

# Western & Southwest Region

## Job Vacancy Survey September 2002

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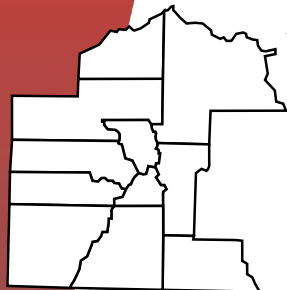
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Delta  
Dolores  
Gunnison  
Hinsdale  
La Plata  
Montezuma  
Montrose  
Ouray  
San Juan &  
San Miguel  
Counties**





# Western & Southwest Region Job Vacancy Survey

*Conducted  
July 10 - 18, 2002*

**State of Colorado**

Bill Owens, *Governor*

**Colorado Department of Labor & Employment**

Vickie Armstrong, *Executive Director*

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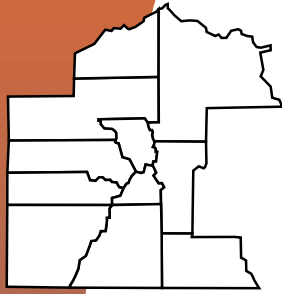
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September 2002



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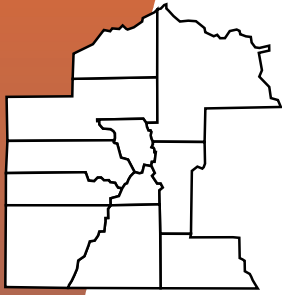
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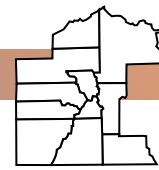


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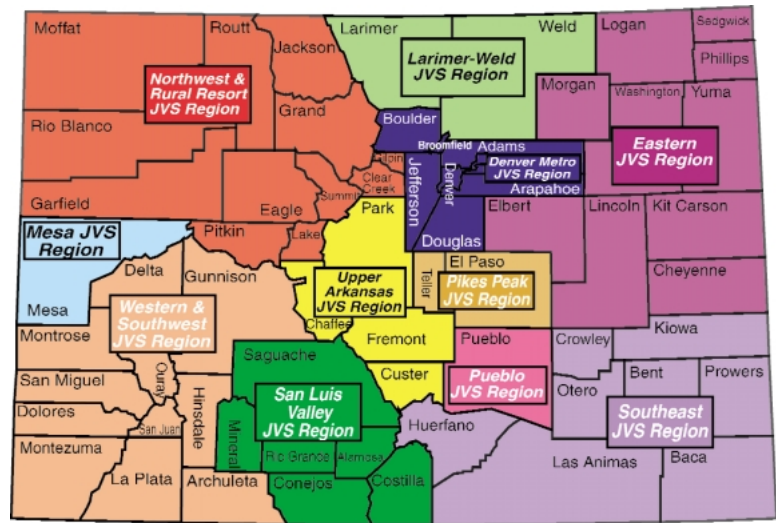
# Introduction

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. The survey is produced for each region in Colorado by Labor Market Information's office of Workforce Research and Analysis.

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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 indicate 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*—

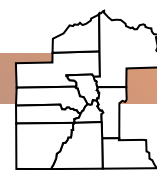
A firm may also choose to increase investment in training for their current employees instead of expanding recruitment efforts.

#### ◆ *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.

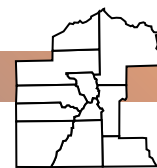
The study provides estimates of job openings for a point-in-time; they do not necessarily portray the distribution of job vacancies in the region. This report does not attempt to explain the cause of vacancies—whether these current vacancies are due to actual growth or to job turnover in an occupation. 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 summer Western & Southwest Job Vacancy Survey (JVS) was conducted from July 10th through July 18th, 2002. The goal of the survey is to provide current information on the demand for workers so that employers, job seekers, economic developers, educators and workforce centers can make more informed decisions in the Western & Southwest Region.

Over the survey period a sample of private employers with at least five employees, as well as all large employers and government agencies were contacted. Employers were asked if they were actively hiring at

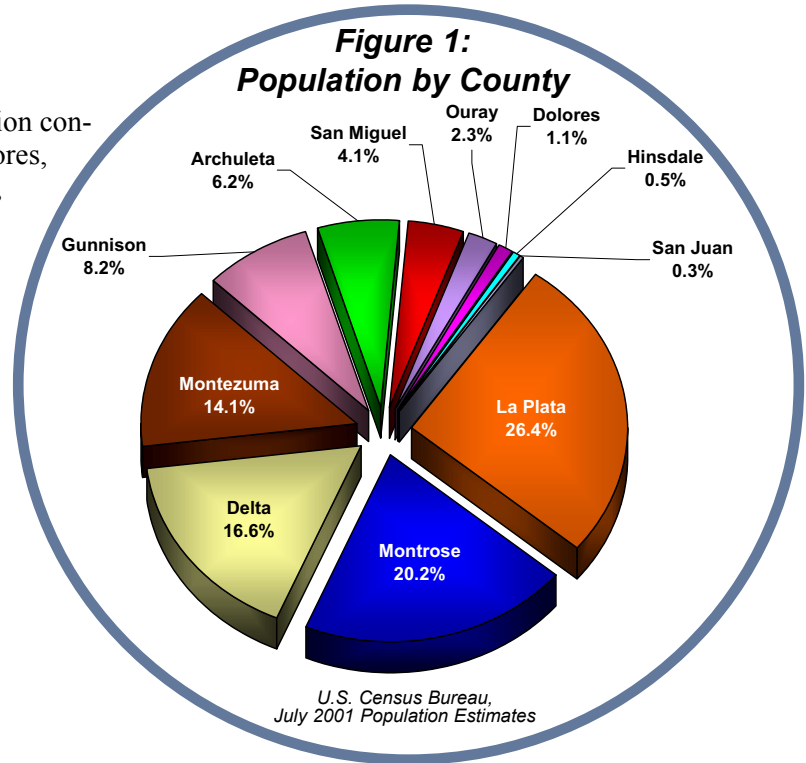
the time of the survey and a variety of questions about the positions that they were seeking to fill.

A total of 733 employers (22% of employers in the sample universe), representing approximately 30% of the region's total employment, responded to the survey. The survey had a 77% effective response rate. Out of these, 123 were government agencies, 28 were large employers and 582 were small to mid-sized entities. The major findings of the survey are as follows:

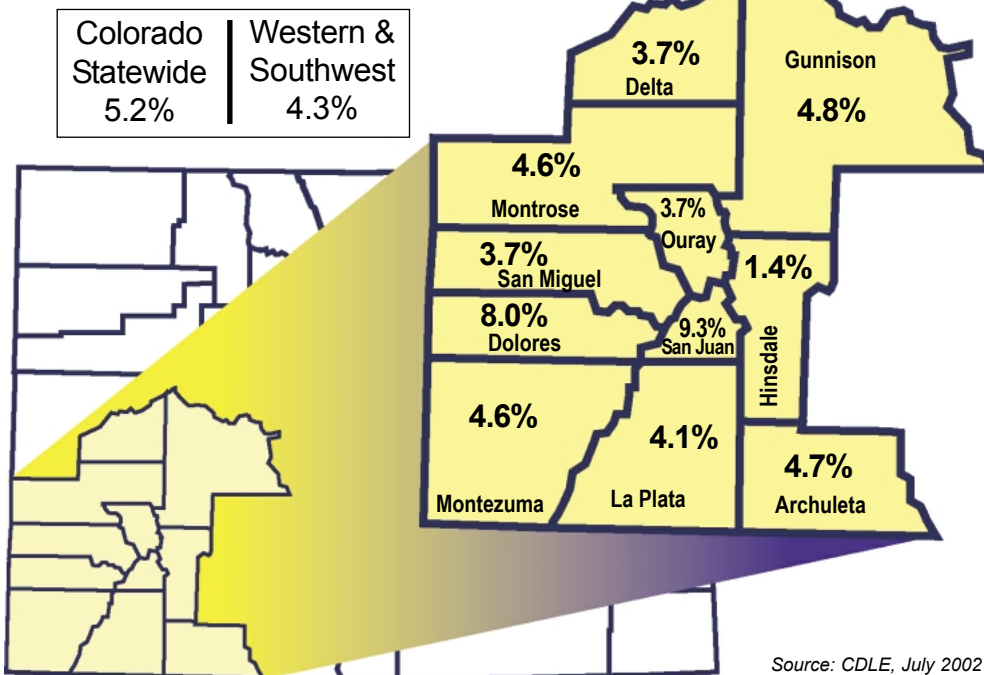
- ◆ An estimated 850 jobs were open for immediate hire in the region during the survey period compared to 1,500 last year.
- ◆ About 15% of the responding employers reported having at least one vacancy.
- ◆ The overall average wage for all vacancies is \$14.00 per hour.
- ◆ Healthcare Practitioners and Technical occupations accounted for almost 25% of all vacancies.
- ◆ Seventy-two percent of the openings are full-time.
- ◆ Half of the vacancies in the Western & Southwest Region require education beyond a high school diploma/GED.
- ◆ The vast majority of vacancies occur in Service Producing Industries.
- ◆ Over 70% of the job openings include some form of medical insurance.
- ◆ Thirteen percent of the vacancies are considered very difficult to fill, down from 33% in July 2001.
- ◆ Fifty-seven percent of the vacancies have been open for less than 30 days, up from 45% a year ago.
- ◆ Seventy-two percent of the openings require experience either related to or in the same field as the vacant position.

# Western & Southwest Region

The Western & Southwest Region consists of Archuleta, Delta, Dolores, Gunnison, Hinsdale, La Plata, Montezuma, Montrose, Ouray, San Juan, and San Miguel counties. The U.S. Census Bureau estimated the region's population at just over 170,000 people in July of 2001. La Plata and Montrose, make up almost half (46.6%) of the entire region's population.

