## Pikes Peak Region



## El Paso \& Teller Counties

## November 2001

Workforce Research \& Analysis
Labor Market Information


# Pikes Peak Region Job Vacancy Survey <br> Conducted July 31-September 7, 2001 

## State of Colorado

Bill Owens, Governor

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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 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.

The Pikes Peak Job Vacancy Survey was initiated not only to measure demand for workers at a specific point in time, but also to provide detailed information on the quality of employees demanded.

Colorado Job Vacancy Survey Regions


The Job Vacancy Survey was adopted by Colorado's Department of Labor and Employment through the Denver Metro pilot studies of September 1999 and April 2000, which were initiated by Arapahoe/Douglas Works! The popularity of the reports based on the survey data led the CDLE to expand its coverage to include the entire state of Colorado. Since the Denver Metro JVS of April 2000, the survey instrument was revised to eliminate
ambiguity and enhanced to gather more specifics on job vacancies within the survey constraints.

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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, job seekers, trainers and planning officials. While Labor Market Information has provided information on the local labor force supply, the Job Vacancy Survey will further complement this data by providing information about the demand for labor and offer a more complete picture of local labor markets.

## Employers

TThe Job Vacancy Survey measures the area's current vacancies and provides information to employers who may be experiencing difficulty in filling positions due to

- worker shortage,
- an imbalance between job seekers' skills and employers' needs,
- compensation packages that are insufficient as a recruitment tool when compared to market standards.

This report identifies certain characteristics of current vacancies according to general categories. For example, upon review of the results, an employer observes a high percentage of vacancies in the region's firms requiring a specific level of education or experience. This observation might indicate that the labor force and/or its skills fall short of the market needs, thus calling for a decision to increase investment in training or import skilled workers. Delays in filling vacancies despite increases in wages and/or benefits
may be attributed to an overall shortage of applicants in the area. Similarly, if a low percentage of vacancies exist for a particular position with the same educational and/or experience requirement, but an employer is finding it difficult to fill, a comparison between the wages offered to the market average may indicate a need for an adjustment.

After a series of surveys from the same time of year have been conducted, current and prospective employers will be able to identify industries and/or occupations that may be consistently oversupplied, in equilibrium, or undersupplied. Employers that are relocating to the area can review the report and determine if the company's employment needs will be filled with minimum delay (current low vacancies). In addition, the Job Vacancy Survey results and Occupational Employment Statistics (OES) wage data (a measure of current wages being paid by occupation) can be used to develop a benchmark of wages to offer for the upcoming positions.

## Job Seekers

For current job seekers, this report is a roadmap that can be used to determine where the best paying jobs are given their skills and level of education. The Job Vacancy Survey helps to illustrate the current supply/demand balance in the local job market and provides associated average wages. Job seekers can review Labor Market Information's occupational
projections in addition to the Job Vacancy Survey to see if current opportunities can contribute to longterm carrier goals. With information the report provides, job seekers can better tailor education and training efforts toward industries and occupations that lead to a more successful job match.

## Workforce Centers

Public officials, educational institutions, and government agencies can use the Job Vacancy Survey information to allocate resources more efficiently among education, training, and job placement programs. The survey provides short-term illumination of the area's current employment needs. Workforce Center representatives can direct job seekers toward high demand occupations in order to increase placement success, or in a direction that might better suit the needs of the applicants' career goals.

Workforce Center officials can also review the nature of job vacancies and decide where to focus placement efforts. Investments in the workforce can be directed toward occupations or industries that continuously contribute to the local economy or to those that show a chronic tendency toward undersupply.

Current vacancy conditions as presented by the Job Vacancy Survey, coupled with other Labor Market Information reports, can offer a better picture of seasonality and long-term trends that might affect
the provisions of future training programs. The Employment and Wage publication (ES-202 data) provides monthly county and statewide industry data on a quarterly basis. To prepare for the high demand of seasonal workers where vacancies persist, Workforce Centers and educators can offer training during the off-season as indicated by the quarterly data. Longterm industry trends in employment are also recorded on an annual basis in the same report for each county.

In addition, Labor Market Information provides statewide occupational projections available at www.coworkforce.com/lmi/oeo/oeo.htm, which includes projected employment growth, and identifies growing as well as declining occupations. This information, used with the Job Vacancy Survey's identification of current vacancies, can help Workforce Centers identify occupations in demand now as well as in the future. Workforce Centers can subsequently plan for future training programs in cooperation with businesses and educators.

## Economic Developers

For economic development professionals, this report is a tool that can be used to track the labor status of key industries and evaluate the area's economic growth and development potential. The survey results can help determine where labor 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 Job Vacancy Survey, and where the market, in general, is trending using Labor Market Information's employment projections.


## Caveats

TThe Job Vacancy Survey statistics should be used as indicators, not actual values of the demand for workers in the Pikes Peak Region. Figures from the survey should not be interpreted as annual vacancies; rather, they are estimates of openings at a point-intime. Users should consider, when comparing the results of one survey to another, the effects seasonality and the business cycle will have on the data. For instance, a decrease in vacancies for construction workers from April to November would represent seasonal variations, not necessarily a long-term decrease in the demand for such workers.

The results of the survey are based only on the sample of responses collected from July 31st through September 7th and should not be considered as necessarily portraying the exact distribution of job vacancies in the Pikes Peak Region. After several years of Job Vacancy Survey data are available, patterns may begin to emerge that more accurately reflect changing
labor market conditions. It should be recognized that the survey identifies current vacancies only, and does not explain whether the vacancies are due to employment growth in the occupations or if they are due to job turnover. In addition, not all surveyed firms participated. However, the employers who did participate enabled the production of statistically reliable results.

Users should keep in mind that the authors of this report are not attempting to project the level of vacancies into the future. In addition, events that have occurred since the time period analyzed, such as plant closings or the migration of people in and out of the area, may have had an effect on the vacancy status of some occupations.

Given the caveats, appropriate application by the user is the most important element for making the information in this report a relevant tool in job vacancy analysis.

## Executive Summary

The Pikes Peak Job Vacancy Survey was conducted from July 31st through September 7th, 2001. Over the survey period, randomly selected 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, and a variety of questions about positions they were seeking to fill.

A total of 2,185 employers representing $45 \%$ of the region's total employment responded to the survey. Out of these, 81 are large employers ( 200 or more employees), 2,043 are from the small to mid-size category (5-199 employees), and 61 are government employers (of any size). The major findings of the survey are as follows:

- It is estimated that a total of 6,500 jobs were open for hire in the Pikes Peak Region during the survey period.
- Half of the vacancies are in large firms, half are in small to medium-size firms.
- Ninety-seven percent of the estimated jobs are permanent positions.
- Eighty-four percent of the vacancies are full-time positions.
- Less than half of the estimated job openings are in services; approximately onethird are in retail trade.
- The overall average wage for all vacancies is $\$ 11.60$ per hour. The average wages for positions in large firms exceed those in small to mid-size firms by $\$ 1.60$ per hour at the minimum level to $\$ 3.50$ per hour at the maximum level.
- Twenty-six percent of the vacancies are offered with a wage rate higher than the market average as reported by the Job Vacancy Survey.
- Both education and experience requirements have a significant positive influence on wages offered.
- Over $90 \%$ of the reported vacancies are offered with medical insurance paid, at least in part, by the employer.
- More than half of the vacancies are not considered as being difficult to fill.

Employers offered sign-on bonuses for less than $1 \%$ of the vacancies.


# Pikes Peak Region 

According to the U.S. Census Bureau, Census 2000, the Pikes Peak Region, which includes El Paso and Teller counties, is home to over 537,000 people. El Paso County has $96 \%$ of the population (nearly 517,000 residents) and grew at a rate of $30.2 \%$ over the 1990 to 2000 period, just slightly less than Colorado's growth rate of $30.6 \%$ over the same period. Although Teller County includes only $4 \%$ of the region's population, the county experienced a growth rate of $64.9 \%$, more than twice that of El Paso or the state.

The Pikes Peak Region employed over 268,000 individuals from a labor force of about 280,000 people in August 2001, according to Colorado's Labor Market
Information, Local Area Unemployment Statistics. Similar to the population proportion, El Paso County has $95 \%$ of the area's employment. In the period between August 2000 and July 2001, the labor force in El Paso County increased while the employment rate decreased resulting in an increase in unemployment from $3.4 \%$ to $4.7 \%$. Teller County's unemployment rate increased only slightly, from $2.5 \%$ to $2.7 \%$ over the same period. According to Labor Market Information's Local Area Unemployment Statistics, Colorado's unemployment rate was $3.6 \%$ in August 2001.

Figure 2 shows the employment distribution for each of the major industry divisions according to Colorado Employment and Wages (ES-202) during the third quarter of 2000. This serves as a useful reference for the time period in which the Pikes Peak Job Vacancy Survey was conducted. Employment by industry in the Pikes Peak Region has remained fairly constant over the past six years. The Services industry accounts for the highest proportion of employers as well as employees, with over 40\% of the area's employment concentrated within Services. Retail Trade follows with nearly 20\% of the area's employment. Although government

Figure 1: Unemployment Rates for August 2001

agencies represent only $1 \%$ of the total employers in the area, this industry accounts for the third highest proportion of employees ( $15 \%$ ).

Most of the region's industries follow a seasonal trend in employment, with the 2nd and 3rd quarters offering the highest employment levels and low employment periods occurring during the 1st quarter. Seasonality is most notable in the Services and Retail Trade industries due to the employment size of these industries though it is also a factor in most other industries. With the exception of Mining, all industries have experienced overall increasing employment trends over the last six years.

