Northwest \& Rural Resort Reg Vacancy Survey Winter 2004


Labor \& Employment

Contents
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Introduction

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

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

The CDLE's survey unit collects original data by conducting phone interviews with a representative sample of employers in a given region. The department's economists analyze the raw data, estimate the number of

Figure 1: Colorado Job Vacancy Survey Regions

vacancies in the area and publish the report within weeks of the original data collection, providing a timely portrait of the employment situation.

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

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

## 2 Executive Summary

## This Northwest \& Rural Resort Job Vacancy

 Survey (JVS) was conducted from January 28th through February 12th, 2004. The survey provides a reliable estimate of the total number of job vacancies in the region while also reporting useful information about the available positions. A representative sample of the region's employers is contacted over the survey period to gain timely and relevant information about current hiring activity.A total of 1,245 employers, representing $38 \%$ of the region's total employment responded to the survey. Of these, 179 are Government agencies, 65 are large employers and 1,001 are small to mid-size entities. The survey had an $83.5 \%$ response rate, while the cooperation rate was $99.4 \%$. The margin of error for the overall vacancy estimate is plus or minus $3.9 \%$, or about 39 vacancies.

## Major Findings of Survey:

An estimated 1,020 jobs were available for hire during the survey period, coinciding with a $0.9 \%$ vacancy rate. At this time last year, 676 vacancies were estimated.

- Leisure \& Hospitality, one of six JVS Industry sectors, offers 340 estimated vacancies. The fewest vacancies are estimated for the Goods-Producing sector with the other four showing estimated vacancies around 150 per sector.
- The average reported wage for vacancies in this survey is $\$ 13.10$ per hour. .Page 8
$\checkmark$ Thirteen percent of the employers surveyed report at least one job vacancy. ........Page 10
- Seventy-eight percent of the reported openings are permanent, full-time positions.
$\checkmark$ Forty percent of the reported job vacancies require educational attainment beyond the high school/GED level.

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Either related or occupation specific experience is required for $77 \%$ of the job vacancies.

- A majority of the vacancies have been open for less than 30 days. Employers are experiencing more difficulty in filling open positions than at this time last year.
- Food Preparation \& Serving Related occupations are the most frequently reported of 22 major occupational groups covered in the survey..


## Regional Information

## The Northwest \& Rural Resort (NW\&RR)

Region encompasses a vast geographic area rich in environmental wealth and serving as the primary tourist destination for the state. Much of the region's labor force works in tourism related business with the Leisure \& Hospitality industries employing more people than any other.

Twelve counties make up the NW\&RR Region. More than $40 \%$ of the region's employment and population is concentrated in Eagle and Garfield counties. Although Eagle was the fastest growing in terms of population
over the 1990-2000 decade, Garfield County has grown at a higher rate, $2.8 \%$, from 2001 to $2002 .{ }^{1}$ Summit and Routt counties each account for more than $11 \%$ of the total region-wide employment. While Summit represents $12 \%$ of the population, Routt is home to only $10 \%$ indicating that businesses like the Steamboat Springs ski area may provide many jobs for people living outside of the county. Pitkin, Gilpin, and Clear Creek with their tourist attractions all support a larger proportion of the region's employment than population. Grand, Jackson, and Rio Blanco have about equal proportions of employment and population, whereas Lake and Moffat counties host a larger percent of the population than employment.

Figure 2: Employment by County for February 2004


Source: CDLE, Local Area Unemployment Statistics, Released March 2004

## 4 Regional Information -continued

The number of estimated vacancies is the highest level recorded for a winter survey in the Northwest \& Rural Resort Region. While all subsequent surveys have shown estimated job vacancy levels below those of the 1st survey in Summer 2001, Winter 2004 results show an upturn in vacancies for a winter survey, the traditionally weaker hiring period. Should the negative trend still be intact, one would expect to see Winter 2004 vacancies below those of Winter 2003. Fewer job openings are found in the winter when compared to the summer as employers have already taken on staff for the ski season. Employers begin posting positions for the peak winter employment period during the summer survey, thus summer vacancies are higher than winter.

Figure 3: Historical Vacancies-Northwest \& Rural Resort Region


Source: CDLE, Local Area Unemployment Statistics, Released March 2004

Figure 4 illustrates the historical progression of both the Northwest \& Rural Resort's labor force and employment levels. The slightly positive trend illustrates growth in both the labor force and employment over time. The region's labor force has grown at $1.6 \%$ while employment has experienced a compound annual growth rate of $1.4 \%$ per year from February of 1999 to February of 2004. The net growth in the labor force over the five-year period is about $8 \%$.

The Job Vacancy Survey is conducted semi-annually in winter and summer in order to measure the demand for labor at peak employment periods. Outdoor recreation based tourism and construction, major components in the area's economy, heavily influence the seasonal fluctuations evident in the graph. Notice the high peaks that start in December each year and continue through March, coinciding with the winter snow-ski season. Then after a lull, labor force and employment levels experience a smaller summer peak in July and August, reflecting summer tourism and activity in the construction industry.

Figure 4 also provides an illustration of unemployment, represented by the gap between the labor force and the employment lines; the greater the distance between the two lines, the higher the number of unemployed.

The unemployment rate tends to peak in May each year, then falls through late summer as the labor force thins and employers hire construction and tourism-related workers for the summer. As the labor force grows steeply again in the late fall in anticipation of hiring for the ski season, there is a short-term rise in unemployment until employers actually take up the slack and hire these workers in November and December.

Figure 5: Northwest \& Rural Resort Region Unemployment Rate Trend
(Not Seasonally Adjusted)


$$
\begin{array}{cccccccccccc}
\text { Jan- Apr July Oct Jan- Apr July Oct Jan- Apr July } & \text { Oct Jan- Apr } & \text { July } & \text { Oct Jan- Apr July } & \text { Oct Jan- } \\
99 & 00 & 01 & 02 & 03 & 04
\end{array}
$$

Source: CDLE, Local Area Unemployment Statistics, Released March 2004


Figure 7: Northwest \& Rural Resort Region Employers and Employees, 1st Quarter, 2003

of the region's employment in the summer; last summer it accounted for $30 \%$ of total employment. The GoodsProducing sector moved from the 3rd most prominent ( $17 \%$ of employment) to 5 th ( $12 \%$ of employment). However, employers' proportional representation in the region was the same for the two periods. To illustrate, ski resorts remain registered businesses throughout the year, though their number of employees swings dramatically with the seasons.

- The region's focus on tourism supports high employment in Leisure \& Hospitality throughout the year.
- Retail trade is the dominant component of the Trade, Transportation, Utilities, \& Other Services sector, and is influenced by the fluctuations in tourism that drive the Leisure \& Hospitality JVS sector.
- Agriculture, Forestry, Fishing and Hunting; Mining; Manufacturing; and Construction are all components of the Goods-Producing sector. Employment and activity peak in the summer when the weather favors construction.


## - Information, Financial Activities \& Professional \& Business Services

 include employment services and services to buildings and dwellings.- Government entities are defined based on ownership that may be federal, state or local. In NW\&RR, these organizations perform functions in construction, mining, transportation, information, education and health services and other areas in addition to public administration.
-Finally, the Education \& Health Services industry accounts for a relatively small portion of employment in the region. Since many organizations categorized as Educational Services, including public schools, fall under Government ownership, health care organizations dominate this JVS sector. Ambulatory Health Care Services account for more employers and employment than any other subcategory, and are dispersed throughout the region to meet the needs of population centers.

