Administrators, Elementary and Secondary School	M	\$30.40	\$44,555	\$60,969	\$69,175	\$39,439	\$50,814	\$62,164	\$71,535	\$84,390
11-9033	Education Administrators, Postsecondary	M	\$60.10	\$20.09	\$30.74	\$36.07	\$18.68	\$21.76	\$29.11	\$39.87	\$46.31
* 11-9039	Education Administrators, All Other	L	†	†	†	†	†	†	†	†	†
11-9041	Engineering Managers	M	\$28.00	\$23.12	\$33.30	\$38.40	\$21.78	\$24.93	\$31.79	\$40.02	\$44.95
11-9051	Food Service Managers	L	\$6.60	\$10.89	\$17.62	\$20.98	\$9.99	\$12.20	\$18.00	\$21.29	\$26.46
11-9111	Medical and Health Services Managers	M	†	\$18.34	\$23.81	\$26.54	\$16.84	\$20.25	\$24.07	\$27.08	\$31.09
11-9121	Natural Sciences Managers	M	\$27.40	\$20.27	\$28.07	\$31.96	\$17.26	\$23.33	\$29.13	\$33.04	\$35.40
11-9151	Social and Community Service Managers	L	\$32.50	\$12.20	\$21.73	\$26.50	\$10.36	\$14.50	\$20.27	\$27.33	\$34.64
11-9199	Managers, All Other	L	\$15.60	\$17.21	\$25.56	\$29.74	\$15.74	\$19.32	\$24.34	\$31.18	\$37.57
<b>13-0000</b>	<b>Business and Financial Operations Occupations</b>		†	<b>\$12.68</b>	<b>\$19.78</b>	<b>\$23.33</b>	<b>\$11.15</b>	<b>\$14.38</b>	<b>\$18.67</b>	<b>\$23.75</b>	<b>\$29.91</b>
13-1022	Wholesale and Retail Buyers, Except Farm Products	L	†	\$10.19	\$13.38	\$14.97	\$9.68	\$10.84	\$12.92	\$15.02	\$16.76

\* OES wages reported for Colorado statewide  
 † No wage data available  
 ‡ L - lowest 25% of actual responses  
 M - middle 50% of actual responses  
 H - highest 25% of actual responses

Table 3: Job Vacancy Survey Occupations with OES Wages – Page 2

SOC Code	SOC Occupational Title	† Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	M	\$22.20	\$12.62	\$17.33	\$19.70	\$11.67	\$14.01	\$16.96	\$20.31	\$22.83
13-1051	Cost Estimators	L	\$26.40	\$15.66	\$20.78	\$23.33	\$15.02	\$17.55	\$20.54	\$24.43	\$27.67
13-1071	Employment, Recruitment, and Placement Specialists	M	\$10.00	\$9.45	\$15.84	\$19.04	\$8.28	\$10.84	\$13.97	\$21.84	\$27.10
* 13-1079	Human Resources Training, and Labor Relations Specialists, All Other	L	\$26.40	†	†	†	†	†	†	†	†
13-1111	Management Analysts	M	\$30.70	\$22.59	\$33.01	\$38.22	\$20.67	\$23.66	\$27.70	\$34.10	\$59.11
13-1199	Business Operations Specialists, All Other	L	\$16.80	\$13.83	\$21.24	\$24.95	\$12.45	\$15.64	\$20.57	\$26.49	\$31.94
13-2011	Accountants and Auditors	M	\$18.30	\$13.47	\$20.58	\$24.13	\$12.29	\$15.21	\$19.87	\$24.73	\$29.97
13-2051	Financial Analysts	L	†	\$12.46	\$19.76	\$23.41	\$10.04	\$15.33	\$21.23	\$25.38	\$27.32
* 13-2052	Personal Financial Advisors	M	\$81.70	\$13.05	\$27.45	\$34.66	\$12.14	\$14.12	\$19.69	\$32.03	†
13-2072	Loan Officers	M	\$12.30	\$17.01	\$26.86	\$31.78	\$15.78	\$19.69	\$25.17	\$33.98	\$41.12
13-2099	Financial Specialists, All Other	L	\$15.60	\$12.78	\$16.96	\$19.06	\$12.15	\$13.22	\$15.23	\$18.19	\$26.96
15-0000	Computer and Mathematical Occupations		†	\$15.29	\$21.97	\$25.31	\$14.02	\$17.36	\$22.58	\$26.13	\$28.87
15-1021	Computer Programmers	L	\$34.60	\$21.83	\$24.20	\$25.39	\$22.29	\$23.32	\$25.03	\$26.73	\$27.75
* 15-1031	Computer Software Engineers, Applications	M	†	\$21.29	\$36.04	\$43.42	\$19.34	\$24.04	\$34.58	\$43.61	\$61.22
* 15-1032	Computer Software Engineers, Systems Software	M	\$30.00	\$26.77	\$35.06	\$39.21	\$24.24	\$29.38	\$34.17	\$41.39	\$48.52
15-1041	Computer Support Specialists	M	\$16.70	\$14.46	\$18.04	\$19.83	\$13.78	\$15.13	\$17.12	\$20.84	\$24.29
15-1051	Computer Systems Analysts	L	†	\$15.94	\$23.40	\$27.13	\$12.93	\$18.93	\$23.80	\$28.07	\$33.39
15-1061	Database Administrators	L	\$22.20	\$15.32	\$24.84	\$29.61	\$13.93	\$17.04	\$20.84	\$26.24	\$34.34
15-1071	Network and Computer Systems Administrators	L	\$16.40	\$13.86	\$20.61	\$23.98	\$10.65	\$16.85	\$20.44	\$25.65	\$30.11
15-1081	Network Systems and Data Communications Analysts	L	†	\$16.45	\$19.15	\$20.49	\$15.29	\$17.38	\$19.30	\$21.16	\$22.92
15-1099	Computer Specialists, All Other	M	†	\$18.16	\$24.94	\$28.32	\$17.81	\$19.51	\$22.36	\$30.80	\$37.12

\* OES wages reported for Colorado statewide  
 † No wage data available  
 ‡ L - lowest 25% of actual responses  
 M - middle 50% of actual responses  
 H - highest 25% of actual responses