The region is dominated by a large number of firms with less than five employees that account for $61 \%$ of the firms in the area. However, in terms of employment, these firms account for only $12 \%$ of the total. The small to mid-size firms (5-199 employees) account for $38 \%$ of all firms in the region and $61 \%$ of the area's total employment. Large firms (with 200 and more employees) account for $1 \%$ of the regional firms and $27 \%$ of the total employment.


Figure 2: Proportion of Employment, 3rd Quarter, 2000


## The Job Vacancy Survey Sample

T'he survey instrument, upon which the telephone questionnaire used for this study is based, was tested in the Upper Arkansas Region in September of 2000, and is a revised version of the one used for the two Denver Metro pilot studies (see Appendix).

For the purpose of this report, employers with at least 200 employees will be referred to as "large employers" and account for about $27 \%$ of the total employment in the region. Firms employing between five and 199 individuals are considered "small to midsize employers," and account for $61 \%$ of the total employment. Firms with four or fewer employees were not contacted as they represent only a small portion of employment in the region.

The Pikes Peak Region (PPR) "sample universe" consists of 7,082 firms with 5 to 199 employees, 108
firms with 200 or more employees, and 172 government establishments regardless of the number of employees. Attempts were made to conduct a full census of each of the large employers as well as the government agencies in the region, in addition to a representative sample of small to mid-size employers randomized from the 7,082 firms.

For the small to mid-size employers, the survey sample was designed to achieve a solid representation from each major industry group. For groups that contained fewer than 100 employers, a $60 \%$ response rate was targeted. Sixty responses were required for industry groups containing 100 to 120 firms and a $50 \%$ response rate, or 360 completed responses, whichever was less, was targeted for groups containing more than 120 employers.

## The Survey Instrument

Employers were asked by telephone if they had job vacancies, or open positions, which they were actively seeking to fill. One-fourth of the firms contacted reported at least one vacancy. Firms actively recruiting were then asked to provide more detail about each position. Information on compensation offered, the level of education and experience required, and the employer's perceived difficulty in filling the vacancy, as well as length of time the
position had been open was collected. Whenever necessary, employers were contacted a second time to clarify responses.

Employers were also asked whether or not a sign-on bonus or health insurance was offered for the position. This information was collected in addition to the minimum and maximum wages offered to describe in more detail the compensation offered.

## Timing Considerations

Pikes Peak Region Job Vacancy Surveys will be conducted semi-annually in January and July. The timing of the survey was developed with the intent of measuring demand for labor at intervals that provide the most useful information.

Analysis of the historical employment trend in the PPR indicates the level of employment peaks in or around the month of August. Likewise, the participating labor force follows a similar cyclical pattern, with the total number of participants out-numbering the employed consistently over time (Figure 3). By conducting the JVS in August, results 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 February represent the
demand for labor at a time of year when employment is at its cyclical low. A study at this time indicates the types of occupations for which a labor shortage exists when the labor supply is least constrained.

Difficulties in hiring at the two differing times of year may signal different issues. A study of any labor shortage during the winter low period may not indicate a general labor availability problem. Rather, it may indicate that labor for certain types of occupations is in short supply. On the other hand, a labor shortage during the summer may indicate specific occupation groups where shortages exist, but it may also indicate a generalized labor shortage. The two conditions have different implications for decision-makers, especially in government and job training positions.

Figure 3: Historical Employment Trends for Pikes Peak Region



## Estimated Vacancies

During the survey period, an estimated 6,500 vacancies were open for immediate hire in firms with at least five employees in the Pikes Peak Region. This estimation was derived from vacancy rates reported for actual employment levels and extrapolated to the total employment for the appropriate industry divisions. Vacancy rates by industry group provide information reflective of where the activity is occurring in the local labor market. Higher vacancy rates can indicate a more dynamic labor situation than
other industries. Both a rapidly growing industry and one in turmoil for some reason (financial, labor strife, reorganization, etc.) could have relatively high vacancy rates. All might experience comparatively greater hiring stress, but might well have significantly different priorities as they evaluate new talent. Reported vacancies for the Pikes Peak Region are evenly divided between large and small to mid-size employers. Eighty-four percent of all vacancies in the region are for full-time positions (Figure 4).

Figure 4: Summary of Vacancies



## Vacancies by Industry

Services and Retail Trade employers account for most of the vacancies found in the Pikes Peak Region and have vacancy rates of $3.6 \%$ and $3.7 \%$, respectively. The two industries combined cover $77 \%$ of all vacancies in the area. As has been mentioned previously, the Services and Retail Trade indus-
tries account for the highest employment levels in both the economy in general as well as in the survey. For that reason it is consistent with other areas in Colorado that these two industries have the most vacancies as well as higher vacancy rates than the region's cumulative $2.4 \%$.

Figure 5: Estimated Vacancies by Industry


All other industries combined make up the remaining $23 \%$ of the area's vacancies. Wholesale Trade (3.3\%) and T.C.P.U. (3.6\%) have vacancy rates as high as the Services and Retail Trade industries, while F.I.R.E., Construction, and Manufacturing have tighter vacancy rates of $2.4 \%, 1.8 \%$ and $1.1 \%$, respectively. Once again, the survey was conducted within the third quarter, at which time most of these industries are experiencing increasing employment needs.

Large employers (firms with 200 or more employees) in the Wholesale Trade industries and small to mid-size firms in the Retail Trade industries experienced the highest vacancy rates, at $5.5 \%$ and $4.8 \%$, respectively. The lowest vacancy rates were reported within large firms in the Construction and Manufacturing industries, with vacancy rates under $1 \%$.

## Vacancies and Wages

Since wages offered may vary with the level of education and experience of the applicant, employers were asked to provide the range of wages offered for the vacancies and the average was
calculated based on the mid-point of that range (Figure 6). Based on the information employers reported, analysis reveals the following:

- The overall average wage offered for all vacancies is $\$ 11.60$ per hour.
- The average minimum wage offered for all vacancies is $\$ 10.00$ and the average maximum is $\$ 13.20$ per hour.
- Twenty-six percent of the vacancies are offered with a wage rate higher than the overall average.
- Large firms offer higher wages than small to mid-size firms with a difference of approximately $\$ 2.50$ per hour.
- Over $80 \%$ of the vacancies in the region are for full-time permanent positions that pay an average of $\$ 12.20$ per hour.

Figure 6: Average Wage Ranges



Average wages offered per industry are notably above the overall average ( $\$ 11.60$ per hour) for all industries except Agriculture, Non-Durable Manufacturing and Retail Trade (Figure 7). The Services industry, which has the largest share of vacancies, offers an average wage closest to the region's overall average. Further examination of the data reveals differences in wage ranges due to position characteristics as well as the educational and skill
level required to fill a position. The highest average wages offered, those in the Mining and Government industries, are found within large companies for highly technical or managerial occupations requiring a minimum of a bachelor's degree in addition to experience in the occupation. In most cases, these positions are reported to be difficult to fill. Only $1 \%$ of all vacancies are in Mining and $1.5 \%$ in Government.

Figure 7: Average Wages by Industry



Pikes Peak Region Job Vacancy Survey

## Medical Insurance and Wages

Almost all of the vacancies reported by employers include some form of medical insurance. Employers offer to pay the entire premium for nearly $25 \%$ of all vacancies reported and a portion of the premium for $70 \%$ of the vacancies. Only a very small fraction of reported vacancies are offered without such contributions.

Survey results reveal a positive relationship between wages offered and payments toward medical insurance premiums (Figure 9). On average, as higher paying jobs require higher levels of education and experience, employers offer better medical insurance packages to attract qualified candidates. For the vacancies associated with premiums paid in part, the average wage is $\$ 10.50$ per hour. These positions were throughout a variety of industries and occupations and include a high proportion of vacancies requiring little or no education or experience. Businesses that pay the total cost of the medical insurance premium offer the highest wage range, with

Figure 8:
Employer's Contribution to Medical Insurance Premium
 Premium 70\% rage wage being $\$ 14.80$ per hour. The majority of these positions require higher levels of education and experience. Where educational requirements were relaxed, more occupation-specific experience was required.

Figure 9: Wage Ranges by Medical Insurance Contributions




Employers add a substantial premium to wage compensation when requiring higher levels of educational attainment (Figure 11). The highest average wage rate difference ( $\$ 9.50$ per hour) was found between having a Bachelor's degree over vocational training. There is
also nearly a $\$ 4.00$ per hour increase in wages for those with a two-year degree over those with a maximum of a high school education. In addition to increasing average wages, the wage range broadens with increasing levels of education.

## Experience and Wages

NTearly one-half of the reported job openings do not require experience or require only general work experience. The remaining $51 \%$ of the vacancies require a minimum of experience in a related field or more specifically, experience in the occupation.

Figure 12: Vacancies by Experience


Figure 13: Wage Ranges by Experience


JVS Average Wage - Minimum / Mid-Point / Maximum

As with increasing levels of education, employers are willing to offer higher wages for added experience. Vacancies requiring experience in a related field offer an average of $\$ 4.20$ per hour more than those with only general work experience. Employers requiring
high levels of experience within the occupation are willing to offer an additional $\$ 3.50$ per hour on average, or a total of $\$ 7.70$ per hour above the average wage for vacancies associated with only general work experience.

## Difficulty to Fill

To estimate the level of difficulty in filling vacancies, employer's were asked about their perceived level of difficulty in filling vacancies and the time period that the position remained vacant. Of the employers responding to these questions, only $10 \%$ of the vacancies reported are classified as very difficult to fill. More than half of the responding employers believed open positions were not difficult to fill (Figure 14).

Furthermore, $58 \%$ of the reported vacancies are filled within 30 days. While some vacancies require longer time periods to fill (20\%), only $4 \%$ of all vacancies are open for periods extending beyond 60 days.

