

# Western & Southwest Region

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## Job Vacancy Survey

Conducted  
July 20 - 30, 2001

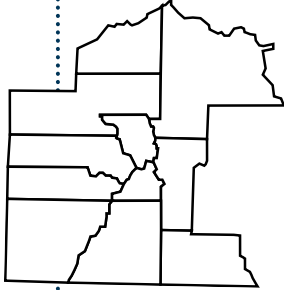
Archuleta, Delta, Dolores, Gunnison, Hinsdale, La Plata, Montezuma, Montrose, Ouray, San Juan, & San Miguel Counties

December 2001



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





# Western & Southwest Region Job Vacancy Survey

*Conducted  
July 20-30, 2001*

## **State of Colorado**

Bill Owens, *Governor*

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

Vickie Armstrong, *Executive Director*

Jeffrey M. Wells, *Deputy Executive Director*

Funding Provided in Part by  
The Colorado Workforce Development Council

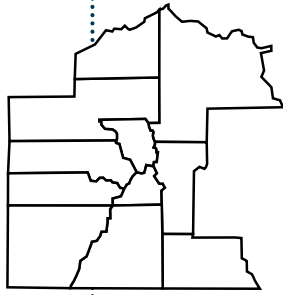
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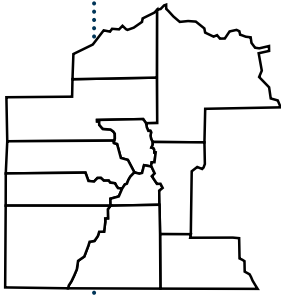
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The Office of Workforce Research and Analysis would like to extend sincerest gratitude to all area employers who participated in this study. The analysis provided in this document would not be possible without their help.

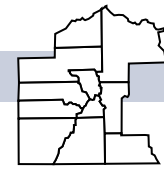


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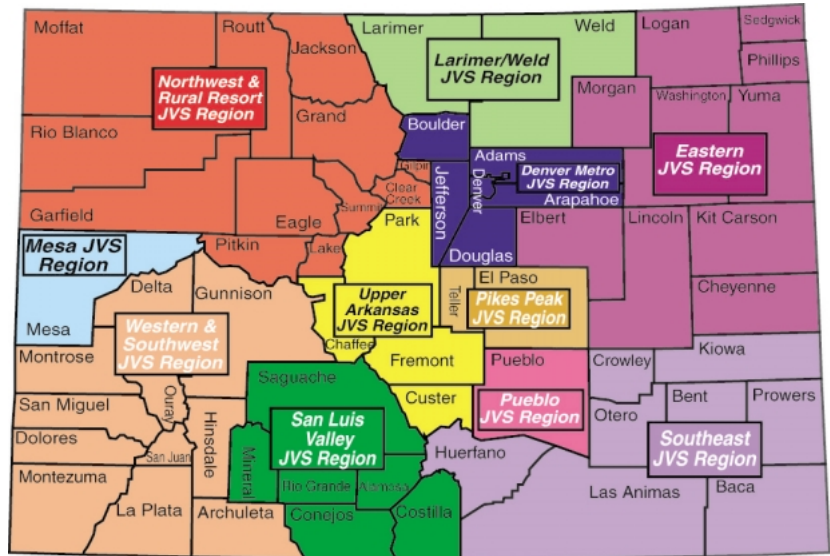
# Introduction

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 Western & Southwest 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.

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 last Denver Metro pilot JVS, the survey instrument was revised to eliminate ambiguity

**Colorado Job Vacancy Survey Regions**



and enhanced to gather more specifics on job vacancies within the survey constraints.

The survey is funded by a grant from the U.S. Department of Labor’s Employment and Training Administration. The JVS is produced by Labor Market Information’s office of Workforce Research and Analysis.

**This publication is a product of the Colorado Department of Labor and Employment’s Labor Market Information Section, Bill LaGrange-Director. This report was prepared by LMI’s office of Workforce Research and Analysis. Members of this unit are:**

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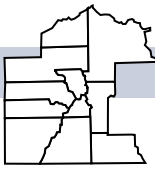
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## How to Use This Report

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 offering a more complete picture of local labor markets.

### *Employers*

The 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, or
- ◆ 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 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

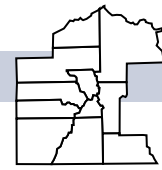
an overall shortage of applicants in the area. Similarly, if a low percentage of vacancies exist for a particular position with the same educational and/or experience requirement, but an employer is finding it difficult to fill, a comparison between the wages offered to the market average may indicate 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 relocating to the area can review the report and determine how easily the company's employment needs will be met by reviewing 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 balance of supply and demand in the local job market. It also provides average wages for open jobs as reported by survey respondents. Job seekers can review Labor

Market Information's occupational projections in addition to the Job Vacancy Survey to see if current opportunities in the job market can contribute to their long-term career goals. This information can help them better tailor education and training efforts toward industries and occupations with the potential to meet their career needs.



## ***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 a short-term picture of the area's current employment needs. Workforce Center representatives can increase placement success by directing job seekers toward high demand occupations, or pointing them 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 where there is a constant need for workers.

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

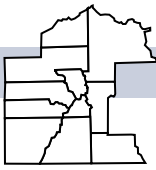
provisions of future training programs. The Employment and Wage publication (ES-202 data) provides monthly county and statewide industry data reported on a quarterly basis. To prepare for the high demand of seasonal workers where vacancies persist, Workforce Centers and educators can offer training during the off-season guided by the quarterly data. Long-term 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](http://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

The Job Vacancy Survey statistics should be used as indicators, not actual values of the demand for workers in the region. Figures from the survey should not be interpreted as annual vacancies; rather, they are estimates of openings at a point-in-time. 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.

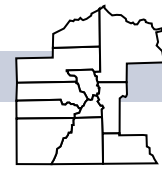
The results of the survey are based only on the sample of responses collected from July 20th through July 30th and should not be considered as necessarily portraying the exact distribution of job vacancies. After several years of Job Vacancy Survey data are available, patterns may begin to emerge that 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.



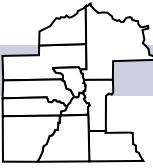


## Executive Summary

The Western & Southwest Job Vacancy Survey (JVS) was conducted between July 20th and 30th, 2001. Over the survey period randomly selected employers with at least five employees were contacted in the survey region. Employers were asked if they were actively hiring at the time of the survey and a variety of questions about positions that they were seeking to fill.

A total of 782 employers (22% of employers in the sample universe), representing approximately one-fourth of the region's total employment, responded to the survey. Out of these, 70 were large employers (60 or more employees) and 712 were from the small to mid-sized category (5-59 employees). The major findings of the survey follow:

- ◆ It is estimated that a total of 1,500 jobs were open for hire in the region during the final weeks of July.
- ◆ Ninety-seven percent of the jobs were estimated to be full-time openings.
- ◆ Small to mid-size employers accounted for 59% of all vacancies.
- ◆ Nearly 80% of the estimated job openings were concentrated in service producing industries.
- ◆ The overall average wage for all vacancies was \$12.20 per hour.
- ◆ Both education and experience exhibited a significant positive influence on wages offered.
- ◆ Only one in three estimated openings require at least some post-secondary education.
- ◆ Fifty-four percent of total openings require experience either within or related to the vacant occupation.
- ◆ According to employers' responses, 69% of job openings are either very difficult or somewhat difficult to fill.
- ◆ Responses concerning sign-on bonuses were not statistically sufficient to be reported.



## Western and Southwest Region

The Western & Southwest (W&SW) Region consists of Archuleta, Delta, Dolores, Gunnison, Hinsdale, La Plata, Montezuma, Montrose, Ouray, San Juan, and San Miguel counties. According to the US Census Bureau, this region was home to over 165,000 people at the turn of the century. Nearly one half of them live in the two largest counties in the

region: La Plata and Montrose. At the time of the survey, the area employed over 82,000 individuals from a labor pool of 86,000 resulting in a 3.9% unemployment rate (Local Area Unemployment Statistics, July 2001). Employment growth in the region varies from county to county, but overall, lags that of the state as a whole.

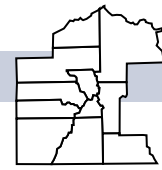
**Table 1: County Summary**

| County           | Y2K Population<br>(1) | Labor Force<br>(2) | Total Employment<br>(2) | 5-year Employment Growth Rate<br>(3) | Unemployment Rate<br>(2) |
|------------------|-----------------------|--------------------|-------------------------|--------------------------------------|--------------------------|
| La Plata         | 43,941                | 25,300             | 24,313                  | 15.27%                               | 3.9%                     |
| Montrose         | 33,432                | 16,024             | 15,360                  | 18.87%                               | 4.1%                     |
| Delta            | 27,834                | 10,901             | 10,525                  | 14.90%                               | 3.4%                     |
| Montezuma        | 23,830                | 12,184             | 11,614                  | 10.86%                               | 4.7%                     |
| Gunnison         | 13,956                | 7,936              | 7,562                   | 15.60%                               | 4.7%                     |
| Archuleta        | 9,898                 | 5,344              | 5,171                   | 41.89%                               | 3.2%                     |
| San Miguel       | 6,594                 | 4,481              | 4,362                   | 15.36%                               | 2.7%                     |
| Ouray            | 3,742                 | 1,869              | 1,835                   | 19.43%                               | 1.8%                     |
| Dolores          | 1,844                 | 660                | 610                     | 19.23%                               | 7.6%                     |
| Hinsdale         | 790                   | 1,038              | 1,024                   | 22.30%                               | 1.3%                     |
| San Juan         | 558                   | 385                | 364                     | 13.65%                               | 5.5%                     |
| <b>W&amp;SW</b>  | <b>166,419</b>        | <b>86,122</b>      | <b>82,740</b>           | <b>14.12%</b>                        | <b>3.9%</b>              |
| <b>Statewide</b> | <b>4,301,261</b>      | <b>2,306,229</b>   | <b>2,237,532</b>        | <b>20.62%</b>                        | <b>3.0%</b>              |