**Table 3: Job Vacancy Survey Occupations with OES Wages – Page 3**

SOC Code		Occupational Employment Statistics Wage Data (2001)									
		Average Wages			Percentile Distribution						
SOC Occupational Title		‡ Vacancy Rank	Average JVS Wage	Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
17-0000	Architecture and Engineering Occupations		†	\$15.42	\$23.57	\$27.64	\$13.47	\$17.94	\$21.64	\$29.09	\$36.60
* 17-2031	Biomedical Engineers	L	\$22.20	\$23.01	\$29.33	\$32.49	\$21.53	\$25.13	\$29.86	\$33.83	\$38.16
17-2051	Civil Engineers	M	\$22.30	\$13.53	\$22.96	\$27.67	\$8.13	\$18.95	\$24.81	\$29.33	\$33.17
* 17-2061	Computer Hardware Engineers	L		\$27.21	\$37.92	\$43.27	\$24.81	\$30.11	\$37.33	\$44.71	\$54.13
17-2071	Electrical Engineers	M	\$31.30	\$22.48	\$29.95	\$33.69	\$20.45	\$24.44	\$30.78	\$34.27	\$36.90
17-2141	Mechanical Engineers	M	\$32.70	\$22.83	\$28.86	\$31.88	\$22.76	\$24.71	\$27.48	\$34.77	\$41.69
17-3011	Architectural and Civil Drafters	L	\$14.00	\$18.30	\$19.18	\$19.61	\$17.63	\$18.39	\$19.64	\$20.90	\$21.65
* 17-3024	Electro-Mechanical Technicians	M	\$14.00	\$13.50	\$18.78	\$21.41	\$12.29	\$15.11	\$19.10	\$21.22	\$24.11
* 17-3029	Engineering Technicians, Except Drafters, All Other	L	\$15.20	†	†	†	†	†	†	†	†
19-0000	Life, Physical, and Social Science Occupations		†	\$12.67	\$19.40	\$22.77	\$11.28	\$14.21	\$18.24	\$24.66	\$28.51
* 19-1011	Animal Scientist	L	†	†	†	†	†	†	†	†	†
* 19-1022	Microbiologists	M	†	\$14.34	\$22.92	\$27.21	\$12.40	\$16.74	\$23.92	\$28.73	\$33.50
19-1023	Zoologists and Wildlife Biologists	M	\$17.80	\$18.37	\$22.96	\$25.27	\$17.24	\$19.83	\$23.44	\$26.39	\$28.46
* 19-1029	Biological Scientist, All Other	M	\$12.00	†	†	†	†	†	†	†	†
19-1031	Conservation Scientists	L	†	\$19.19	\$23.43	\$25.54	\$17.92	\$21.50	\$24.22	\$26.54	\$27.93
* 19-1032	Foresters	M	\$13.70	\$18.92	\$24.41	\$27.15	\$18.07	\$20.20	\$23.74	\$27.32	\$33.24
* 19-2012	Physicists	L	†	\$30.58	\$41.23	\$46.55	\$28.89	\$34.73	\$41.37	\$49.14	\$55.97
* 19-2021	Atmospheric and Space Scientists	M	†	†	†	†	†	†	†	†	†
* 19-2031	Chemists	L	†	\$13.39	\$22.56	\$27.16	\$12.51	\$14.21	\$20.33	\$28.35	\$36.93
19-2041	Environmental Scientists and Specialists, Including Health	L	\$9.80	\$18.61	\$22.78	\$24.87	\$17.80	\$20.16	\$23.52	\$26.05	\$27.58
19-2042	Geoscientists, Except Hydrologists and Geographers	H	\$15.60	\$20.86	\$27.75	\$31.20	\$18.72	\$25.02	\$29.85	\$32.73	\$34.47
* 19-3021	Market Research Analysts	L	\$26.40	\$18.31	\$30.82	\$37.07	\$16.43	\$20.81	\$28.36	\$38.10	\$51.05
* 19-3041	Sociologists	L	†	†	†	†	†	†	†	†	†
19-3051	Urban and Regional Planners	L	\$32.50	\$21.40	\$26.11	\$28.47	\$19.82	\$22.54	\$26.17	\$30.37	\$33.64

\* OES wages reported for Colorado statewide  
 † No wage data available  
 ‡ L - lowest 25% of actual responses  
 M - middle 50% of actual responses  
 H - highest 25% of actual responses

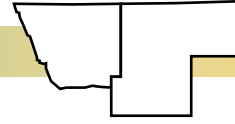


Table 3: Job Vacancy Survey Occupations with OES Wages – Page 4

SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experi-enced	10th	25th	50th	75th	90th
19-4021	Biological Technicians	M	\$7.20	\$10.85	\$13.60	\$14.97	\$9.92	\$11.47	\$13.44	\$15.82	\$17.32
19-4031	Chemical Technicians	H	\$8.80	\$12.45	\$17.56	\$20.12	\$10.04	\$14.53	\$16.77	\$21.33	\$26.00
* 19-4061	Social Science Research Assistants Life, Physical, and Social Science Technicians, All Other	L	\$10.00	†	†	†	†	†	†	†	†
19-4099	Community and Social Services Occupations	H	\$7.80	\$13.39	\$16.87	\$18.62	\$12.32	\$14.06	\$15.77	\$17.48	\$25.20
21-0000	Substance Abuse and Behavioral Disorder Counselors	L	†	\$9.20	\$14.85	\$17.68	\$8.36	\$10.47	\$14.02	\$18.28	\$22.22
* 21-1011	Educational, Vocational, and School Counselors	L	\$22.20	\$10.83	\$14.27	\$16.00	\$9.83	\$11.73	\$13.55	\$16.27	\$20.46
21-1012	Marriage and Family Therapists	M	\$15.30	\$12.75	\$19.07	\$22.23	\$11.60	\$14.27	\$18.14	\$21.57	\$29.10
* 21-1013	Mental Health Counselors	L	\$18.00	\$13.21	\$16.19	\$17.69	\$12.11	\$14.25	\$16.03	\$18.03	\$20.97
21-1014	Rehabilitation Counselors	L	\$13.00	\$8.08	\$10.89	\$12.30	\$7.67	\$8.30	\$9.55	\$14.03	\$16.22
* 21-1015	Child, Family, and School Social Workers	M	\$10.00	\$8.36	\$12.56	\$14.68	\$7.77	\$8.93	\$10.69	\$14.09	\$22.56
21-1021	Mental Health and Substance Abuse Social Workers	M	\$13.60	\$10.78	\$12.95	\$14.05	\$10.07	\$11.37	\$12.82	\$14.27	\$16.54
* 21-1023	Probation Officers and Correctional Treatment Specialists	L	\$20.70	\$11.58	\$15.59	\$17.60	\$11.05	\$12.40	\$14.82	\$18.02	\$21.94
* 21-1092	Community and Social Services Specialists, All Other	L	\$14.90	\$16.86	\$22.83	\$25.81	\$15.32	\$18.75	\$23.44	\$26.77	\$30.76
* 21-1099	Directors, Religious Activities and Education	L	\$9.70	†	†	†	†	†	†	†	†
* 21-2021	Legal Occupations	L	\$5.80	\$12.25	\$15.72	\$17.46	\$10.31	\$14.23	\$15.59	\$16.97	\$21.46
23-0000	Judges, Magistrate Judges, and Magistrates	M	†	\$14.86	\$19.66	\$22.07	\$14.48	\$15.84	\$18.28	\$21.21	\$27.73
23-1023	Education, Training, and Library Occupations	M	\$44.10	\$19.64	\$47.67	\$61.68	\$6.11	\$39.33	\$59.60	\$65.88	\$69.64
25-0000	Mathematical Science Teachers, Postsecondary	M	†	\$9.90	\$16.29	\$19.48	\$8.51	\$11.56	\$15.63	\$20.54	\$25.82
25-1022		M	\$36.10	\$35.886	\$48,239	\$54,416	\$32,347	\$40,057	\$48,711	\$57,234	\$66,739

\* OES wages reported for Colorado statewide  
 † No wage data available  
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**Table 3: Job Vacancy Survey Occupations with OES Wages – Page 5**