Positions which employers reported as being difficult to fill were offered wages at two levels. Difficult to fill vacancies that are highly technical, requiring extensive education and experience levels, offer wages above $\$ 25.00$ per hour. Occupations in this category are com-puter-related and/or highly specialized positions, for example: software engineers, network analysts, financial managers and various directors. Otherwise, vacant positions reported as difficult to fill, but requiring little or no education and experience, offer wages either closer to the region's average ( $\$ 11.60$ ) or below (Figure 16). Occupations in this category include office assistants, mechanics, wait-staff, and various entry-level attendants.

Fifty-eight percent of reported vacancies are open less than 30 days. While a small portion of highly
technical vacancies are in this group, the majority of vacancies found open for this short time period are those that require lower levels of education and experience, are variably full-time and part-time positions, and are dispersed throughout all industries. Except for the small percentage of specialized vacancies, most of these quick-to-fill positions offer wages below the overall average. Vacancies open for continuous hire offer an average wage close to the overall average. These vacancies are in retail and wholesale trade as well as the service industries and are full-time positions. While only half of these higher-paid positions require education beyond high school, most positions open for hire continuously are entry-level and offer the minimum wage.


Figure 16: Average Wage by Difficulty to Fill/Time Open


## Sign-On Bonus

Only small to mid-size firms reported offering a sign-on bonus during the survey period. Of all vacancies reported, only $1 \%$ offer sign-on bonuses (Figure 17). Most of the vacancies for which sign-on bonuses are offered are in service industries. These positions are full-time and do not require more than a high school education level. The average sign-on bonus is $\$ 220$.



## Occupations

The distribution of vacancies varies greatly between major occupational groups, however, out of the major occupational groups, only the Healthcare Practitioners/Technical and Office \&

Administrative Support occupational categories have close to or more than 400 openings. Over $60 \%$ of the estimated vacancies fall in the top five major occupational groups (Figure 18).

Figure 18: Vacancies by Major Occupational Groups


Estimated vacancies in the Healthcare
Practitioners/Technical occupations (410) as well as those in Transportation and Material Moving (190) on average request post-secondary education, while occupations in the remaining service producing industries among the top five are less restrictive with education and experience requirements.

Occupational groups with higher levels of educational requirements such as Healthcare Practitioners,

Computer and Mathematical, Management, and Architecture and Engineering offer the highest wages. Wages for these occupational groups also have a relatively wider range between the minimum and maximum offered (Figure 19). In general, occupations requiring education beyond high school in addition to experience offer close to or above the area's average wage offered of $\$ 11.60$ per hour.


Figure 19: Range of Average Wages by Major Occupational Groups


- JVS Average Wage - Minimum / Mid-Point / Maximum

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 \& Serving

Related, Building \& Grounds Cleaning \& Maintenance, Personal Care \& Service, and Arts, Design, Entertainment, Sports \& Media.

Table 1: Occupations with 10 or More Vacancies


Table 1: Occupations with 10 or More Vacancies - Page 2

| SOCCode | Occupation Title | Estimated Number of Vacancies | Average Wage Offered | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 25-9041 | Teacher Assistants | 14 | \$6.90 | \$14,739 | \$17,870 | \$19,436 | \$13,643 | \$15,459 | \$17,379 | \$20,553 | \$23,350 |
| 35-9099 | Food Preparation and Serving Related Workers, All |  |  |  |  |  |  |  |  |  |  |
|  |  | 14 | \$6.60 | \$5.97 | \$6.56 | \$6.85 | \$5.54 | \$5.83 | \$6.32 | \$6.81 | \$7.88 |
| 29-2051 | Dietetic Technicians | 13 | \$0.00 | \$6.69 | \$9.67 | \$11.16 | \$6.13 | \$7.25 | \$9.38 | \$11.74 | \$44.45 |
| 29-2055 | Surgical Technologists | 13 | \$0.00 | \$11.48 | \$13.99 | \$15.25 | \$10.61 | \$12.26 | \$13.75 | \$15.73 | \$16.93 |
| 39-5090 | Miscellaneous Personal Appearance Workers | 13 | \$0.00 | * | * | * | * | * | * | * | * |
| 39-9021 | Personal and Home Care Aides | 13 | \$7.40 | \$7.81 | \$7.93 | \$7.99 | \$6.86 | \$7.31 | \$7.91 | \$8.51 | \$8.93 |
| 43-4071 | File Clerks | 13 | \$9.00 | \$6.44 | \$8.61 | \$9.69 | \$6.15 | \$6.90 | \$8.23 | \$10.05 | \$12.11 |
| 51-4081 | Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic |  |  |  |  |  |  |  |  |  |  |
|  | Tenders, Metal and Plastic | 13 | \$8.30 | \$8.82 | \$11.48 | \$12.80 | \$7.89 | \$9.72 | \$11.03 | \$12.37 | \$15.78 |
| 29-2090 | Miscellaneous Health Technologists and |  |  |  |  |  |  |  |  |  |  |
|  | Technicians | 12 | \$19.20 | \$15.80 | \$17.87 | \$18.90 | \$14.54 | \$15.25 | \$16.42 | \$17.59 | \$16.66 |
| 41-2021 | Counter and Rental Clerks | 12 | \$9.30 | \$6.15 | \$8.34 | \$9.44 | \$5.95 | \$6.56 | \$7.87 | \$9.80 | \$11.95 |
| 43-6014 | Secretaries, Except Legal, Medical, and Executive | 12 | \$9.60 | \$9.19 | \$12.63 | \$14.34 | \$8.80 | \$10.00 | \$12.24 | \$15.26 | \$17.36 |
| 47-2031 | Carpenters | 12 | \$13.00 | \$12.22 | \$16.28 | \$18.31 | \$11.06 | \$14.08 | \$16.17 | \$19.94 | \$12.27 |
| 49-9042 | Maintenance and Repair Workers, General | 12 | \$14.40 | \$8.71 | \$13.01 | \$15.17 | \$7.94 | \$9.75 | \$12.21 | \$15.39 | \$19.45 |
| 13-2072 | Loan Officers | 11 | \$14.40 | \$12.60 | \$22.12 | \$26.89 | \$11.45 | \$14.88 | \$19.64 | \$27.19 | \$35.78 |
| 25-2021 | Elementary School Teachers, Except Special |  |  |  |  |  |  |  |  |  |  |
|  | Education | 11 | \$17.30 | \$27,538 | \$40,192 | \$46,519 | \$25,714 | \$29,852 | \$36,826 | \$46,853 | \$88,994 |
| 29-1126 | Respiratory Therapists | 11 | \$0.00 | \$14.25 | \$17.57 | \$19.24 | \$13.50 | \$15.49 | \$17.66 | \$19.91 | \$26.02 |
| 29-2071 | Medical Records and Health Information Technicians | 11 | \$0.00 | * | * | * | * | * | * | * | * |
| 33-9032 | Security Guards | 11 | \$10.20 | \$7.88 | \$9.23 | \$9.90 | \$7.01 | \$7.61 | \$8.47 | \$9.65 | \$12.93 |
| 39-5012 | Hairdressers, Hairstylists, and Cosmetologists | 11 | \$8.40 | \$7.22 | \$9.18 | \$10.15 | \$6.91 | \$8.04 | \$9.38 | \$10.38 | \$10.97 |
| 43-5071 | Shipping, Receiving, and Traffic Clerks | 11 | \$8.40 | \$7.87 | \$10.42 | \$11.69 | \$7.44 | \$8.53 | \$10.19 | \$11.85 | \$13.76 |
| 47-2140 | Painters and Paperhangers | 11 | \$0.00 | \$9.04 | \$12.87 | \$14.79 | \$8.65 | \$10.27 | \$12.56 | \$15.91 | \$18.93 |
| 25-2011 | Preschool Teachers, Except Special Education | 10 | \$7.40 | \$7.27 | \$9.70 | \$10.92 | \$6.61 | \$7.62 | \$8.87 | \$10.24 | \$11.87 |
| 29-1122 | Occupational Therapists | 10 | \$0.00 | \$16.15 | \$21.83 | \$24.67 | \$15.15 | \$17.50 | \$20.62 | \$25.53 | \$32.05 |
| 39-9031 | Fitness Trainers and Aerobics Instructors | 10 | \$6.90 | * | * | * | * | * | * | * | * |
| 43-6011 | Executive Secretaries and Administrative Assistants | 10 | \$14.60 | \$11.73 | \$15.46 | \$17.33 | \$11.20 | \$12.62 | \$15.02 | \$17.49 | \$21.04 |
| 51-4034 | Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic | 10 | \$0.00 | \$11.93 | \$16.14 | \$18.24 | \$11.63 | \$12.98 | \$15.47 | \$13.20 | \$20.89 |