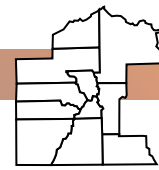


**Figure 2: Unemployment Rates for July 2002**  
(Rates Not Seasonally Adjusted)

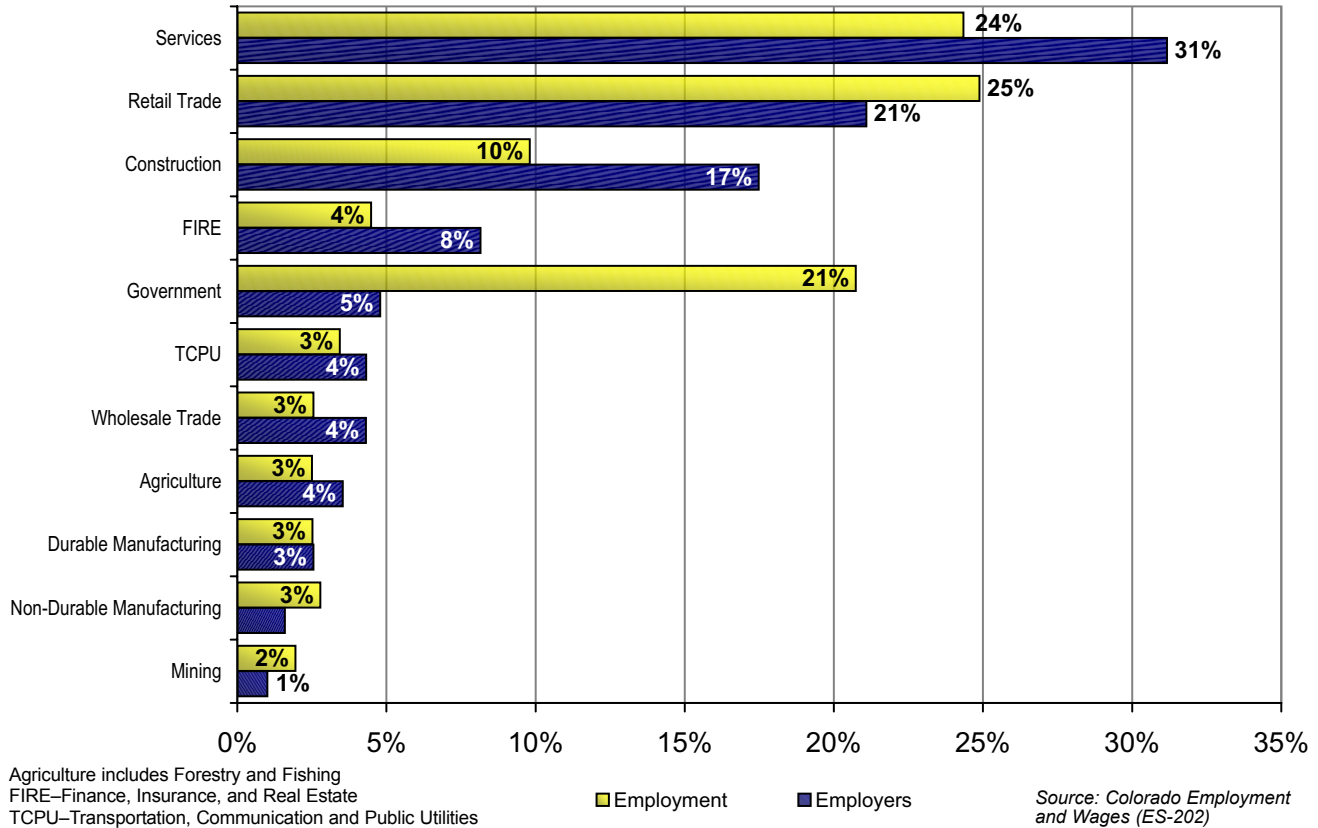


The region employed 84,315 people in July of 2002 out of a labor force of 88,084. The region's preliminary unemployment rate is lower than both the state as a whole and the national rate of 5.9%. The unemployment rate in the Western & Southwest Region has increased from 3.9% a year ago to 4.3% in the current survey. The number of continued unemployment claims for the region has risen more than 30% in the last year<sup>1</sup>.

<sup>1</sup>CDLE, Local Area Unemployment Statistics



**Figure 3: Western & Southwest Region Employers & Employees, 3rd Quarter, 2001**

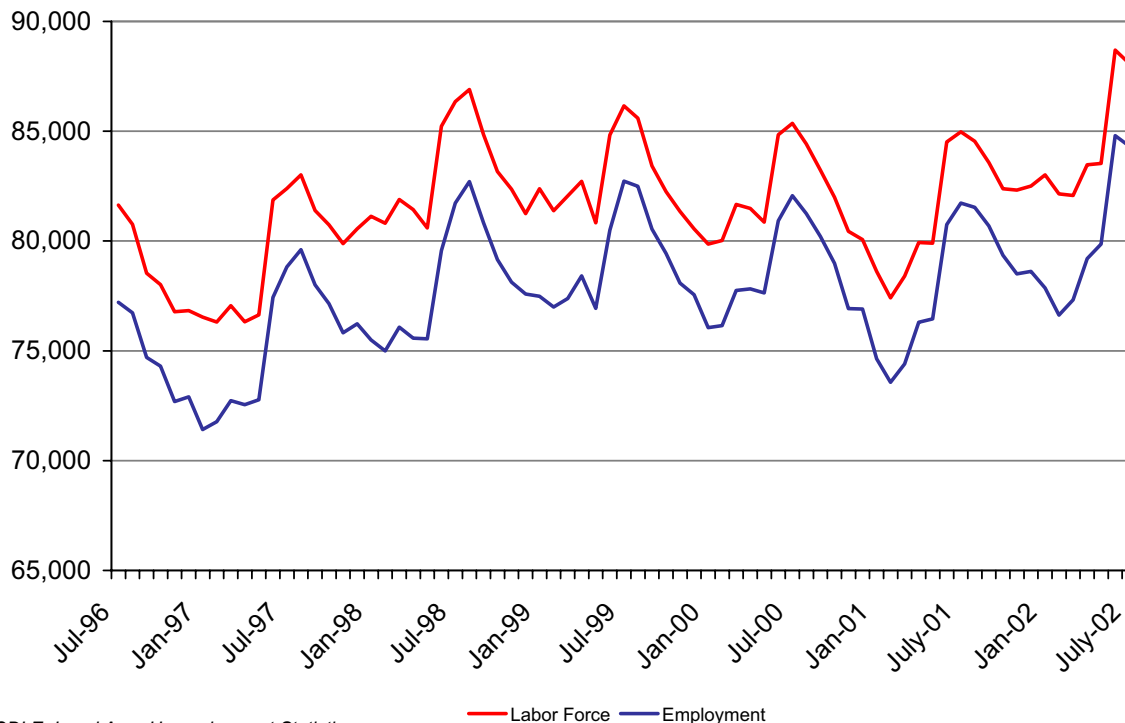


Like the rest of the state, the economy of the Western & Southwest Region consists predominantly of Services and Retail Trade businesses. Combined, employers in these industries make up 52% of the total employers and 49% of the employment.

It is important to note that the Bureau of Labor Statistics' Employment and Wages (ES-202) program collects information on firms whose employees are covered by unemployment insurance. Nationally, this

program captures 94% of total employment. Agriculture, however, is an industry in which much of the employment is not covered. Many agricultural employers are exempt from paying unemployment insurance tax, and therefore are not represented in the ES-202 numbers. Simply put, agricultural employment may represent a much larger part of the Western & Southwest Region labor market than indicated by the 3% reported under the Employment and Wages program.

**Figure 4: Employment & Labor Force Trends for the Western & Southwest Region**



Source: CDLE, Local Area Unemployment Statistics

Figure 4 shows a 6-year history of both the region's labor force and the employment level between July 1996 and July 2002. Several different conclusions may be drawn from this graph:

◆ **The rising trend lines demonstrate that both labor force and employment levels in the region have grown since 1996.**

Because labor force and employment levels vary from season to season, change does not occur smoothly. Both levels gradually increased through the summer of 1998. Labor force and employment then decreased slightly until July 2001 and has since increased once again.

◆ **The graph also illustrates the unemployment level.**

The unemployment level is the gap between the labor force and employment. The larger the distance between the two lines, the larger the number of unemployed. In July 1996 there were 4,422 unemployed compared to 3,769 in July 2002. In that time the unemployment rate dropped from 5.4% to 4.3%.

◆ **In addition, Figure 4 demonstrates the region's seasonal trend.**

Both employment levels and the labor force peak in the middle of the summer and bottom out in the

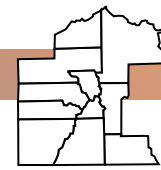
middle of winter. The Job Vacancy Survey is conducted semi-annually in the middle of winter and summer in order to measure the demand for labor at both high and low employment periods.

Surveys conducted in summer represent the demand for labor at a time when employers are nearing peak employment, yet are still in the process of actively recruiting. Vacancies found in winter represent the demand for labor at a time of year when employment is at its seasonal low. A study in winter tells of the type of occupations in demand even when employment is at traditionally low points of the year.

There are currently several factors placing stress on the Western & Southwest economy. Unfortunately, it is difficult to determine the exact effect of these factors on the local economy until more local information becomes available. These factors include the following:

*The U.S. Economic Slowdown—*

After the longest economic expansion in U.S. history ended last year, the U.S. economy inevitably slowed. Unemployment rates have increased



throughout the country and U.S. equity markets lost almost half their value from March 24, 2000 to July 18, 2002<sup>2</sup>.

*The 2002 Drought—*

The 2002 drought has impacted the entire state of Colorado, but southwestern Colorado has been particularly hard hit. Precipitation and stream flow levels are at all time lows and according to the U.S. Drought Monitor<sup>3</sup>

Southwest Colorado is in an exceptional drought, the most extreme on the scale.

*Fire Danger—*

Several major fires have erupted in the region, including the 77,000 acre Missionary Ridge fire near Durango and the Mesa Verde National Park fire near Cortez. Fire danger also closed the Durango-Silverton railroad for over a month and restricted park access through much of the summer.

## The Job Vacancy Survey Sample

The Summer Western & Southwest Region survey was conducted from July 10th through July 18th, 2002. For the purpose of this report, all known employers with 5 or more employees as well as all government employers are referred to as the sample universe. Firms with fewer than 5 employees make up 68% of all employers in the region, but 20% of the total employment. Employment in the sample universe accounts for approximately 80% of the region’s total employment.

The Job Vacancy Survey separates employers into either government or private industry. Private firms are then split into large and small to mid-size categories. Firms with at least 150 employees are considered large employers. Attempts are made to contact all government agencies and large firms. The remaining small to mid-size firms are split into industry groups.<sup>4</sup> To achieve a solid representation from each group, 360 completed responses were required. For

industry groups containing less than 360 employers, a response rate of at least 50% was required.

Government makes up 18% of the employment in the sample universe, while private industry employers make up the remaining 82%. Large firms account for 16% of private industry employment in the sample universe. Firms employing from 5 to 149 individuals are considered small to mid-size employers, and account for the remaining 84% of the private industry employment. Over the survey period, a total of 733 employers, approximately 22% of employers in the sample universe, responded to the survey. Out of these, 123 were government agencies, 28 were large employers and 582 were from the small to mid-sized category.

The response rate for the survey is 77% and the cooperation rate is 98%. The response rate measures how successful the survey is at contacting eligible employers. The cooperation rate measures how willing employers are to participate in the survey once they are contacted.

**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)

<sup>2</sup>Feaster, Seth, "The Incredible Shrinking Stock Market", *The New York Times*, July 21, 2002.

<sup>3</sup>US Drought Monitor, National Oceanic and Atmospheric Administration, <http://www.drought.unl.edu/dm/monitor.html>.

<sup>4</sup>Based on the 1987 Standard Industrial Classification Manual.

## Data Collection

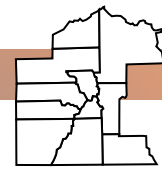
Data for the Job Vacancy Survey is collected using a Computer Assisted Telephone Interview (CATI) process. While this system of data collection has been in use in the public sector for several years, Colorado is the first state in the nation to pioneer the use of CATI data collection for the Job Vacancy 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 opened. 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 850 vacancies were open for immediate hire with firms having at least 5 employees in the Western & Southwest Region. The total number of estimated vacancies dropped from 1,500 found in the Summer 2001 JVS.

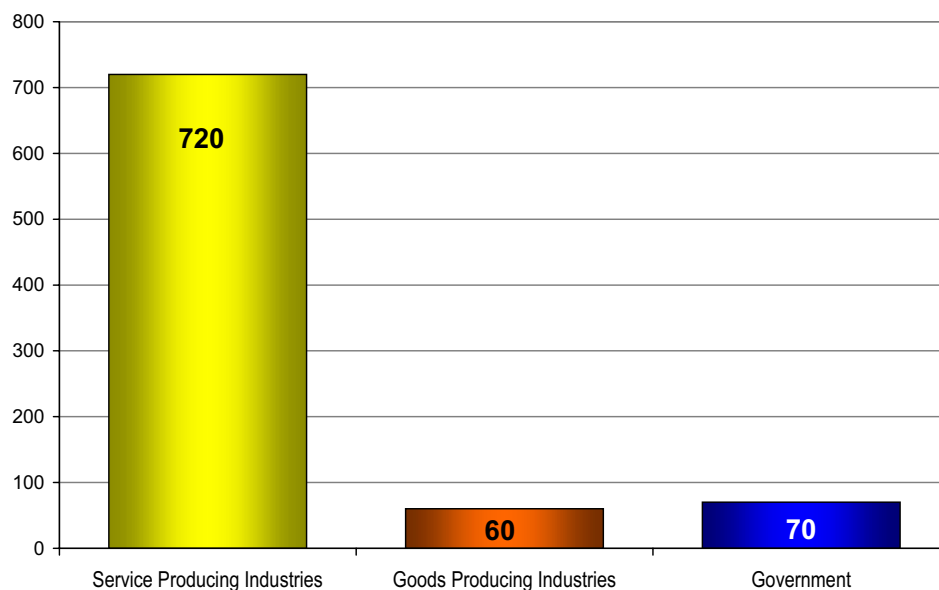
The region's estimated vacancy rate is 1.3%. The vacancy rate is the total number of estimated vacancies divided by total employment. In July 2001 the region had an overall vacancy rate of 1.9%. In this survey, Goods Producing Industries have a vacancy rate of 0.3%, Service Producing Industries 1.6% and Government 0.7%.