SOC Code		SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Average Wages			Percentile Distribution				
					Entry Level	Overall	Experi-enced	10th	25th	50th	75th	90th
25-1042	Biological Science Teachers, Postsecondary	M	\$36.10	\$38,185	\$48,447	\$53,577	\$36,190	\$42,096	\$49,524	\$55,384	\$61,075	
* 25-1043	Forestry and Conservation Science Teachers, Postsecondary	L	\$8.40	†	†	†	†	†	†	†	†	
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	L	†	\$37,745	\$44,714	\$48,197	\$35,144	\$38,631	\$42,868	\$49,973	\$60,960	
25-1052	Chemistry Teachers, Postsecondary	L	\$36.10	\$38,445	\$52,736	\$59,881	\$37,937	\$43,403	\$54,295	\$64,516	\$70,180	
25-1061	Anthropology and Archeology Teachers, Postsecondary	L	†	\$39,370	\$47,502	\$51,568	\$37,507	\$41,177	\$47,434	\$54,270	\$58,371	
* 25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	M	\$16.80	\$34,237	\$51,676	\$60,395	\$31,939	\$38,669	\$47,666	\$58,241	\$84,058	
* 25-1063	Economics Teachers, Postsecondary	M	\$16.80	\$35,392	\$59,199	\$71,093	\$32,578	\$40,741	\$61,920	\$73,216	\$87,799	
* 25-1064	Geography Teachers, Postsecondary	M	\$36.10	\$36,835	\$53,788	\$62,270	\$33,949	\$41,256	\$50,140	\$67,434	\$84,697	
25-1065	Political Science Teachers, Postsecondary	M	†	\$41,654	\$53,471	\$59,380	\$39,590	\$44,313	\$53,876	\$63,896	\$69,889	
25-1066	Psychology Teachers, Postsecondary	M	\$36.10	\$39,576	\$48,443	\$52,876	\$38,096	\$42,895	\$49,358	\$54,797	\$58,061	
25-1067	Sociology Teachers, Postsecondary	L	\$36.10	\$32,003	\$42,515	\$47,773	\$26,630	\$37,305	\$44,342	\$51,374	\$55,591	
* 25-1071	Health Specialties Teachers, Postsecondary	M	\$22.20	\$19,561	\$57,591	\$76,606	\$16,851	\$21,736	\$51,645	\$79,338	\$123,438	
* 25-1072	Nursing Instructors and Teachers, Postsecondary	M	\$16.70	\$32,516	\$45,615	\$52,170	\$31,259	\$34,145	\$41,029	\$53,376	\$59,611	
25-1081	Education Teachers, Postsecondary	M	\$36.10	\$32,878	\$40,677	\$44,576	\$31,332	\$34,919	\$40,038	\$44,863	\$53,333	
25-1121	Art, Drama, and Music Teachers, Postsecondary	H	\$31.20	\$32,780	\$42,750	\$47,735	\$29,890	\$36,660	\$44,157	\$51,339	\$55,583	
* 25-1122	Communications Teachers, Postsecondary	M	\$36.10	\$32,671	\$46,945	\$54,077	\$29,022	\$37,597	\$44,760	\$56,406	\$70,454	
25-1123	English Language and Literature Teachers, Postsecondary	M	\$36.10	\$25,137	\$39,005	\$45,939	\$24,141	\$26,891	\$38,546	\$46,688	\$61,595	
25-1124	Foreign Language and Literature Teachers, Postsecondary	M	\$36.10	\$31,072	\$42,343	\$47,978	\$26,260	\$36,679	\$44,543	\$51,574	\$55,670	
* 25-1126	Philosophy and Religion Teachers, Postsecondary	L	†	\$35,093	\$53,345	\$62,477	\$31,743	\$38,937	\$50,573	\$66,424	\$82,945	

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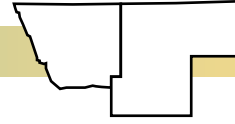


Table 3: Job Vacancy Survey Occupations with OES Wages – Page 6

SOC Code	SOC Occupational Title	† Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
* 25-1194	Vocational Education Teachers, Postsecondary	M	\$8.40	\$13.56	\$20.46	\$23.90	\$12.29	\$15.11	\$20.97	\$25.93	\$28.30
25-2011	Preschool Teachers, Except Special Education	L	\$8.80	\$8.27	\$10.06	\$10.95	\$7.73	\$8.77	\$9.97	\$11.30	\$12.95
25-2012	Kindergarten Teachers, Except Special Education	L	\$12.50	\$14,358	\$28,061	\$34,912	\$13,004	\$15,791	\$25,526	\$35,038	\$49,800
25-2031	Secondary School Teachers, Except Special and Vocational Education	M	\$12.50	\$29,792	\$40,845	\$46,372	\$27,295	\$31,841	\$37,789	\$48,936	\$60,514
* 25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors	L	\$22.10	\$9.96	\$14.20	\$16.33	\$9.48	\$10.30	\$11.93	\$16.70	\$23.93
* 25-3099	Teachers and Instructors, All Others	H	\$11.10	†	†	†	†	†	†	†	†
25-4021	Librarians	M	\$19.30	\$13.19	\$17.70	\$19.94	\$12.03	\$14.34	\$17.76	\$21.02	\$24.34
25-4031	Library Technicians	L	\$7.80	\$9.97	\$13.06	\$14.60	\$8.28	\$11.36	\$13.16	\$15.46	\$17.03
25-9041	Teacher Assistants	H	\$7.60	\$15,978	\$18,994	\$20,501	\$15,211	\$16,430	\$18,470	\$21,359	\$23,605
<b>27-0000</b>	<b>Arts, Design, Entertainment, Sports, and Media Occupations</b>		†	<b>\$7.99</b>	<b>\$14.36</b>	<b>\$17.54</b>	<b>\$7.16</b>	<b>\$9.02</b>	<b>\$11.83</b>	<b>\$16.56</b>	<b>\$23.93</b>
* 27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	L	\$13.00	\$7.39	\$14.23	\$17.64	\$6.80	\$8.35	\$13.27	\$18.25	\$25.02
27-2022	Coaches and Scouts	M	\$20.60	\$19,546	\$29,384	\$34,303	\$18,857	\$20,714	\$27,028	\$36,697	\$44,780
* 27-2023	Umpires, Referees, and Other Sports Officials	L	\$6.30	\$19,520	\$25,405	\$28,353	\$18,314	\$20,087	\$22,282	\$27,672	\$41,586
27-3041	Editors	L		\$9.51	\$12.95	\$14.69	\$9.14	\$10.05	\$11.49	\$15.43	\$20.25
* 27-3091	Interpreters and Translators	L	\$8.30	\$10.73	\$15.47	\$17.84	\$9.80	\$11.81	\$14.14	\$19.38	\$23.47
<b>29-0000</b>	<b>Healthcare Practitioners and Technical Occupations</b>		†	<b>\$11.87</b>	<b>\$20.15</b>	<b>\$24.29</b>	<b>\$10.19</b>	<b>\$14.07</b>	<b>\$19.36</b>	<b>\$23.89</b>	<b>\$30.23</b>
29-1051	Pharmacists	M	\$32.80	\$29.05	\$32.83	\$34.71	\$28.83	\$30.59	\$33.22	\$36.07	\$41.41
29-1111	Registered Nurses	H	\$23.90	\$17.17	\$20.88	\$22.74	\$15.95	\$18.51	\$20.63	\$23.49	\$27.28
29-1122	Occupational Therapists	M	\$25.50	\$20.30	\$24.60	\$26.74	\$18.96	\$22.07	\$24.57	\$27.08	\$30.68
29-1123	Physical Therapists	M	\$25.50	\$21.60	\$24.99	\$26.68	\$19.82	\$22.76	\$25.20	\$27.63	\$31.25
* 29-1124	Radiation Therapists	L	\$19.30	\$21.51	\$25.12	\$26.91	\$19.38	\$22.87	\$25.27	\$27.67	\$32.08

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Table 3: Job Vacancy Survey Occupations with OES Wages – Page 7