OES wages reported for Colorado statewide in bold

* No wage data available

Table 2: Occupations with Fewer Than 10 Vacancies

| $\begin{aligned} & \text { SOC } \\ & \text { Code } \end{aligned}$ | Occupation Title | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | try- |  |  |  |  |  |  |  |
|  |  | Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 13-2011 | Accountants and Auditors | \$14.69 | \$20.59 | \$23.53 | \$13.78 | \$15.88 | \$19.15 | \$23.35 | \$31.33 |
| 11-3011 | Administrative Services Managers | \$10.61 | \$22.28 | \$28.10 | \$9.70 | \$12.18 | \$18.87 | \$30.19 | \$40.62 |
| 41-3011 | Advertising Sales Agents | \$10.87 | \$20.02 | \$24.59 | \$9.80 | \$12.70 | \$16.98 | \$23.97 | \$13.85 |
| 17-3021 | Aerospace Engineering and Operations Technicians | \$16.78 | \$21.57 | \$23.95 | \$13.51 | \$19.02 | \$22.61 | \$25.51 | \$27.25 |
| 45-2011 | Agricultural Inspectors | * | * | * | * | * | * | * | * |
| 53-3011 | Ambulance Drivers and Attendants, Except Emergency Medical Technicians | * | * | * | * | * | * | * | * |
| 27-3010 | Announcers | \$7.21 | \$12.34 | \$14.91 | \$6.30 | \$8.27 | \$11.44 | \$14.91 | \$19.30 |
| 17-3011 | Architectural and Civil Drafters | \$13.44 | \$18.61 | \$21.19 | \$12.34 | \$14.74 | \$18.14 | \$21.85 | \$26.35 |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | \$31,030 | \$49,229 | \$58,339 | \$29,237 | \$36,169 | \$45,508 | \$61,445 | \$81,396 |
| 51-2099 | Assemblers and Fabricators, All Other | \$7.42 | \$9.14 | \$9.99 | \$7.16 | \$7.91 | \$9.14 | \$10.29 | \$10.99 |
| 27-4011 | Audio and Video Equipment Technicians | \$12.07 | \$17.51 | \$20.23 | \$10.57 | \$14.23 | \$17.26 | \$20.53 | \$32.17 |
| 49-3021 | Automotive Body and Related Repairers | \$14.88 | \$17.06 | \$18.15 | \$14.34 | \$15.20 | \$16.65 | \$22.35 | \$20.06 |
| 49-3020 | Automotive Technicians and Repairers | * | * | * | * | * | * | * | * |
| 39-6010 | Baggage Porters, Bellhops, and Concierges | \$5.94 | \$7.94 | \$8.94 | \$5.77 | \$6.11 | \$6.89 | \$8.80 | \$8.74 |
| 51-3011 | Bakers | \$7.32 | \$10.82 | \$12.57 | \$6.81 | \$8.13 | \$10.60 | \$13.41 | \$15.45 |
| 35-3011 | Bartenders | \$5.94 | \$6.76 | \$7.16 | \$5.74 | \$5.97 | \$6.33 | \$7.13 | \$9.42 |
| 43-3011 | Bill and Account Collectors | \$8.43 | \$11.84 | \$13.54 | \$6.41 | \$9.85 | \$11.80 | \$13.76 | \$16.49 |
| 19-4021 | Biological Technicians | \$11.12 | \$15.25 | \$17.31 | \$10.19 | \$12.10 | \$14.57 | \$17.44 | \$22.08 |
| 43-3031 | Bookkeeping, Accounting, and Auditing Clerks | \$8.87 | \$12.06 | \$13.65 | \$8.21 | \$9.80 | \$11.54 | \$13.76 | \$16.48 |
| 37-2019 | Building Cleaning Workers, All Other | * | * | * | * | * | * | * | * |
| 49-3031 | Bus and Truck Mechanics and Diesel Engine Specialists | \$12.00 | \$15.59 | \$17.39 | \$11.53 | \$13.13 | \$15.51 | \$17.59 | \$20.26 |
| 53-3022 | Bus Drivers, School | \$7.83 | \$9.88 | \$10.91 | \$7.46 | \$8.64 | \$9.78 | \$11.00 | \$12.94 |
| 13-1199 | Business Operations Specialists, All Other | \$14.88 | \$23.60 | \$27.97 | \$13.38 | \$18.12 | \$22.70 | \$27.71 | \$35.67 |
| 29-2031 | Cardiovascular Technologists and Technicians | \$11.21 | \$16.83 | \$19.65 | \$10.42 | \$12.77 | \$16.32 | \$20.26 | \$52.03 |
| 47-2040 | Carpet, Floor, and Tile Installers and Finishers | * | * | * | * | * | * | * | * |
| 39-9011 | Child Care Workers | \$6.02 | \$7.13 | \$7.68 | \$5.80 | \$6.25 | \$7.09 | \$8.21 | \$8.91 |
| 21-1021 | Child, Family, and School Social Workers | \$14.46 | \$20.97 | \$24.23 | \$13.90 | \$15.37 | \$17.60 | \$22.11 | \$38.73 |
| 17-3022 | Civil Engineering Technicians | \$12.11 | \$18.54 | \$21.76 | \$10.75 | \$14.07 | \$17.32 | \$21.89 | \$28.20 |
| 21-2011 | Clergy | * | * | * | * | * | * | * | * |
| 19-3031 | Clinical, Counseling, and School Psychologists | \$16.45 | \$25.02 | \$29.31 | \$15.29 | \$17.40 | \$22.73 | \$30.37 | \$35.37 |
| 43-9011 | Computer Operators | \$11.63 | \$15.98 | \$18.16 | \$11.26 | \$13.15 | \$16.16 | \$19.08 | \$20.88 |
| 15-1021 | Computer Programmers | \$17.14 | \$28.02 | \$33.47 | \$14.50 | \$20.33 | \$28.16 | \$37.95 | \$44.93 |
| 15-1031 | Computer Software Engineers, Applications | \$22.92 | \$29.02 | \$32.06 | \$21.10 | \$24.05 | \$27.65 | \$33.77 | \$40.56 |
| 15-1032 | Computer Software Engineers, Systems Software | \$22.70 | \$31.76 | \$36.29 | \$20.67 | \$25.74 | \$32.02 | \$38.09 | \$43.18 |
| 15-1099 | Computer Specialists, All Other | \$17.18 | \$25.47 | \$29.61 | \$12.71 | \$21.99 | \$26.91 | \$31.66 | \$34.52 |
| 15-1041 | Computer Support Specialists | \$12.39 | \$15.01 | \$16.32 | \$11.67 | \$12.49 | \$13.85 | \$16.67 | \$20.41 |
| 15-1051 | Computer Systems Analysts | \$20.01 | \$29.62 | \$34.44 | \$18.07 | \$22.77 | \$29.79 | \$35.63 | \$42.83 |
| 39-6012 | Concierges | \$8.62 | \$9.99 | \$10.67 | \$7.89 | \$9.05 | \$9.90 | \$10.75 | \$9.74 |
| 47-4011 | Construction and Building Inspectors | \$14.48 | \$19.66 | \$22.27 | \$13.53 | \$15.58 | \$19.47 | \$24.40 | \$26.51 |
| 47-4099 | Construction and Related Workers, All Other | \$9.43 | \$15.36 | \$18.33 | \$8.67 | \$10.52 | \$15.52 | \$18.16 | \$23.35 |
| 35-2010 | Cooks | \$5.89 | \$6.64 | \$7.02 | \$5.77 | \$5.97 | \$6.28 | \$7.20 | \$13.74 |
| 35-2011 | Cooks, Fast Food | \$5.89 | \$6.38 | \$6.64 | \$5.77 | \$5.93 | \$6.20 | \$6.83 | \$8.12 |
| 35-2014 | Cooks, Restaurant | \$6.99 | \$8.40 | \$9.09 | \$6.39 | \$7.13 | \$8.22 | \$9.39 | \$10.86 |
| 33-3012 | Correctional Officers and Jailers | \$24.34 | \$27.81 | \$29.55 | \$22.94 | \$24.56 | \$27.26 | \$31.45 | \$34.49 |
| 43-4021 | Correspondence Clerks | \$9.19 | \$11.14 | \$12.12 | \$8.94 | \$9.49 | \$10.41 | \$12.72 | \$16.13 |
| 43-5021 | Couriers and Messengers | \$7.56 | \$9.14 | \$9.94 | \$6.82 | \$7.64 | \$8.87 | \$10.22 | \$11.58 |
| 23-2091 | Court Reporters | \$13.19 | \$19.53 | \$22.69 | \$12.11 | \$14.31 | \$16.94 | \$23.48 | \$32.48 |