First quarter 2003 data reveals that $36 \%$ of the region's employment is in Leisure \& Hospitality. This JVS sector constitutes a smaller proportion

The winter survey highlights a period in the labor market when employment is still in the seasonal peak, and hiring activity is less than that seen in the summer. This survey reflects on-going year-round demand for labor that is not as closely tied to seasonal tourism.

The Job Vacancy Survey is designed to reflect hiring activity by industry groups. In this survey, most job openings are in the Leisure \& Hospitality JVS sector. This group of industries has more than twice the number of vacancies of any other sector. With a vacancy rate of $0.8 \%$, there are 8 job openings for every 1,000 positions in this sector. Seventynine percent of reported Leisure \& Hospitality vacancies are with Accommodation businesses. All other reported vacancies in this sector are classified as either Amusement, Gambling, \& Recreation Industries (15\%), or Food Services and Drinking Places (6\%).

Trade, Transportation, Utilities \& Other Services has 158 estimated vacancies, with a vacancy rate that translates to eight vacancies for every 1,000 positions. Vacancies are reported by firms representing the myriad detailed industries within this JVS sector. Building Material \& Garden Equipment \& Supplies Dealers represent the largest proportion, $29 \%$, of total vacancies in the sector.

Education \& Health Services; Information, Financial Activities \& Professional \& Business Services; and Government each represent between 14 and $15 \%$ of total estimated job vacancies. Of all six JVS sectors, Education \& Health Services has the highest vacancy rate at $1.5 \%$. This indicates higher job growth and/or turnover for this industry group. Seventy-eight percent of reported Education \& Health Services job vacancies are concentrated in hospitals.

## 9 Survey FindingS Estimated Vacancies: JVS Sectors and Employer Size - continued

Information, Financial Activities \& Professional \& Business Services also has a relatively high vacancy rate with approximately 11 job openings for every 1,000 positions. Forty-six percent of reported vacancies in this sector are in Real Estate firms.

The Government JVS sector has a $1.1 \%$ vacancy rate, and is among the top three sectors in terms of relative job demand. Fifty-five percent of Government vacancies are reported by institutions involved in Executive, Legislative, \& Other General Government Support.

The fewest job vacancies are found in Goods-Producing firms, this group also has the lowest vacancy rate, $0.7 \%$. Specialty Trade Contractors
offer $52 \%$ of the job vacancies reported in this JVS sector; indeed, $72 \%$ of the vacancies are in Construction, with few opportunities in Mining and Manufacturing.

While strong or weak demand for labor in an industry puts pressure on wages, specific occupations within an industry category along with their pay play a major role in determining the average wage offered in a JVS sector. Wages offered to an executive secretary will be similar whether the position is with a government agency, healthcare system or retail chain.

Figure 9: Reported Average Wage Ranges by JVS Sectors


## 10 Survey Findings Estimated Vacancies: Jvs Sectors and Employer Size -continued

In this survey, $57 \%$ of large employers, $24 \%$ of Government and $18 \%$ of small to mid-size employers had at least one job vacancy to report. Overall, 13 out of every 100 employers in the region have at least one open position.

Of all reported job vacancies, $55 \%$ are with small to mid-size businesses. They represent $95 \%$ of sample frame employers and $64 \%$ of employment. The types of businesses offering open positions in this employer size category are:

- Education \& Health Services (23\%)
- Leisure \& Hospitality ( $23 \%$ )
- Information, Financial Activities, \& Professional \& Business Services (20\%)
- Goods-Producing (17\%)
- Trade, Transportation, Utilities, \& Other Services (17\%)

Large employers represent $23 \%$ of current employment, but are offering about $30 \%$ of the job openings. A majority ( $62 \%$ ) of the vacancies for this employer size group are with Leisure \& Hospitality businesses. Vacancies are also reported for each of the other non-Government JVS Sectors.

Thirteen percent of current employment and $14 \%$ of reported job vacancies are found in Government entities. There are no job vacancies reported by federal agencies during the survey period. Eighty-seven percent of Government vacancies are with local governments, and $13 \%$ with state run institutions.

Government job opportunities are offering the highest average wage and represent the widest wage range. The bulk of these positions are for Office \& Administrative occupations. Job vacancies with Leisure \& Hospitality businesses make up the lower end of the wage ranges for both small to mid-size and large private firms, this JVS sector accounts for $70 \%$ of the wage information for large employers and $35 \%$ for Small to Mid-Size business vacancies.

Figure 10: Estimated Vacancies and Average Wages by Employer Size


Figure 11: Reported Average Wage Ranges by Employer Size


## Survey Findings

The remainder of this report provides descriptive statistics of the vacancies reported in and unique to this survey. The survey design does not allow for application of this detail to the region as a whole; however, it can be used to understand characteristics of those job vacancies and occupations reported.

Figure 12: Vacancies by Employment Status


The majority of open positions are full-time/permanent. Vacancies are reported by employers representing each of the 6 JVS Sectors for both full-time/permanent and part-time permanent positions. Fulltime/Temporary positions are available with Leisure \& Hospitality businesses and Government institutions. Only one part-time/temporary position is reported.

Average wage ranges are narrow for all employment status categories, even though there are diverse occupations within these categories. Frequently reported occupations with wage information in the full-time permanent category are Office \& Administrative Support, Healthcare

Figure 13: Reported Average Wage Ranges by Employment Status


Practitioner \& Technical, and Food Preparation \& Serving Related occupations. Average wages reported for these vacancies range from a low of $\$ 9$ to a high of $\$ 23$; when averaging all full-time/permanent vacancies the wage range narrows with a low of $\$ 13.30$ and a high of $\$ 15.70$. There are 13 other major occupations represented by this status category offering a broad spectrum of wages.

The wage range for full-time/temporary positions in this survey reflects wages offered to Food Preparation \& Serving Related workers on the low end, while vacancies for Architecture \& Engineering positions raise the average maximum wage.

Part-time/permanent openings represent a wide range of occupations and the wages associated with them. Management jobs are at the high end while Food Preparation \& Serving Related occupations represent the lowest average wage offered.


Figure 15: Reported Average Wage Ranges by Education


Assessing labor demand in terms of education and experience requirements provides valuable labor market information. About $81 \%$ of reported job vacancies have information on the education and experience requirements of surveyed employers.

Sixty percent of the vacancies reported in this survey require a high school diploma or less. These education requirements are primarily reflective of the employment demands of the Leisure \& Hospitality sector.

Figure 15 illustrates that wages offered tend to be correlated with educational attainment-higher levels of education command higher wages. Following are details of the occupations demanded and the wages offered for vacancies grouped by education required:

Advanced Degree: Job vacancies in three major occupational groups required advanced degrees: Healthcare Practitioner \& Technical; Management; and Community \& Social Services. Wage information is reported for only $20 \%$ of the vacancies in this category, so the range shown is not reflective of all vacancies in this group.
Bachelor's Degree: Most vacancies requiring a bachelor's degree are in Management occupations followed by Healthcare
Practitioner \& Technical jobs. Six other major occupational groups are represented by vacancies in this educational category.
Reported Education, Training \& Library vacancies pay the lowest wages while Architecture \& Engineering openings offer the highest wages.
Two-Year Degree: Vacancies requiring two-year degrees fall into eight different major occupational groups. Healthcare Practitioner \& Technical roles are reported most often. These Healthcare Practitioner \& Technical vacancies offer the highest wages for candidates meeting this educational requirement while Community and Social Service job vacancies pay on the low end of the scale.