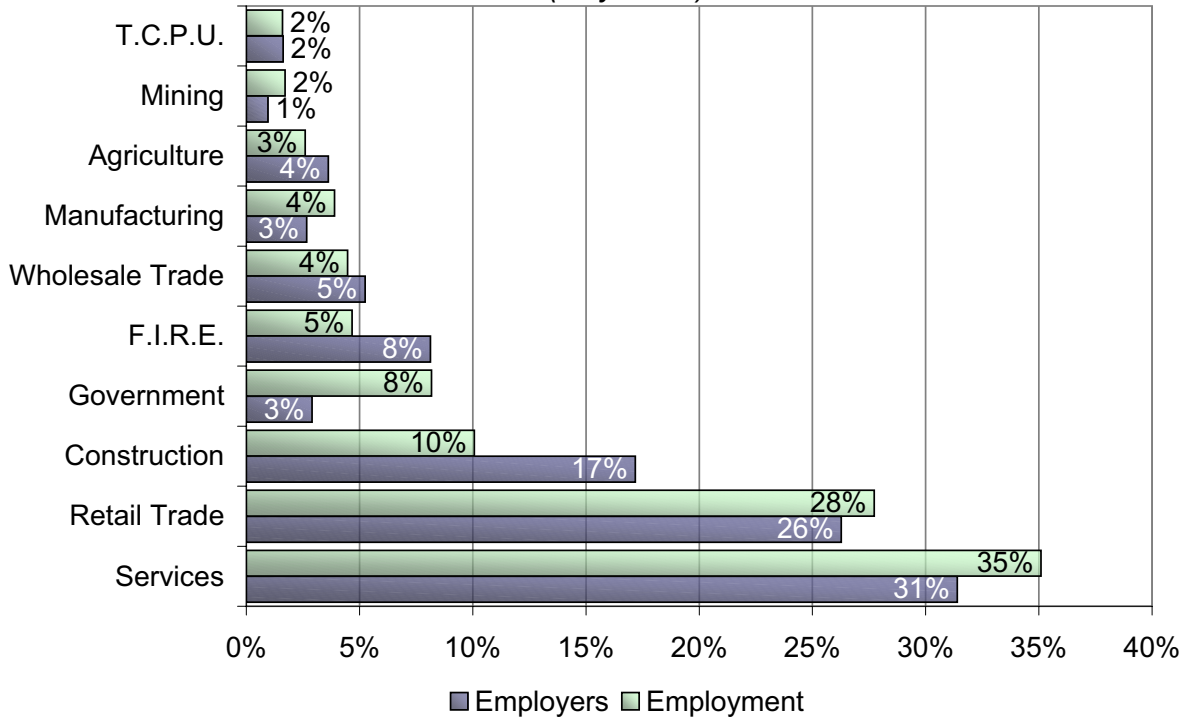
(1) U.S. Census Bureau, 2000 Census

(2) CDLE, Local Area Unemployment Statistics, July 2001

(3) CDLE, Colorado Employment and Wages (ES-202), 4th Quarter 1995-2000



**Figure 1: Industrial Frequency of Employers and Employment (July 2000)**

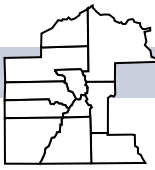


Agriculture includes Forestry and Fishing  
 F.I.R.E.—Finance, Insurance, and Real Estate  
 T.C.P.U.—Transportation, Communication and Public Utilities

Source:  
 Colorado Employment and Wages (ES-202)

Like the rest of the state, the economy of the Western & Southwest region consists predominantly of Services and Retail Trade industries. Combined, these industries make up 57% of the region's employers

and 63% of employment. In addition, the large presence of the Construction industry in the region indicates the potential for growth.



## The Job Vacancy Survey Sample

For the purpose of this report, private employers with 5 or more employees as well as all government employers are referred to as the “sample universe.” Workers in the sample universe account for approximately 95% of the region’s total employment. Employers with at least 60 employees are referred to as “large employers.” They account for about 30% of the employment in the sample universe. All other firms are considered “small to mid-size employers,” and account for the remaining 70% of the sample universe employment.

Attempts were made to contact all Government and large employers. The remaining small to mid-size employers were then stratified into goods producing and service producing industries based on the 1987 *Standard Industrial Classification Manual*. Attempts were made to contact a sufficient sample from each of the stratifications in order to provide statistically reliable results. Over the survey period a total of 782 employers, approximately 22% of employers in the sample universe, responded to the survey. Out of these, 70 were large employers and 712 were from the small to mid-sized category. The sample response requirements were achieved for all stratifications.

**Table 2: Goods and Service Producing Industries**

| <b>Goods Producing Industries</b>  | <b>Service Producing Industries</b>                         |
|--|---|
| <b>Agriculture, Forestry, and Fishing (except Agricultural Services)</b> | <b>Transportation, Communications, and Public Utilities</b> |
| <b>Mining</b>  | <b>Wholesale Trade</b>                                      |
| <b>Construction</b>  | <b>Retail Trade</b>   |
| <b>Manufacturing</b>   | <b>Finance, Insurance, and Real Estate</b>                  |
|  | <b>Agricultural Services</b>                                |
|  | <b>Public Administration</b>                                |

## The Survey Instrument

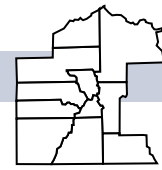
The survey instrument, upon which the telephone questionnaire used for this study is based, was tested in the Upper Arkansas Region in September, 2000, and is a revised version of the one used for the two Denver Metro pilot studies.

Employers were asked if they had job vacancies, or open positions, which they were actively seeking to fill. Firms actively recruiting were then asked to provide more detail about each position. Information on compensation offered, the education level 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 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

The Western & Southwest Job Vacancy Survey is produced semi-annually in January and July. The timing of the survey was developed with the intent of measuring the demand for labor at intervals that provide the most useful information.

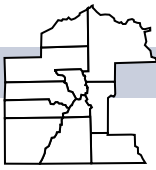
Analysis of the historical employment trends in the region indicates annual peaks in or around the month of July. Surveys conducted at this time of

year 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 January represent the demand for labor at a time of year when employment is at its cyclical low. A study at this time indicates the type of occupations for which a labor shortage exists even when the labor supply is least constrained.

**Figure 2: Historical Regional Employment**



Source: CDLE, Local Area Unemployment Statistics



# Estimated Vacancies and Reported Wages

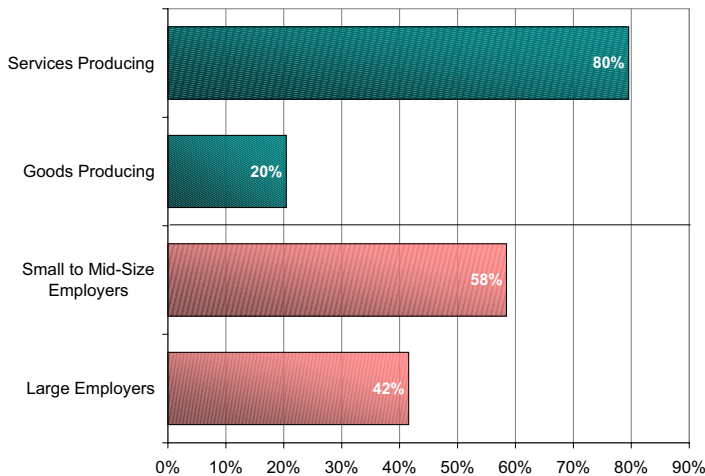
During the survey period, it is estimated that 1,500 vacancies were open for immediate hire by firms with at least 5 employees in Western & Southwest counties. The majority of vacancies, 89%, offered full-time, permanent employment.

Because wages offered vary according to the individual applicant's qualifications, employers were asked to provide the range of wages offered for the vacancies. The average wage was then calculated based on the mid-point of that range. The overall average wage offered for all vacancies in the Western & Southwest region was \$12.20 per hour.

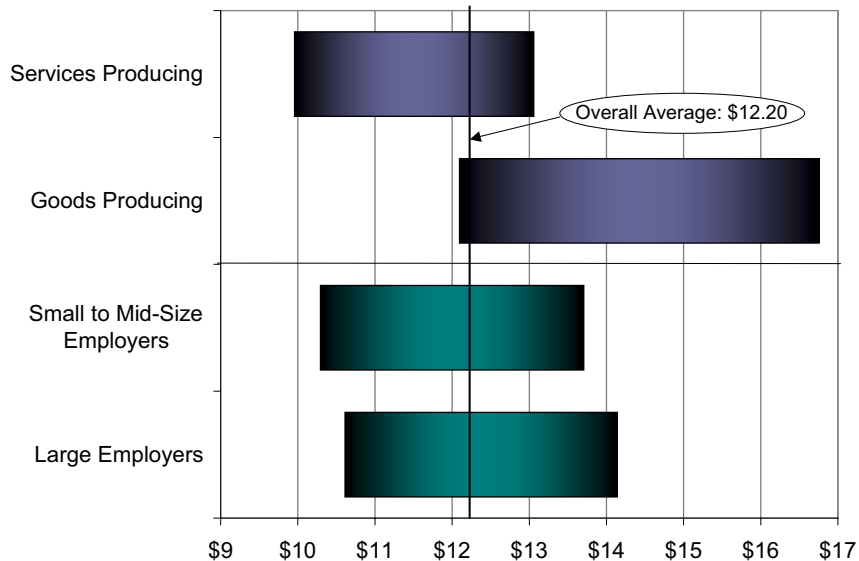
The overall average wage offered for all vacancies in the Western & Southwest region was \$12.20 per hour.

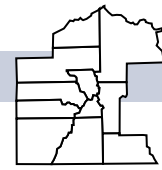
While it is estimated that employers in the small to mid-size category required more new employees than large employers, the wages they offered did not significantly differ from those reported by large employers. The large difference in wages offered by employers in the goods producing industries compared to service producing may partially explain why vacancies with those employers were less frequent than those of service producing employers.