Table 2: Occupations with Fewer Than 10 Vacancies - Page 2

|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SOC <br> Code | Occupation Title | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 43-9021 | Data Entry Keyers | \$8.33 | \$10.85 | \$12.11 | \$7.66 | \$9.06 | \$10.40 | \$12.24 | \$14.67 |
| 15-1061 | Database Administrators | \$16.17 | \$26.30 | \$31.36 | \$13.25 | \$19.37 | \$26.46 | \$36.63 | \$43.06 |
| 31-9091 | Dental Assistants | \$8.74 | \$12.20 | \$13.92 | \$7.96 | \$9.72 | \$11.88 | \$14.65 | \$11.58 |
| 35-9011 | Dining Room and Cafeteria Attendants and Bartender Helpers | \$5.94 | \$6.50 | \$6.78 | \$5.71 | \$5.94 | \$6.32 | \$7.03 | \$8.33 |
| 43-5030 | Dispatchers | * | * | * | * | * | * | * | * |
| 41-9091 | Door-to-Door Sales Workers, News and Street Vendors, and Related Workers | * | * | * | * | * | * | * | * |
| 17-3019 | Drafters, All Other | * | * | * | * | * | * | * | * |
| 53-3031 | Driver/Sales Workers | \$5.95 | \$8.01 | \$9.04 | \$5.78 | \$6.02 | \$6.57 | \$9.05 | \$13.89 |
| 27-3041 | Editors | \$14.46 | \$17.98 | \$19.74 | \$13.31 | \$15.00 | \$17.03 | \$20.77 | \$24.81 |
| 11-9030 | Education Administrators | \$10.77 | \$14.81 | \$16.84 | \$8.74 | \$11.87 | \$13.31 | \$16.55 | \$24.41 |
| 11-9039 | Education Administrators, All Other | * | * | * | * | * | * | * | * |
| 25-9099 | Education, Training, and Library Workers, All Other | \$9.18 | \$14.50 | \$17.15 | \$8.71 | \$10.13 | \$12.24 | \$15.07 | \$25.92 |
| 21-1012 | Educational, Vocational, and School Counselors | \$12.98 | \$24.13 | \$29.71 | \$10.52 | \$15.60 | \$21.93 | \$35.41 | \$41.70 |
| 49-2092 | Electric Motor, Power Tool, and Related Repairers | \$8.82 | \$13.25 | \$15.47 | \$8.09 | \$9.85 | \$12.36 | \$26.22 | \$26.43 |
| 17-3023 | Electrical and Electronic Engineering Technicians | \$14.38 | \$19.22 | \$21.65 | \$13.71 | \$15.75 | \$18.83 | \$22.12 | \$26.45 |
| 51-2022 | Electrical and Electronic Equipment Assemblers | \$6.57 | \$10.16 | \$11.94 | \$6.10 | \$7.34 | \$10.09 | \$9.55 | \$21.94 |
| 49-2099 | Electrical and Electronic Equipment Mechanics, Installers, and Repairers, All Other (OES Only) | \$10.86 | \$13.69 | \$15.10 | \$9.96 | \$11.55 | \$13.72 | \$15.93 | \$17.25 |
| 17-3012 | Electrical and Electronics Drafters | \$13.55 | \$19.11 | \$21.88 | \$12.41 | \$14.53 | \$17.62 | \$24.35 | \$27.05 |
| 49-2094 | Electrical and Electronics Repairers, Commercial and Industrial Equipment | \$12.90 | \$18.87 | \$21.86 | \$11.65 | \$14.34 | \$17.45 | \$21.03 | \$13.89 |
| 17-2071 | Electrical Engineers | \$20.75 | \$28.65 | \$32.61 | \$18.30 | \$23.10 | \$28.27 | \$33.77 | \$40.00 |
| 47-2111 | Electricians | \$14.86 | \$20.32 | \$23.07 | \$13.08 | \$17.10 | \$20.86 | \$24.59 | \$26.91 |
| 43-4061 | Eligibility Interviewers, Government Programs | \$10.59 | \$13.39 | \$14.78 | \$9.69 | \$11.46 | \$13.25 | \$15.53 | \$17.77 |
| 39-4011 | Embalmers | \$7.57 | \$12.68 | \$15.24 | \$6.74 | \$8.59 | \$11.82 | \$17.21 | \$14.65 |
| 13-1071 | Employment, Recruitment, and Placement Specialists | \$13.03 | \$18.85 | \$21.76 | \$11.98 | \$14.50 | \$17.31 | \$23.36 | \$27.00 |
| 11-3031 | Financial Managers | \$20.08 | \$30.73 | \$36.05 | \$18.54 | \$22.08 | \$27.26 | \$36.79 | \$47.70 |
| 33-2011 | Fire Fighters | \$11.28 | \$18.69 | \$22.39 | \$9.66 | \$14.03 | \$18.91 | \$23.72 | \$12.68 |
| 35-1012 | First-Line Supervisors/Managers of Food Preparation and Serving Workers | \$9.72 | \$13.14 | \$14.85 | \$9.26 | \$10.84 | \$13.07 | \$15.47 | \$17.00 |
| 39-1010 | First-Line Supervisors/Managers of Gaming Workers | * | * | * | * | * | * | * | * |
| 53-1021 | First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand | \$10.23 | \$15.87 | \$18.69 | \$9.35 | \$11.31 | \$14.89 | \$19.66 | \$23.46 |
| 37-1011 | First-Line Supervisors/Managers of Housekeeping and Janitorial Workers | \$8.81 | \$11.97 | \$13.56 | \$8.06 | \$9.56 | \$11.47 | \$14.15 | \$16.62 |
| 37-1012 | First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers | \$11.46 | \$16.56 | \$19.11 | \$10.35 | \$13.12 | \$16.07 | \$19.96 | \$24.51 |
| 49-1011 | First-Line Supervisors/Managers of Mechanics, Installers, and Repairers | \$15.11 | \$22.33 | \$25.93 | \$14.28 | \$16.62 | \$20.58 | \$26.38 | \$34.01 |
| 43-1011 | First-Line Supervisors/Managers of Office and Administrative Support Workers | \$12.17 | \$19.08 | \$22.53 | \$11.11 | \$14.09 | \$17.98 | \$21.70 | \$29.85 |
| 51-1011 | First-Line Supervisors/Managers of Production and Operating Workers | \$13.05 | \$20.00 | \$23.48 | \$12.08 | \$14.04 | \$18.93 | \$25.03 | \$29.95 |

Table 2: Occupations with Fewer Than 10 Vacancies - Page 3

| SOC <br> Code | Occupation Title | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | EntryLevel | Overall | Experienced | 10th |  | 50th | 75th | 90th |
| 53-1031 | First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators | \$13.09 | \$20.07 | \$23.57 | \$11.70 | \$14.55 | \$18.09 | \$23.36 | \$29.94 |
| 33-1010 | First-Line Supervisors/Managers, Law Enforcement Workers | * | * | * | * | * | * | * | * |
| 27-1023 | Floral Designers | \$6.94 | \$9.39 | \$10.61 | \$6.40 | \$7.72 | \$9.43 | \$10.78 | \$12.83 |
| 35-2021 | Food Preparation Workers | \$7.51 | \$8.83 | \$9.49 | \$7.15 | \$7.60 | \$8.33 | \$9.87 | \$12.19 |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | \$25,110 | \$44,445 | \$54,118 | \$24,047 | \$27,684 | \$40,265 | \$59,767 | \$79,957 |
| 51-4022 | Forging Machine Setters, Operators, and Tenders, Metal and Plastic | \$5.92 | \$10.55 | \$12.86 | \$5.74 | \$6.39 | \$11.60 | \$16.39 | \$12.44 |
| 39-3011 | Gaming Dealers | * | * | * | * | * | * | * | * |
| 11-1021 | General and Operations Managers | \$17.34 | \$33.68 | \$41.86 | \$15.65 | \$19.63 | \$27.45 | \$44.05 | \$68.81 |
| 25-1064 | Geography Teachers, Postsecondary | \$36,065 | \$49,969 | \$56,932 | \$33,511 | \$38,983 | \$45,967 | \$62,144 | \$82,448 |
| 27-1024 | Graphic Designers | \$12.20 | \$17.20 | \$19.71 | \$10.76 | \$13.72 | \$17.43 | \$20.51 | \$22.34 |
| 25-1071 | Health Specialties Teachers, Postsecondary | \$19,168 | \$55,556 | \$73,755 | \$16,396 | \$21,576 | \$49,292 | \$75,705 | \$118,951 |
| 25-1070 | Health Teachers, Postsecondary | * | * | * | * | * | * | * | * |
| 31-9099 | Healthcare Support Workers, All Other | \$6.94 | \$9.84 | \$11.28 | \$6.21 | \$7.96 | \$9.87 | \$11.23 | \$13.37 |
| 49-3040 | Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics | \$9.00 | \$12.37 | \$14.05 | \$8.31 | \$9.98 | \$12.14 | \$19.76 | \$20.63 |
| 47-3019 | Helpers, Construction Trades, All Other | \$7.76 | \$10.77 | \$12.27 | \$7.16 | \$8.50 | \$10.94 | \$10.50 | \$25.28 |
| 47-3015 | Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters | \$9.50 | \$11.99 | \$13.24 | \$9.18 | \$10.38 | \$11.57 | \$11.21 | \$22.33 |
| 47-4051 | Highway Maintenance Workers | \$12.50 | \$15.29 | \$16.68 | \$12.08 | \$12.93 | \$14.49 | \$17.56 | \$20.15 |
| 49-9031 | Home Appliance Repairers | \$9.27 | \$13.90 | \$16.20 | \$9.15 | \$10.47 | \$12.70 | \$20.79 | \$19.63 |
| 35-9031 | Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop | \$5.93 | \$7.71 | \$8.60 | \$5.84 | \$6.19 | \$7.28 | \$8.65 | \$11.60 |
| 43-4081 | Hotel, Motel, and Resort Desk Clerks | \$6.95 | \$7.81 | \$8.24 | \$6.26 | \$7.11 | \$7.92 | \$8.67 | \$9.19 |
| 43-4161 | Human Resources Assistants, Except Payroll and Timekeeping | \$9.49 | \$12.68 | \$14.28 | \$9.23 | \$10.61 | \$12.45 | \$14.49 | \$16.69 |
| 11-3040 | Human Resources Managers | \$20.31 | \$30.05 | \$34.92 | \$18.02 | \$23.54 | \$30.58 | \$39.37 | \$44.52 |
| 13-1079 | Human Resources, Training, and Labor Relations Specialists, All Other | \$13.61 | \$18.97 | \$21.65 | \$12.42 | \$14.81 | \$17.50 | \$22.48 | \$27.94 |
| 53-7051 | Industrial Truck and Tractor Operators | \$8.92 | \$11.56 | \$12.89 | \$8.23 | \$9.48 | \$11.06 | \$13.43 | \$16.06 |
| 43-4199 | Information and Record Clerks, All Other | \$8.52 | \$12.84 | \$15.00 | \$7.79 | \$9.61 | \$12.25 | \$14.44 | \$18.34 |
| 51-9061 | Inspectors, Testers, Sorters, Samplers, and Weighers | \$8.55 | \$11.73 | \$13.31 | \$7.82 | \$9.26 | \$11.32 | \$13.27 | \$16.37 |
| 41-3021 | Insurance Sales Agents | \$13.99 | \$25.65 | \$31.47 | \$12.82 | \$15.97 | \$22.05 | \$31.77 | \$27.99 |
| 13-2053 | Insurance Underwriters | \$13.60 | \$20.51 | \$23.97 | \$12.35 | \$14.75 | \$18.26 | \$23.85 | \$35.72 |
| 27-3091 | Interpreters and Translators | \$10.05 | \$12.40 | \$13.58 | \$9.40 | \$10.95 | \$12.34 | \$13.58 | \$33.02 |
| 43-4111 | Interviewers, Except Eligibility and Loan | \$7.80 | \$10.44 | \$11.76 | \$7.24 | \$8.16 | \$9.85 | \$12.42 | \$16.19 |
| 53-7062 | Laborers and Freight, Stock, and Material Movers, Hand | \$6.91 | \$9.57 | \$10.90 | \$6.31 | \$7.95 | \$9.62 | \$10.69 | \$12.82 |
| 53-7060 | Laborers and Material Movers, Hand | * | * | * | * | * | * | * | * |
| 51-6011 | Laundry and Dry-Cleaning Workers | \$5.92 | \$7.07 | \$7.63 | \$5.68 | \$6.23 | \$7.15 | \$8.05 | \$8.58 |
| 23-2092 | Law Clerks | \$10.88 | \$13.74 | \$15.17 | \$10.84 | \$11.84 | \$13.08 | \$14.43 | \$16.70 |
| 25-4021 | Librarians | \$12.54 | \$18.76 | \$21.87 | \$11.67 | \$14.11 | \$17.32 | \$22.60 | \$27.90 |
| 25-4031 | Library Technicians | \$9.78 | \$12.42 | \$13.75 | \$9.37 | \$10.37 | \$12.12 | \$13.98 | \$16.56 |
| 29-2061 | Licensed Practical and Licensed Vocational Nurses | \$12.12 | \$14.46 | \$15.62 | \$11.37 | \$12.96 | \$14.35 | \$16.04 | \$17.39 |
| 13-2070 | Loan Counselors and Officers | \$11.07 | \$13.81 | \$15.17 | \$10.14 | \$11.57 | \$13.02 | \$15.12 | \$17.23 |
| 43-4131 | Loan Interviewers and Clerks | \$11.82 | \$13.57 | \$14.45 | \$11.27 | \$12.01 | \$13.26 | \$15.08 | \$16.92 |
| 39-3093 | Locker Room, Coatroom, and Dressing Room Attendants | \$5.97 | \$7.91 | \$8.87 | \$5.79 | \$6.47 | \$7.94 | \$9.62 | \$10.55 |
| 11-9081 | Lodging Managers | \$11.12 | \$16.59 | \$19.32 | \$10.41 | \$11.94 | \$13.67 | \$20.30 | \$25.46 |