## 13 Survey Findings vacancies: Employment Status, Education and Experience Requirements-continued

Vocational Training/Certification: Seventeen of the 22 major occupational groups represent vacancies for which employers require vocational training or certification. Forty-one percent of these are classified as Healthcare Practitioner \& Technical, which offer the highest earning power while Food Preparation \& Serving Related job vacancies pay the lowest wages.

High-School/GED: Eighteen occupational groups represent the vacancies requiring a high school diploma or GED. Office \& Administrative Support positions provide the greatest number of job opportunities during the survey period. The opportunities in Production and Management
occupations, while limited, offer higher earnings potential. Personal Care \& Service job openings offer the lowest wages for vacancies requiring a High School diploma or GED.

No Diploma: Employers reported that no educational diploma is required for $20 \%$ of the vacancies. Opportunities span ten different occupational groups, but the majority of open positions are in Food Preparation \& Serving Related Occupations. Construction \& Extraction positions are at the top of the wage range while Food Preparation \& Serving Related jobs though plentiful, pay wages on the low end of the of this education scale.

Figure 16: Vacancies by Experience


The JVS also collects experience requirements for job vacancies. The experience levels demanded by employers can be used to guide employ-ment-training programs and to help job candidates plan for career advancement.

Figure 16 shows the percentage distribution of vacancies by experience requirement. To date, NW\&RR surveys have found that a majority of job vacancies require either related or direct experience in the occupation for hire. Seventy-nine percent of reported vacancies require at the least, experience in a related field.

## 14 Survey FindingS Vacancies: Employment Status, Education and Experience Requirements-continued

Figure 17: Reported Average Wage Ranges by Experience


Positions demanding higher levels of experience generally pay higher wages. The minimum and maximum wages for each experience category represent a variety of occupations along with the requisite skills and training for each. For example, the "experience in this occupation" category may include a vacancy in a hospital seeking a registered nurse with prior experience and a job opening at a cafe looking for an experienced barista. Knowing the occupations reported in the JVS enhances the relevance of these experience categories:

## Experience in This Occupation:

Healthcare Practitioner \& Technical jobs make up 28\% of the vacancies in this experience category. These jobs offer wages at the high end of the scale along with Architecture \& Engineering positions. Personal Care \& Service; Sales \& Related; and Food Preparation \& Serving vacancies pay the lowest wages for vacancies for which direct experience is required.

## Experience in a Related Field:

Employers are looking to fill a wide variety of occupations with people who have experience related to the job open for hire. Office \& Administrative Support positions are found most frequently. Higher paying positions are in Healthcare Support \& Technical fields while many Food Preparation \& Serving Related vacancies offer wages below the average minimum wage range charted.

## General Work Experience:

Office \& Administrative Support is once again among the most frequently reported occupational groups. Though more vacancies are open to candidates with experience related to Office \& Administrative Support, there are still many job openings in this field for people with general non-related experience. Transportation \& Material Moving jobs are the lowest paying in this experience category.

## No Experience Required:

Candidates new to the labor force have many opportunities to obtain work experience in Food Preparation \& Serving Related jobs. Wages paid for these jobs are low to begin, and do not increase significantly as evidenced by the low-end of the scale for vacancies where candidates are required to have experience in that occupation. However, people in this field expect a substantial portion of their income in the form of customer gratuities that are received in addition to wages paid by employers. There are also job vacancies for Protective Service occupations that offer higher wages and do not require experience.

## Survey Findings

Figure 18: Vacancies by Difficulty to Fill


Employers' ability to find and hire qualified candidates provides important information on the labor market. With a higher number of total vacancies in this survey as compared to the prior two winter surveys, the increased demand for workers is increasing the challenge to hire qualified candidates. Survey results indicate that employers are finding it more difficult to fill their vacant positions. Fifty-five percent of vacancies are
described as very or somewhat difficult to fill. Though employers' perceptions of difficulty in filling vacant positions have increased as compared to Winter 2003, they are lower than Winter 2002. Healthcare Practitioner \& Technical occupations represent the greatest proportion of vacancies employers describe as very difficult to fill.

## 16 Survey Findings vacancies: Difficulty to Fill and Time Open for Hire-continued

The length of time that a vacancy is open is a good indicator of the degree of difficulty an employer is having in filling a position. Factors include: the availability of qualified candidates, competition among employers for similar candidates, and the willingness of candidates to accept job duties in light of wages and benefits offered.

The majority of job vacancies have been open for less than 30 days. This category represents a wide range of occupations and wages.

The greatest change from prior winter surveys is in the proportion of vacancies for which employers are always hiring. This means that employers are always looking to hire qualified employees in certain occupations. Ten different major occupations are represented in this group with Transportation \& Material Moving and Protective Service jobs most frequently reported.

Healthcare Practitioner \& Technical job openings are found in each of the time open for hire categories; they make up a quarter of the vacancies open for 60 or more days. The average minimum and maximum wages offered for vacancies in this category are relatively low-unattractive compensation may be one reason that these positions remain open.

Figure 19: Vacancies by Time Open for Hire


Figure 20: Reported Average Wage Ranges by Time Open for Hire


## Survey Findings

## Medical Insurance

## Employers frequently offer compensation related

 benefits to recruit qualified candidates. Some of these perks are paid time off, transportation or parking vouchers, and subsidized child-care. An important benefit offered to employees is a group medical insurance plan-the employer may pay all or part of the monthly insurance premium for employees.Twenty-two percent of all available job openings do not include a medical benefit. Reported vacancies by Government followed by the Leisure \& Hospitality JVS sector are the least likely to offer a medical benefit. Interestingly, the most likely organization for which one could work and receive full coverage for a medical plan premium is a Government institution based on the vacancy characteristics reported in this survey.

Benefits are often associated with the employment status of a job. The survey found that employers offer a medical benefit with $80 \%$ of full-time positions, but only $30 \%$ of part-time vacancies.

Figure 21: Employers' Contribution to Medical Insurance Occupations

No Monetary


## Sign-On Bonus

Four percent of vacancies offered a sign-on bonus. The only occupation for which a bonus is offered is registered nurse - the average sign-on bonus amount offered by employers in this survey is $\$ 5,000$.

## Occupational Details

In order to help make comparisons between this survey and other sources of employment statistics, all jobs reported are assigned a Standard Occupational Classification (SOC) code from the 2000 Standard Occupational Classification Manual. The JVS utilizes 820 detailed SOC occupational titles combined into 22 major groups.

At the major occupation level shown in Figure 22, job vacancies associated with tourism top the list. Just as Leisure \& Hospitality businesses represented
the greatest number of estimated vacancies, Food Preparation \& Serving Related occupations account for the greatest number of reported vacancies.

The wages associated with these occupations reflect the degree of skill and experience required to do the job, as well as supply and demand in the labor market.

Figure 22: Vacancies and Reported Average Wage Ranges by Major Occupational Groups


## 20 Occupational Details

## Occupational Estimates

Table 1 contains a list of all of the detailed SOC job titles assigned to vacancies reported in this survey. As a census of large employers and Government agencies is conducted, the list contains titles for nearly all of the vacancies available at the time of the survey for those employers. About $19 \%$ of small to mid-size employers were contacted for the random sample, and likewise the occupations associated with those vacancies are listed. Though the sample of small to mid-size employers is representative and significant, it is not exhaustive. Most likely, if a different random sample had been drawn there would be some differences in the job titles reported, but there would also be many of the same.