**Figure 3: Summary of Estimated Vacancies**



**Figure 4: Summary of Reported Wages**

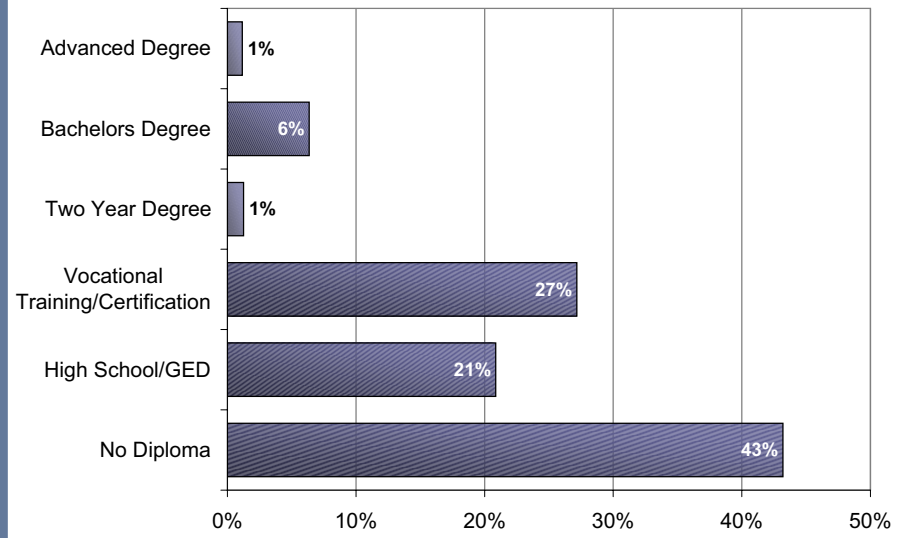




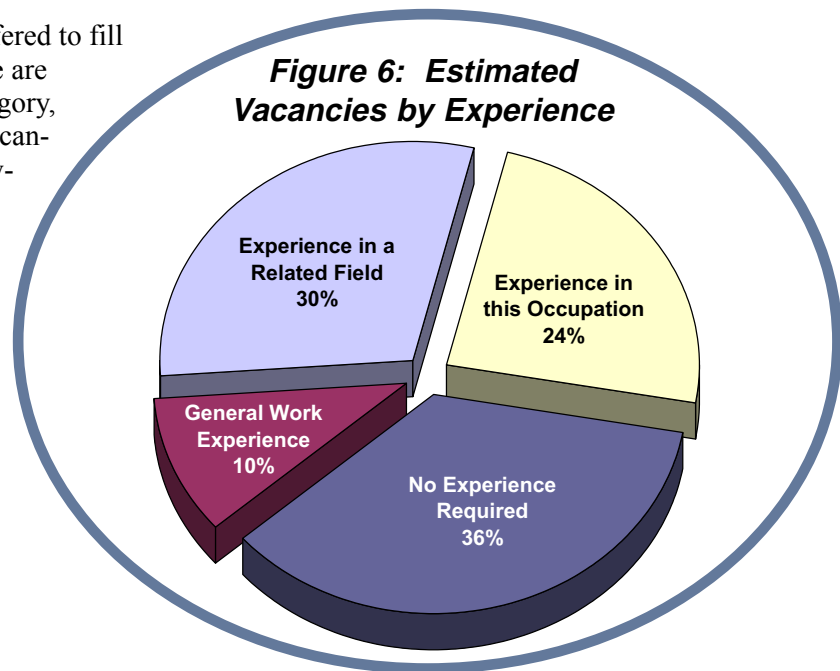
## Education and Experience

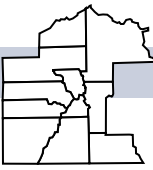
Employers were asked what level of education and/or experience was required of an applicant in order to be considered for a particular vacancy. Typically, employers compete to recruit the most educated and/or experienced candidates. In general, this causes the wages offered to fill a position to increase along with both measures. The average wages reported in this survey, however, are also affected by the amount of information available. Either a significantly large employer with many vacancies, or even a small employer in a category with relatively few other employers may greatly skew the average reported for that category. For example, figure 7 shows that the average wage offered to fill vacancies requiring a two-year degree are lower than any other educational category, but figure 5 shows that only 1% of vacancies fall into that category. The following graphs summarize the results of this survey with respect to these indicators of job quality.

**Figure 5: Estimated Vacancies by Education**

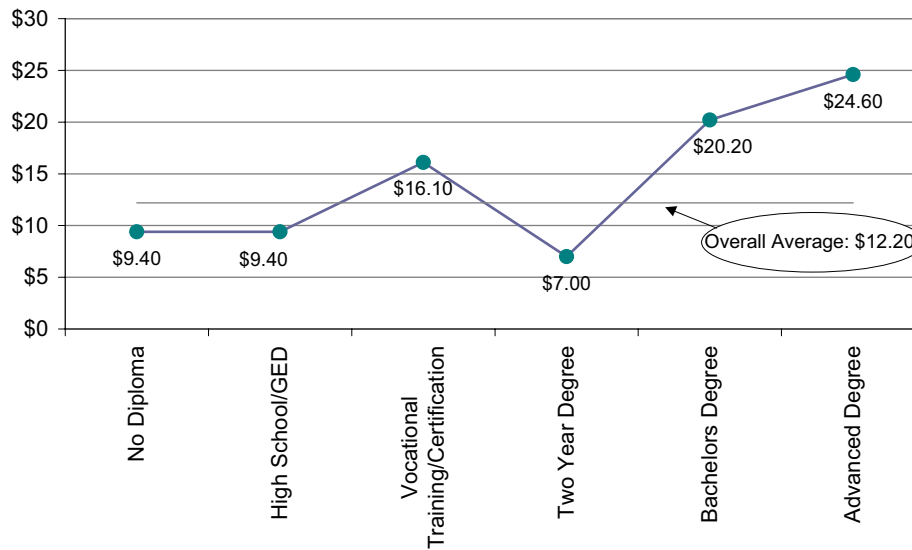


**Figure 6: Estimated Vacancies by Experience**

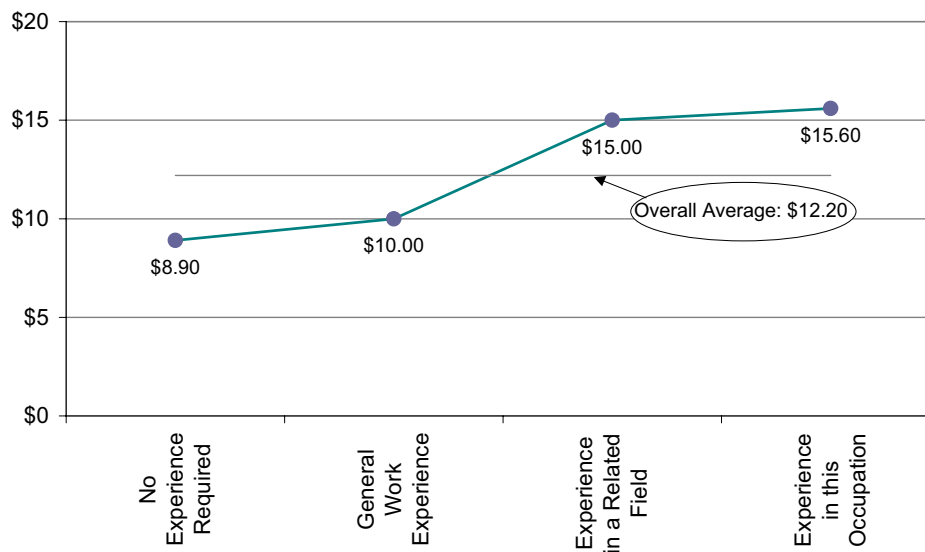




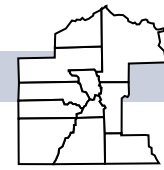
**Figure 7: Average Reported Wage by Education**



**Figure 8: Average Reported Wage by Experience**







## Difficulty to Fill

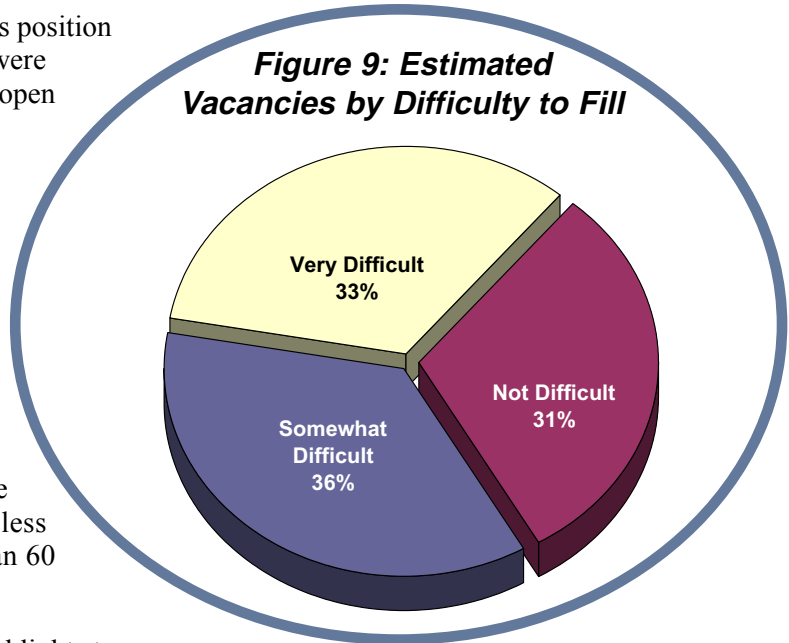
Because the response to the question, “Is this position difficult to fill?” is subjective, employers were queried as to how long each position had been open at the time of the survey. Knowing how long a position has been open allows further analysis into the subjectivity of the response to the first question. This information may help gain deeper understanding of the challenges employers face in filling vacancies.