## Table 2: Occupations with Fewer Than 10 Vacancies - Page 4

| SOC <br> Code | Occupation Title | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 13-1081 | Logisticians | * | * | * | * | * | * | * | * |
| 51-4030 | Machine Tool Cutting Setters, Operators, and Tenders, Metal and Plastic | \$8.49 | \$11.57 | \$13.11 | \$7.78 | \$9.18 | \$11.01 | \$15.83 | \$11.02 |
| 51-4041 | Machinists | \$9.60 | \$13.15 | \$14.92 | \$9.16 | \$10.07 | \$12.43 | \$16.05 | \$18.48 |
| 11-9199 | Managers, All Other | \$14.88 | \$25.88 | \$31.39 | \$13.18 | \$16.85 | \$24.44 | \$33.76 | \$41.98 |
| 39-5092 | Manicurists and Pedicurists | \$6.06 | \$8.26 | \$9.36 | \$5.90 | \$6.30 | \$7.83 | \$9.79 | \$8.08 |
| 11-2021 | Marketing Managers | \$21.40 | \$36.01 | \$43.33 | \$18.03 | \$25.75 | \$34.80 | \$45.40 | \$57.15 |
| 53-7199 | Material Moving Workers, All Other | \$7.52 | \$10.76 | \$12.39 | \$7.27 | \$8.11 | \$10.00 | \$13.19 | \$16.20 |
| 43-5199 | Material Recording, Scheduling, Dispatching, and Distributing Workers, All Other (OES Only) | \$8.38 | \$13.44 | \$15.97 | \$7.79 | \$8.89 | \$10.70 | \$18.73 | \$23.57 |
| 17-2131 | Materials Engineers | \$20.84 | \$29.46 | \$33.76 | \$19.42 | \$23.09 | \$29.82 | \$37.27 | \$43.83 |
| 25-1022 | Mathematical Science Teachers, Postsecondary | \$31,364 | \$51,762 | \$61,956 | \$27,934 | \$36,336 | \$46,186 | \$70,535 | \$91,121 |
| 27-3099 | Media and Communication Workers, All Other | \$8.77 | \$14.03 | \$16.67 | \$6.53 | \$11.31 | \$12.73 | \$14.50 | \$25.30 |
| 11-9111 | Medical and Health Services Managers | \$16.24 | \$25.69 | \$30.41 | \$13.47 | \$19.24 | \$24.41 | \$30.29 | \$39.67 |
| 51-9082 | Medical Appliance Technicians | \$8.32 | \$10.87 | \$12.15 | \$7.48 | \$9.16 | \$10.25 | \$16.39 | \$21.51 |
| 31-9092 | Medical Assistants | \$7.90 | \$10.24 | \$11.41 | \$7.58 | \$8.44 | \$9.88 | \$11.49 | \$13.25 |
| 43-6013 | Medical Secretaries | \$9.70 | \$11.27 | \$12.07 | \$9.23 | \$10.01 | \$11.25 | \$12.28 | \$13.52 |
| 31-9094 | Medical Transcriptionists | \$12.13 | \$13.89 | \$14.78 | \$11.48 | \$12.29 | \$13.61 | \$15.65 | \$17.12 |
| 21-1014 | Mental Health Counselors | \$9.67 | \$14.20 | \$16.46 | \$9.18 | \$9.96 | \$11.44 | \$16.91 | \$22.81 |
| 49-9044 | Millwrights | \$12.87 | \$16.91 | \$18.93 | \$10.00 | \$16.94 | \$18.24 | \$15.34 | \$11.53 |
| 49-2090 | Miscellaneous Electrical and Electronic Equipment Mechanics, Installers, and Repairers | * | * | * | * | * | * | * | * |
| 51-3090 | Miscellaneous Food Processing Workers | \$7.56 | \$12.46 | \$14.93 | \$7.02 | \$8.47 | \$14.44 | \$10.88 | \$13.22 |
| 31-9090 | Miscellaneous Healthcare Support Occupations | * | * | * | * | * | * | * | * |
| 49-9090 | Miscellaneous Installation, Maintenance, and Repair Workers | \$8.38 | \$11.86 | \$13.59 | \$7.58 | \$9.53 | \$12.21 | \$15.47 | \$26.63 |
| 23-2090 | Miscellaneous Legal Support Workers | * | * | * | * | * | * | * | * |
| 51-9190 | Miscellaneous Production Workers | \$7.80 | \$11.88 | \$13.93 | \$7.41 | \$8.56 | \$11.10 | \$13.10 | \$13.68 |
| 41-9090 | Miscellaneous Sales and Related Workers | * | * | * | * | * | * | * | * |
| 53-3099 | Motor Vehicle Operators, All Other | \$6.62 | \$10.02 | \$11.73 | \$6.03 | \$7.27 | \$9.87 | \$11.70 | \$15.38 |
| 15-1071 | Network and Computer Systems Administrators | \$18.38 | \$28.84 | \$34.08 | \$17.29 | \$20.67 | \$25.62 | \$32.71 | \$44.24 |
| 43-4141 | New Accounts Clerks | \$9.09 | \$11.05 | \$12.04 | \$8.39 | \$9.70 | \$10.78 | \$17.49 | \$20.75 |
| 39-2021 | Nonfarm Animal Caretakers | \$6.85 | \$8.78 | \$9.75 | \$6.31 | \$7.33 | \$8.37 | \$9.91 | \$11.12 |
| 29-2033 | Nuclear Medicine Technologists | \$16.35 | \$19.49 | \$21.07 | \$15.08 | \$17.44 | \$19.42 | \$21.45 | * |
| 31-2011 | Occupational Therapist Assistants | \$12.18 | \$15.03 | \$16.45 | \$11.73 | \$12.80 | \$14.74 | \$17.01 | \$35.68 |
| 43-9199 | Office and Administrative Support Workers, All Other | \$9.46 | \$14.53 | \$17.06 | \$8.88 | \$10.80 | \$14.14 | \$15.62 | \$14.80 |
| 43-9061 | Office Clerks, General | \$8.40 | \$11.75 | \$13.42 | \$7.60 | \$9.23 | \$10.68 | \$13.61 | \$18.80 |
| 47-2073 | Operating Engineers and Other Construction Equipment Operators | \$12.66 | \$16.35 | \$18.20 | \$11.49 | \$14.04 | \$16.21 | \$18.79 | \$21.04 |
| 53-7064 | Packers and Packagers, Hand | \$6.17 | \$8.02 | \$8.93 | \$5.91 | \$6.49 | \$7.64 | \$9.17 | \$10.97 |
| 51-9122 | Painters, Transportation Equipment | \$8.18 | \$10.90 | \$12.26 | \$7.57 | \$8.93 | \$10.66 | \$13.44 | \$16.72 |
| 51-9123 | Painting, Coating, and Decorating Workers | \$8.03 | \$11.51 | \$13.25 | \$7.47 | \$8.69 | \$11.03 | \$14.28 | \$16.43 |
| 23-2011 | Paralegals and Legal Assistants | \$11.65 | \$15.49 | \$17.41 | \$10.56 | \$13.15 | \$15.43 | \$17.18 | \$20.41 |
| 43-3051 | Payroll and Timekeeping Clerks | \$9.58 | \$12.58 | \$14.07 | \$9.18 | \$10.56 | \$12.43 | \$14.52 | \$16.63 |
| 39-9099 | Personal Care and Service Workers, All Other | \$6.93 | \$9.41 | \$10.65 | \$6.39 | \$7.37 | \$8.36 | \$10.56 | \$13.24 |
| 13-2052 | Personal Financial Advisors | \$16.49 | \$33.13 | \$41.44 | \$14.92 | \$19.54 | \$28.70 | \$43.23 | * |
| 29-1051 | Pharmacists | \$29.35 | \$32.20 | \$33.62 | \$26.60 | \$29.70 | \$33.02 | \$37.12 | \$43.03 |