The total and industry specific vacancy rates are two of the most important pieces of information that the Job Vacancy Survey produces. Unfortunately, because the Western & Southwest Region survey is only a year old, it is difficult to determine exactly what a vacancy rate of 1.3% tells us about the demand for workers in the economy. Watching the change in

the vacancy rates through several economic recessions and expansions will help to better gauge the level of demand for labor. When several years of Job Vacancy Survey results are available the vacancy rate will become a telling indicator of the demand for new workers, much as the unemployment rate serves as a telling measure of the supply of workers.

Figure 5 demonstrates that the majority of the openings occur in Service Producing Industries. Not only does this category employ more than twice as many workers as Government and Goods Producing Industries combined, but it also has many high-turnover, high-demand occupations. In this survey registered nurses, nursing aides, orderlies and attendants and hand packers are the most frequently found occupations in the Service Producing Industries category. Government and Goods Producing Industries make up about 15% of the estimated total of open jobs.

**Figure 5: Estimated Vacancies by Industry Group**



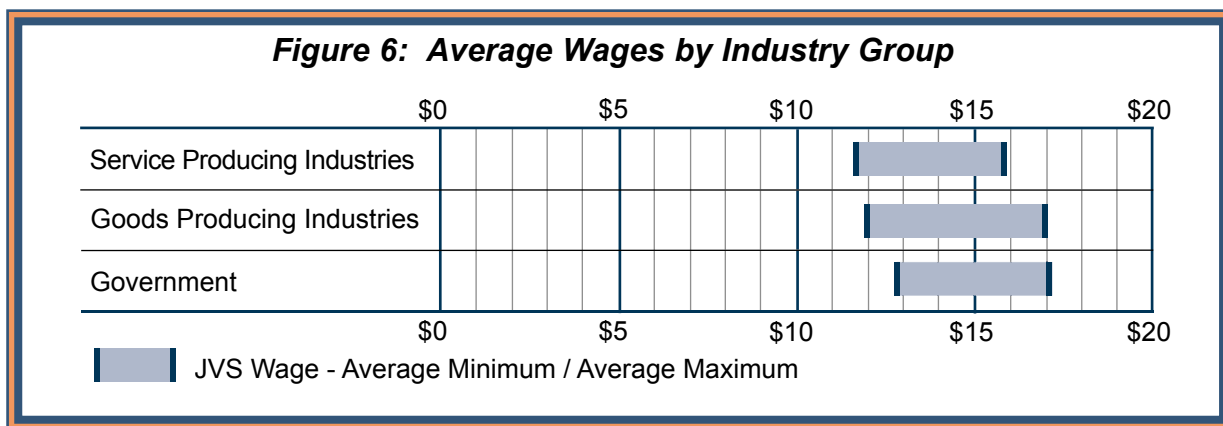
Because wages offered vary according to an individual's qualifications, employers were asked to provide the range of wages offered for the vacancies. The average wage is then calculated based on the mid-point of that range. The overall average wage offered for all vacancies in the region is \$14.00 per hour. In July 2001 the average wage was \$12.20, although this does not imply that the overall wage level has increased.

While wages do reflect the labor force supply and demand they are also heavily affected by the particular occupations that employers are looking to fill during the time of the survey. Given that the type and distribution of vacancies found this year is different from a year ago it is difficult to determine whether the increase in the overall wage is due to a different occupational mix or an actual increase in the wage level. The former scenario is more likely than the latter, but as more Job Vacancy Surveys are conducted it will be easier to answer this question.

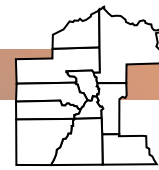
The Summer 2002 Job Vacancy Survey is heavily influenced by Healthcare Practitioners and Technical occupations. In July 2001 this major occupational classification group made up 14% of the vacancies found, but this year they make up almost 25%. The average wage for this group is \$16.60, greatly affecting the overall average wage. In fact, if you exclude Healthcare Practitioners and Technical Occupations the overall average wage of \$14.00 per hour drops by \$2.00 to \$12.00.

The reader should keep in mind that all of the estimates, proportions and averages in this report are profoundly affected by this occupational group. There are half as many vacancies as in July 2001, but 26% more Healthcare Practitioners and Technical open positions.

Wages are slightly higher in Government and Goods Producing Industries than in Service Producing Industries as shown in *Figure 6*.



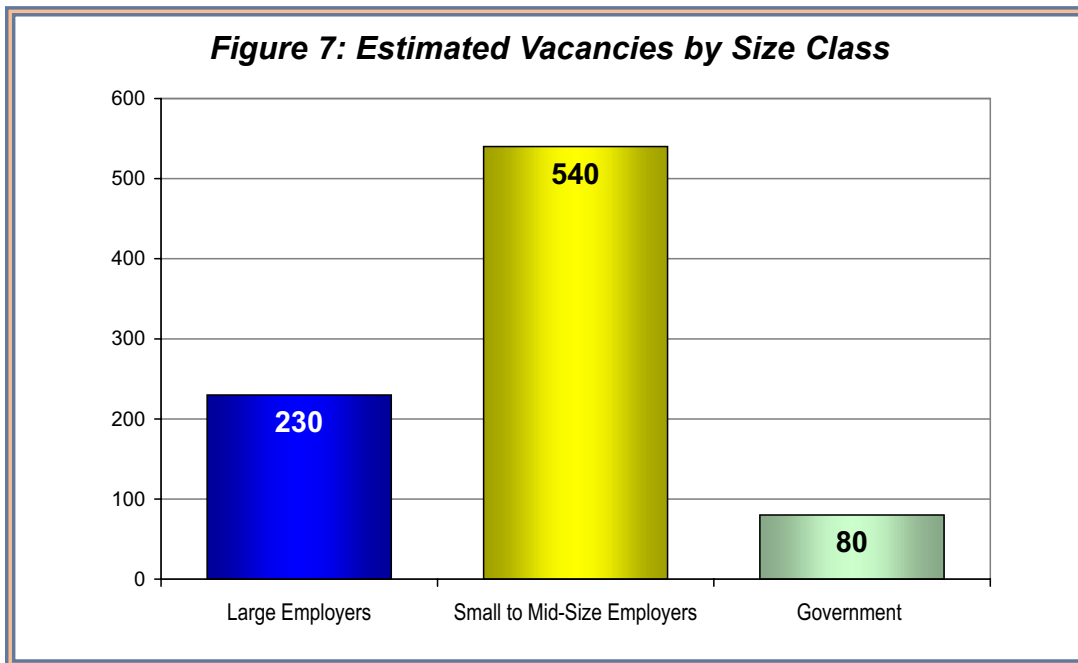




Most vacancies are found in the small to mid-size (5 to 149 employees) category. Large employers and government agencies combined make up 36% of the vacancies.

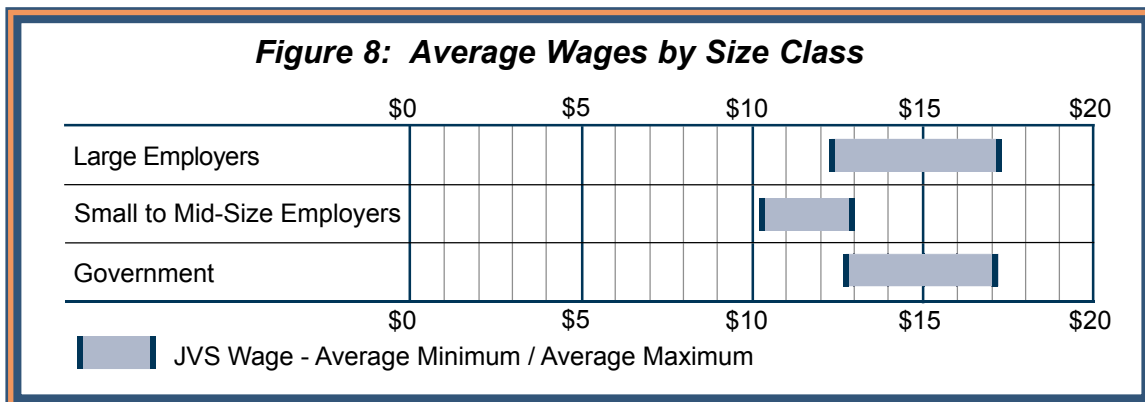
Does this imply that job seekers should target small to mid-size firms? Not necessarily. It is important to consider the fact that while large firms (private firms with 150 or more employees) make up only 1% of all firms in the region, they have a larger number of vacancies per employer. Overall, there are more vacancies in small to mid-size firms, but because they

make up such a large proportion of all firms, there are actually fewer vacancies per employer in the small to mid-size category than in government or large employers. If a job seeker looks for work at just a few employers he may find a greater number of vacancies open at large companies than at small to mid-size firms. There are 6.7 vacancies per large private employer, 0.5 vacancies per governmental employer and 0.2 vacancies per small to mid-size employer. Looking at *Figure 7* might prompt a job seeker to focus on smaller companies, but targeting the large companies as well may lead to a more efficient job search.



Large employers and government agencies offer higher wages than small to mid-size firms. The particular occupations found in a size class play a large role in determining the average wage in that category. The vast majority of healthcare related occupations are

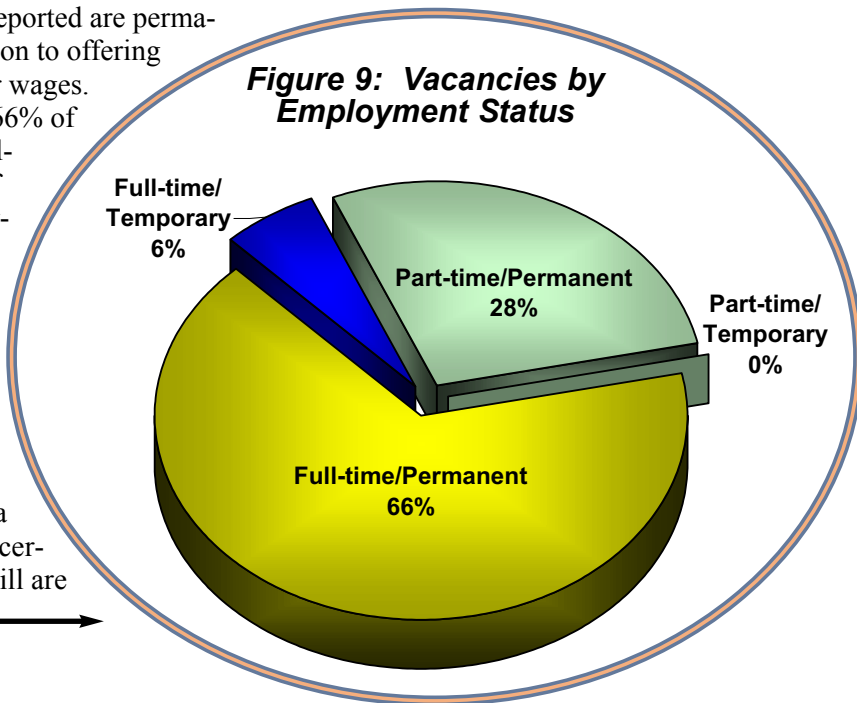
found in the large size category. Government agencies are dominated by: Education, Training and Library; Management; and Office and Administrative Support occupational groups. These relatively high paying occupations positively affect average wages.