Survey results show that employers did perceive difficulties in filling the majority of open positions. Two-thirds of the vacancies reported were classified as either somewhat or very difficult to fill. Alternatively, the majority of vacancies were open for a period less than 30 days and only 24% open for more than 60 days.

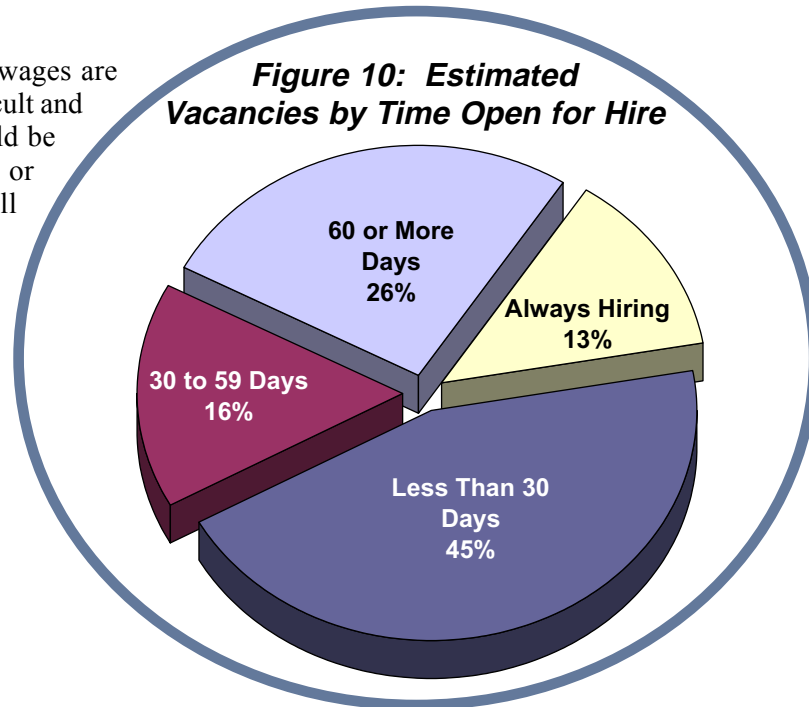
Wage information reported by employers highlights two important facts.

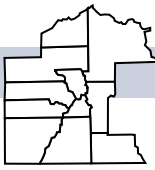
1. Positions for which higher wages are offered tend to be more difficult and take longer to fill. This could be due to the specialized skills or requirements needed to fill these vacancies.
2. Jobs for which lower wages are offered tend to be filled quickly and easily.

**Figure 9: Estimated Vacancies by Difficulty to Fill**

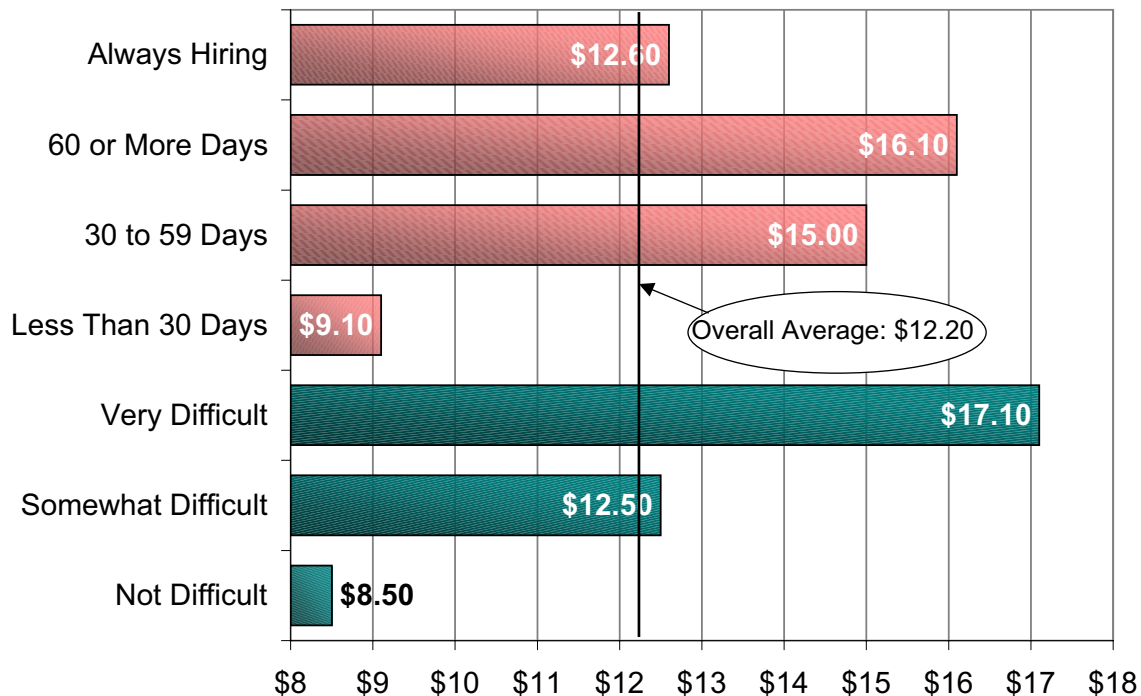


**Figure 10: Estimated Vacancies by Time Open for Hire**





**Figure 11: Average Reported Wage by Difficulty to Fill/ Time Open for Hire**

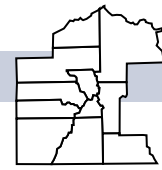


## Additional Compensation

Approximately two-thirds of the vacancies reported by employers included some form of medical insurance. Of those, over 98% offered to pay at least some portion of the insurance premium and 40% the entire premium. Survey results reveal a positive relationship between wage and medical insurance coverage offered. As higher paying jobs require higher levels of education and experience, employers offer better medical insurance packages to attract qualified candidates. Businesses that paid the total cost of the medical insurance premium offered an average wage

of \$17.20 per hour for the advertised vacancy. At the other end of the spectrum, positions where no monetary contribution was offered towards the insurance premium paid an average wage of \$9.40 per hour.

Employers were asked whether or not a sign-on bonus was used as a tool to help fill vacancies. Responses to this question were insufficient to reliably convey any information on the subject. Future surveys may prove otherwise.



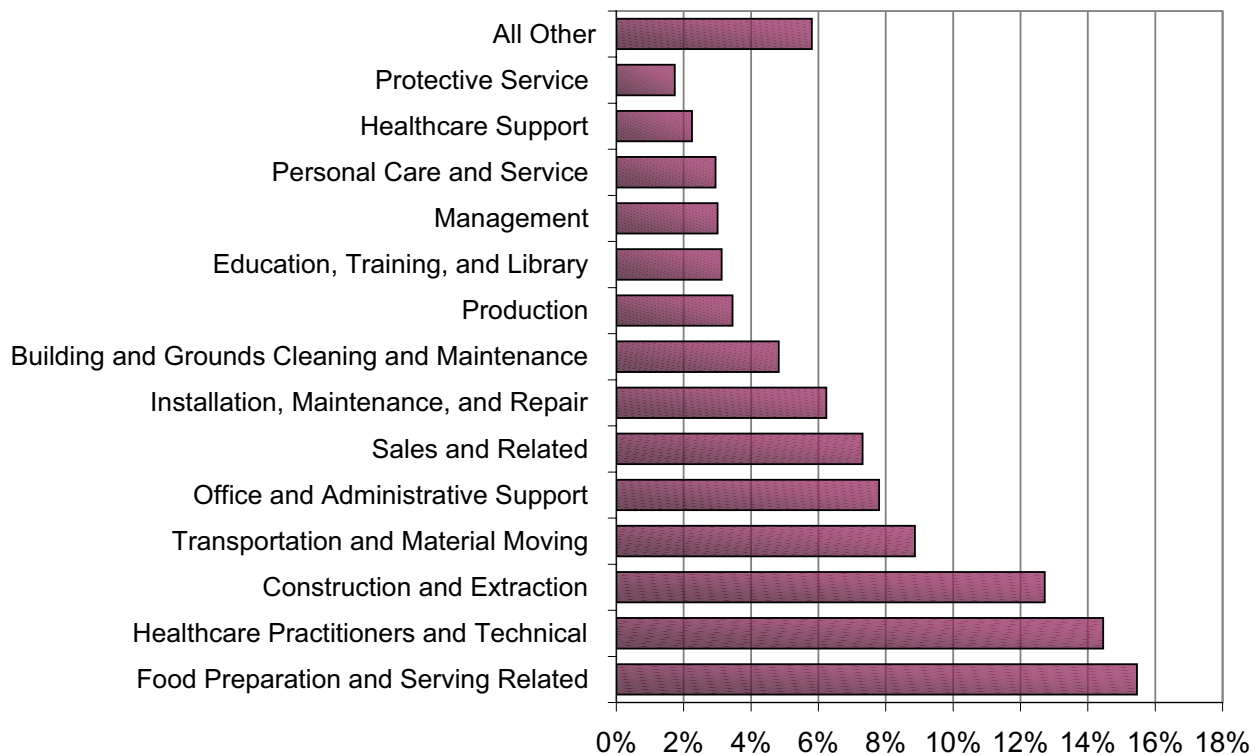
# Occupations

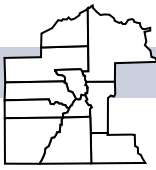
## Characteristics of Major SOC Occupational Groups

In order to facilitate comparisons between the results of this survey and other sources of employment statistics, all job titles reported were assigned a Standard Occupational Classification (SOC) code. Summary results from the survey are reported for the major occupational groups as defined in the *Standard*