## Estimated Vacancies

Because nearly all large employers and government agencies are contacted, the number of vacancies by occupation for those groups is not estimated; it is an actual accounting of the vacancies. However, in addition to the number reported, vacancies are estimated for occupations reported by small to mid-size, private firms. The additional estimated occupational vacancies are calculated per the current mix of occupations found in the region, but restricted to the occupations reported in the survey.

## Average JVS Wage

The average of any and all wages reported in the survey is given for each occupation. The average wage is based solely on information provided by employers responding to this survey and does not reflect information from other sources or wages paid for currently filled positions.

## Occupational Employment Statistics (OES) Wage Data

Occupational Employment Statistics (OES) wage data are provided for each reported occupation. OES data are based on a national survey of employers and refer to filled positions, not vacancies. The data provided here are reported for the Northwest \& Rural Resort Region when available and statewide otherwise. Data were collected over three years, from 1999 through 2001 and are aged to September 2002. A complete description of the OES survey is available on the Internet at: http://www.bls.gov/.

While the Job Vacancy Survey average wages reflect what is being offered to fill vacancies at the time of the survey, OES wage data reflect what was being paid for filled positions. Together, these data provide employers and job seekers with a good indication of the compensation offered in the current job market.

## Vacancies Found

The number of vacancies by occupation found in the survey.

Table 1: Occupations with Five or More Estimated Vacancies

|  |  |  |  |  | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| $\begin{aligned} & \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | Vacancies Estimated | Vacancies Found | Average JVS <br> Wage | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 29-1111 | Registered Nurses | 57 | 52 | \$24.30 | \$17.02 | \$22.86 | \$25.78 | \$15.55 | \$18.46 | \$21.87 | \$26.23 | \$32.44 |
| 41-2031 | Retail Salespersons | 41 | 11 | \$8.30 | \$7.95 | \$11.28 | \$12.94 | \$7.39 | \$8.88 | \$10.38 | \$12.47 | \$16.35 |
| 37-2012 | Maids and Housekeeping Cleaners | 34 | 24 | \$8.80 | \$8.73 | \$10.50 | \$11.37 | \$7.98 | \$9.29 | \$10.31 | \$11.41 | \$13.54 |
| 35-2014 | Cooks, Restaurant | 30 | 18 | \$8.60 | \$9.21 | \$11.08 | \$12.01 | \$8.84 | \$9.59 | \$10.66 | \$12.52 | \$14.66 |
| 35-9011 | Dining Room and Cafeteria Attendants and Bartender Helpers | 28 | 16 | \$7.50 | \$6.12 | \$7.86 | \$8.72 | \$5.85 | \$6.45 | \$7.71 | \$9.23 | \$10.43 |
| 43-9061 | Office Clerks, General | 27 | 9 | \$11.40 | \$7.31 | \$11.92 | \$14.24 | \$6.28 | \$8.52 | \$11.87 | \$14.81 | \$17.50 |
| 43-4171 | Receptionists and Information Clerks | 27 | 9 | \$10.70 | \$8.85 | \$11.76 | \$13.21 | \$8.05 | \$9.87 | \$11.82 | \$13.66 | \$15.69 |
| 37-1011 | First-Line Supervisors/Managers of Housekeeping and Janitorial Workers | 26 | 11 | \$12.60 | \$10.85 | \$15.30 | \$17.53 | \$9.95 | \$11.79 | \$14.64 | \$17.88 | \$22.06 |
| 47-2181 | Roofers | 22 | 3 | \$14.00 | \$11.98 | \$15.78 | \$17.70 | \$11.41 | \$12.89 | \$15.39 | \$18.18 | \$21.48 |
| 35-3031 | Waiters and Waitresses | 21 | 13 | \$6.60 | \$6.12 | \$8.52 | \$9.73 | \$5.72 | \$6.18 | \$6.96 | \$9.69 | \$14.34 |
| 49-9042 | Maintenance and Repair Workers, General | 20 | 12 | \$12.70 | \$11.27 | \$15.71 | \$17.94 | \$10.51 | \$12.27 | \$14.73 | \$18.67 | \$22.62 |
| 41-1011 | First-Line Supervisors/Managers of Retail Sales Workers | 18 | 3 | \$10.50 | \$12.09 | \$18.65 | \$21.94 | \$11.44 | \$13.43 | \$16.71 | \$21.74 | \$28.07 |
| 43-6014 | Secretaries, Except Legal, Medical, and Executive | 17 | 8 | \$15.30 | \$9.26 | \$12.72 | \$14.46 | \$8.68 | \$10.40 | \$12.63 | \$15.34 | \$17.25 |
| 47-2111 | Electricians | 16 | 3 | \$17.50 | \$13.97 | \$20.18 | \$23.28 | \$12.83 | \$15.42 | \$20.54 | \$24.64 | \$27.34 |
| 39-9011 | Child Care Workers | 15 | 7 | \$9.70 | \$8.01 | \$9.66 | \$10.48 | \$7.66 | \$8.26 | \$9.20 | \$10.90 | \$12.91 |
| 47-2152 | Plumbers, Pipefitters, and Steamfitters | 15 | 2 | $\dagger$ | \$14.50 | \$21.37 | \$24.80 | \$13.49 | \$16.21 | \$20.62 | \$26.64 | \$32.11 |
| 47-2031 | Carpenters | 15 | 2 | $\dagger$ | \$15.31 | \$21.09 | \$23.98 | \$14.17 | \$17.36 | \$20.36 | \$23.58 | \$28.21 |
| 11-9032 | Education Administrators, Elementary and Secondary School | 15 | 2 | $\dagger$ | \$50,729 | \$63,458 | \$69,821 | \$48,815 | \$53,881 | \$62,624 | \$73,147 | \$84,880 |
| 11-9081 | Lodging Managers | 15 | 2 | $\dagger$ | \$16.77 | \$22.94 | \$26.01 | \$15.47 | \$18.00 | \$20.81 | \$25.42 | \$34.44 |
| 35-9021 | Dishwashers | 12 | 4 | \$8.50 | \$6.20 | \$7.87 | \$8.71 | \$5.93 | \$6.69 | \$7.80 | \$8.86 | \$10.32 |