Ninety-four percent of the vacancies reported are permanent employment opportunities. In addition to offering stability, these positions also offer higher wages. Full-time/permanent positions make up 66% of the total number of vacancies found. Full-time/temporary positions make up 6% of the reported vacancies, and part-time/permanent make up 28%. No vacancies were reported for part-time/temporary positions.

Temporary positions typically make up a small proportion of total vacancies despite the dramatic increase in popularity of temporary workers during the 1990s<sup>5</sup>. Temporary workers can provide a cost effective and productive solution to certain staffing needs, but most vacancies still are filled permanently.

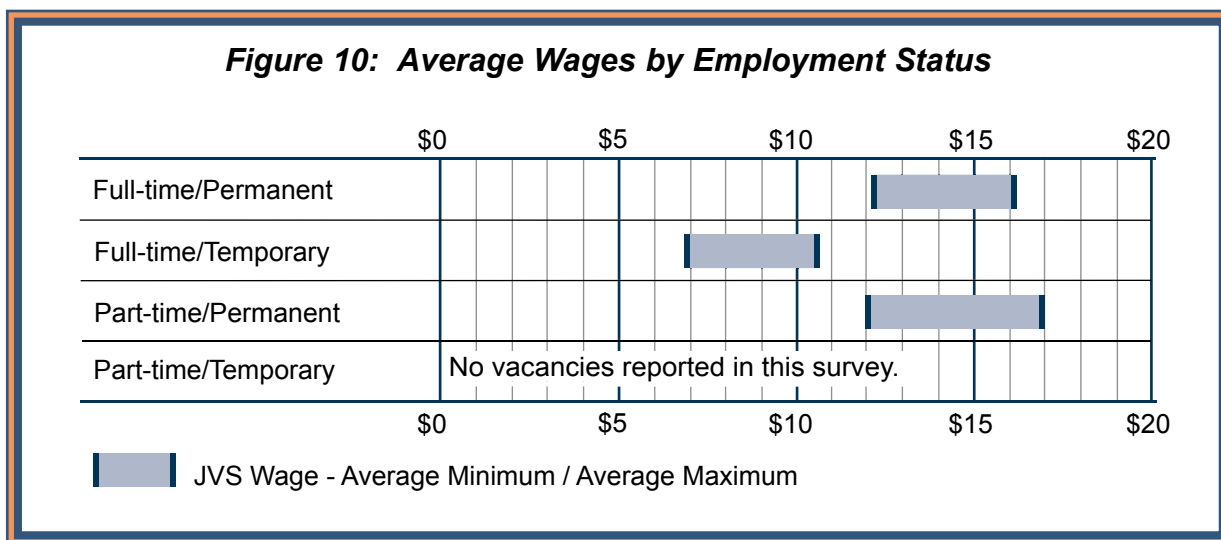
**Figure 9: Vacancies by Employment Status**



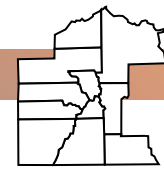
Permanent positions offer significantly higher wages than temporary ones. Most of the temporary positions are in either the Food Preparation and Serving Related occupations or Construction and

Extraction. Full-time positions tend to pay more than part-time positions, but in this case almost half of the part-time permanent positions were in high paying healthcare occupations.

**Figure 10: Average Wages by Employment Status**



<sup>5</sup>Daily temporary employment increased 157% from 1990-2000. American Staffing Association.

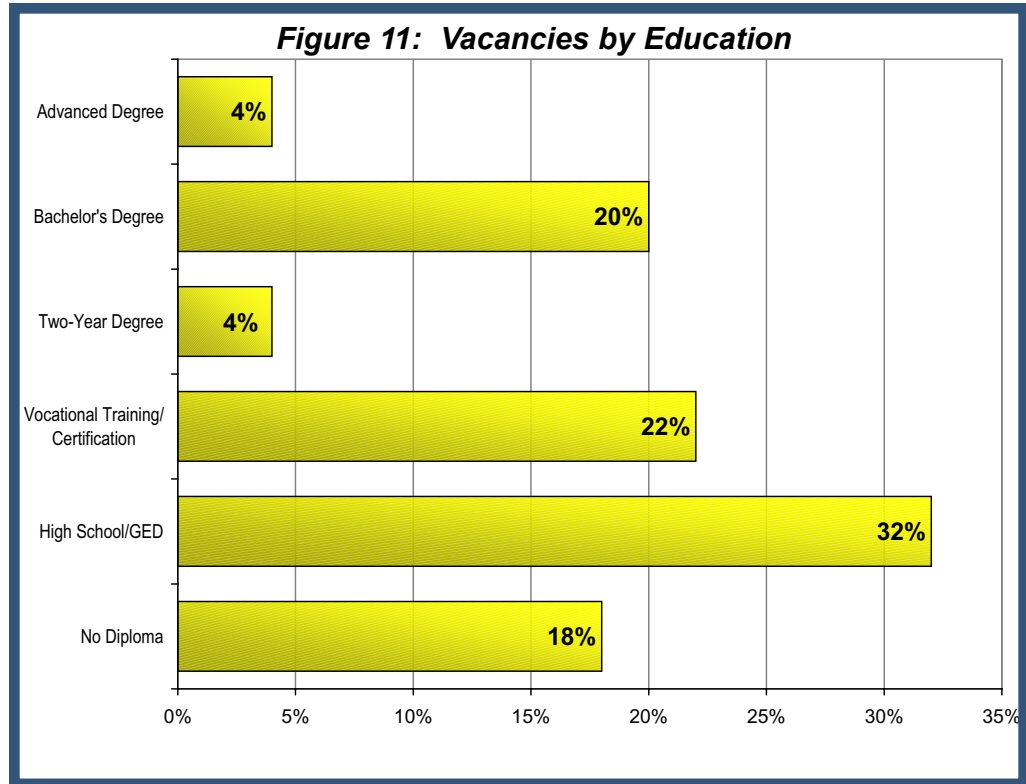


# Vacancies: Education and Experience Requirements

The majority of economic reporting treats all workers as if they are part of the same labor market. For example, if the unemployment rate is high, one might assume there are lots of qualified candidates and no job openings. The reality is that even in recessions there are many employers who cannot find qualified candidates for their open positions. Because a region's overall labor force is made up of hundreds of smaller labor groups, only a certain number of qualified candidates who have the necessary knowledge, skills and experience can compete for a given job. It is important, therefore, that job seekers have accurate information regarding what types of education and experience are in highest demand.

Half of the vacancies in the Western & Southwest Region require education beyond a high school diploma/GED. While the vacancies appear to be relatively

well spread out between different educational categories the picture changes drastically when excluding healthcare occupations. Instead of 50% of the vacancies requiring more than a high school diploma, only 30% of the non-healthcare related positions have this requirement.



Generally, the more education required for a position, the higher the wages offered. The Bureau of Labor Statistics in its report on *Usual Weekly Earnings of Wage and Salary Workers*<sup>6</sup> found that full-time workers age 25 and over without a high school diploma had median weekly earnings of \$386, compared with \$536 for high school graduates and \$940 for college graduates. In this survey, positions requiring a bachelor's degree offered double the wages as positions requiring a high school diploma/GED.

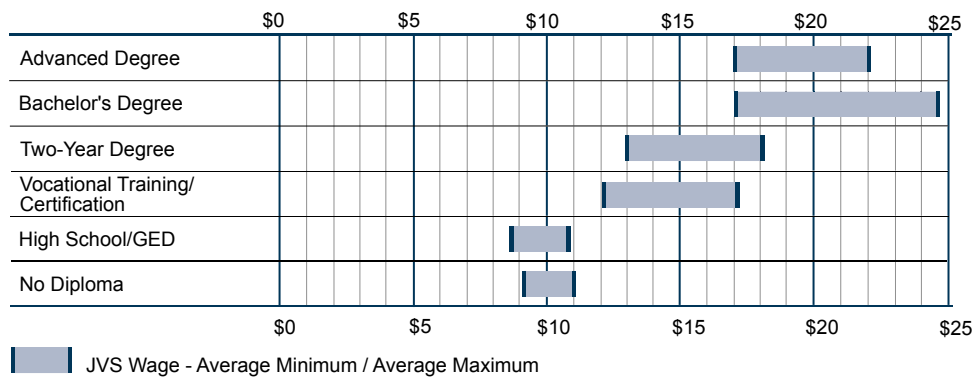
This common trend did not hold perfectly in this survey, however. Wages in the bachelor's degree category are slightly higher than advanced degrees and

jobs requiring no diploma offer more than jobs requiring a diploma. What causes these irregularities?

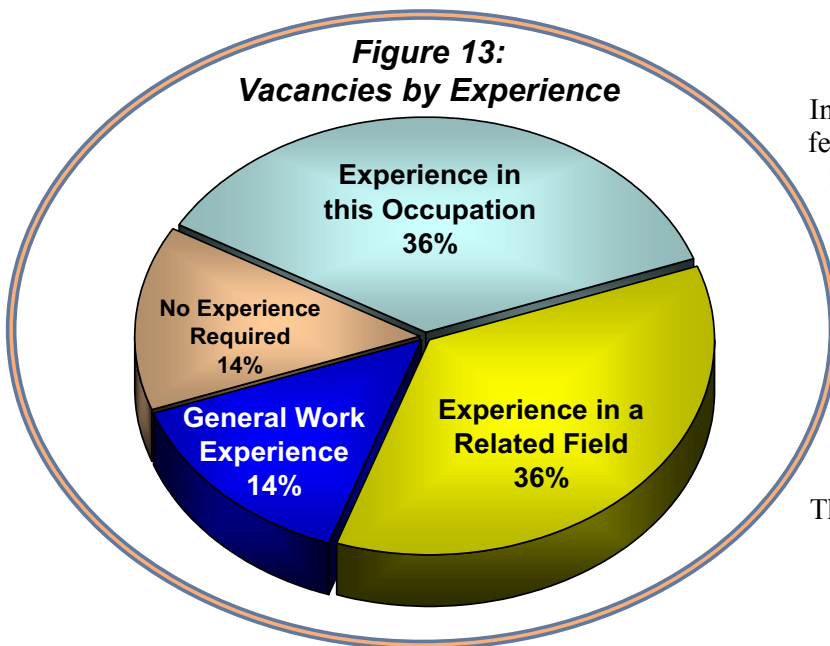
In the no diploma category a large number of Construction and Extraction positions were reported with an average wage of over \$18 an hour that brought the overall average wage up. While these positions did not require a diploma they did require the highest level of experience.

The average wage for bachelor's degrees is heavily influenced by registered nurses who make up almost half of the vacancies found in the bachelor's degree category. At an average wage of over \$22 this occupation has a large positive effect on the results.

**Figure 12: Average Wages by Education**

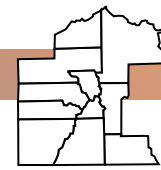


**Figure 13: Vacancies by Experience**



Increased unemployment coupled with fewer vacancies may be terrible news for job seekers, but it gives employers a larger pool of candidates from which to select employees. What often happens in this situation is that employers are able to attract candidates with more experience than in a tight labor period. In July 2001, 54% of the open positions required either experience in a related field or in the specific occupation. This summer that figure rose to 72%.