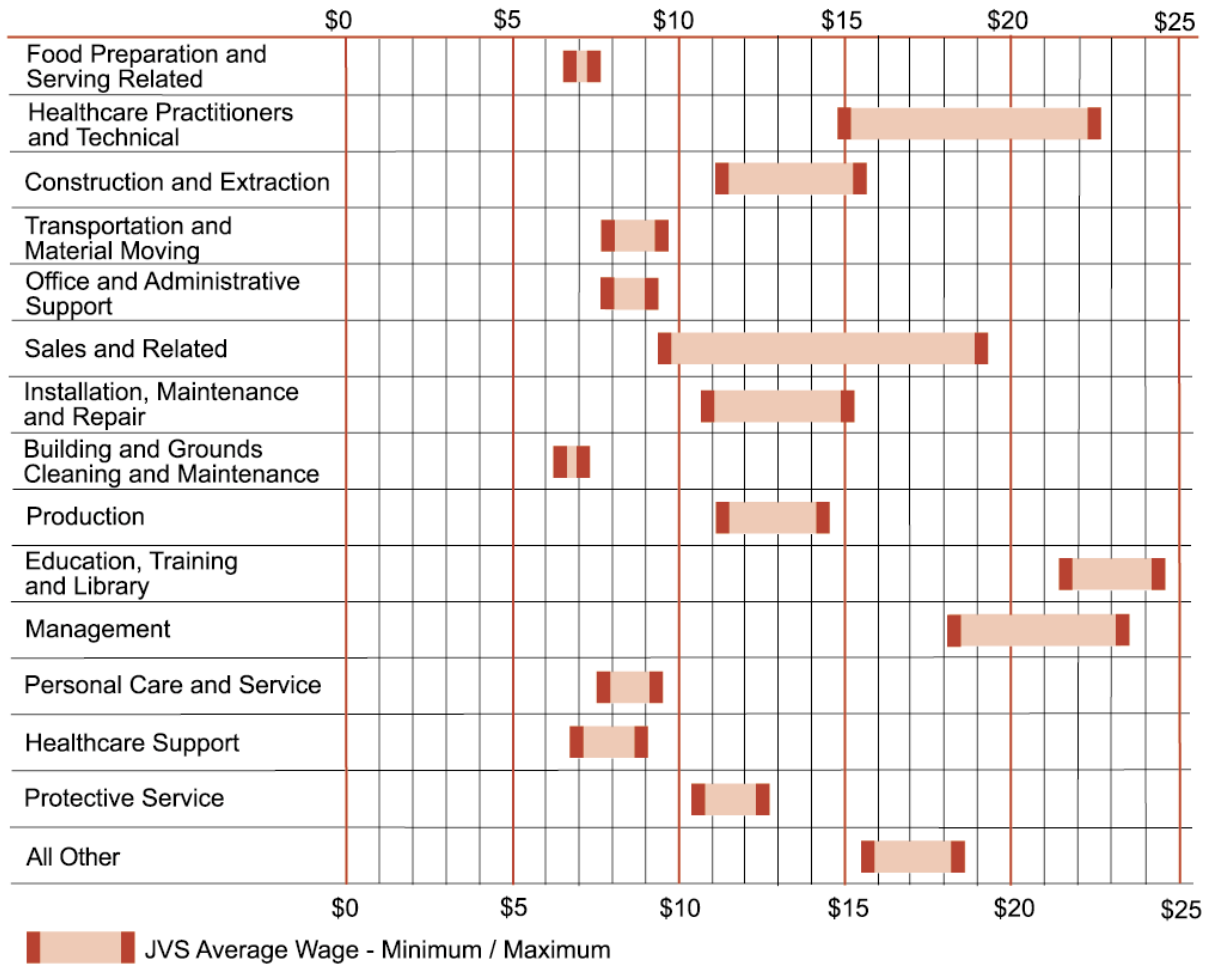
*Occupational Classification Manual 2000*. Not surprisingly, the most frequent occurrence of job vacancies fall into occupational groups most often associated with the largest industries in the region: Services, Retail Trade, and Construction.

**Figure 12: Estimated Vacancies by Major Occupational Groups**



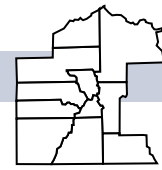


**Figure 13: Average Reported Wage by Major Occupational Groups**

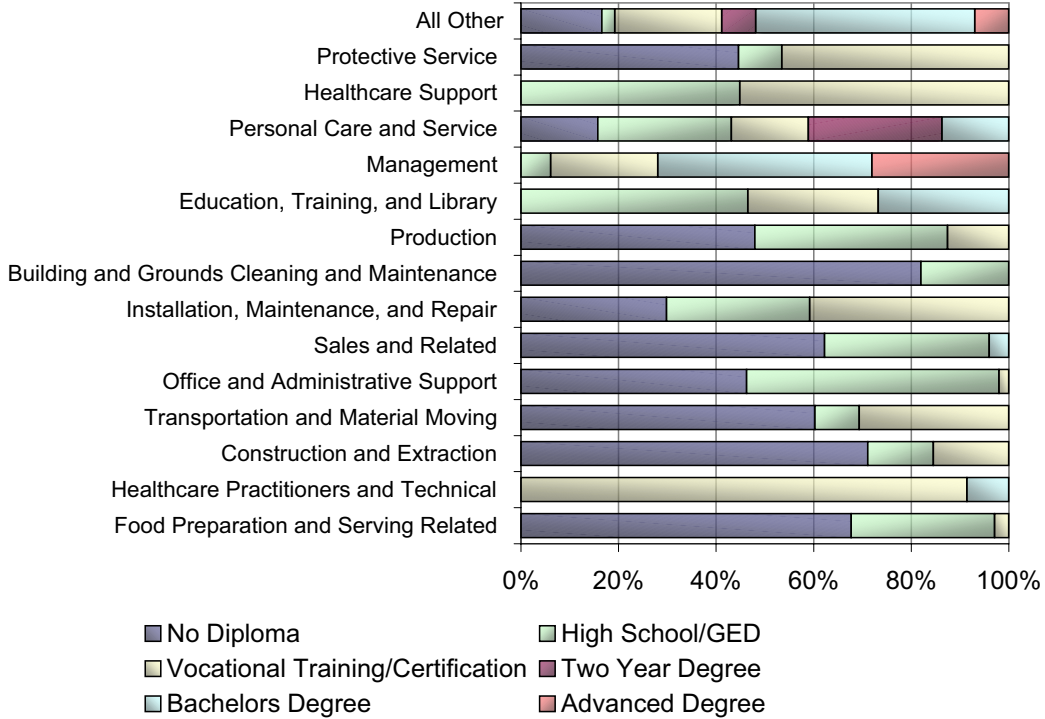


The results of the survey show that the most frequently occurring job vacancies are not necessarily offered the highest wages. This indicates that compensation for workers can be explained by the investigation of other vacancy characteristics. Figures 14 and 15 show the education and experience requirements to fill the position in the Major SOC Occupational Groups.

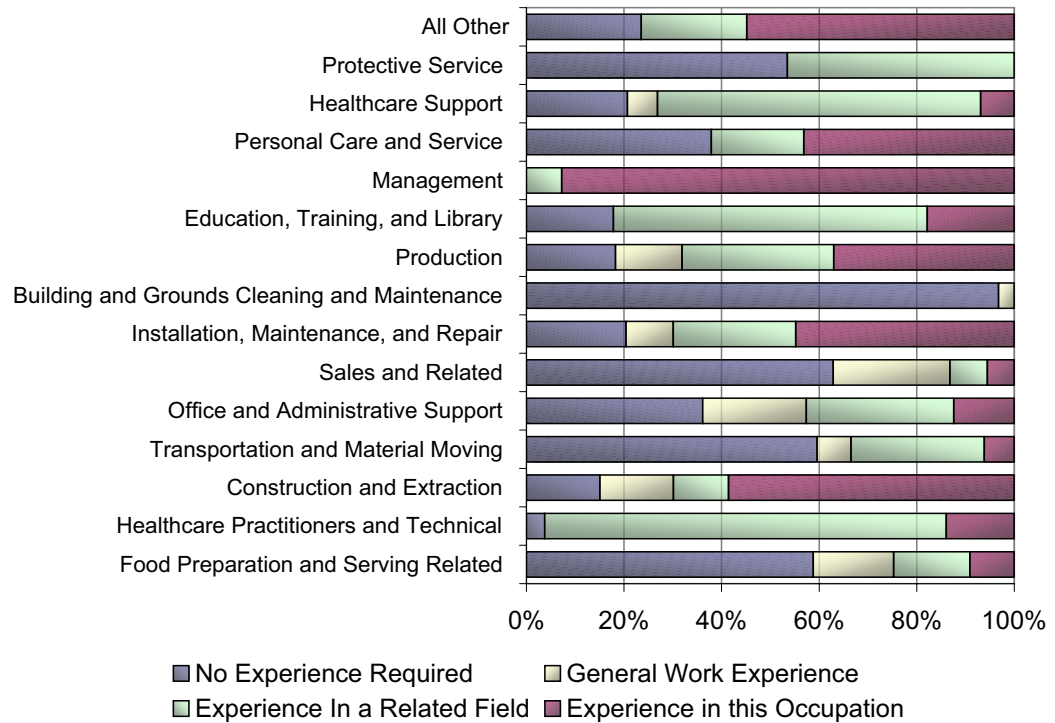
For example, vacancies in the Food Preparation and Serving Related occupations are the most frequently occurring, but are not offered the highest wages. Figures 14 and 15 show that vacancies in this occupation category have the second lowest education requirements and for the most part no experience requirements.