Table 2: Occupations with Fewer Than 10 Vacancies - Page 5

|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SOC Code | Occupation Title | Entry- <br> Level |  | Experienced | 10th |  | 50th | 75th | 90th |
| 29-2052 | Pharmacy Technicians | \$8.15 | \$10.51 | \$11.68 | \$7.66 | \$8.69 | \$10.51 | \$12.49 | \$13.61 |
| 27-4021 | Photographers | \$7.30 | \$9.70 | \$10.90 | \$6.39 | \$7.79 | \$9.12 | \$11.42 | \$13.41 |
| 19-2099 | Physical Scientists, All Other | * | * | * | * | * | * | * | * |
| 31-2021 | Physical Therapist Assistants | \$12.46 | \$14.45 | \$15.44 | \$11.74 | \$12.61 | \$14.09 | \$16.19 | \$17.46 |
| 29-1069 | Physicians and Surgeons, All Other | \$22.84 | \$29.00 | \$32.07 | \$22.71 | \$25.13 | \$29.62 | \$34.40 | \$40.48 |
| 47-2150 | Pipelayers, Plumbers, Pipefitters, and Steamfitters | \$9.95 | \$13.32 | \$15.02 | \$9.51 | \$10.88 | \$12.83 | \$15.27 | \$24.00 |
| 51-4193 | Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic | \$7.92 | \$9.48 | \$10.26 | \$7.38 | \$8.09 | \$9.11 | \$10.34 | \$11.57 |
| 33-3050 | Police Officers | \$15.19 | \$20.40 | \$23.01 | \$14.29 | \$16.93 | \$20.40 | \$24.11 | \$15.85 |
| 43-5031 | Police, Fire, and Ambulance Dispatchers | \$11.31 | \$15.14 | \$17.05 | \$10.62 | \$12.65 | \$15.23 | \$11.10 | \$13.85 |
| 51-8013 | Power Plant Operators | \$16.25 | \$21.58 | \$24.24 | \$14.64 | \$18.16 | \$22.76 | \$27.76 | \$14.82 |
| 33-9021 | Private Detectives and Investigators | \$9.41 | \$13.55 | \$15.61 | \$9.07 | \$10.42 | \$12.24 | \$13.83 | \$41.04 |
| 51-9199 | Production Workers, All Other | \$8.59 | \$10.82 | \$11.93 | \$7.88 | \$9.06 | \$10.40 | \$12.22 | \$13.70 |
| 33-9099 | Protective Service Workers, All Other | \$8.01 | \$12.54 | \$14.79 | \$7.42 | \$8.83 | \$10.82 | \$14.42 | \$20.39 |
| 31-1013 | Psychiatric Aides | \$9.15 | \$11.77 | \$13.09 | \$8.55 | \$10.12 | \$12.33 | \$13.42 | \$25.27 |
| 25-1066 | Psychology Teachers, Postsecondary | \$31,687 | \$51,950 | \$62,081 | \$28,393 | \$35,960 | \$49,552 | \$69,002 | \$88,046 |
| 13-1021 | Purchasing Agents and Buyers, Farm Products | \$12.13 | \$17.59 | \$20.32 | \$11.72 | \$13.19 | \$16.43 | \$20.79 | \$25.77 |
| 29-1124 | Radiation Therapists | \$14.92 | \$19.12 | \$21.22 | \$14.30 | \$16.36 | \$18.89 | \$21.31 | \$41.26 |
| 41-9022 | Real Estate Sales Agents | \$8.93 | \$17.04 | \$21.09 | \$7.75 | \$9.43 | \$16.81 | \$19.47 | \$34.11 |
| 49-3092 | Recreational Vehicle Service Technicians | * | * | * | * | * | * | * | * |
| 41-9099 | Sales and Related Workers, All Other | \$7.07 | \$13.53 | \$16.76 | \$6.31 | \$8.11 | \$11.89 | \$17.54 | \$24.98 |
| 41-9031 | Sales Engineers | \$23.64 | \$32.25 | \$36.56 | \$23.05 | \$25.62 | \$31.07 | \$39.97 | \$47.91 |
| 11-2022 | Sales Managers | \$20.55 | \$37.11 | \$45.40 | \$17.87 | \$24.32 | \$33.63 | \$47.53 | \$72.38 |
| 41-3099 | Sales Representatives, Services, All Other | * | * | * | * | * | * | * | * |
| 41-4012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | \$10.19 | \$19.21 | \$23.71 | \$9.04 | \$12.04 | \$16.67 | \$24.48 | \$34.87 |
| 41-4011 | Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | \$17.50 | \$32.62 | \$40.19 | \$15.77 | \$20.60 | \$31.21 | \$48.10 | \$58.59 |
| 51-7041 | Sawing Machine Setters, Operators, and Tenders, Wood | \$8.78 | \$10.61 | \$11.53 | \$8.89 | \$9.58 | \$10.54 | \$12.22 | \$13.40 |
| 41-3031 | Securities, Commodities, and Financial Services Sales Agents | * | * | * | * | * | * | * | * |
| 49-2098 | Security and Fire Alarm Systems Installers | \$12.88 | \$17.54 | \$19.88 | \$11.47 | \$14.70 | \$18.32 | \$18.06 | \$21.20 |
| 25-3021 | Self-Enrichment Education Teachers | \$9 | \$14 | \$16 | \$8 | \$10 | \$14 | \$16 | \$55,119 |
| 47-2211 | Sheet Metal Workers | \$11.48 | \$17.76 | \$20.90 | \$9.55 | \$13.89 | \$18.48 | \$21.64 | \$25.02 |
| 21-1020 | Social Workers | * | * | * | * | * | * | * | * |
| 25-2040 | Special Education Teachers | * | * | * | * | * | * | * | * |
| 25-2041 | Special Education Teachers, Preschool, Kindergarten, and Elementary School | \$28,445 | \$40,005 | \$45,779 | \$26,090 | \$29,977 | \$34,960 | \$45,352 | \$61,654 |
| 29-1127 | Speech-Language Pathologists | \$15.91 | \$26.71 | \$32.11 | \$14.50 | \$17.43 | \$25.97 | \$36.21 | \$41.84 |
| 17-3031 | Surveying and Mapping Technicians | \$11.27 | \$15.90 | \$18.20 | \$10.82 | \$12.06 | \$15.37 | \$18.99 | \$21.77 |
| 17-1022 | Surveyors | \$13.14 | \$18.08 | \$20.55 | \$12.17 | \$14.07 | \$17.06 | \$21.56 | \$26.11 |
| 51-6050 | Tailors, Dressmakers, and Sewers | \$7.61 | \$8.41 | \$8.81 | \$7.17 | \$7.52 | \$8.12 | \$9.38 | \$15.63 |
| 53-3041 | Taxi Drivers and Chauffeurs | \$5.86 | \$6.95 | \$7.49 | \$5.73 | \$5.93 | \$6.25 | \$7.97 | \$9.98 |
| 25-3099 | Teachers and Instructors, All Other | \$19,648 | \$35,512 | \$43,444 | \$18,856 | \$21,201 | \$33,772 | \$49,438 | \$63,634 |
| 49-9052 | Telecommunications Line Installers and Repairers | \$9.72 | \$17.25 | \$21.01 | \$8.63 | \$11.25 | \$17.66 | \$21.24 | \$25.60 |
| 43-2021 | Telephone Operators | \$7.29 | \$9.90 | \$11.21 | \$6.57 | \$7.39 | \$8.83 | \$12.34 | \$16.06 |
| 29-1129 | Therapists, All Other | * | * | * | * | * | * | * | * |
| 49-3093 | Tire Repairers and Changers | \$7.80 | \$10.17 | \$11.35 | \$7.18 | \$7.77 | \$8.69 | \$14.30 | \$15.87 |
| 53-6041 | Traffic Technicians | \$14.75 | \$19.46 | \$21.82 | \$14.15 | \$15.70 | \$18.65 | \$9.42 | \$17.34 |



Table 2: Occupations with Fewer Than 10 Vacancies - Page 6

| SOC <br> Code | Occupation Title | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 39-6030 | Transportation Attendants | * | * | * | * | * | * | * | * |
| 53-6099 | Transportation Workers, All Other | \$9.86 | \$10.85 | \$11.34 | \$9.18 | \$9.73 | \$10.63 | \$12.06 | \$13.32 |
| 41-3041 | Travel Agents | \$8.47 | \$10.99 | \$12.24 | \$7.62 | \$9.31 | \$10.59 | \$12.60 | \$15.15 |
| 51-6093 | Upholsterers | \$9.91 | \$13.27 | \$14.96 | \$9.15 | \$11.02 | \$12.94 | \$11.05 | \$21.86 |
| 39-3031 | Ushers, Lobby Attendants, and Ticket Takers | \$5.93 | \$6.36 | \$6.58 | \$5.66 | \$5.87 | \$6.22 | \$6.78 | \$8.12 |
| 29-2056 | Veterinary Technologists and Technicians | \$9.17 | \$11.06 | \$12.01 | \$8.58 | \$9.76 | \$11.41 | \$12.74 | \$13.54 |
| 51-8031 | Water and Liquid Waste Treatment Plant and System Operators | \$11.64 | \$16.11 | \$18.34 | \$10.59 | \$13.05 | \$15.89 | \$19.16 | \$21.46 |
| 43-5111 | Weighers, Measurers, Checkers, and Samplers, Recordkeeping | \$9.00 | \$11.36 | \$12.54 | \$8.29 | \$9.48 | \$10.98 | \$13.25 | \$15.49 |
| 51-4121 | Welders, Cutters, Solderers, and Brazers | \$9.45 | \$13.81 | \$16.00 | \$8.81 | \$10.61 | \$12.80 | \$22.91 | \$21.65 |
| 51-4122 | Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders | \$9.10 | \$11.57 | \$12.81 | \$9.22 | \$10.12 | \$11.40 | \$16.29 | \$19.70 |
| 43-9022 | Word Processors and Typists | \$8.80 | \$10.47 | \$11.30 | \$8.12 | \$9.42 | \$10.33 | \$11.57 | \$13.48 |