Occupational Employment Statistics Wage Data (2001)											
SOC Code	SOC Occupational Title	† Vacancy Rank	Average JVS Wage	Average Wages			Percentile Distribution				
				Entry Level	Overall	Experi-enced	10th	25th	50th	75th	90th
29-1126	Respiratory Therapists	H	\$17.80	\$15.36	\$17.93	\$19.22	\$14.63	\$15.97	\$18.16	\$20.29	\$21.56
29-1127	Speech-Language Pathologists	M	\$22.20	\$15.79	\$22.51	\$25.87	\$15.13	\$16.67	\$22.12	\$26.61	\$32.24
* 29-1129	Therapists, All Other	M	\$16.80	†	†	†	†	†	†	†	†
* 29-2011	Medical and Clinical Laboratory Technologists	L	\$20.20	\$16.58	\$20.34	\$22.22	\$15.10	\$17.96	\$20.18	\$22.43	\$26.46
* 29-2012	Medical and Clinical Laboratory Technicians	M	\$13.60	\$10.57	\$14.62	\$16.64	\$9.83	\$11.40	\$13.87	\$17.39	\$20.76
* 29-2021	Dental Hygienists	L	\$25.00	\$12.10	\$25.52	\$32.23	\$8.41	\$17.69	\$28.38	\$34.36	\$40.20
29-2032	Diagnostic Medical Sonographers	M	\$22.10	\$17.83	\$22.05	\$24.15	\$16.47	\$18.80	\$22.89	\$25.70	\$27.38
29-2033	Nuclear Medicine Technologists	L	\$20.60	\$18.92	\$22.23	\$23.88	\$17.91	\$19.72	\$22.69	\$25.48	\$27.16
29-2034	Radiologic Technologists and Technicians	H	\$19.10	\$15.19	\$18.62	\$20.33	\$14.54	\$16.25	\$18.67	\$21.00	\$22.99
29-2041	Emergency Medical Technicians and Paramedics	M	\$16.10	\$10.00	\$14.15	\$16.23	\$9.42	\$10.08	\$11.17	\$19.56	\$21.25
29-2051	Dietetic Technicians	L	\$14.00	\$6.00	\$7.93	\$8.89	\$5.69	\$6.26	\$7.41	\$8.81	\$12.06
29-2055	Surgical Technologists	M	\$15.00	\$11.07	\$13.94	\$15.38	\$10.18	\$11.77	\$13.66	\$16.07	\$17.86
29-2056	Veterinary Technologists and Technicians	M	\$9.90	\$8.81	\$9.48	\$9.81	\$8.02	\$8.99	\$9.69	\$10.38	\$10.80
29-2061	Licensed Practical and Licensed Vocational Nurses	H	\$15.20	\$10.36	\$13.04	\$14.38	\$9.80	\$11.01	\$12.63	\$14.50	\$17.10
29-2071	Medical Records and Health Information Technicians	L	\$10.20	\$7.85	\$9.85	\$10.85	\$7.41	\$8.04	\$9.45	\$11.37	\$13.06
* 29-2099	Health Technologists and Technicians, All Other	M	\$18.90	†	†	†	†	†	†	†	†
<b>31-0000</b>	<b>Healthcare Support Occupations</b>		†	<b>\$6.68</b>	<b>\$9.15</b>	<b>\$10.39</b>	<b>\$6.14</b>	<b>\$7.20</b>	<b>\$8.32</b>	<b>\$9.95</b>	<b>\$11.58</b>
31-1011	Home Health Aides	H	\$8.50	\$6.02	\$6.92	\$7.36	\$5.57	\$5.90	\$6.44	\$7.06	\$8.78
31-1012	Nursing Aides, Orderlies, and Attendants	H	\$10.90	\$7.70	\$8.71	\$9.23	\$7.29	\$7.79	\$8.62	\$9.80	\$10.70
31-2021	Physical Therapist Assistants	M	\$15.90	\$7.80	\$9.19	\$9.90	\$7.16	\$7.52	\$8.12	\$8.72	\$13.87
* 31-2022	Physical Therapist Aides	M	\$11.10	\$7.94	\$10.18	\$11.31	\$7.60	\$8.42	\$9.77	\$11.78	\$13.42
* 31-9091	Dental Assistants	M	\$12.30	\$10.31	\$14.64	\$16.81	\$9.32	\$11.49	\$13.80	\$16.69	\$23.53
31-9092	Medical Assistants	H	\$11.70	\$9.83	\$10.63	\$11.03	\$9.13	\$9.63	\$10.47	\$11.62	\$13.02

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Table 3: Job Vacancy Survey Occupations with OES Wages – Page 8

SOC Code		Occupational Employment Statistics Wage Data (2001)									
		Average Wages			Percentile Distribution						
SOC Occupational Title		‡ Vacancy Rank	Average JVS Wage	Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
31-9094	Medical Transcriptionists	H	\$17.30	\$11.23	\$12.57	\$13.23	\$10.50	\$11.49	\$12.46	\$13.44	\$14.66
33-0000	Protective Service Occupations		†	\$10.13	\$15.30	\$17.89	\$8.76	\$11.96	\$14.74	\$17.74	\$22.40
33-3021	Detectives and Criminal Investigators	L	\$13.90	\$15.61	\$19.82	\$21.92	\$14.97	\$16.50	\$18.92	\$21.40	\$27.01
33-3051	Police and Sheriff's Patrol Officers	L	†	\$13.52	\$16.43	\$17.89	\$12.58	\$14.14	\$16.06	\$18.50	\$21.26
33-9032	Security Guards	L	\$7.80	\$6.56	\$9.31	\$10.68	\$6.16	\$7.13	\$9.22	\$10.88	\$13.06
* 33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	H	\$8.00	†	†	†	†	†	†	†	†
33-9099	Protective Service Workers, All Other	L	\$9.50	\$7.38	\$12.82	\$15.53	\$6.44	\$8.39	\$12.36	\$16.37	\$20.69
<b>35-0000</b>	<b>Food Preparation and Serving-Related Occupations</b>		†	<b>\$6.00</b>	<b>\$7.88</b>	<b>\$8.83</b>	<b>\$5.64</b>	<b>\$6.13</b>	<b>\$6.93</b>	<b>\$9.04</b>	<b>\$11.95</b>
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	M	\$9.10	\$6.65	\$9.82	\$11.41	\$6.03	\$7.35	\$9.49	\$12.42	\$13.64
35-2011	Cooks, Fast Food	M	\$5.60	\$6.00	\$6.55	\$6.81	\$5.56	\$5.91	\$6.49	\$7.17	\$8.16
35-2012	Cooks, Institution and Cafeteria	L	\$9.00	\$6.73	\$8.53	\$9.42	\$6.28	\$7.14	\$8.09	\$9.65	\$11.94
35-2014	Cooks, Restaurant	L	\$11.10	\$7.03	\$9.17	\$10.25	\$6.53	\$7.62	\$9.25	\$10.65	\$12.14
35-2021	Food Preparation Workers	M	\$7.30	\$5.98	\$7.53	\$8.31	\$5.58	\$6.02	\$6.75	\$8.63	\$11.14
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	H	\$6.50	\$6.00	\$6.27	\$6.41	\$5.52	\$5.81	\$6.27	\$6.74	\$7.49
35-3031	Waiters and Waitresses	H	\$5.50	\$5.98	\$8.35	\$9.53	\$5.61	\$6.09	\$6.87	\$10.44	\$13.26
35-3041	Food Servers, Nonrestaurant	M	\$7.50	\$6.11	\$7.95	\$8.88	\$5.88	\$6.59	\$7.67	\$9.25	\$10.66
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	M	\$7.70	\$6.00	\$8.60	\$9.90	\$5.66	\$6.18	\$7.58	\$11.19	\$12.90
<b>37-0000</b>	<b>Building and Grounds Cleaning and Maintenance Occupations</b>		†	<b>\$6.69</b>	<b>\$9.25</b>	<b>\$10.52</b>	<b>\$6.13</b>	<b>\$7.18</b>	<b>\$8.52</b>	<b>\$10.81</b>	<b>\$13.47</b>
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	H	\$11.50	\$14.59	\$16.68	\$17.72	\$13.61	\$14.89	\$16.38	\$18.14	\$21.09
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	H	\$8.30	\$6.76	\$9.25	\$10.48	\$6.20	\$7.35	\$9.12	\$10.82	\$12.87
* 37-2019	Building Cleaning Workers, All Others	M	\$12.00	†	†	†	†	†	†	†	†

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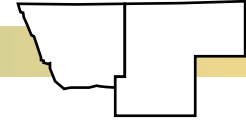