* OES wages reported for Colorado statewide
$\dagger$ Insufficient wage data

Table 1: Occupations with Five or More Estimated Vacancies - Page 2

|  |  |  |  |  | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| $\begin{aligned} & \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | Vacancies Estimated | Vacancies Found | Average JVS <br> Wage | Entry- <br> Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 35-3021 | Combined Food Preparation and Serving Workers, Including Fast Food | 12 | 4 | \$8.40 | \$6.95 | \$8.66 | \$9.51 | \$6.44 | \$7.36 | \$8.43 | \$9.86 | \$10.99 |
| 53-3032 | Truck Drivers, Heavy and TractorTrailer | 12 | 3 | $\dagger$ | \$13.35 | \$17.44 | \$19.48 | \$12.45 | \$14.58 | \$16.98 | \$20.39 | \$22.67 |
| 41-3011 | Advertising Sales Agents | 12 | 2 | $\dagger$ | \$13.85 | \$21.68 | \$25.60 | \$12.61 | \$15.47 | \$19.36 | \$25.03 | \$35.38 |
| 13-1071 | Employment, Recruitment, and Placement Specialists | 12 | 3 | $\dagger$ | \$12.75 | \$17.76 | \$20.26 | \$12.16 | \$13.48 | \$16.05 | \$22.49 | \$26.41 |
| 33-9032 | Security Guards | 11 | 2 | $\dagger$ | \$8.04 | \$10.58 | \$11.85 | \$7.16 | \$9.01 | \$10.60 | \$12.30 | \$13.75 |
| 47-4051 | Highway Maintenance Workers | 11 | 11 | \$17.20 | \$11.76 | \$15.15 | \$16.85 | \$11.27 | \$12.70 | \$14.97 | \$17.48 | \$20.28 |
| 33-9092 | Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers | 11 | 11 | \$9.30 | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 51-7011 | Cabinetmakers and Bench Carpenters | 11 | 3 | $\dagger$ | \$10.72 | \$18.30 | \$22.08 | \$10.10 | \$11.67 | \$17.51 | \$24.59 | \$28.02 |
| 25-9041 | Teacher Assistants | 11 | 4 | \$10.90 | \$15,375 | \$19,492 | \$21,550 | \$14,137 | \$16,579 | \$19,093 | \$22,474 | \$25,862 |
| 43-4081 | Hotel, Motel, and Resort Desk Clerks | 11 | 6 | \$10.60 | \$9.27 | \$10.68 | \$11.39 | \$8.98 | \$9.67 | \$10.62 | \$11.80 | \$13.45 |
| 39-6021 | Tour Guides and Escorts | 10 | 2 | $\dagger$ | \$12.05 | \$14.35 | \$15.50 | \$11.94 | \$12.98 | \$14.64 | \$16.41 | \$17.53 |
| 37-2011 | Janitors and Cleaners, Except Maids and Housekeeping Cleaners | 10 | 5 | \$9.60 | \$7.47 | \$10.77 | \$12.42 | \$6.59 | \$8.55 | \$10.62 | \$12.89 | \$15.26 |
| 11-9111 | Medical and Health Services Managers | 10 | 10 | \$24.70 | \$20.80 | \$29.56 | \$33.93 | \$19.44 | \$22.49 | \$26.05 | \$34.06 | \$45.04 |
| 41-2021 | Counter and Rental Clerks | 10 | 5 | \$8.50 | \$7.52 | \$10.54 | \$12.05 | \$7.19 | \$8.26 | \$10.11 | \$12.29 | \$14.24 |
| 35-1012 | First-Line Supervisors/Managers of Food Preparation and Serving Workers | 9 | 5 | \$12.40 | \$9.11 | \$14.78 | \$17.62 | \$7.57 | \$10.99 | \$13.42 | \$17.00 | \$21.43 |
| 39-9031 | Fitness Trainers and Aerobics Instructors | 9 | 9 | \$15.10 | \$9.61 | \$18.92 | \$23.57 | \$6.89 | \$11.87 | \$18.30 | \$26.22 | \$29.16 |
| 53-3021 | Bus Drivers, Transit and Intercity | 9 | 9 | \$13.50 | \$10.78 | \$14.07 | \$15.71 | \$9.73 | \$12.10 | \$14.09 | \$16.39 | \$17.84 |
| 35-3022 | Counter Attendants, Cafeteria, Food Concession, and Coffee Shop | 8 | 4 | \$9.90 | \$6.63 | \$8.06 | \$8.79 | \$6.22 | \$7.09 | \$8.00 | \$8.99 | \$10.39 |
| 53-3099 | Motor Vehicle Operators, All Other | 8 | 5 | \$10.80 | \$10.38 | \$15.33 | \$17.80 | \$8.19 | \$12.97 | \$15.61 | \$17.24 | \$23.18 |

[^0]Table 1: Occupations with Five or More Estimated Vacancies - Page 3

|  |  |  |  |  | Oc | patio | Emp | men | tatis | Wag | Data | 02) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Ave | rage W | ges |  | Percen | ile Dist | ibution |  |
| $\begin{aligned} & \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | Vacancies Estimated | Vacancies Found | Average JVS Wage | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 53-7062 | Laborers and Freight, Stock, and Material Movers, Hand | 8 | 5 | \$10.50 | \$8.60 | \$11.72 | \$13.28 | \$7.76 | \$9.47 | \$11.00 | \$13.76 | \$17.11 |
| 53-3031 | Driver/Sales Workers | 8 | 2 | $\dagger$ | \$7.92 | \$11.71 | \$13.60 | \$6.52 | \$9.28 | \$10.71 | \$14.20 | \$17.91 |
| 25-2011 | Preschool Teachers, Except Special Education | 8 | 1 | $\dagger$ | \$8.66 | \$11.36 | \$12.70 | \$8.08 | \$9.15 | \$10.38 | \$12.62 | \$16.73 |
| 25-9031 | Instructional Coordinators | 8 | 1 | $\dagger$ | \$13.84 | \$20.03 | \$23.14 | \$11.73 | \$16.01 | \$19.24 | \$23.24 | \$28.13 |
| 35-3011 | Bartenders | 7 | 3 | \$8.30 | \$6.11 | \$8.35 | \$9.46 | \$5.75 | \$6.25 | \$7.15 | \$9.42 | \$13.27 |
| 33-3051 | Police and Sheriff's Patrol Officers | 7 | 7 | \$22.80 | \$14.79 | \$18.51 | \$20.37 | \$13.90 | \$15.52 | \$17.90 | \$21.31 | \$24.56 |
| 41-2011 | Cashiers | 7 | 7 | \$8.80 | \$7.99 | \$10.67 | \$12.01 | \$7.50 | \$8.78 | \$10.23 | \$12.37 | \$15.35 |
| 43-5081 | Stock Clerks and Order Fillers | 7 | 2 | $\dagger$ | \$9.05 | \$12.58 | \$14.34 | \$8.75 | \$9.68 | \$11.12 | \$15.70 | \$19.30 |
| * 49-2022 | Telecommunications Equipment Installers and Repairers, Except Line Installers | 6 | 2 | $\dagger$ | \$18.04 | \$23.40 | \$26.07 | \$16.55 | \$20.44 | \$24.73 | \$27.20 | \$28.90 |
| 35-2021 | Food Preparation Workers | 6 | 2 | $\dagger$ | \$7.53 | \$9.80 | \$10.93 | \$7.21 | \$8.06 | \$9.38 | \$10.93 | \$13.68 |
| 31-9092 | Medical Assistants | 6 | 3 | $\dagger$ | \$9.24 | \$12.42 | \$14.01 | \$8.73 | \$9.64 | \$11.36 | \$15.15 | \$17.22 |
| 31-9091 | Dental Assistants | 6 | 3 | \$12.00 | \$11.05 | \$14.07 | \$15.59 | \$10.13 | \$11.80 | \$14.17 | \$16.25 | \$18.02 |
| 29-2041 | Emergency Medical Technicians and Paramedics | 6 | 6 | \$22.40 | \$10.76 | \$15.28 | \$17.55 | \$10.15 | \$12.50 | \$14.85 | \$17.11 | \$21.82 |
| 43-3071 | Tellers | 6 | 1 | $\dagger$ | \$11.25 | \$12.37 | \$12.94 | \$10.14 | \$11.70 | \$12.62 | \$13.53 | \$14.15 |
| 43-4181 | Reservation and Transportation Ticket Agents and Travel Clerks | 6 | 1 | $\dagger$ | \$9.44 | \$12.80 | \$14.48 | \$8.80 | \$10.24 | \$11.90 | \$14.83 | \$17.41 |
| 43-5031 | Police, Fire, and Ambulance Dispatchers | 5 | 5 | \$14.50 | \$8.79 | \$13.34 | \$15.61 | \$7.52 | \$10.43 | \$13.34 | \$16.37 | \$19.07 |
| 53-6021 | Parking Lot Attendants | 5 | 5 | \$7.70 | \$7.14 | \$8.98 | \$9.91 | \$6.72 | \$7.48 | \$8.53 | \$10.38 | \$12.24 |
| 29-2034 | Radiologic Technologists and Technicians | 5 | 3 | $\dagger$ | \$15.90 | \$19.72 | \$21.61 | \$15.13 | \$16.88 | \$19.37 | \$22.14 | \$25.86 |