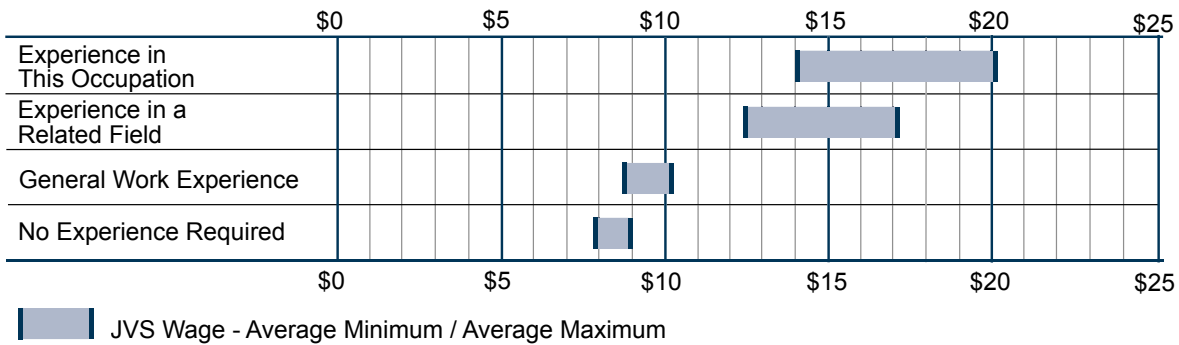
<sup>6</sup>1st Quarter, 2002.



Positions needing higher levels of experience generally pay higher wages. In this survey vacancies requiring experience in a particular occupation offer wages twice as high as those requiring no experience. Firms offer experienced candidates better compensation packages because experience usually increases a worker’s productivity.

The most frequently reported occupations in each experience category are: *No Experience Required*—Transportation and Material Moving; *General Work Experience*—Office and Administrative Support; *Experience in a Related Field*—Healthcare Practitioner and Technical; and *Experience in this Occupation*—Healthcare Practitioner and Technical.

**Figure 14: Average Wages by Experience**



**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>	<b>48%</b>	<b>16%</b>	<b>12%</b>	<b>24%</b>
<b>High School Diploma/GED</b>	<b>13%</b>	<b>31%</b>	<b>41%</b>	<b>15%</b>
<b>Vocational Training/Certification</b>	<b>3%</b>	<b>5%</b>	<b>33%</b>	<b>59%</b>
<b>Two-Year Degree</b>	<b>0%</b>	<b>0%</b>	<b>43%</b>	<b>57%</b>
<b>Bachelor’s Degree</b>	<b>3%</b>	<b>3%</b>	<b>52%</b>	<b>42%</b>
<b>Advanced Degree</b>	<b>0%</b>	<b>0%</b>	<b>7%</b>	<b>93%</b>

Note: Percentages based on each educational category.

An interesting relationship exists between the type of education required to fill a position and the level of experience desired. In both the survey and in general, the higher the level of education demanded, the higher the level of experience required as well. Internships and apprenticeships have gained importance and popularity in recent years, because to be competitive in today’s job market students must obtain quality experience along with academic knowledge.

Jobs that require no high school diploma are typically low skill, entry-level jobs requiring little experience. In the Western & Southwest Region, 93% of jobs requiring an advanced degree require experience in the specific occupation. Ninety-four percent of jobs requiring a bachelor’s degree require at least experience in a related field.

# Vacancies: Difficulty to Fill

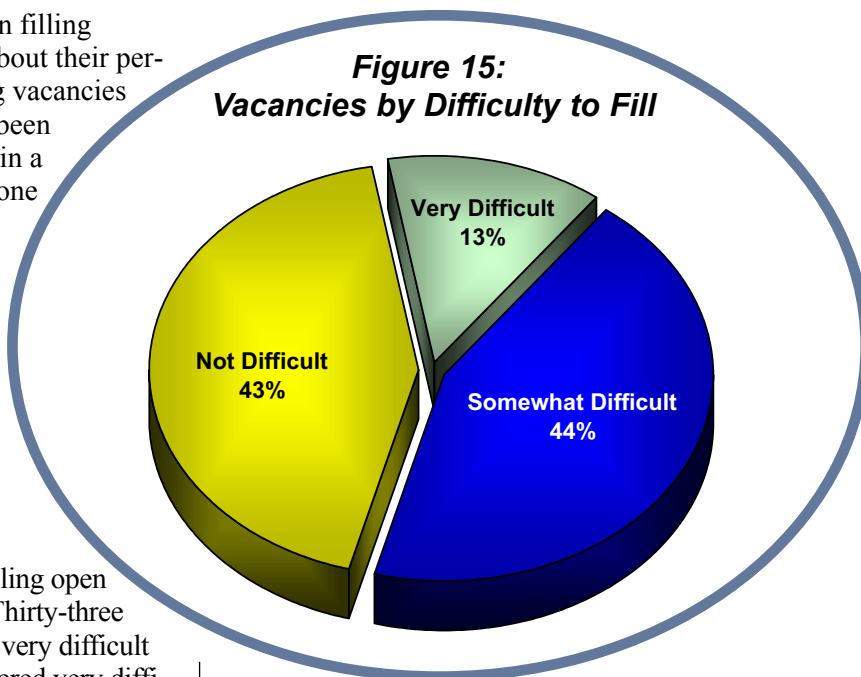
To estimate the level of difficulty in filling vacancies, employers are asked about their perceived level of difficulty in filling vacancies and the length of time that position has been open. If a large proportion of vacancies in a region are difficult to fill, it may signal one or a combination of 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 seeker, and/or
- Unattractive compensation.

Employers are having less difficulty filling open positions as compared to summer 2001. Thirty-three percent of the vacancies were considered very difficult to fill in July 2001, while 13% are considered very difficult to fill in this survey.

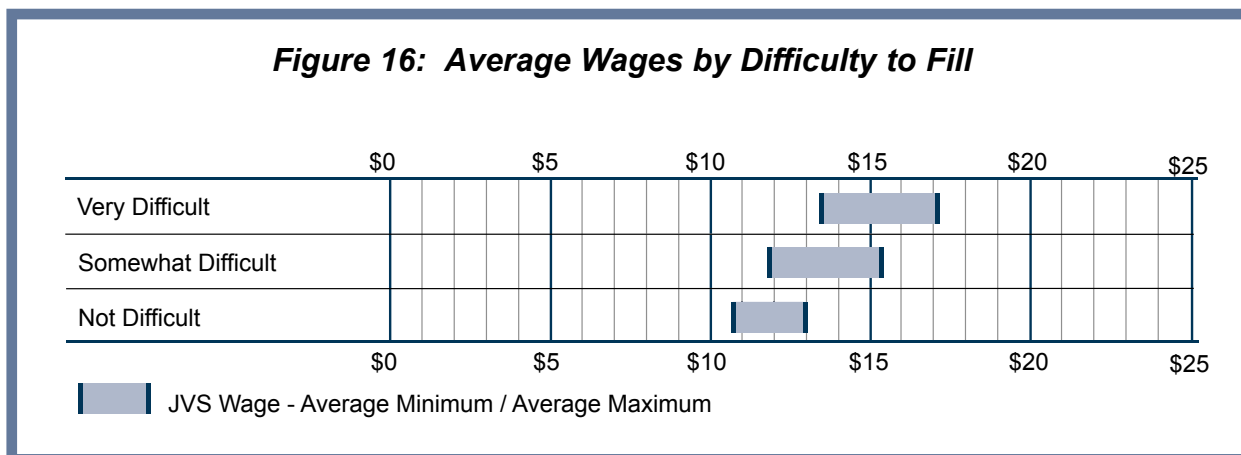
Transportation and Material Moving occupations were most frequently found in the not difficult to fill category, while Education, Training, and Library occupations were most frequent in the somewhat difficult

**Figure 15: Vacancies by Difficulty to Fill**



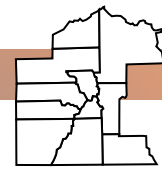
to fill category. Not surprising, Healthcare Practitioners and Technical occupations dominated the very difficult to fill category. The shortage of nurses in the labor market is not only an issue in the Western & Southwest Region, but it is also an issue throughout Colorado and the nation as a whole.

**Figure 16: Average Wages by Difficulty to Fill**

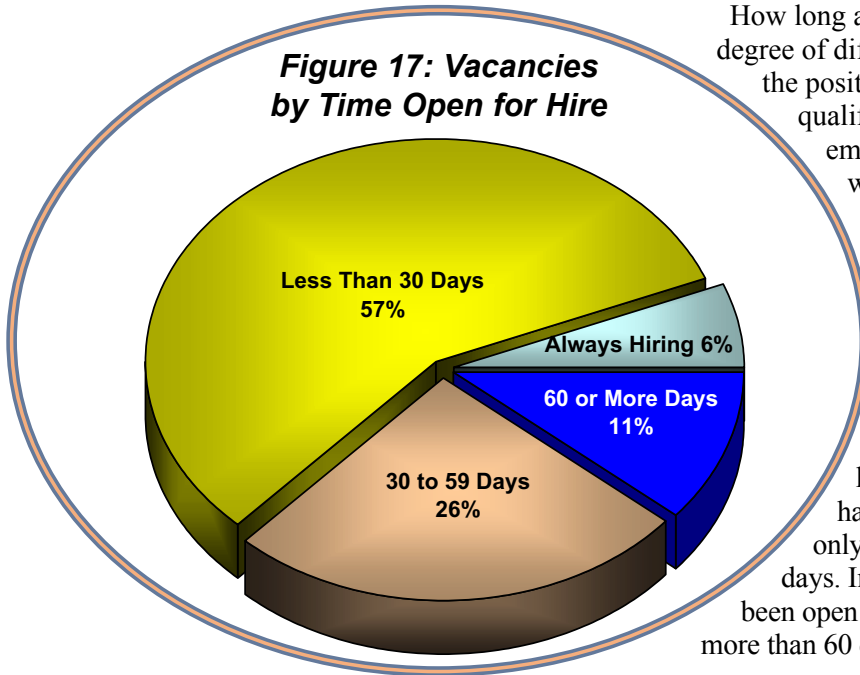


In this survey, vacancies that are difficult to fill tend to offer higher wages. Vacancies that are very difficult to fill offer an average wage of \$14.80 while positions

that are not difficult to fill offer an average wage of \$11.80.



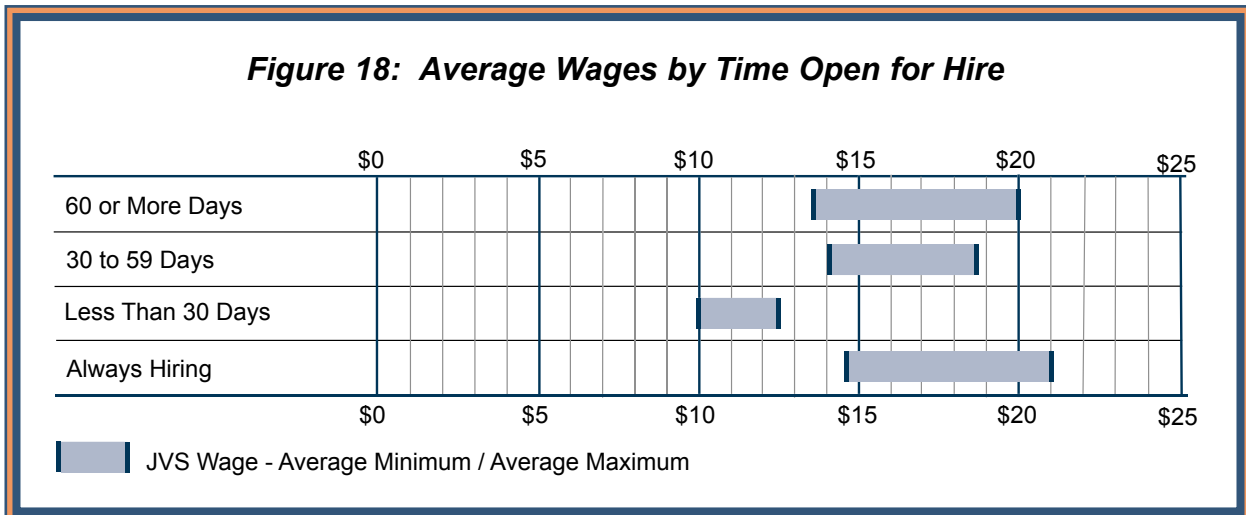
**Figure 17: Vacancies by Time Open for Hire**



How long a vacancy is open is indicative of the degree of difficulty an employer is having in filling the position. Factors include: the availability of qualified candidates; competition among employers for similar candidates; and the willingness of candidates to accept job duties considering wages and benefits offered. Also, employers may allow more time to fill a vacancy in order to ensure the fit of the candidate with the organization, or because there may be a limited number of qualified applicants.