Table 3: Job Vacancy Survey Occupations with OES Wages – Page 9

SOC Code	SOC Occupational Title	† Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
37-3011	Landscaping and Groundskeeping Workers	H	\$8.20	\$7.90	\$10.78	\$12.22	\$6.77	\$9.16	\$10.94	\$12.75	\$14.26
* 37-3019	Grounds Maintenance Workers, All Other	M	\$6.60	†	†	†	†	†	†	†	†
<b>39-0000</b>	<b>Personal Care and Service Occupations</b>			<b>\$6.42</b>	<b>\$9.44</b>	<b>\$10.95</b>	<b>\$6.03</b>	<b>\$6.97</b>	<b>\$8.56</b>	<b>\$10.94</b>	<b>\$13.97</b>
39-2021	Nonfarm Animal Caretakers	L	\$8.80	\$6.08	\$7.89	\$8.80	\$5.74	\$6.22	\$7.04	\$8.82	\$11.86
39-3031	Ushers, Lobby Attendants, and Ticket Takers	M	\$8.00	\$6.13	\$6.62	\$6.87	\$5.71	\$6.03	\$6.58	\$7.13	\$8.42
39-3091	Amusement and Recreation Attendants	H	\$8.80	\$7.80	\$10.00	\$11.09	\$7.30	\$7.84	\$8.78	\$10.74	\$15.32
39-5012	Hairdressers, Hairstylists, and Cosmetologists	H	\$9.10	\$6.01	\$7.09	\$7.62	\$5.58	\$5.93	\$6.52	\$7.67	\$10.12
39-6021	Tour Guides and Escorts	H	\$9.60	\$8.00	\$9.87	\$10.81	\$7.47	\$7.89	\$8.59	\$11.85	\$15.32
39-9011	Child Care Workers	L	\$8.80	\$7.19	\$8.28	\$8.82	\$6.68	\$7.44	\$8.20	\$9.21	\$10.49
39-9021	Personal and Home Care Aides	H	\$7.60	\$6.10	\$7.11	\$7.61	\$5.78	\$6.27	\$7.06	\$8.06	\$8.71
39-9031	Fitness Trainers and Aerobics Instructors	L	\$6.80	\$7.58	\$11.03	\$12.76	\$7.26	\$8.24	\$9.91	\$12.01	\$15.98
39-9032	Recreation Workers	L	\$7.50	\$9.81	\$13.26	\$14.99	\$9.29	\$10.79	\$12.76	\$15.74	\$19.13
<b>41-0000</b>	<b>Sales and Related Occupations</b>			<b>\$6.17</b>	<b>\$10.89</b>	<b>\$13.25</b>	<b>\$5.84</b>	<b>\$6.68</b>	<b>\$8.45</b>	<b>\$11.68</b>	<b>\$17.18</b>
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	H	\$11.00	\$7.85	\$13.08	\$15.69	\$6.28	\$9.72	\$12.11	\$14.48	\$19.96
41-2011	Cashiers	H	\$7.00	\$5.93	\$8.08	\$9.15	\$5.60	\$6.12	\$7.12	\$8.94	\$13.67
41-2021	Counter and Rental Clerks	H	\$7.00	\$5.93	\$6.85	\$7.32	\$5.47	\$5.80	\$6.34	\$7.11	\$9.46
41-2022	Parts Salespersons	L	†	\$7.25	\$11.00	\$12.87	\$6.66	\$8.21	\$10.17	\$13.03	\$17.00
41-2031	Retail Salespersons	H	\$9.20	\$6.53	\$8.78	\$9.89	\$6.03	\$7.02	\$8.10	\$9.75	\$11.88
41-3011	Advertising Sales Agents	H	\$13.20	\$9.52	\$14.37	\$16.80	\$8.88	\$10.57	\$12.49	\$14.49	\$30.14
41-3031	Securities, Commodities, and Financial Services Sales Agents	M	\$19.20	\$29.22	\$35.22	\$38.22	\$28.41	\$29.84	\$32.22	\$34.61	\$58.56
41-3099	Sales Representatives, Services, All Other	M	\$14.80	\$11.93	\$13.10	\$13.69	\$11.13	\$11.64	\$12.50	\$13.34	\$18.51
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	M	\$22.80	\$11.27	\$24.00	\$30.36	\$9.86	\$13.05	\$18.25	\$25.73	\$54.88

\* OES wages reported for Colorado statewide  
 † No wage data available  
 † L - lowest 25% of actual responses  
 † M - middle 50% of actual responses  
 † H - highest 25% of actual responses

Table 3: Job Vacancy Survey Occupations with OES Wages – Page 10

SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
* 41-9011	Demonstrators and Product Promoters	M	\$9.40	\$7.90	\$11.32	\$13.04	\$7.40	\$8.65	\$10.08	\$12.91	\$16.76
* 41-9031	Sales Engineers	M	†	\$20.13	\$31.45	\$37.11	\$17.97	\$23.13	\$30.08	\$37.40	\$50.24
41-9041	Telemarketers	H	\$7.90	\$6.19	\$7.63	\$8.34	\$5.96	\$6.75	\$7.61	\$8.42	\$9.58
41-9099	Sales and Related Workers, All Other	L	\$8.00	\$7.25	\$9.99	\$11.36	\$6.90	\$7.98	\$9.65	\$11.31	\$13.11
<b>43-0000</b>	<b>Office and Administrative Support Occupations</b>		†	<b>\$8.02</b>	<b>\$11.73</b>	<b>\$13.58</b>	<b>\$7.18</b>	<b>\$9.00</b>	<b>\$10.75</b>	<b>\$13.80</b>	<b>\$17.91</b>
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	M	\$14.40	\$10.72	\$16.46	\$19.34	\$9.80	\$12.25	\$16.09	\$19.72	\$22.23
* 43-2021	Telephone Operators	M	\$11.20	\$6.90	\$10.92	\$12.92	\$6.37	\$7.74	\$11.71	\$13.68	\$15.62
43-3011	Bill and Account Collectors	M	\$11.00	\$10.47	\$15.02	\$17.30	\$9.26	\$11.77	\$14.38	\$18.29	\$21.64
43-3021	Billing and Posting Clerks and Machine Operators	L	\$13.00	\$8.73	\$11.63	\$13.08	\$7.95	\$9.32	\$11.24	\$13.69	\$16.30
43-3031	Bookkeeping, Accounting, and Auditing Clerks	H	\$11.30	\$9.34	\$12.81	\$14.54	\$9.10	\$10.38	\$12.25	\$14.46	\$18.02
43-3051	Payroll and Timekeeping Clerks	L	\$11.00	\$9.05	\$11.60	\$12.88	\$8.77	\$9.63	\$10.80	\$14.11	\$16.43
43-3071	Tellers	M	\$8.80	\$8.17	\$10.50	\$11.66	\$7.45	\$8.93	\$10.46	\$12.30	\$13.63
43-4031	Court, Municipal, and License Clerks	M	\$11.50	\$10.29	\$13.48	\$15.07	\$9.82	\$11.17	\$12.78	\$15.12	\$17.26
* 43-4041	Credit Authorizers, Checkers, and Clerks	L	\$12.10	\$8.94	\$14.28	\$16.94	\$8.23	\$9.68	\$12.71	\$17.34	\$21.18
43-4051	Customer Service Representatives	H	\$9.10	\$8.90	\$12.16	\$13.79	\$8.20	\$9.47	\$11.27	\$13.84	\$18.46
* 43-4061	Eligibility Interviewers, Government Programs	M	\$12.90	\$11.52	\$14.71	\$16.32	\$10.96	\$12.05	\$13.57	\$16.73	\$20.30
43-4081	Hotel, Motel, and Resort Desk Clerks	M	\$9.30	\$7.10	\$8.73	\$9.54	\$6.53	\$7.53	\$8.75	\$10.07	\$10.86
43-4111	Interviewers, Except Eligibility and Loan	L	\$8.50	\$8.70	\$10.80	\$11.86	\$8.13	\$9.08	\$10.65	\$12.52	\$13.78
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	L	\$13.00	\$10.17	\$14.67	\$16.93	\$9.34	\$11.27	\$14.15	\$16.96	\$21.96
43-4171	Receptionists and Information Clerks	H	\$9.20	\$7.92	\$9.56	\$10.39	\$6.89	\$8.89	\$9.74	\$10.61	\$11.12
* 43-4199	Information and Records Clerks, All Other	M	\$15.70	†	†	†	†	†	†	†	†
43-5031	Police, Fire, and Ambulance Dispatchers	M	\$14.60	\$8.79	\$11.91	\$13.47	\$8.09	\$9.72	\$12.37	\$13.72	\$15.34
43-5071	Shipping, Receiving, and Traffic Clerks	M	\$9.20	\$8.37	\$10.29	\$11.26	\$7.75	\$8.85	\$10.23	\$11.48	\$13.28