[^1]
## 24 Occupational Details

Table 2: Occupations with Fewer than Five Estimated Vacancies

|  |  | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| SOC <br> Code | SOC Occupational Title | Entry- <br> Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 11-3011 | Administrative Services Managers | \$16.74 | \$28.55 | \$34.46 | \$14.52 | \$19.28 | \$24.81 | \$33.90 | \$45.89 |
| 39-3091 | Amusement and Recreation Attendants | \$7.17 | \$8.93 | \$9.82 | \$6.47 | \$7.61 | \$8.43 | \$9.29 | \$12.27 |
| 13-2021 | Appraisers and Assessors of Real Estate | \$12.53 | \$17.40 | \$19.84 | \$11.93 | \$13.59 | \$16.82 | \$20.63 | \$23.84 |
| * 29-1121 | Audiologists | \$17.62 | \$21.39 | \$23.29 | \$16.97 | \$18.94 | \$21.19 | \$24.29 | \$27.13 |
| 49-3021 | Automotive Body and Related Repairers | \$12.57 | \$19.29 | \$22.65 | \$12.19 | \$13.55 | \$19.52 | \$22.60 | \$26.96 |
| 49-3023 | Automotive Service Technicians and Mechanics | \$10.92 | \$18.27 | \$21.94 | \$9.19 | \$13.08 | \$18.26 | \$22.02 | \$27.83 |
| 43-3031 | Bookkeeping, Accounting, and Auditing Clerks | \$9.96 | \$15.07 | \$17.63 | \$9.04 | \$11.72 | \$14.75 | \$18.09 | \$21.52 |
| * 27-4012 | Broadcast Technicians | \$8.04 | \$15.59 | \$19.36 | \$7.29 | \$9.05 | \$13.61 | \$18.73 | \$26.40 |
| 49-3031 | Bus and Truck Mechanics and Diesel Engine Specialists | \$14.30 | \$18.62 | \$20.79 | \$13.46 | \$15.87 | \$18.50 | \$21.58 | \$25.30 |
| 53-3022 | Bus Drivers, School | \$9.65 | \$12.51 | \$13.93 | \$9.45 | \$10.41 | \$11.92 | \$14.16 | \$17.51 |
| 35-1011 | Chefs and Head Cooks | \$11.36 | \$20.84 | \$25.58 | \$10.63 | \$13.31 | \$16.94 | \$21.97 | \$28.74 |
| 21-1021 | Child, Family, and School Social Workers | \$12.69 | \$17.34 | \$19.67 | \$11.70 | \$13.82 | \$17.47 | \$20.73 | \$23.06 |
| 17-2051 | Civil Engineers | \$18.24 | \$26.21 | \$30.21 | \$16.69 | \$21.17 | \$25.51 | \$29.64 | \$35.88 |
| 27-2022 | Coaches and Scouts | \$19,010 | \$29,820 | \$35,223 | \$17,429 | \$21,280 | \$26,188 | \$33,288 | \$48,719 |
| 49-9091 | Coin, Vending, and Amusement Machine Servicers and Repairers | \$10.45 | \$14.64 | \$16.73 | \$9.71 | \$11.10 | \$14.63 | \$17.78 | \$20.55 |
| * 11-3041 | Compensation and Benefits Managers | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 15-1099 | Computer Specialists, All Other | \$12.24 | \$22.54 | \$27.69 | \$10.35 | \$15.39 | \$22.33 | \$28.23 | \$36.08 |
| 39-6012 | Concierges | \$9.53 | \$12.42 | \$13.86 | \$9.06 | \$10.26 | \$11.97 | \$13.98 | \$17.06 |
| 47-2061 | Construction Laborers | \$9.92 | \$13.02 | \$14.58 | \$9.42 | \$10.76 | \$12.57 | \$14.92 | \$17.24 |
| 35-2012 | Cooks, Institution and Cafeteria | \$8.06 | \$11.03 | \$12.51 | \$7.74 | \$8.52 | \$10.20 | \$13.55 | \$16.37 |
| 33-3012 | Correctional Officers and Jailers | \$11.66 | \$16.86 | \$19.46 | \$9.79 | \$14.09 | \$16.79 | \$20.49 | \$24.15 |
| * 21-1019 | Counselors, All Other | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 43-4031 | Court, Municipal, and License Clerks | \$9.37 | \$13.94 | \$16.22 | \$6.70 | \$11.69 | \$13.84 | \$17.10 | \$20.38 |
| 43-4051 | Customer Service Representatives | \$9.46 | \$14.05 | \$16.35 | \$8.89 | \$10.69 | \$13.09 | \$16.92 | \$21.90 |