Another indication that the labor market has loosened is that 57% of vacancies have been open for less than 30 days and only 11% have been open for more than 60 days. In July 2001, 45% of the openings had been open less than 30 days and 26% were open for more than 60 days.

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



The survey found that positions open for longer periods of time have a slightly higher associated wage. As higher wages usually accompany occupations that

require specialized skills, it may take an employer longer to recruit and hire a candidate with the desired background.

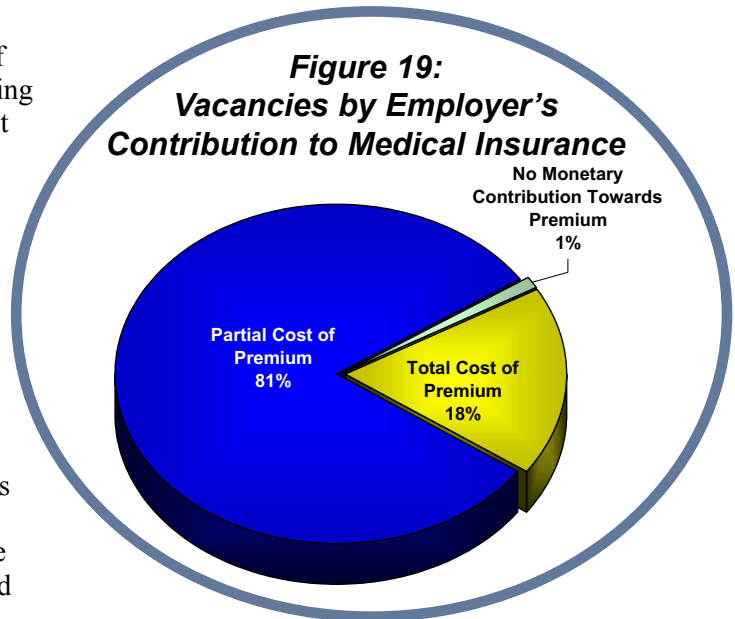
# Vacancies: Additional Compensation

## Medical Insurance

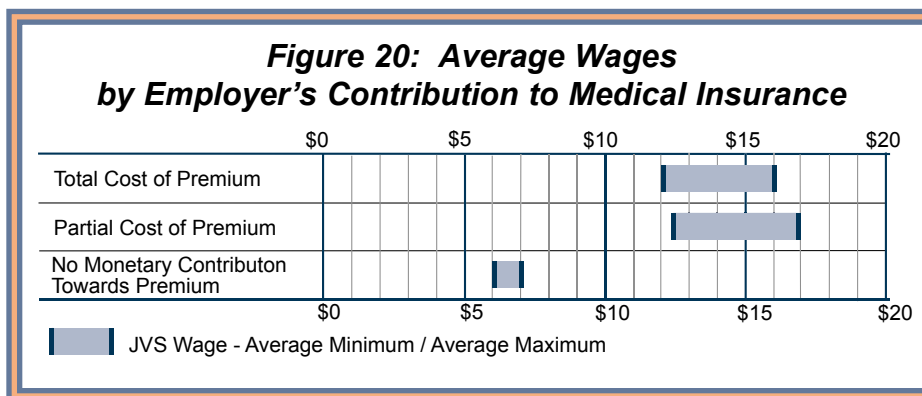
Employers frequently offer compensation related benefits to recruit qualified candidates. Some of these perks are paid time off, transportation or parking vouchers and subsidized child-care. One of the most important benefits offered to employees is medical insurance via an employer group plan. Employers may pay all, part or none of the monthly insurance premium. How can an employer offer medical insurance and not pay for it? While this scenario is uncommon, employers can and do offer employees the opportunity to participate in their group medical insurance plans even though they do not contribute to the premium.

Over 70% of the vacancies reported by employers include some form of medical insurance. Of these, employers offer to pay a part of the premium for the vast majority. Almost 20% of the vacancies included payment of the entire medical insurance premium.

**Figure 19: Vacancies by Employer's Contribution to Medical Insurance**



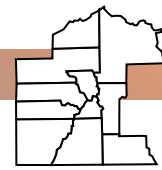
**Figure 20: Average Wages by Employer's Contribution to Medical Insurance**



Generally, positions paying a higher proportion of medical insurance premiums also pay higher wages. The higher the skill set demanded by employers the higher the compensation level required to attract candidates. Paying part or all of a medical insurance premium is an important feature of that compensation package.

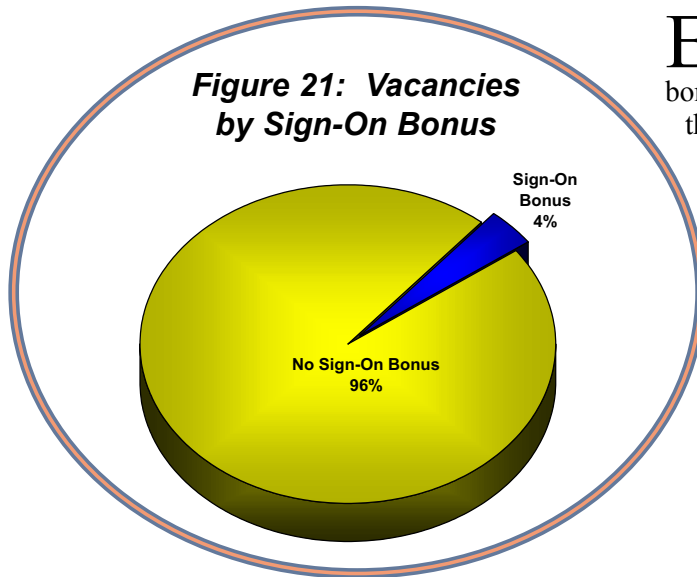
In this survey, however, there is a weak relationship between wages and the proportion of premium paid. Registered nurses make up over half of all the vacancies offering to pay part of the premium. This occupation positively influenced the average wage in the partial-cost-of-premium category in *Figure 20*.





## Sign-On Bonus

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



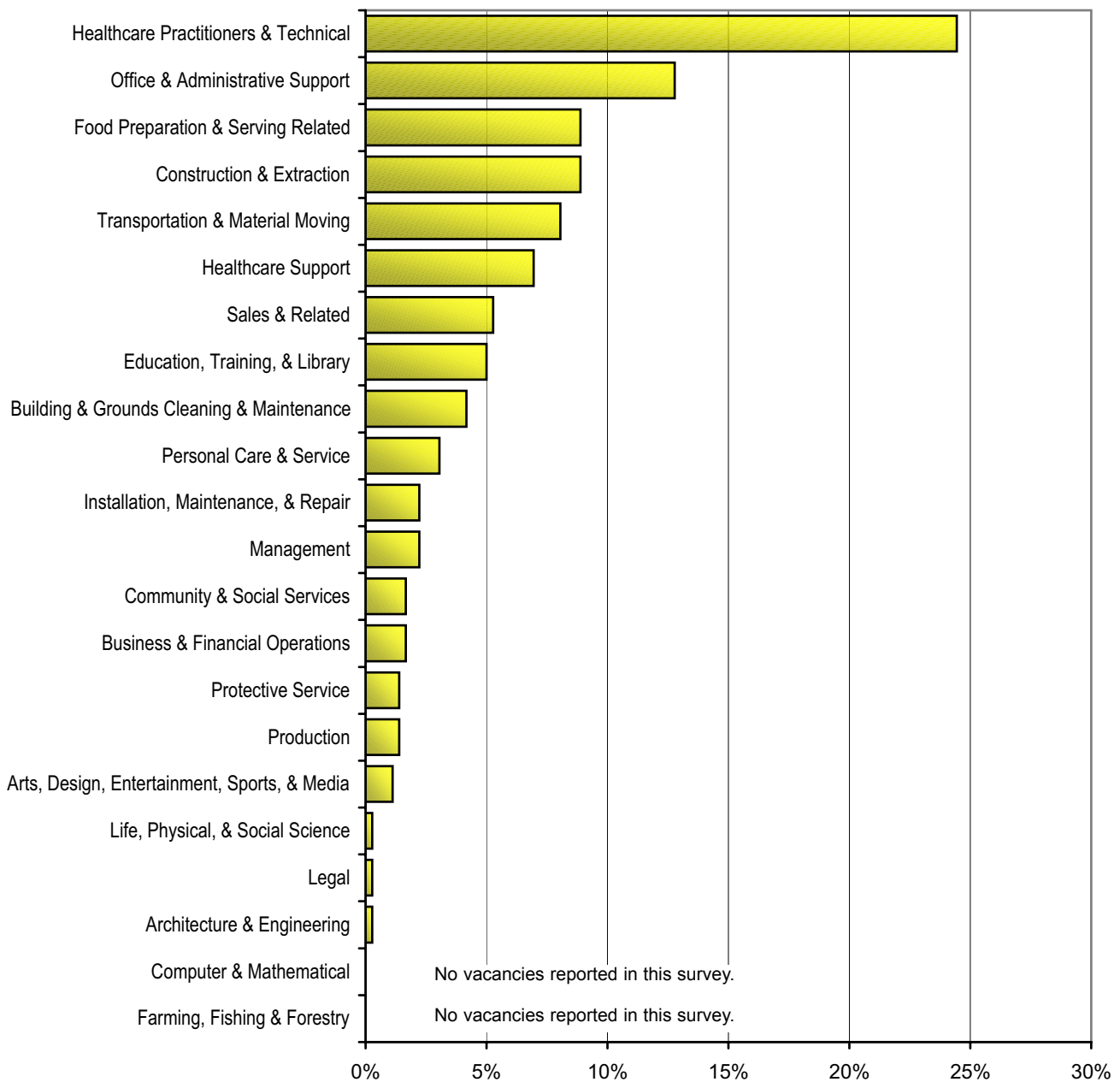
Employers are asked if they offer sign-on bonuses for the positions for which they are recruiting. Sign-on bonuses became popular lore in the late nineties due to the tight labor market situation, but it is unclear whether the actual size and frequency of sign-on bonuses deserved the hype. Out of the 108 companies in this survey that reported vacancies, only three offered a sign-on bonus for an average amount of \$1,700. As the economy continues through the business cycle and the labor market once again tightens, it will be interesting to see how popular sign-on bonuses become as a means of attracting candidates.

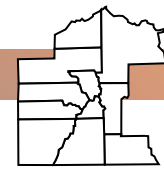
# Occupations

In order to facilitate comparisons between the results of this survey and other sources of employment statistics, all jobs reported are assigned a Standard Occupational Classification (SOC) code from the 2000 *Standard Occupational Classification Manual*. Not

surprisingly, the most frequently occurring job vacancies fall into occupational groups that are most often associated with the largest industries in the region: Services, Retail Trade, and Construction.

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





The results of the survey show that the most frequently occurring job vacancies are not necessarily offered the highest wages. This indicates that compensation for workers can be explained by the investigation of other vacancy characteristics. Occupations offering the lowest wage ranges also

tend to be occupations typically requiring lower levels of education and experience. Occupational groups offering the highest wage ranges in the survey are: Legal; Business and Financial Operations; and Management. These high skill occupations typically require higher levels of education and experience.