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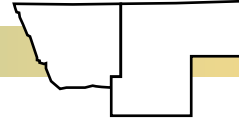


Table 3: Job Vacancy Survey Occupations with OES Wages – Page 11

SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)				Percentile Distribution				
				Average Wages			Experienced	10th	25th	50th	75th	90th
				Entry Level	Overall							
43-5081	Stock Clerks and Order Fillers	M	\$10.60	\$6.73	\$10.34	\$12.14	\$6.14	\$7.33	\$8.91	\$12.15	\$18.24	
43-6011	Executive Secretaries and Administrative Assistants	H	\$11.60	\$12.07	\$15.57	\$17.32	\$11.66	\$13.02	\$15.27	\$17.85	\$20.80	
43-6013	Medical Secretaries	H	\$14.70	\$8.72	\$9.88	\$10.47	\$7.97	\$9.02	\$9.84	\$10.62	\$11.08	
43-6014	Secretaries, Except Legal, Medical, and Executive	H	\$10.90	\$8.63	\$11.28	\$12.60	\$7.87	\$9.27	\$10.58	\$12.90	\$15.92	
43-9011	Computer Operators	M	\$6.80	\$11.09	\$15.52	\$17.73	\$9.84	\$13.28	\$15.85	\$18.39	\$21.29	
43-9021	Data Entry Keyers	H	\$8.30	\$9.38	\$11.66	\$12.80	\$9.21	\$10.20	\$11.59	\$13.23	\$15.03	
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	L	\$8.10	\$9.34	\$10.89	\$11.68	\$8.87	\$9.37	\$10.34	\$12.04	\$14.79	
43-9061	Office Clerks, General	H	\$9.30	\$6.45	\$9.51	\$11.04	\$6.00	\$6.94	\$9.39	\$10.95	\$13.78	
* 43-9199	Office and Administrative Support Workers, All Other	M	\$8.30	†	†	†	†	†	†	†	†	
<b>45-0000</b>	<b>Farming, Fishing, and Forestry Occupations</b>		†	<b>\$7.12</b>	<b>\$10.47</b>	<b>\$12.15</b>	<b>\$6.23</b>	<b>\$8.25</b>	<b>\$9.98</b>	<b>\$11.63</b>	<b>\$16.53</b>	
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	H	\$8.50	\$6.01	\$6.91	\$7.35	\$5.58	\$5.95	\$6.59	\$7.81	\$8.90	
* 45-2093	Farmworkers, Farm and Ranch Animals	L	\$10.30	\$6.03	\$8.28	\$9.41	\$5.74	\$6.34	\$7.65	\$10.02	\$12.12	
* 45-4011	Forest and Conservation Workers	L	\$8.70	\$11.02	\$15.01	\$17.00	\$10.07	\$11.98	\$14.33	\$17.73	\$20.79	
<b>47-0000</b>	<b>Construction and Extraction Occupations</b>		†	<b>\$10.33</b>	<b>\$16.37</b>	<b>\$19.39</b>	<b>\$9.40</b>	<b>\$11.49</b>	<b>\$15.02</b>	<b>\$20.21</b>	<b>\$24.76</b>	
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	M	\$10.00	\$15.13	\$23.64	\$27.90	\$14.76	\$16.50	\$20.93	\$27.02	\$41.20	
47-2031	Carpenters	H	\$14.70	\$16.15	\$20.77	\$23.08	\$14.33	\$17.90	\$20.18	\$22.67	\$28.98	
47-2051	Cement Masons and Concrete Finishers	L	\$11.50	\$10.04	\$12.31	\$13.45	\$9.56	\$10.67	\$12.07	\$13.34	\$15.48	
47-2061	Construction Laborers	H	\$9.00	\$8.38	\$11.32	\$12.79	\$7.75	\$9.10	\$11.04	\$12.96	\$14.17	
47-2071	Paving, Surfacing, and Tamping Equipment Operators	L	\$16.30	\$11.80	\$14.78	\$16.27	\$11.10	\$12.84	\$15.16	\$16.88	\$17.97	

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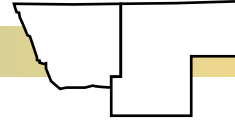


Table 3: Job Vacancy Survey Occupations with OES Wages – Page 12

SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
47-2073	Operating Engineers and Other Construction Equipment Operators	M	\$12.00	\$12.98	\$16.88	\$18.84	\$12.14	\$13.70	\$16.32	\$19.62	\$23.43
47-2111	Electricians	M	\$13.30	\$16.90	\$20.92	\$22.93	\$15.32	\$18.22	\$21.14	\$24.61	\$26.88
47-2141	Painters, Construction and Maintenance	L	\$10.00	\$10.22	\$11.62	\$12.31	\$9.71	\$10.57	\$11.53	\$12.78	\$13.53
47-2151	Pipelayers	L	\$10.50	\$9.67	\$12.16	\$13.42	\$9.10	\$9.77	\$10.89	\$13.74	\$18.23
47-2152	Plumbers, Pipefitters, and Steamfitters	H	\$15.30	\$12.36	\$19.18	\$22.59	\$11.35	\$14.34	\$18.83	\$22.13	\$27.94
* 47-2161	Plasterers and Stucco Masons	M	\$13.00	\$11.49	\$14.39	\$15.84	\$10.88	\$12.30	\$14.21	\$16.52	\$18.63
47-2181	Roofers	M	\$11.50	\$9.53	\$12.84	\$14.49	\$8.98	\$10.46	\$12.53	\$14.69	\$17.50
47-2211	Sheet Metal Workers	M	\$14.00	\$8.08	\$9.63	\$10.41	\$7.55	\$7.98	\$8.73	\$10.09	\$11.37
* 47-2221	Structural Iron and Steel Workers	L	\$14.00	\$12.42	\$17.41	\$19.90	\$11.83	\$13.38	\$17.87	\$20.81	\$22.77
47-4011	Construction and Building Inspectors	M	\$20.30	\$11.51	\$17.94	\$21.14	\$10.48	\$12.75	\$18.80	\$21.11	\$25.35
* 47-4031	Fence Erectors	H	\$11.90	\$9.63	\$12.22	\$13.50	\$9.18	\$10.02	\$11.53	\$14.79	\$16.49
* 47-5071	Roustabouts, Oil and Gas	M	\$11.30	\$9.72	\$13.16	\$14.87	\$9.23	\$10.65	\$12.75	\$15.27	\$18.13
<b>49-0000</b>	<b>Installation, Maintenance, and Repair Occupations</b>		†	<b>\$8.70</b>	<b>\$15.36</b>	<b>\$18.69</b>	<b>\$7.83</b>	<b>\$9.91</b>	<b>\$14.42</b>	<b>\$19.76</b>	<b>\$24.55</b>
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	M	\$12.00	\$13.77	\$22.19	\$26.40	\$12.00	\$16.14	\$20.83	\$28.27	\$33.47
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	H	\$12.00	\$15.71	\$21.76	\$24.79	\$10.35	\$19.67	\$23.47	\$26.36	\$28.11
* 49-3021	Automotive Body and Related Repairers	M	\$13.80	\$12.16	\$20.73	\$25.01	\$10.30	\$14.53	\$19.48	\$25.30	\$34.08
49-3023	Automotive Service Technicians and Mechanics	M	\$20.60	\$7.52	\$11.54	\$13.56	\$7.18	\$7.93	\$9.86	\$15.41	\$18.67
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	L	†	\$11.89	\$15.75	\$17.68	\$11.45	\$12.88	\$15.36	\$18.18	\$21.40
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	M	\$12.70	\$10.47	\$15.08	\$17.40	\$9.92	\$11.15	\$15.12	\$18.57	\$21.06
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	H	\$17.30	\$13.51	\$17.92	\$20.14	\$12.69	\$14.28	\$18.64	\$20.87	\$22.21
49-9042	Maintenance and Repair Workers, General	H	\$10.90	\$7.78	\$12.67	\$15.11	\$7.44	\$8.22	\$11.64	\$17.05	\$20.43