OES wages reported for Colorado statewide in bold

* No wage data available


## Methodology

## Survey Instrument and Redesign

The Job Vacancy Survey was initiated in the Denver Metro area by Arapahoe/Douglas Works! through funding from the Employment and Training Administration in cooperation with Labor Market Information. The Denver Metro pilot studies were conducted along with pilot studies in five other metropolitan areas across the nation. As a result of the success of the Denver Metro Job Vacancy Survey, the Colorado Department of Labor and Employment initiated a plan to expand the studies across the entire state.

After the first two Denver Metro pilot studies, the survey instrument was evaluated and redesigned. In choosing questions, considerations were made regarding various forms and gradations. Decisions were made to address the core of what was required in order to stay within the defined limits. The survey was expanded not only to state the purpose of the survey, but also to collect employer information; verifying addresses, number of employees, and establishing contact names. Email and fax numbers were added to provide a means of contacting employers for notification of the availability of survey results. A review of the survey questions follows:

A-The "Job Title" section remained relatively the same, although a definition of Full- versus Parttime was included.

B-"Number of vacancies for which your firm is actively recruiting:" The objective was to get a measure of the job market from the employer's point of view. A variant of this question was, "Number of vacancies that your firm currently has." Actively recruiting was queried due to the possible presence of vacancies that were deliberately left vacant. Also revised was the query for Permanent vs. Temporary identification.

C-The "Wages/Salary" question was revised to request the maximum and the minimum rates of pay to evaluate variations in pay given different applicant qualifications.

D-"Is a sign-on bonus offered to the person hired to fill this vacancy?" In addition to noting whether or not a bonus is offered, the revised survey allows a dollar amount to be entered.

E-"Is medical insurance offered?" In addition, the revised survey prompted for the portion (if any) that the firm contributed. To better understand the relationship between types of positions, pay, vacancies, and the existence of medical insurance, it was important to note to what degree the firm contributes to the insurance premium.

F-"What is the typical education level required to fill this vacancy?" Examination of the nature of the job market and the needs of employers included the query of educational requirements.

G-"What is the typical type of experience required to qualify for this vacancy?" This also adds to the characteristics that employers are looking for in applicants. It was important to expand this question, allowing the firm to note the nature of the experience requested. During times of excess labor supply, qualifications demanded of applicants tend to increase. During periods of limited supply, the reverse tends to occur.

H-"How long has this vacancy been open?" This question was added to the revised survey to gauge the tightness of the labor market. It provides an objective measure that can be tracked and compared across time.

I-"How difficult is this vacancy to fill?" Questions H and I together help to evaluate the challenges employers face in the timely hiring of personnel and the degree to which the supply of labor falls short of demand.


## Survey Sample Methodology

This survey is designed to find frequency of job vacancies in the surveyed region and identifies the characteristics of those vacancies. Firms were ordered into groups, or stratifications, by employment size and industry, and the resulting percentages of vacancies for each category were used to estimate total job vacancies for each group. Only firms with five or more employees were surveyed. The list of private sector firms used for this survey, contact information, staff size and industry classification were obtained from the America's Labor Market Information System (ALMIS) database. Information regarding government agencies was obtained from LMI's ES-202 database.

The survey was conducted by telephone. In some cases copies of the survey form were faxed to employers upon request.

## Stratifications

Employers are referred to as "small to mid-size" or "large" employers depending on the number of employees within the firm as well as on the level of employment in the region. Large firms account for approximately $30 \%$ of the employment in the sample universe. Small to mid-size employers account for the remaining $70 \%$. For optimum sample representation, each region will produce different cutoff points for employer classification. For example, the Denver Primary Metropolitan Statistical Area (PMSA) considers "small to mid-size" employers as those having 5 to 249 employees and "large" employers as those with 250 or more. Attempts are made to contact all large employers.

Most Metropolitan Statistical Area (MSA) regions will define the cutoff between large and small employers to mid-size at an employment level of 200 employees. However, this cutoff number will be dependent on the number of firms representing approximately $30 \%$ of the region's employment.

Rural regions will generally have a cutoff at an employment level of 80 . Each JVS will clearly define specifications for the region. All cutoff points depend upon the proportion of employment per region.

The survey sample was then stratified into the following major industry classifications as defined by the 1987 Standard Industrial Classification Manual for small to mid-size employers in the PMSA and MSA areas:

- Agriculture, Forestry and Fishing (except Agricultural Services)
- Mining
- Construction
- Durable Goods Manufacturing
- Non-Durable Goods Manufacturing
- Transportation, Communication, and Public Utilities (TCPU)
- Wholesale Trade
- Retail Trade
- Finance, Insurance, and Real Estate (FIRE)
- Services (including Agricultural Services)
- Government

Due to limited data, rural regions are not stratified by industry, rather, they are stratified into "Goods Producing" (top 5 industries) and "Service Producing" industries.

The lists of small to mid-sized employers were randomized and a sample of sufficient size was drawn to achieve a proportional representation from each stratification.

## Data Editing and Cleaning

[n preparing data for analysis, data entry was reviewed. Employers were called in cases to clarify questionable entries and/or inconsistencies.

## Occupational Coding

Job titles and their descriptions were used to match vacancies with the appropriate Standard Occupational Classification (SOC) occupational titles. In some cases a second interview with the employer was necessary to decide on a specific occupational title.

## Wage Conversion

Standard conversions were used to convert salaries into hourly wages: 2,080 hours for annual salaries, 173 hours for monthly salaries.

All wages below the minimum wage level were adjusted upwards to $\$ 5.15$ per hour. When necessary employers were contacted a second time for more information on questionable wages.

## Definitions

## Annual Salary

The monetary return for one year's work. The definition does not include benefits (e.g., insurance, retirement program, or stock plans).

## 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.

## Full-time and Part-time Employment

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

## Job Vacancy Rate

Is the number of openings in a specific occupation expressed as a share of total employment in that same occupation.

## Level of Education

Refers to completed programs of work. High school diplomas, associate, professional, vocational, bachelors, and graduate degrees all are examples of programs of work.

## Medical Insurance Premium

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

## Mid-Point

For the purpose of this survey, the Mid-Point refers to the wage halfway between the average minimum and average maximum wages as reported by survey respondents.

## Permanent and Temporary Employment

Employment is classified as permanent if it will be filled for more than six months. Temporary employment on the other hand refers to those positions which will be filled for six months or less.

## Sample Frame

The set of employers randomly chosen for the survey from the whole population of employers. Since vacancies and employment data were the central objectives of the survey, the sample frame was designed to allow necessary representation in those categories.

## $\underline{\text { Sign-on Bonus }}$

An additional financial incentive offered by a firm to new employees in order to influence their decisions to agree to employment with that firm. The bonus, for purposes of this survey, is a monetary lump sum.

## SOC

The 1998 Standard Occupational Classification (SOC), with 822 detailed occupations, reflects the current occupational structure in the United States and was designed to provide a universal classification system. All federal agencies that collect occupational data will adhere to the new SOC. Information on the 1998 SOC, including its occupational structure, is available online.

Internet: http://stats.bls.gov/soc/soc_home.htm.
Source: Occupational Outlook Handbook, 2000-01
Edition, U.S. Department Of Labor, Bureau of Labor Statistics, January 2000.

## Vacancy

An established position that is currently unfilled for which the firm is actively recruiting to fill. The definition does not include positions that are anticipated, but not yet created.

## Wage

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

## Appendix - Survey Instrument

## Survey Instructions

- Please direct this survey to the manager or human resources professional responsible for hiring and recruitment at your business.
- Please respond within three business days. Your assistance will allow us to complete this survey in a timely manner.
- Return this survey by fax to (887) 222-0921.

For the purposes of this survey, a vacancy at your company is a job opening for which your firm is actively recruiting. Only provide information for job vacancies in the following counties, which make up the Pikes Peak Region:

El Paso Teller

## Part A: About Your Firm

1. Who may we contact regarding job vacancies at your location and at other Pikes Peak area locations? $\qquad$
2. Contact's:
a. Job Title $\qquad$
b. Phone \# $\qquad$
c. Fax \# $\qquad$
d. E-Mail Address $\qquad$
3. Company Name: $\qquad$
4. Number of Employees working within the Pikes Peak Region: $\qquad$
5. Do you have any job vacancies for which your firm is actively recruiting?

- Yes
$\square$ No
If you answered yes to question number five, please complete the next page of this survey. If you have more vacancies than will fit on the next page or, if you have more than one job site for which to list vacancies, please make copies before you begin filling out the form. Thank you very much for your participation in the survey. We look forward to providing you with a final copy of the study.

Part B: About Your Vacancies, See next page



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