**Figure 14: Required Education by Major Occupational Groups**

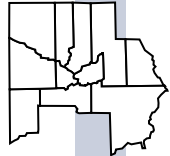


**Figure 15: Required Experience by Major Occupational Groups**



**Table 3: Occupations and Wages**

| SOC Code  | SOC Occupation Title   | Estimated Number of Vacancies | Average Wage Offered (nearest dime) | Occupational Employment Statistics Wage Data (2001) |         |             |                         |         |         |         |         |
|-----------|--|-------------------------------|-------------------------------------|---|---------|-------------|-------------------------|---------|---------|---------|---------|
|           |  |                               |                                     | Average Wages                                       |         |             | Percentile Distribution |         |         |         |         |
|           |  |                               |                                     | Entry-Level   | Overall | Experienced | 10th                    | 25th    | 50th    | 75th    | 90th    |
| 29-1111   | Registered Nurses  | 176                           | \$19.10                             | \$16.66   | \$20.26 | \$22.06     | \$15.48                 | \$17.96 | \$20.02 | \$22.79 | \$26.47 |
| * 37-2012 | Maids and Housekeeping Cleaners                                | 58                            | \$6.70                              | \$6.18  | \$8.13  | \$9.10      | \$5.84                  | \$6.72  | \$7.90  | \$9.44  | \$10.72 |
| 35-2011   | Cooks, Fast Food   | 50                            | \$8.20                              | \$5.85  | \$6.38  | \$6.64      | \$5.42                  | \$5.76  | \$6.32  | \$6.99  | \$7.95  |
| 53-3032   | Truck Drivers, Heavy and Tractor-Trailer                       | 46                            | \$13.30                             | \$10.39   | \$13.43 | \$14.94     | \$9.58                  | \$11.23 | \$12.87 | \$15.42 | \$17.39 |
| * 53-7199 | Material Moving Workers, All Other                             | 46                            | \$7.50                              | \$8.66  | \$13.21 | \$15.48     | \$7.99                  | \$9.87  | \$12.96 | \$16.34 | \$19.64 |
| * 35-9021 | Dishwashers  | 42                            | \$6.00                              | \$5.87  | \$7.23  | \$7.91      | \$5.67                  | \$6.35  | \$7.27  | \$8.09  | \$8.78  |
| 35-3031   | Waiters and Waitresses   | 40                            | \$6.20                              | \$5.83  | \$8.14  | \$9.29      | \$5.47                  | \$5.93  | \$6.69  | \$10.17 | \$12.92 |
| * 49-3023 | Automotive Service Technicians and Mechanics                   | 33                            | \$16.30                             | \$10.10   | \$17.36 | \$20.99     | \$8.74                  | \$11.74 | \$16.27 | \$21.25 | \$27.06 |
| 41-2011   | Cashiers   | 32                            | -----                               | \$5.83  | \$7.95  | \$9.00      | \$5.51                  | \$6.02  | \$7.00  | \$8.79  | \$13.44 |
| 25-3099   | Teachers and Instructors, All Other                            | 30                            | -----                               | -----   | -----   | -----       | -----                   | -----   | -----   | -----   | -----   |
| 35-3011   | Bartenders   | 30                            | \$6.20                              | \$5.88  | \$8.13  | \$9.25      | \$5.62                  | \$6.20  | \$7.31  | \$10.79 | \$12.53 |
| 49-9090   | Miscellaneous Installation, Maintenance, and Repair Workers    | 30                            | \$13.30                             | -----   | -----   | -----       | -----                   | -----   | -----   | -----   | -----   |
| 47-2181   | Roofers  | 27                            | -----                               | \$9.21  | \$12.41 | \$14.01     | \$8.68                  | \$10.11 | \$12.11 | \$14.20 | \$16.92 |
| * 11-1021 | General and Operations Managers                                | 25                            | -----                               | \$18.21   | \$36.06 | \$44.98     | \$15.91                 | \$21.20 | \$33.24 | \$48.47 | -----   |
| * 43-3071 | Tellers  | 25                            | \$8.60                              | \$8.43  | \$10.18 | \$11.06     | \$7.76                  | \$8.86  | \$10.00 | \$11.54 | \$13.08 |
| 47-2061   | Construction Laborers  | 25                            | \$9.70                              | \$8.11  | \$10.96 | \$12.38     | \$7.50                  | \$8.81  | \$10.69 | \$12.55 | \$13.72 |
| 47-3012   | Helpers--Carpenters  | 23                            | -----                               | \$8.67  | \$10.34 | \$11.17     | \$7.95                  | \$9.11  | \$10.34 | \$11.86 | \$13.18 |
| 35-9011   | Dining Room and Cafeteria Attendants and Bartender Helpers     | 22                            | \$5.90                              | \$5.85  | \$8.38  | \$9.65      | \$5.52                  | \$6.02  | \$7.39  | \$10.90 | \$12.57 |
| * 47-2073 | Operating Engineers and Other Construction Equipment Operators | 22                            | \$16.90                             | \$13.54   | \$17.42 | \$19.36     | \$12.35                 | \$14.70 | \$17.32 | \$20.27 | \$22.62 |
| * 41-9041 | Telemarketers  | 20                            | -----                               | \$6.58  | \$9.23  | \$10.56     | \$6.05                  | \$7.16  | \$8.51  | \$10.67 | \$13.39 |
| 29-2034   | Radiologic Technologists and Technicians                       | 18                            | \$18.40                             | \$14.74   | \$18.07 | \$19.73     | \$14.11                 | \$15.77 | \$18.12 | \$20.38 | \$22.31 |
| * 51-9199 | Production Workers, All Other                                  | 18                            | \$8.90                              | \$6.43  | \$9.72  | \$11.36     | \$5.96                  | \$7.01  | \$9.16  | \$11.54 | \$14.83 |
| 53-7064   | Packers and Packagers, Hand                                    | 18                            | \$6.70                              | \$5.93  | \$7.27  | \$7.94      | \$5.68                  | \$6.27  | \$7.11  | \$8.06  | \$9.37  |
| 29-2061   | Licensed Practical and Licensed Vocational Nurses              | 17                            | -----                               | \$10.05   | \$12.65 | \$13.95     | \$9.51                  | \$10.68 | \$12.25 | \$14.07 | \$16.59 |
| * 35-2021 | Food Preparation Workers                                       | 17                            | \$8.60                              | \$6.78  | \$8.62  | \$9.55      | \$6.21                  | \$7.20  | \$8.14  | \$9.91  | \$12.30 |
| * 31-9011 | Massage Therapists   | 16                            | \$6.50                              | \$9.09  | \$20.09 | \$25.60     | \$8.92                  | \$9.93  | \$13.21 | \$34.61 | \$39.88 |
| * 39-9011 | Child Care Workers   | 16                            | -----                               | \$6.00  | \$7.76  | \$8.64      | \$5.74                  | \$6.50  | \$7.56  | \$8.62  | \$10.32 |
| * 43-6014 | Secretaries, Except Legal, Medical, and Executive              | 16                            | -----                               | \$8.84  | \$12.64 | \$14.54     | \$8.36                  | \$10.01 | \$12.40 | \$15.21 | \$17.36 |
| * 17-2199 | Engineers, All Other   | 15                            | \$9.30                              | \$22.30   | \$32.81 | \$38.06     | \$20.49                 | \$25.44 | \$32.29 | \$40.04 | \$47.38 |
| 41-1010   | First-Line Supervisors/Managers, Sales Workers                 | 14                            | -----                               | -----   | -----   | -----       | -----                   | -----   | -----   | -----   | -----   |
| * 43-9061 | Office Clerks, General   | 14                            | -----                               | \$8.00  | \$11.39 | \$13.09     | \$7.18                  | \$8.95  | \$10.80 | \$13.35 | \$16.45 |
| 37-2011   | Housekeeping Cleaners  | 13                            | -----                               | \$6.59  | \$9.01  | \$10.21     | \$6.04                  | \$7.16  | \$8.89  | \$10.54 | \$12.54 |
| * 21-1021 | Child, Family, and School Social Workers                       | 12                            | -----                               | \$12.70   | \$17.87 | \$20.46     | \$11.54                 | \$14.11 | \$17.22 | \$20.93 | \$25.82 |
| * 39-9021 | Personal and Home Care Aides                                   | 12                            | -----                               | \$6.12  | \$7.60  | \$8.34      | \$5.81                  | \$6.64  | \$7.56  | \$8.45  | \$9.86  |
| * 43-4051 | Customer Service Representatives                               | 12                            | -----                               | \$8.78  | \$13.26 | \$15.50     | \$8.20                  | \$9.99  | \$12.67 | \$15.88 | \$19.50 |