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

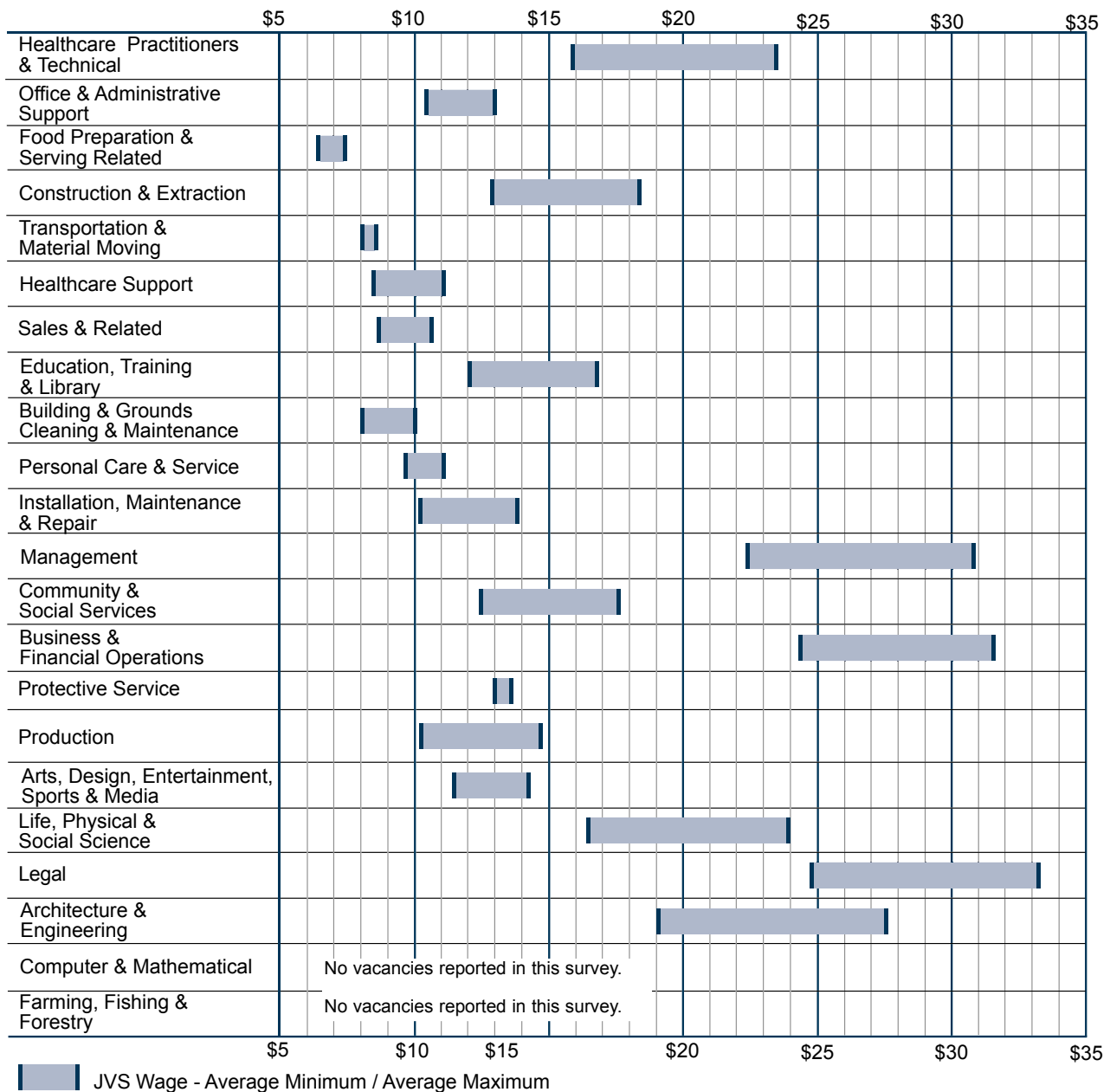


Table 3: Job Vacancy Survey Occupations with OES Wages

SOC Code		Occupational Employment Statistics Wage Data (2001)																		
		Average Wages					Percentile Distribution													
		‡ Average JVS Wage	‡ Vacancy Rank	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th									
	<b>SOC Occupational Title</b>																			
11-0000	Management Occupations	\$26.60		\$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									
11-3040	Human Resources Managers	†	L	\$15.51	\$23.90	\$28.10	\$13.93	\$17.50	\$21.42	\$28.81	\$38.12									
11-9032	Education Administrators, Elementary and Secondary School		L	\$14.80	\$60,969	\$69,175	\$39,439	\$50,814	\$62,164	\$71,535	\$84,390									
11-9033	Education Administrators, Postsecondary		L	\$32.50	\$30.74	\$36.07	\$18.68	\$21.76	\$29.11	\$39.87	\$46.31									
* 11-9039	Education Administrators, All Other		L	\$24.80	†	†	†	†	†	†	†									
11-9041	Engineering Managers		M	\$31.30	\$33.30	\$38.40	\$21.78	\$24.93	\$31.79	\$40.02	\$44.95									
11-9111	Medical and Health Services Managers		L	\$25.20	\$23.81	\$26.54	\$16.84	\$20.25	\$24.07	\$27.08	\$31.09									
<b>13-0000</b>	<b>Business and Financial Operations Occupations</b>			<b>\$28.00</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	\$18.00	\$13.38	\$14.97	\$9.68	\$10.84	\$12.92	\$15.02	\$16.76									
13-2011	Accountants and Auditors		M	\$18.70	\$20.58	\$24.13	\$12.29	\$15.21	\$19.87	\$24.73	\$29.97									
13-2072	Loan Officers		M	\$42.20	\$26.86	\$31.78	\$15.78	\$19.69	\$25.17	\$33.98	\$41.12									
<b>17-0000</b>	<b>Architecture and Engineering Occupations</b>			<b>\$23.40</b>	<b>\$23.57</b>	<b>\$27.64</b>	<b>\$13.47</b>	<b>\$17.94</b>	<b>\$21.64</b>	<b>\$29.09</b>	<b>\$36.60</b>									
* 17-2199	Engineers, All Other		L	\$23.40	\$34.06	\$39.50	\$21.27	\$26.41	\$33.52	\$41.56	\$49.18									
<b>19-0000</b>	<b>Life, Physical, and Social Science Occupations</b>			<b>\$20.20</b>	<b>\$19.40</b>	<b>\$22.77</b>	<b>\$11.28</b>	<b>\$14.21</b>	<b>\$18.24</b>	<b>\$24.66</b>	<b>\$28.51</b>									
19-4099	Life, Physical, and Social Science Technicians, All Other		L	\$20.20	\$16.87	\$18.62	\$12.32	\$14.06	\$15.77	\$17.48	\$25.20									
<b>21-0000</b>	<b>Community and Social Services Occupations</b>			<b>\$15.00</b>	<b>\$14.85</b>	<b>\$17.68</b>	<b>\$8.36</b>	<b>\$10.47</b>	<b>\$14.02</b>	<b>\$18.28</b>	<b>\$22.22</b>									
21-1021	Child, Family, and School Social Workers		M	\$16.80	\$12.95	\$14.05	\$10.07	\$11.37	\$12.82	\$14.27	\$16.54									

\* 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

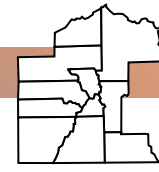


Table 3: Job Vacancy Survey Occupations with OES Wages — Page 2

SOC Code		Occupational Employment Statistics Wage Data (2001)									
		Average Wages					Percentile Distribution				
		‡ Vacancy Rank	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
SOC Occupational Title											
21-1022	Medical and Public Health Social Workers	L	†	\$13.79	\$17.74	\$19.72	\$12.00	\$15.28	\$17.96	\$20.80	\$22.51
* 21-1029	Social Workers, All Other	M		\$12.30	†	†	†	†	†	†	†
<b>23-0000</b>	<b>Legal Occupations</b>			<b>\$29.00</b>	<b>\$19.66</b>	<b>\$22.07</b>	<b>\$14.48</b>	<b>\$15.84</b>	<b>\$18.28</b>	<b>\$21.21</b>	<b>\$27.73</b>
23-1023	Judges, Magistrate Judges, and Magistrates	L		\$29.00	\$47.67	\$61.68	\$6.11	\$39.33	\$59.60	\$65.88	\$69.64
<b>25-0000</b>	<b>Education, Training, and Library Occupations</b>			<b>\$14.50</b>	<b>\$16.29</b>	<b>\$19.48</b>	<b>\$8.51</b>	<b>\$11.56</b>	<b>\$15.63</b>	<b>\$20.54</b>	<b>\$25.82</b>
25-1121	Art, Drama, and Music Teachers, Postsecondary	M		\$13.20	\$42,750	\$47,735	\$29,890	\$36,660	\$44,157	\$51,339	\$55,583
* 25-1199	Postsecondary Teachers, All Other	L		\$18.00	\$38,539	\$45,576	\$21,558	\$28,699	\$34,086	\$43,480	\$60,865
25-2022	Middle School Teachers, Except Special and Vocational Education	M		\$15.60	\$37,158	\$41,135	\$26,783	\$30,738	\$35,639	\$43,158	\$51,299
25-2031	Secondary School Teachers, Except Special and Vocational Education	H		\$14.40	\$40,845	\$46,372	\$27,295	\$31,841	\$37,789	\$48,936	\$60,514
25-2042	Special Education Teachers, Middle School	L		\$12.80	\$39,984	\$45,275	\$26,895	\$32,094	\$39,867	\$48,081	\$54,874
25-2043	Special Education Teachers, Secondary School	L		\$15.90	\$34,883	\$37,193	\$28,523	\$30,987	\$34,781	\$39,455	\$43,436
* 25-3099	Teacher and Instructors, All Other	M		\$18.00	†	†	†	†	†	†	†
25-9041	Teacher Assistants	L		\$8.30	\$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>\$12.90</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>
27-2022	Coaches and Scouts	M		\$13.70	29,384	34,303	18,857	20,714	27,028	36,697	44,780
* 27-3022	Reporters and Correspondents	L		\$11.10	†	†	†	†	†	†	†

\* 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							
		‡ Vacancy Rank	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 27-3042	Technical Writers	L	†	\$17.12	\$23.71	\$27.01	\$15.68	\$18.90	\$23.68	\$27.63	\$32.55
<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>
29-1031	Dietitians and Nutritionists	M		\$12.40	\$16.15	\$18.03	\$11.88	\$13.10	\$16.00	\$19.10	\$21.30
* 29-1071	Physician Assistants	L		\$22.33	\$29.15	\$32.56	\$20.69	\$24.49	\$28.91	\$34.40	\$39.60
29-1111	Registered Nurses	H		\$17.17	\$20.88	\$22.74	\$15.95	\$18.51	\$20.63	\$23.49	\$27.28
29-1122	Occupational Therapists	L		\$20.30	\$24.60	\$26.74	\$18.96	\$22.07	\$24.57	\$27.08	\$30.68
29-1123	Physical Therapists	M		\$21.60	\$24.99	\$26.68	\$19.82	\$22.76	\$25.20	\$27.63	\$31.25
29-1126	Respiratory Therapists	H		\$15.36	\$17.93	\$19.22	\$14.63	\$15.97	\$18.16	\$20.29	\$21.56
* 29-2011	Medical and Clinical Laboratory Technologists	M		\$16.70	\$20.49	\$22.38	\$15.21	\$18.09	\$20.32	\$22.59	\$26.64
* 29-2012	Medical and Clinical Laboratory Technicians	L		\$10.65	\$14.73	\$16.76	\$9.90	\$11.48	\$13.97	\$17.51	\$20.90
29-2032	Diagnostic Medical Sonographers	M		\$17.83	\$22.05	\$24.15	\$16.47	\$18.80	\$22.89	\$25.70	\$27.38
29-2034	Radiologic Technologists and Technicians	H		\$15.19	\$18.62	\$20.33	\$14.54	\$16.25	\$18.67	\$21.00	\$22.99
29-2061	Licensed Practical and Licensed Vocational Nurses	H		\$10.36	\$13.04	\$14.38	\$9.80	\$11.01	\$12.63	\$14.50	\$17.10
29-2071	Medical Records and Health Information Technicians	M		\$7.85	\$9.85	\$10.85	\$7.41	\$8.04	\$9.45	\$11.37	\$13.06
<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>
31-1012	Nursing Aides, Orderlies, and Attendants	H		\$7.70	\$8.71	\$9.23	\$7.29	\$7.79	\$8.62	\$9.80	\$10.70
31-2021	Physical Therapist Assistants	M		\$7.80	\$9.19	\$9.90	\$7.16	\$7.52	\$8.12	\$8.72	\$13.87
31-9093	Medical Equipment Preparers	L		\$9.10	\$10.49	\$11.19	\$8.31	\$9.42	\$10.51	\$11.80	\$13.10