* OES wages reported for Colorado statewide
$\dagger$ Insufficient wage data

Table 2: Occupations with Fewer than Five Estimated Vacancies - Page 2

|  |  | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| $\begin{aligned} & \hline \text { SOC } \\ & \text { Code } \\ & \hline \end{aligned}$ | SOC Occupational Title | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 51-4031 | Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic | \$6.79 | \$9.67 | \$11.10 | \$6.34 | \$7.43 | \$9.36 | \$10.93 | \$15.05 |
| 43-9021 | Data Entry Keyers | \$8.55 | \$11.72 | \$13.31 | \$7.82 | \$9.35 | \$11.20 | \$13.93 | \$17.06 |
| 29-2021 | Dental Hygienists | \$30.30 | \$30.96 | \$31.29 | \$28.38 | \$29.66 | \$31.60 | \$33.55 | \$34.70 |
| * 29-1021 | Dentists, General | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| * 21-2021 | Directors, Religious Activities and Education | \$9.88 | \$15.47 | \$18.28 | \$6.71 | \$12.77 | \$15.86 | \$17.77 | \$21.93 |
| 43-5032 | Dispatchers, Except Police, Fire, and Ambulance | \$11.70 | \$14.80 | \$16.36 | \$10.87 | \$12.36 | \$14.35 | \$16.56 | \$17.97 |
| 11-9031 | Education Administrators, Preschool and Child Care Center/Program | \$10.14 | \$16.19 | \$19.23 | \$8.26 | \$12.47 | \$15.61 | \$17.90 | \$25.45 |
| 43-4061 | Eligibility Interviewers, Government Programs | \$11.41 | \$16.25 | \$18.66 | \$10.49 | \$12.09 | \$14.32 | \$20.39 | \$25.79 |
| 53-7032 | Excavating and Loading Machine and Dragline Operators | \$14.61 | \$19.16 | \$21.43 | \$14.36 | \$15.86 | \$18.75 | \$22.85 | \$26.53 |
| 43-6011 | Executive Secretaries and Administrative Assistants | \$13.16 | \$17.72 | \$20.00 | \$12.37 | \$14.16 | \$17.07 | \$20.65 | \$24.41 |
| 29-1062 | Family and General Practitioners | \$48.96 | \$62.11 | \$68.68 | \$42.82 | \$58.70 | \$69.38 | $\dagger$ | $\dagger$ |
| 11-3031 | Financial Managers | \$21.18 | \$34.36 | \$40.94 | \$18.21 | \$24.68 | \$32.71 | \$43.81 | \$54.34 |
| 13-2099 | Financial Specialists, All Other | \$16.21 | \$20.83 | \$23.15 | \$14.96 | \$15.65 | \$16.82 | \$17.99 | \$28.73 |
| 47-1011 | First-Line Supervisors/Managers of Construction Trades and Extraction Workers | \$19.52 | \$26.45 | \$29.92 | \$18.10 | \$21.75 | \$25.79 | \$30.35 | \$36.49 |
| 37-1012 | First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers | \$13.46 | \$17.81 | \$19.98 | \$11.36 | \$15.20 | \$17.81 | \$20.73 | \$22.82 |
| 49-1011 | First-Line Supervisors/Managers of Mechanics, Installers, and Repairers | \$18.07 | \$25.96 | \$29.91 | \$16.59 | \$20.04 | \$25.44 | \$32.03 | \$35.99 |
| 43-1011 | First-Line Supervisors/Managers of Office and Administrative Support Workers | \$13.33 | \$20.18 | \$23.61 | \$11.83 | \$14.89 | \$17.56 | \$23.52 | \$32.17 |
| 39-1021 | First-Line Supervisors/Managers of Personal Service Workers | \$11.11 | \$16.48 | \$19.17 | \$11.49 | \$12.92 | \$15.32 | \$19.62 | \$25.89 |
| 51-1011 | First-Line Supervisors/Managers of Production and Operating Workers | \$15.55 | \$22.22 | \$25.55 | \$13.68 | \$17.75 | \$21.23 | \$26.54 | \$33.07 |
| 35-9099 | Food Preparation and Serving Related Workers, All Other | \$9.07 | \$10.84 | \$11.73 | \$8.49 | \$9.57 | \$10.93 | \$12.42 | \$13.45 |
| 35-3041 | Food Servers, Nonrestaurant | \$6.52 | \$9.23 | \$10.58 | \$6.07 | \$7.02 | \$8.78 | \$10.72 | \$13.86 |
| 11-9051 | Food Service Managers | \$14.45 | \$21.16 | \$24.52 | \$13.41 | \$15.89 | \$19.78 | \$25.03 | \$32.34 |

[^2]Table 2: Occupations with Fewer than Five Estimated Vacancies - Page 3

|  |  | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| $\begin{aligned} & \hline \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | Entry- <br> Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 41-2012 | Gaming Change Persons and Booth Cashiers | \$8.11 | \$10.98 | \$12.42 | \$7.27 | \$9.08 | \$11.22 | \$12.97 | \$14.46 |
| 39-3011 | Gaming Dealers | \$6.11 | \$9.20 | \$10.74 | \$5.63 | \$5.97 | \$6.52 | \$7.15 | \$24.08 |
| * 39-3019 | Gaming Service Workers, All Other | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| * 51-8092 | Gas Plant Operators | \$16.68 | \$21.93 | \$24.56 | \$15.12 | \$18.69 | \$21.63 | \$25.93 | \$30.15 |
| 49-9021 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | \$16.99 | \$19.96 | \$21.43 | \$15.95 | \$18.42 | \$20.22 | \$22.12 | \$24.88 |
| 47-5081 | Helpers--Extraction Workers | \$10.16 | \$13.36 | \$14.96 | \$9.48 | \$10.10 | \$11.14 | \$17.73 | \$21.53 |
| 49-9098 | Helpers--Installation, Maintenance, and Repair Workers | \$9.41 | \$13.11 | \$14.97 | \$8.92 | \$9.99 | \$12.45 | \$16.43 | \$18.05 |
| 35-9031 | Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop | \$7.14 | \$9.33 | \$10.42 | \$6.69 | \$7.58 | \$8.87 | \$10.78 | \$13.09 |
| * 11-3049 | Human Resources Managers, All Other | $\dagger$ | $\dagger$ | $\dagger$ | † | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 53-7051 | Industrial Truck and Tractor Operators | \$9.01 | \$12.94 | \$14.91 | \$8.08 | \$10.45 | \$13.05 | \$15.72 | \$17.67 |
| 37-3011 | Landscaping and Groundskeeping Workers | \$9.07 | \$12.02 | \$13.49 | \$8.37 | \$10.16 | \$12.08 | \$13.69 | \$15.74 |
| 43-4121 | Library Assistants, Clerical | \$7.92 | \$9.40 | \$10.15 | \$6.86 | \$8.83 | \$9.67 | \$10.51 | \$11.05 |
| 29-2061 | Licensed Practical and Licensed Vocational Nurses | \$11.78 | \$14.40 | \$15.71 | \$11.03 | \$12.30 | \$14.00 | \$16.29 | \$18.61 |
| 39-3093 | Locker Room, Coatroom, and Dressing Room Attendants | \$7.57 | \$10.76 | \$12.35 | \$6.57 | \$8.79 | \$10.55 | \$12.77 | \$15.95 |
| 49-9043 | Maintenance Workers, Machinery | \$16.19 | \$21.93 | \$24.81 | \$13.67 | \$18.72 | \$23.67 | \$26.37 | \$28.00 |
| 11-9199 | Managers, All Other | \$16.46 | \$26.60 | \$31.68 | \$15.14 | \$18.15 | \$24.65 | \$32.59 | \$43.50 |
| 39-5092 | Manicurists and Pedicurists | \$6.99 | \$13.96 | \$17.44 | \$6.38 | \$7.79 | \$9.46 | \$10.90 | \$33.30 |
| * 21-1013 | Marriage and Family Therapists | \$13.64 | \$16.05 | \$17.25 | \$12.60 | \$14.41 | \$15.88 | \$17.45 | \$20.47 |
| 31-9011 | Massage Therapists | \$10.62 | \$19.18 | \$23.45 | \$10.09 | \$11.41 | \$12.96 | \$23.96 | \$41.02 |
| 29-2011 | Medical and Clinical Laboratory Technologists | \$13.59 | \$20.92 | \$24.60 | \$12.07 | \$15.55 | \$21.76 | \$25.15 | \$27.89 |
| 43-6013 | Medical Secretaries | \$10.94 | \$13.59 | \$14.92 | \$10.04 | \$11.85 | \$14.06 | \$15.73 | \$16.78 |
| 21-1014 | Mental Health Counselors | \$11.79 | \$17.34 | \$20.11 | \$11.33 | \$12.55 | \$14.93 | \$21.91 | \$27.79 |
| * 47-5049 | Mining Machine Operators, All Other | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 49-3042 | Mobile Heavy Equipment Mechanics, Except Engines | \$15.74 | \$20.75 | \$23.26 | \$14.95 | \$17.52 | \$20.93 | \$24.83 | \$27.48 |
| 39-2021 | Nonfarm Animal Caretakers | \$7.89 | \$10.19 | \$11.34 | \$7.51 | \$8.65 | \$10.03 | \$11.75 | \$13.83 |