**Table 3: Occupations and Wages - Page 2**

| SOC Code  | SOC Occupation Title  | Estimated Number of Vacancies | Average Wage Offered (nearest dime) | Occupational Employment Statistics Wage Data (2001) |         |             |                         |         |         |         |         |
|-----------|---|-------------------------------|-------------------------------------|---|---------|-------------|-------------------------|---------|---------|---------|---------|
|           |   |                               |                                     | Average Wages                                       |         |             | Percentile Distribution |         |         |         |         |
|           |   |                               |                                     | Entry-Level   | Overall | Experienced | 10th                    | 25th    | 50th    | 75th    | 90th    |
| 47-4011   | Construction and Building Inspectors  | 12                            | -----                               | \$11.20   | \$17.46 | \$20.58     | \$10.20                 | \$12.41 | \$18.30 | \$20.55 | \$24.67 |
| 33-9092   | Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers       | 11                            | -----                               |   |         |             |                         |         |         |         |         |
| 41-2031   | Retail Salespersons   | 11                            | -----                               | \$6.42  | \$8.63  | \$9.73      | \$5.93                  | \$6.90  | \$7.97  | \$9.59  | \$11.68 |
| 49-3090   | Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers | 11                            | -----                               |   |         |             |                         |         |         |         |         |
| 47-2071   | Operators   | 10                            | -----                               | \$11.41   | \$14.29 | \$15.73     | \$10.73                 | \$12.41 | \$14.66 | \$16.32 | \$17.37 |
| * 47-2111 | Electricians  | 10                            | -----                               | \$13.30   | \$20.42 | \$23.98     | \$11.92                 | \$15.36 | \$21.04 | \$25.15 | \$27.93 |
| 51-9190   | Miscellaneous Production Workers  | 10                            | \$18.00                             |   |         |             |                         |         |         |         |         |
| 25-2030   | Secondary School Teachers   | 9                             | -----                               |   |         |             |                         |         |         |         |         |
| * 31-1012 | Nursing Aides, Orderlies, and Attendants  | 9                             | -----                               | \$7.74  | \$9.72  | \$10.71     | \$7.33                  | \$8.42  | \$9.68  | \$10.95 | \$12.67 |
| * 39-9031 | Fitness Trainers and Aerobics Instructors                                       | 9                             | -----                               | \$8.08  | \$14.20 | \$17.25     | \$7.35                  | \$9.10  | \$12.73 | \$17.54 | \$24.88 |
| * 43-6011 | Executive Secretaries and Administrative Assistants                             | 9                             | -----                               | \$12.18   | \$16.37 | \$18.46     | \$11.40                 | \$13.34 | \$15.88 | \$19.05 | \$21.92 |
| 35-2014   | Cooks, Restaurant   | 8                             | -----                               | \$6.85  | \$8.94  | \$9.99      | \$6.36                  | \$7.43  | \$9.01  | \$10.38 | \$11.83 |
| 47-2070   | Construction Equipment Operators  | 8                             | -----                               |   |         |             |                         |         |         |         |         |
| * 11-9111 | Medical and Health Services Managers  | 7                             | -----                               | \$19.73   | \$29.35 | \$34.15     | \$17.86                 | \$22.12 | \$26.95 | \$34.33 | \$44.13 |
| 35-3041   | Food Servers, Nonrestaurant   | 7                             | -----                               | \$5.95  | \$7.75  | \$8.65      | \$5.73                  | \$6.42  | \$7.47  | \$9.01  | \$10.39 |
| 11-3031   | Financial Managers  | 6                             | -----                               | \$16.68   | \$31.19 | \$38.44     | \$15.62                 | \$19.84 | \$26.23 | \$38.60 | \$57.54 |
| 13-1051   | Cost Estimators   | 6                             | -----                               | \$15.19   | \$20.16 | \$22.64     | \$14.57                 | \$17.03 | \$19.93 | \$23.70 | \$26.85 |
| 15-1071   | Network and Computer Systems Administrators                                     | 6                             | -----                               | \$13.45   | \$20.00 | \$23.27     | \$10.33                 | \$16.35 | \$19.83 | \$24.89 | \$29.22 |
| 17-2071   | Electrical Engineers  | 6                             | -----                               | \$21.81   | \$29.06 | \$32.69     | \$19.84                 | \$23.71 | \$29.87 | \$33.25 | \$35.80 |
| 19-1020   | Biological Scientists   | 6                             | -----                               |   |         |             |                         |         |         |         |         |
| * 21-1013 | Marriage and Family Therapists  | 6                             | -----                               | \$12.82   | \$15.71 | \$17.16     | \$11.75                 | \$13.83 | \$15.55 | \$17.49 | \$20.35 |
| 21-2099   | Religious Workers, All Other  | 6                             | -----                               |   |         |             |                         |         |         |         |         |
| 27-1023   | Floral Designers  | 6                             | -----                               | \$6.50  | \$8.86  | \$10.04     | \$5.91                  | \$7.14  | \$8.93  | \$10.57 | \$12.22 |
| 31-9090   | Miscellaneous Healthcare Support Occupations                                    | 6                             | -----                               |   |         |             |                         |         |         |         |         |
| 33-2020   | Fire Inspectors   | 6                             | -----                               |   |         |             |                         |         |         |         |         |
| * 33-9011 | Animal Control Workers  | 6                             | -----                               | \$7.14  | \$11.51 | \$13.69     | \$6.11                  | \$8.31  | \$11.56 | \$14.21 | \$17.23 |
| 35-2015   | Cooks, Short Order  | 6                             | -----                               | \$6.43  | \$7.61  | \$8.20      | \$5.88                  | \$6.84  | \$7.61  | \$8.36  | \$9.67  |
| * 39-9032 | Recreation Workers  | 6                             | -----                               | \$6.61  | \$9.38  | \$10.76     | \$6.05                  | \$7.12  | \$8.46  | \$10.71 | \$14.32 |
| 41-2010   | Cashiers  | 6                             | -----                               |   |         |             |                         |         |         |         |         |
| * 41-2021 | Counter and Rental Clerks   | 6                             | -----                               | \$5.90  | \$8.85  | \$10.32     | \$5.71                  | \$6.38  | \$7.82  | \$10.04 | \$13.80 |
| 41-3041   | Travel Agents   | 6                             | -----                               | \$9.29  | \$10.24 | \$10.72     | \$8.84                  | \$9.31  | \$10.08 | \$10.86 | \$12.85 |
| 41-3099   | Sales Representatives, Services, All Other                                      | 6                             | -----                               | \$11.73   | \$12.88 | \$13.46     | \$10.95                 | \$11.45 | \$12.29 | \$13.12 | \$18.20 |
| 43-1011   | First-Line Supervisors/Managers of Office and Administrative Support Workers    | 6                             | -----                               | \$10.36   | \$15.91 | \$18.69     | \$9.47                  | \$11.84 | \$15.55 | \$19.06 | \$21.49 |
| 43-4081   | Hotel, Motel, and Resort Desk Clerks  | 6                             | -----                               | \$6.86  | \$8.44  | \$9.22      | \$6.31                  | \$7.28  | \$8.46  | \$9.73  | \$10.50 |
| * 43-4141 | New Accounts Clerks   | 6                             | -----                               | \$9.19  | \$11.05 | \$11.98     | \$8.76                  | \$9.70  | \$11.20 | \$12.53 | \$13.33 |
| * 43-4171 | Receptionists and Information Clerks  | 6                             | -----                               | \$7.81  | \$10.49 | \$11.83     | \$7.16                  | \$8.65  | \$10.32 | \$12.35 | \$14.08 |

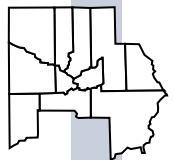
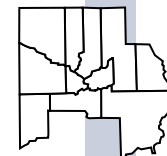


Table 3: Occupations and Wages - Page 3

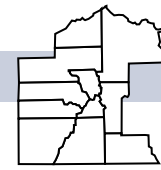
| SOC Code  | SOC Occupation Title  | Estimated Number of Vacancies | Average Wage Offered (nearest dime) | Occupational Employment Statistics Wage Data (2001) |         |             |                         |         |         |         |         |
|-----------|---|-------------------------------|-------------------------------------|---|---------|-------------|-------------------------|---------|---------|---------|---------|
|           |   |                               |                                     | Average Wages                                       |         |             | Percentile Distribution |         |         |         |         |
|           |   |                               |                                     | Entry-Level   | Overall | Experienced | 10th                    | 25th    | 50th    | 75th    | 90th    |
| * 45-2093 | Farmworkers, Farm and Ranch Animals                                 | 6                             | -----                               | \$5.84  | \$8.02  | \$9.11      | \$5.56                  | \$6.14  | \$7.41  | \$9.70  | \$11.73 |
| 47-2031   | Carpenters  | 6                             | -----                               | \$15.61   | \$20.08 | \$22.31     | \$13.85                 | \$17.31 | \$19.51 | \$21.92 | \$28.02 |
| * 47-2151 | Pipelayers  | 6                             | -----                               | \$10.07   | \$13.79 | \$15.65     | \$9.36                  | \$10.83 | \$13.11 | \$16.60 | \$19.77 |
| * 47-2152 | Plumbers, Pipefitters, and Steamfitters                             | 6                             | -----                               | \$11.78   | \$18.25 | \$21.49     | \$10.36                 | \$13.50 | \$17.62 | \$22.73 | \$26.45 |
| * 47-3013 | Helpers--Electricians   | 6                             | -----                               | \$10.60   | \$15.02 | \$17.23     | \$8.64                  | \$12.38 | \$15.31 | \$18.39 | \$20.34 |
| 47-4051   | Highway Maintenance Workers   | 6                             | -----                               | \$11.23   | \$17.44 | \$20.54     | \$10.48                 | \$11.97 | \$14.54 | \$24.50 | \$27.50 |
| * 47-4071 | Septic Tank Servicers and Sewer Pipe Cleaners                       | 6                             | -----                               | \$9.52  | \$14.35 | \$16.77     | \$9.16                  | \$10.20 | \$12.68 | \$18.00 | \$22.06 |
| 51-1011   | First-Line Supervisors/Managers of Production and Operating Workers | 6                             | -----                               | \$11.28   | \$19.68 | \$23.88     | \$9.99                  | \$12.84 | \$17.49 | \$24.96 | \$32.39 |
| * 51-3011 | Bakers  | 6                             | -----                               | \$8.18  | \$12.39 | \$14.50     | \$7.49                  | \$9.10  | \$11.97 | \$14.70 | \$16.40 |
| * 53-2099 | Air Transportation Workers, All Other                               | 6                             | -----                               | \$8.34  | \$12.03 | \$13.87     | \$7.57                  | \$8.88  | \$10.41 | \$15.54 | \$17.57 |
| 53-3033   | Truck Drivers, Light or Delivery Services                           | 6                             | -----                               | \$9.03  | \$13.15 | \$15.21     | \$8.47                  | \$9.76  | \$11.70 | \$14.04 | \$23.59 |