\* OES wages reported for Colorado statewide  
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**Table 3: Job Vacancy Survey Occupations with OES Wages – Page 13**

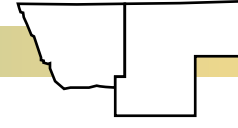
SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
49-9043	Maintenance Workers, Machinery	M	\$17.00	\$10.19	\$16.08	\$19.02	\$8.45	\$11.06	\$17.18	\$20.18	\$21.93
* 49-9062	Medical Equipment Repairers	L	\$44.90	\$16.95	\$22.22	\$24.84	\$14.78	\$19.39	\$22.77	\$26.06	\$28.15
49-9099	Installation, Maintenance, and Repair Workers, All Other	M	\$10.80	\$9.12	\$15.04	\$18.00	\$7.21	\$11.14	\$13.86	\$16.98	\$24.82
<b>51-0000</b>	<b>Production Occupations</b>	†		<b>\$7.07</b>	<b>\$11.82</b>	<b>\$14.20</b>	<b>\$6.49</b>	<b>\$7.95</b>	<b>\$10.25</b>	<b>\$14.24</b>	<b>\$19.79</b>
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	M	\$20.50	\$11.67	\$20.36	\$24.70	\$10.33	\$13.28	\$18.09	\$25.82	\$33.50
* 51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	M	\$20.00	\$15.21	\$20.45	\$23.07	\$13.30	\$17.84	\$21.38	\$24.80	\$26.83
* 51-2022	Electrical and Electronic Equipment Assemblers	M	\$9.50	\$7.37	\$10.54	\$12.12	\$6.96	\$8.22	\$10.17	\$12.63	\$14.86
51-2041	Structural Metal Fabricators and Fitters	H	\$9.30	\$6.17	\$10.13	\$12.10	\$5.97	\$6.61	\$9.15	\$12.94	\$16.12
51-2099	Assemblers and Fabricators, All Other	L	\$8.50	\$8.60	\$9.98	\$10.67	\$7.69	\$9.15	\$10.01	\$10.85	\$12.73
51-3011	Bakers	L	\$6.00	\$8.68	\$11.04	\$12.22	\$7.97	\$9.16	\$10.98	\$12.89	\$14.06
* 51-3022	Meat, Poultry, and Fish Cutters and Trimmers	H	\$9.50	†	†	†	†	†	†	†	†
* 51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	M	\$10.80	\$10.76	\$15.27	\$17.53	\$9.78	\$12.25	\$15.46	\$17.60	\$20.85
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	L	\$10.00	\$6.98	\$9.40	\$10.61	\$6.37	\$7.70	\$9.42	\$10.82	\$12.81
* 51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	L	\$10.80	\$10.71	\$13.59	\$15.04	\$9.84	\$11.44	\$13.33	\$15.74	\$17.78
51-4041	Machinists	H	\$13.50	\$9.18	\$12.68	\$14.43	\$8.42	\$9.91	\$12.19	\$15.38	\$17.60
51-4121	Welders, Cutters, Solderers, and Brazers	H	\$12.00	\$9.69	\$14.24	\$16.52	\$9.22	\$10.07	\$11.79	\$16.31	\$24.30
51-5011	Bindery Workers	L	\$9.00	\$7.31	\$9.00	\$9.83	\$6.96	\$7.54	\$8.36	\$10.66	\$12.99
51-5023	Printing Machine Operators	L	†	\$8.13	\$15.13	\$18.62	\$7.77	\$8.69	\$13.24	\$21.75	\$26.23
51-6021	Pressers, Textile, Garment, and Related Materials	L	\$9.50	\$6.42	\$7.50	\$8.05	\$6.08	\$6.97	\$7.55	\$8.20	\$8.60
* 51-6052	Tailors, Dressmakers, and Custom Sewers	L	\$7.50	\$7.98	\$14.52	\$17.78	\$7.42	\$8.73	\$13.62	\$19.40	\$21.48

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Table 3: Job Vacancy Survey Occupations with OES Wages – Page 14

SOC Code	SOC Occupational Title	† Vacancy Rank	Average JVS Wage	Occupational Employment Statistics Wage Data (2001)							
				Average Wages			Percentile Distribution				
				Entry Level	Overall	Experienced	10th	25th	50th	75th	90th
51-7011	Cabinetmakers and Bench Carpenters	M	\$8.00	\$8.26	\$12.09	\$14.00	\$6.60	\$9.55	\$11.28	\$15.67	\$16.88
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	L	†	\$7.83	\$10.58	\$11.97	\$7.47	\$8.53	\$10.16	\$12.04	\$14.42
51-8031	Water and Liquid Waste Treatment Plant and System Operators	M	\$18.70	\$12.77	\$17.65	\$20.08	\$11.13	\$14.89	\$18.34	\$20.97	\$23.01
* 51-9011	Chemical Equipment Operators and Tenders	L	†	\$10.35	\$15.91	\$18.70	\$9.13	\$11.64	\$14.76	\$19.29	\$25.06
* 51-9132	Photographic Processing Machine Operators	H	\$8.60	\$7.62	\$9.16	\$9.94	\$7.22	\$7.81	\$8.79	\$10.35	\$11.42
* 51-9199	Production Workers, All Other	M	\$10.80	\$6.65	\$10.05	\$11.75	\$6.16	\$7.25	\$9.47	\$11.94	\$15.34
<b>53-0000</b>	<b>Transportation and Material Moving Occupations</b>		†	<b>\$7.68</b>	<b>\$11.72</b>	<b>\$13.73</b>	<b>\$6.86</b>	<b>\$8.71</b>	<b>\$10.90</b>	<b>\$13.56</b>	<b>\$17.49</b>
53-1021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	M	\$15.20	\$12.60	\$18.03	\$20.75	\$12.13	\$13.41	\$17.98	\$21.58	\$26.05
53-3021	Bus Drivers, Transit and Intercity	M	\$12.10	\$8.56	\$13.52	\$16.01	\$7.93	\$9.07	\$11.25	\$19.22	\$21.01
53-3031	Driver/Sales Workers	M	\$5.30	\$6.15	\$10.80	\$13.13	\$5.97	\$6.65	\$11.30	\$13.86	\$16.73
53-3032	Truck Drivers, Heavy and Tractor-Trailer	H	\$19.40	\$10.73	\$13.87	\$15.43	\$9.89	\$11.60	\$13.29	\$15.92	\$17.96
53-3033	Truck Drivers, Light or Delivery Services	H	\$11.70	\$9.33	\$13.58	\$15.71	\$8.75	\$10.08	\$12.08	\$14.50	\$24.36
* 53-6021	Parking Lot Attendants	L	\$6.50	\$6.04	\$7.65	\$8.47	\$5.68	\$6.17	\$6.97	\$8.99	\$10.72
* 53-6041	Traffic Technicians	M	\$17.50	\$13.96	\$19.15	\$21.75	\$12.76	\$15.12	\$18.28	\$22.70	\$27.25
53-7051	Industrial Truck and Tractor Operators	H	\$15.50	\$7.87	\$10.47	\$11.76	\$7.07	\$8.88	\$10.09	\$11.25	\$14.19
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	H	\$8.00	\$6.58	\$9.34	\$10.72	\$6.16	\$7.15	\$9.29	\$10.99	\$13.02
53-7064	Packers and Packers, Hand	H	†	\$6.12	\$7.51	\$8.20	\$5.87	\$6.48	\$7.34	\$8.32	\$9.68
* 53-7081	Refuse and Recyclable Material Collectors	L	\$9.00	\$8.80	\$12.93	\$15.01	\$7.88	\$9.97	\$12.19	\$14.67	\$19.86
* 53-7199	Material Moving Workers, All Other	M	\$10.40	\$8.94	\$13.64	\$15.99	\$8.25	\$10.19	\$13.38	\$16.87	\$20.28