\* OES wages reported for Colorado statewide

† No wage data available

‡

L - lowest 25% of actual responses

M - middle 50% of actual responses

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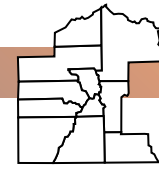


Table 3: Job Vacancy Survey Occupations with OES Wages – Page 4

SOC Code		Occupational Employment Statistics Wage Data (2001)									
		Average Wages			Percentile Distribution						
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
31-9094	Medical Transcriptionists	‡	Average JVS Wage	\$11.23	\$12.57	\$13.23	\$10.50	\$11.49	\$12.46	\$13.44	\$14.66
33-0000	Protective Service Occupations	M	\$13.30	\$15.30	\$17.89	\$8.76	\$11.96	\$14.74	\$17.74	\$22.40	\$25.32
33-2011	Fire Fighters	L	\$19.90	\$17.66	\$18.90	\$14.21	\$15.04	\$16.38	\$19.31	\$25.32	\$21.26
33-3051	Police and Sheriff's Patrol Officers	L	\$14.70	\$16.43	\$17.89	\$12.58	\$14.14	\$16.06	\$18.50	\$21.26	\$13.06
33-9032	Security Guards	M	\$9.40	\$9.31	\$10.68	\$6.16	\$7.13	\$9.22	\$10.88	\$13.06	\$11.95
35-0000	Food Preparation and Serving-Related Occupations		\$6.90	\$7.88	\$8.83	\$5.64	\$6.13	\$6.93	\$9.04	\$11.95	\$11.94
35-2012	Cooks, Institution and Cafeteria	M	\$8.90	\$8.53	\$9.42	\$6.28	\$7.14	\$8.09	\$9.65	\$11.94	\$12.14
35-2014	Cooks, Restaurant	H	\$10.40	\$9.17	\$10.25	\$6.53	\$7.62	\$9.25	\$10.65	\$12.14	\$12.86
35-3011	Bartenders	L	\$6.00	\$8.34	\$9.49	\$5.77	\$6.36	\$7.50	\$11.07	\$12.86	\$7.49
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	H	\$6.30	\$6.27	\$6.41	\$5.52	\$5.81	\$6.27	\$6.74	\$7.49	\$13.26
35-3031	Waiters and Waitresses	H	\$5.20	\$8.35	\$9.53	\$5.61	\$6.09	\$6.87	\$10.44	\$13.26	\$12.90
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	H	\$6.90	\$8.60	\$9.90	\$5.66	\$6.18	\$7.58	\$11.19	\$12.90	\$8.47
35-9021	Dishwashers	M	\$6.20	\$6.63	\$6.96	\$5.54	\$5.88	\$6.47	\$7.35	\$8.47	\$9.03
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	L	†	\$7.35	\$8.04	\$5.72	\$6.36	\$7.40	\$8.28	\$9.03	\$13.47
37-0000	Building and Grounds Cleaning and Maintenance Occupations		\$9.00	\$9.25	\$10.52	\$6.13	\$7.18	\$8.52	\$10.81	\$13.47	\$17.06
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	L	\$10.90	\$11.68	\$13.36	\$7.66	\$8.72	\$10.27	\$14.64	\$17.06	\$12.87
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	H	\$9.90	\$9.25	\$10.48	\$6.20	\$7.35	\$9.12	\$10.82	\$12.87	\$10.69
37-2012	Maids and Housekeeping Cleaners	H	\$8.20	\$8.04	\$8.89	\$5.93	\$6.83	\$7.77	\$8.66	\$10.69	

\* 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 5

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
<b>39-0000</b>	<b>Personal Care and Service Occupations</b>		<b>\$10.40</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>	
* 39-1011	Gaming Supervisors	L	\$17.00	\$19.52	\$22.39	\$12.53	\$15.82	\$19.47	\$23.11	\$27.10	
39-1021	First-Line Supervisors/Managers of Personal Service Workers	L	†	\$10.97	\$11.77	\$8.93	\$9.48	\$10.40	\$12.00	\$14.08	
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	M	\$10.30	\$9.14	\$9.87	\$7.25	\$7.72	\$8.49	\$9.97	\$12.87	
39-6011	Baggage Porters and Bellhops	L	\$12.00	\$8.70	\$10.05	\$5.74	\$6.33	\$8.77	\$10.12	\$10.94	
39-6012	Concierges	M	\$8.80	\$12.19	\$13.52	\$9.08	\$10.03	\$11.91	\$14.57	\$16.30	
39-9032	Recreation Workers	M	\$8.00	\$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>\$9.70</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	L	†	\$13.08	\$15.69	\$6.28	\$9.72	\$12.11	\$14.48	\$19.96	
41-2011	Cashiers	H	\$6.40	\$8.08	\$9.15	\$5.60	\$6.12	\$7.12	\$8.94	\$13.67	
* 41-2012	Gaming Change Persons and Booth Cashiers	M	\$10.10	\$9.66	\$11.05	\$6.27	\$7.51	\$9.37	\$11.29	\$13.78	
41-2031	Retail Salespersons	H	\$7.70	\$8.78	\$9.89	\$6.03	\$7.02	\$8.10	\$9.75	\$11.88	
* 41-3021	Insurance Sales Agents	L	\$11.50	\$27.31	\$32.66	\$13.99	\$19.75	\$25.60	\$32.46	\$38.12	
41-9022	Real Estate Sales Agents	M	\$12.00	\$17.92	\$20.76	\$11.46	\$12.25	\$13.57	\$24.54	\$26.51	
* 41-9031	Sales Engineers	L	\$28.80	\$31.74	\$37.46	\$18.13	\$23.35	\$30.36	\$37.74	\$50.71	
<b>43-0000</b>	<b>Office and Administrative Support Occupations</b>		<b>\$11.70</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	\$23.30	\$16.46	\$19.34	\$9.80	\$12.25	\$16.09	\$19.72	\$22.23	

\* OES wages reported for Colorado statewide

† No wage data available

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M - middle 50% of actual responses

H - highest 25% of actual responses





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

SOC Code		Occupational Employment Statistics Wage Data (2001)									
		Average Wages					Percentile Distribution				
		‡	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
SOC Occupational Title	Vacancy Rank										
47-2051	Cement Masons and Concrete Finishers	L	\$13.50	\$10.04	\$12.31	\$13.45	\$9.56	\$10.67	\$12.07	\$13.34	\$15.48
47-2061	Construction Laborers	H	\$12.00	\$8.38	\$11.32	\$12.79	\$7.75	\$9.10	\$11.04	\$12.96	\$14.17
47-2073	Operating Engineers and Other Construction Equipment Operators	M	\$14.00	\$12.98	\$16.88	\$18.84	\$12.14	\$13.70	\$16.32	\$19.62	\$23.43
47-2152	Plumbers, Pipefitters, and Steamfitters	L	\$15.00	\$12.36	\$19.18	\$22.59	\$11.35	\$14.34	\$18.83	\$22.13	\$27.94
47-3012	Helpers--Carpenters	L	†	\$8.95	\$10.68	\$11.54	\$8.21	\$9.41	\$10.68	\$12.25	\$13.61
47-4051	Highway Maintenance Workers	H	\$16.00	\$11.62	\$18.04	\$21.24	\$10.84	\$12.38	\$15.04	\$25.34	\$28.44
* 47-5049	Mining Machine Operators, All Other	H	\$18.10	†	†	†	†	†	†	†	†
<b>49-0000</b>	<b>Installation, Maintenance, and Repair Occupations</b>		<b>\$12.00</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>
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	L	†	\$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	M	\$17.50	\$13.51	\$17.92	\$20.14	\$12.69	\$14.28	\$18.64	\$20.87	\$22.21
49-9042	Maintenance and Repair Workers, General	H	\$8.30	\$7.78	\$12.67	\$15.11	\$7.44	\$8.22	\$11.64	\$17.05	\$20.43
<b>51-0000</b>	<b>Production Occupations</b>		<b>\$12.40</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>
51-6011	Laundry and Dry-Cleaning Workers	L	†	\$6.06	\$7.56	\$8.32	\$5.84	\$6.50	\$7.60	\$8.62	\$9.90
51-6031	Sewing Machine Operators	M	\$9.90	\$6.17	\$7.72	\$8.50	\$5.85	\$6.67	\$7.60	\$8.39	\$9.58
* 51-6093	Upholsterers	L	†	\$9.87	\$12.56	\$13.92	\$9.39	\$10.27	\$11.98	\$14.03	\$17.10
51-8031	Water and Liquid Waste Treatment Plant and System Operators	L	\$17.50	\$12.77	\$17.65	\$20.08	\$11.13	\$14.89	\$18.34	\$20.97	\$23.01

\* OES wages reported for Colorado statewide

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† No wage data available

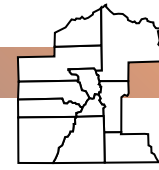


Table 3: Job Vacancy Survey Occupations with OES Wages — Page 8

SOC Code	SOC Occupational Title	‡ Vacancy Rank	Average JVS Wage	Average Wages			Percentile Distribution				
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
53-0000	Transportation and Material Moving Occupations		\$8.20	\$7.68	\$11.72	\$13.73	\$6.86	\$8.71	\$10.90	\$13.56	\$17.49
* 53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	L	\$10.40	\$7.80	\$10.81	\$12.32	\$7.49	\$8.43	\$10.23	\$12.58	\$14.03
53-3022	Bus Drivers, School	H	\$7.70	\$8.96	\$10.15	\$10.75	\$8.18	\$9.19	\$10.07	\$10.96	\$12.77
53-3032	Truck Drivers, Heavy and Tractor-Trailer	H	\$12.30	\$10.73	\$13.87	\$15.43	\$9.89	\$11.60	\$13.29	\$15.92	\$17.96
53-3033	Truck Drivers, Light or Delivery Services	M	\$7.50	\$9.33	\$13.58	\$15.71	\$8.75	\$10.08	\$12.08	\$14.50	\$24.36
53-7051	Industrial Truck and Tractor Operators	L	\$7.30	\$7.87	\$10.47	\$11.76	\$7.07	\$8.88	\$10.09	\$11.25	\$14.19
53-7061	Cleaners of Vehicles and Equipment	L	\$8.00	\$7.24	\$8.69	\$9.42	\$6.72	\$7.47	\$8.20	\$9.18	\$12.20
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	M	\$6.50	\$6.58	\$9.34	\$10.72	\$6.16	\$7.15	\$9.29	\$10.99	\$13.02
53-7064	Packers and Packers, Hand	H	\$7.80	\$6.12	\$7.51	\$8.20	\$5.87	\$6.48	\$7.34	\$8.32	\$9.68

\* OES wages reported for Colorado statewide

† No wage data available

‡ L - lowest 25% of actual responses  
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 H - highest 25% of actual responses

## 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?*

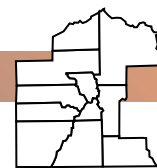
- ♦ No experience is required
- ♦ General work experience
- ♦ Experience in a related field
- ♦ Experience in this occupation

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

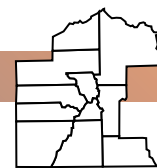
A vacancy is classified as permanent if it will be filled for more than six months. Temporary employment refers to those positions that will be filled for six months or less.

### 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).