\* OES wages reported for Colorado statewide

----- No wage data available





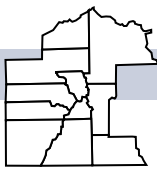


**Table 4: Occupations and Wages (Fewer than 5 Vacancies)**

| SOC Code  | SOC Occupation Title  | Occupational Employment Statistics Wage Data (2001) |               |             |          |                         |          |          |          |      |
|-----------|---|---|---------------|-------------|----------|-------------------------|----------|----------|----------|------|
|           |   | Entry-Level   | Average Wages |             |          | Percentile Distribution |          |          |          |      |
|           |   |   | Overall       | Experienced |          | 10th                    | 25th     | 50th     | 75th     | 90th |
| * 43-4181 | Reservation and Transportation Ticket Agents and Travel Clerks        | \$8.77  | \$12.18       | \$13.89     | \$8.09   | \$9.38                  | \$11.41  | \$13.95  | \$18.70  |      |
| 49-9042   | Maintenance and Repair Workers, General                               | \$7.52  | \$12.25       | \$14.61     | \$7.19   | \$7.95                  | \$11.25  | \$16.48  | \$19.75  |      |
| 49-9043   | Maintenance Workers, Machinery  | \$9.85  | \$15.55       | \$18.39     | \$8.17   | \$10.69                 | \$16.61  | \$19.51  | \$21.20  |      |
| 53-7051   | Industrial Truck and Tractor Operators                                | \$7.62  | \$10.14       | \$11.39     | \$6.85   | \$8.60                  | \$9.77   | \$10.89  | \$13.74  |      |
| * 41-9099 | Sales and Related Workers, All Other                                  | \$9.19  | \$19.97       | \$25.36     | \$7.82   | \$10.92                 | \$16.21  | \$26.73  | \$39.25  |      |
| 43-5050   | Postal Service Workers  | -----   | -----         | -----       | -----    | -----                   | -----    | -----    | -----    |      |
| * 47-2161 | Plasterers and Stucco Masons  | \$11.11   | \$13.91       | \$15.31     | \$10.52  | \$11.89                 | \$13.74  | \$15.97  | \$18.01  |      |
| * 51-4041 | Machinists  | \$10.15   | \$15.20       | \$17.72     | \$9.06   | \$11.55                 | \$15.03  | \$18.68  | \$21.41  |      |
| 51-4121   | Welders, Cutters, Solderers, and Brazers                              | \$9.40  | \$13.82       | \$16.03     | \$8.95   | \$9.77                  | \$11.44  | \$15.83  | \$23.58  |      |
| 11-3061   | Purchasing Managers   | \$16.94   | \$24.07       | \$27.63     | \$13.36  | \$18.82                 | \$21.48  | \$30.82  | \$35.42  |      |
| * 11-9051 | Food Service Managers   | \$10.95   | \$17.97       | \$21.48     | \$10.16  | \$12.26                 | \$15.92  | \$20.19  | \$26.69  |      |
| * 11-9199 | Managers, All Other   | \$20.40   | \$32.71       | \$38.86     | \$18.31  | \$24.22                 | \$31.81  | \$41.03  | \$50.77  |      |
| * 13-2011 | Accountants and Auditors  | \$16.00   | \$23.66       | \$27.48     | \$14.60  | \$17.64                 | \$21.61  | \$27.78  | \$37.30  |      |
| 15-1099   | Computer Specialists, All Other                                       | \$17.62   | \$24.20       | \$27.48     | \$17.28  | \$18.93                 | \$21.70  | \$29.88  | \$36.02  |      |
| 23-2090   | Miscellaneous Legal Support Workers                                   | -----   | -----         | -----       | -----    | -----                   | -----    | -----    | -----    |      |
| * 25-1122 | Communications Teachers, Postsecondary                                | \$45,550  | \$31,700      | \$52,470    | \$28,160 | \$36,480                | \$43,430 | \$54,730 | \$68,360 |      |
| 25-2040   | Special Education Teachers  | -----   | -----         | -----       | -----    | -----                   | -----    | -----    | -----    |      |
| 25-9099   | Education, Training, and Library Workers, All Other                   | -----   | -----         | -----       | -----    | -----                   | -----    | -----    | -----    |      |
| 27-1024   | Graphic Designers   | \$8.47  | \$11.59       | \$13.15     | \$7.83   | \$9.00                  | \$10.83  | \$13.97  | \$16.61  |      |
| * 27-3041 | Editors   | \$11.91   | \$18.94       | \$22.46     | \$11.21  | \$13.07                 | \$16.64  | \$23.41  | \$31.01  |      |
| * 29-2056 | Veterinary Technologists and Technicians                              | \$9.23  | \$12.11       | \$13.55     | \$8.87   | \$9.88                  | \$11.67  | \$13.59  | \$16.01  |      |
| * 31-9096 | Veterinary Assistants and Laboratory Animal Caretakers                | \$6.81  | \$9.82        | \$11.32     | \$6.19   | \$7.31                  | \$8.39   | \$10.18  | \$13.09  |      |
| * 33-9032 | Security Guards   | \$8.24  | \$10.84       | \$12.14     | \$7.49   | \$8.87                  | \$10.02  | \$11.68  | \$16.59  |      |
| * 35-3022 | Counter Attendants, Cafeteria, Food Concession, and Coffee Shop       | \$5.92  | \$7.37        | \$8.10      | \$5.67   | \$6.25                  | \$7.23   | \$8.36   | \$9.81   |      |
| * 35-9031 | Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop              | \$5.84  | \$7.18        | \$7.86      | \$5.56   | \$6.14                  | \$7.19   | \$8.13   | \$8.82   |      |
| * 41-3011 | Advertising Sales Agents  | \$10.57   | \$19.56       | \$24.06     | \$9.46   | \$12.12                 | \$15.69  | \$21.29  | \$37.16  |      |
| 43-5030   | Dispatchers   | -----   | -----         | -----       | -----    | -----                   | -----    | -----    | -----    |      |
| * 43-5032 | Dispatchers, Except Police, Fire, and Ambulance                       | \$10.16   | \$14.60       | \$16.82     | \$9.26   | \$11.33                 | \$14.21  | \$17.20  | \$20.88  |      |
| * 43-5081 | Stock Clerks and Order Fillers  | \$7.43  | \$11.39       | \$13.37     | \$7.03   | \$8.24                  | \$10.46  | \$14.34  | \$17.52  |      |
| * 47-2051 | Cement Masons and Concrete Finishers                                  | \$9.81  | \$14.36       | \$16.63     | \$9.06   | \$10.86                 | \$14.27  | \$17.43  | \$20.33  |      |
| * 47-2211 | Sheet Metal Workers   | \$10.60   | \$16.54       | \$19.51     | \$9.60   | \$11.94                 | \$15.67  | \$21.31  | \$25.63  |      |
| * 47-3015 | Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters          | \$10.23   | \$13.14       | \$14.59     | \$9.44   | \$11.02                 | \$12.79  | \$15.34  | \$17.73  |      |
| * 47-5021 | Earth Drillers, Except Oil and Gas                                    | \$11.33   | \$15.94       | \$18.25     | \$10.81  | \$12.07                 | \$14.53  | \$19.51  | \$24.89  |      |
| * 47-5051 | Rock Splitters, Quarry  | \$10.77   | \$14.04       | \$15.67     | \$9.95   | \$11.35                 | \$12.68  | \$15.00  | \$17.47  |      |
| 49-3020   | Automotive Technicians and Repairers                                  | -----   | -----         | -----       | -----    | -----                   | -----    | -----    | -----    |      |
| 49-9021   | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | \$13.06   | \$17.33       | \$19.47     | \$12.27  | \$13.81                 | \$18.02  | \$20.18  | \$21.47  |      |
| * 49-9052 | Telecommunications Line Installers and Repairers                      | \$10.78   | \$16.26       | \$18.99     | \$9.86   | \$11.98                 | \$14.81  | \$18.95  | \$25.65  |      |
| 49-9098   | Helpers--Installation, Maintenance, and Repair Workers                | \$7.15  | \$10.32       | \$11.90     | \$6.70   | \$7.52                  | \$8.48   | \$13.94  | \$16.50  |      |
| * 51-5023 | Printing Machine Operators  | \$9.92  | \$15.19       | \$17.83     | \$9.08   | \$11.03                 | \$14.38  | \$18.84  | \$23.70  |      |
| 53-3041   | Taxi Drivers and Chauffeurs   | \$7.15  | \$10.47       | \$12.13     | \$6.63   | \$8.00                  | \$11.19  | \$12.62  | \$13.48  |      |
| 53-3099   | Motor Vehicle Operators, All Other                                    | \$7.10  | \$12.24       | \$14.80     | \$6.52   | \$7.67                  | \$11.70  | \$16.79  | \$20.35  |      |

\* OES wages reported for Colorado statewide

----- 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 Part-time 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.

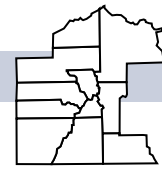
**E**—“Is medical insurance offered?” In addition, the revised survey prompted for the portion (if any) that the firm contributed. To better understand the relationship between types of positions, pay, vacancies, and the existence of medical insurance, it was important to note to what degree the firm 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 Western & Southwest region and 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 firms used for this survey, with their contact information, staff size and industry classification was obtained from the American Labor Market Information System (ALMIS) database.

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

### **Stratifications**

Employers with at least 60 employees are referred to as “large employers.” They account for about 30% of the employment in the sample universe. Firms employing between 5 and 59 individuals are considered “small to mid-size employers,” and account for the remaining 70% of the sample universe employment. Attempts were made to contact all large and government employers. The small to mid-size employers were then stratified into Goods producing and Service producing industries based on the 1987 Standard Industrial Classification Manual. The lists of small to mid-sized employers were randomized and a sample of sufficient size to achieve a predictable level of accuracy for the estimates of job vacancies was taken.

### **Data Editing**

After data collection was completed, a few measures were taken to prepare data for analysis.

### **Data Cleaning**

In cases where a job title was reported without a number of vacancies associated with it, it was assumed that only one vacancy was open for hire. However, this vacancy was used only in calculation of total number of vacancies with no further break down such as full-time or part-time, etc.

### **Occupational Coding**

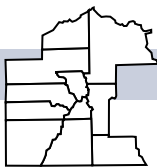
Job title and descriptions were used to match the vacancy with the appropriate Standard Occupational Classification. In some cases a second interview with the employer was necessary to decide on a specific occupational title.

### **Wage Conversion**

Standard conversions were used to convert salaries into hourly wages: 2,080 hours for annual salaries, 173.3 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.

Average wages are calculated based on the mid-point of the reported minimum and maximum that employers were offering to fill a vacancy at the time of the survey.



## 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.

### 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](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).