\* OES wages reported for Colorado statewide  
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## Methodology

Many challenges exist in collecting and analyzing the data for the Job Vacancy Survey. Because methods selected to carry out a survey impact the final results, great effort is put into

making this survey statistically viable and, most importantly, accurate. Methods used in this survey will continue to be reviewed and, where statistical viability and accuracy can be improved, modified.

### Computer Assisted Telephone Interview

Our professional survey unit developed the Computer Assisted Telephone Interview (CATI) to maximize accuracy and usefulness, while minimizing length and survey bias. In accordance with

recognized survey research standards, the following selection of questions are taken directly from the phone interview script.

#### **In General**

1. *How many employees do you have working within the region?*
2. *Do you have any job vacancies for which your firm is actively recruiting?*
3. *How many job vacancies is your firm recruiting to fill?*

#### **For Each Vacancy**

1. *What is the job title?*
2. *Briefly, what are the job duties?*
3. *Which of the following best describes this vacancy?*
  - ♦ Full-time/Permanent
  - ♦ Full-time/Temporary
  - ♦ Part-time/Permanent
  - ♦ Part-time/Temporary
4. *What is the maximum wage offered for this vacancy?*
5. *What is the minimum wage offered for this vacancy?*
6. *Is a sign-on bonus offered? If yes, how much?*

7. *Is medical insurance offered?*

8. *If yes, does your firm pay the total cost of the premium, partial cost of the premium or do you make no contribution at all to the premium?*

9. *Which of the following best describes the education level required to fill this vacancy?*

- ♦ No diploma required
- ♦ High School or GED diploma
- ♦ Two-year degree
- ♦ Bachelor's degree
- ♦ Advanced degree

10. *What best describes the type of experience required to qualify for this vacancy?*

- ♦ No experience is required
- ♦ General work experience
- ♦ Experience in a related field
- ♦ Experience in this occupation

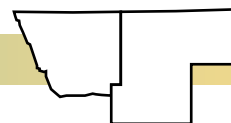
11. *How long has this vacancy been open?*

- ♦ Less than 30 days
- ♦ 30 to 59 days
- ♦ 60 or more days
- ♦ Always hiring for this position

12. *How difficult is this vacancy to fill?*

- ♦ Not difficult
- ♦ Somewhat difficult
- ♦ Very difficult to fill





## Survey Sample Methodology

This survey is designed to estimate the number of vacancies in the region and to provide detailed vacancy characteristics. Employers with at least five employees are placed into either government or private industry categories. Firms with fewer than five employees make up a very large portion of all employers in the region, but a small proportion of total employment. The possibility of employing statistical methods to estimate vacancies for this group is currently being explored.

Private firms are grouped by employment level into either large or small to mid-size categories. Attempts are made to contact each large private employer and government agency in the region. Small to mid-size firms are further divided by major industry and randomly sampled until a representative response is obtained for each category.

The original list of private industry firms used for the survey, along with their contact information, staff size and industry classification is obtained from the America's Labor Market Information System (ALMIS) database. Government contact information is provided by the Colorado Department of Labor and Employment's ES-202 employer database.

## Data Editing

Once data collection is complete, measures are taken to prepare the data for analysis. To ensure accuracy, follow-up phone calls are made when employer responses need clarification.

## Occupational Coding

The job title and duties reported by employers are used to code vacancies in accordance with the latest release of the Standard Occupational Classification system. For more information on this occupational classification system, please refer to the definitions section.

## Wage Conversion

Standard conversions are used to translate salaries into hourly wages: 2,080 hours for annual, 173.3 hours for monthly.

All wages reported below the Federal minimum wage are adjusted to that amount. Currently, the Federal minimum wage is \$5.15 per hour.

## Definitions

These definitions are meant to clarify data gathered for the Job Vacancy Survey. For other data sources referenced in the document, please see that source for a complete definition.

### Average

The arithmetic average (also called the mean) for a group of items is defined as the sum of the values of the items divided by the number of items.

### Average Minimum and Average Maximum Wage

When surveyed employers report wages offered for current vacancies, both a minimum and a maximum wage are recorded. All minimum wages are averaged to determine the reported average minimum wage. The same is true for the reported average maximum wage.

### Employer

A person or establishment that pays one or more people a wage or salary.

### Employment

Includes people who did any work for pay or profit in the reference period, worked 15 hours or more without pay in a family business or farm, or were temporarily absent from their jobs.

### Full-time and Part-time Employment

To be classified as full-time employment, a position must require a minimum of 35 hours of work per week. Part-time employment refers to cases where a position requires less than 35 hours of work a week.

### Industry Classification

Employers are grouped into industries on the basis of their principal product or activity in accordance with the *1987 Standard Industrial Classification Manual*.

### Job Seekers

People actively looking for employment or researching career options.

### Job Vacancy

A specific position of employment at an establishment with the condition that there is work available for the position and the employer is actively recruiting for the position. The definition does not include positions that are anticipated, but not yet created.

### Job Vacancy Rate

The number of openings in a specific industry or category expressed as a share of the total employment in that same industry.

### Labor Force

Consists of all employed or unemployed civilians who are eligible to work, plus members of the Armed Forces stationed in the United States.

### Level of Education

Refers to completed education programs - high school diplomas, associate, professional, vocational, bachelor's, and graduate degrees all are examples of completed programs.

### Medical Insurance Premium

Refers to payments that a holder of an insurance policy pays in order to keep his/her policy current.

### Permanent and Temporary Employment

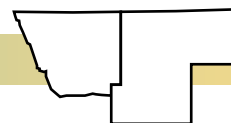
A vacancy is classified as permanent if it will be filled for more than six months. Temporary employment refers to those positions that will be filled for six months or less.

### Sign-on Bonus

An additional financial incentive offered by a firm to a new employee to influence his/her decision to agree to employment with that firm. The bonus, for purposes of this survey, is a monetary lump sum.

### SOC

The Standard Occupational Classification is a system for classifying all occupations in the economy, including private, public, and military occupations. This classification system replaces all occupational



classification systems previously used by Federal statistical agencies. It will be used by all Federal statistical agencies and programs collecting occupational data, providing a means to compare occupational data across agencies. It is designed to cover all occupations in which work is performed for pay or profit, reflecting the current occupational structure in the United States.

#### **Survey Sample Universe**

All private industry and government employers with five or more employees in the region. Government entities are drawn from ES-202 while private companies come from the ALMIS database.

#### **Unemployment**

Includes people 16 years of age and over who had no employment during the reference period, were

available for work (except for temporary illness), and have made specific efforts to find employment. People who did not look for work because they were on temporary layoff or waiting to start new jobs within the next thirty days are also counted among the unemployed.

#### **Unemployment rate**

The unemployment rate represents the number unemployed as a percent of the labor force.

#### **Wage**

The monetary return per hour of work. The definition does not include benefits (*e.g.*, insurance, retirement program, or stock plans).