[^3]Table 2: Occupations with Fewer than Five Estimated Vacancies - Page 4

|  |  | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
| $\begin{aligned} & \hline \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 31-1012 | Nursing Aides, Orderlies, and Attendants | \$9.88 | \$12.07 | \$13.16 | \$9.43 | \$10.32 | \$11.61 | \$14.07 | \$16.07 |
| 29-1122 | Occupational Therapists | \$17.57 | \$22.46 | \$24.90 | \$16.60 | \$19.19 | \$22.71 | \$26.07 | \$28.72 |
| 47-2073 | Operating Engineers and Other Construction Equipment Operators | \$14.86 | \$19.18 | \$21.34 | \$14.38 | \$16.00 | \$18.89 | \$22.55 | \$26.08 |
| 29-2081 | Opticians, Dispensing | \$11.64 | \$13.20 | \$13.98 | \$10.95 | \$11.85 | \$13.02 | \$14.33 | \$16.55 |
| 43-3051 | Payroll and Timekeeping Clerks | \$11.53 | \$15.58 | \$17.61 | \$11.30 | \$12.84 | \$15.15 | \$18.90 | \$21.40 |
| 39-9099 | Personal Care and Service Workers, All Other | \$7.61 | \$9.79 | \$10.88 | \$7.18 | \$7.92 | \$8.82 | \$10.79 | \$14.29 |
| 29-1123 | Physical Therapists | \$18.54 | \$26.24 | \$30.09 | \$18.01 | \$19.82 | \$23.39 | \$27.73 | \$45.82 |
| * 21-1092 | Probation Officers and Correctional Treatment Specialists | \$16.77 | \$23.41 | \$26.74 | \$15.25 | \$18.50 | \$23.62 | \$28.97 | \$32.61 |
| 13-1023 | Purchasing Agents, Except Wholesale, Retail, and Farm Products | \$15.31 | \$21.24 | \$24.20 | \$14.67 | \$16.63 | \$20.19 | \$25.61 | \$29.84 |
| * 27-3011 | Radio and Television Announcers | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 39-9032 | Recreation Workers | \$7.11 | \$10.49 | \$12.19 | \$6.63 | \$7.87 | \$10.14 | \$12.39 | \$15.38 |
| 29-1126 | Respiratory Therapists | \$16.06 | \$18.69 | \$20.00 | \$15.17 | \$17.00 | \$18.77 | \$20.72 | \$22.03 |
| 11-2022 | Sales Managers | \$14.91 | \$23.03 | \$27.08 | \$13.65 | \$15.96 | \$18.77 | \$27.33 | \$39.82 |
| 41-3099 | Sales Representatives, Services, All Other | \$14.38 | \$28.08 | \$34.92 | \$11.01 | \$17.49 | \$24.57 | \$36.28 | \$51.16 |
| 43-5071 | Shipping, Receiving, and Traffic Clerks | \$9.71 | \$13.53 | \$15.44 | \$9.17 | \$10.70 | \$13.25 | \$16.34 | \$18.29 |
| 11-9151 | Social and Community Service Managers | \$13.79 | \$22.27 | \$26.51 | \$12.01 | \$15.77 | \$20.83 | \$27.93 | \$36.09 |
| * 21-1029 | Social Workers, All Other | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 29-1127 | Speech-Language Pathologists | \$16.07 | \$21.35 | \$24.00 | \$14.95 | \$17.56 | \$20.76 | \$25.45 | \$29.43 |
| 29-2055 | Surgical Technologists | \$10.32 | \$14.17 | \$16.09 | \$9.69 | \$10.93 | \$13.64 | \$17.43 | \$20.00 |
| * 19-3022 | Survey Researchers | \$8.22 | \$12.85 | \$15.16 | \$7.82 | \$8.49 | \$10.15 | \$16.42 | \$20.97 |
| 53-3041 | Taxi Drivers and Chauffeurs | \$8.35 | \$11.28 | \$12.73 | \$7.78 | \$8.86 | \$10.44 | \$14.29 | \$16.56 |
| 25-3099 | Teachers and Instructors, All Other | \$7.89 | \$14.84 | \$18.31 | \$7.53 | \$8.32 | \$14.19 | \$19.88 | \$24.93 |
| 41-3041 | Travel Agents | \$9.28 | \$13.49 | \$15.59 | \$8.99 | \$9.87 | \$11.20 | \$16.39 | \$21.16 |
| * 27-2023 | Umpires, Referees, and Other Sports Officials | \$18,296 | \$24,492 | \$27,590 | \$16,648 | \$19,648 | \$22,204 | \$27,069 | \$38,831 |
| 51-8031 | Water and Liquid Waste Treatment Plant and System Operators | \$11.42 | \$17.17 | \$20.05 | \$10.13 | \$13.07 | \$17.09 | \$21.03 | \$25.15 |
| 43-5111 | Weighers, Measurers, Checkers, and Samplers, Recordkeeping | \$10.16 | \$10.34 | \$10.42 | \$9.33 | \$9.72 | \$10.37 | \$11.00 | \$11.40 |

[^4]
## Education \& Health Services

## Sector Briefs

The Education \& Health Services JVS sector represents a mix of private-sector businesses that offer Education Services as well as Health Care \& Social Assistance in the region. This sector represents the smallest proportion of employment as compared to the other five JVS sectors; only five percent of the region's employment was associated with this sector in the 1st quarter of 2003. Likewise, there are few employers in this industry group (also about $5 \%$ ). ${ }^{4}$ However, Education \& Health Services does have the highest vacancy rate of JVS sectors for this survey, $1.5 \%$. This indicates more job openings per position than the other sectors. These vacancies may represent job-turnover and/or job growth.

Looking at the subsector classifications within the NAICS system, allows us to take a more detailed look at the Education \& Health Services JVS sector.

Ambulatory Health Care Services is the largest subsector with 38\% of the employment. This group also accounts for the majority of businesses, $61 \%$ of firms in the JVS sector. Doctors and dentists offices along with outpatient care centers represent this subsector. Healthcare Support, Healthcare Practitioner \& Technical, Office \& Administrative, and Community \& Social Service occupational vacancies are reported for this industry subsector in this winter survey.

Hospitals support $31 \%$ of the employment, but are only $1 \%$ of the businesses operating in this subsector. Hospitals are usually large regional facilities that rely on the skills and work of many people. General medical and surgical, as well as psychiatric and substance abuse hospitals are found in the region. Seventy-eight percent of the job vacancies reported for the Education \& Health Services sector are with hospitals; Registered

Nurses are the most demanded occupation by hospitals, but 21 other detailed occupations are represented by surveyed job vacancies.

Educational Services represents $14 \%$ of employment and $16 \%$ of the employers in the Education \& Health Services JVS sector. Since publicly funded schools are included in the Government sector, the institutions represented here tend to be smaller in size; on average there are 19 employees per private educational institution in the NW\&RR. Other Schools and Instruction represents the largest number of employers; these schools offer training in such things as skiing, arts, language, yoga, and survival training. Private Elementary and Secondary Schools operate in the region with average employment of 70 , much higher than the NAICS sector average. The region also hosts a number of private business and technical schools. Limited job openings are reported by these businesses; however representative positions are Education, Training \& Library occupations and Office \& Administrative Support roles.

Social Assistance is another subsector of this JVS industry group. Child Day Care Services represent $58 \%$ of the businesses and $70 \%$ of the employment within this group. Services for specific social groups - children, the elderly, persons with disabilities, and the indigent - represent other businesses in this sector. Job openings for Healthcare Practitioner \& Technical professionals; Community \& Social Service workers; Education, Training, and Library occupations; and Personal Care \& Service workers were in demand during the survey period.

Nursing and Residential Care Facilities is the remaining subsector. This group represents only four percent of employers and seven percent of the jobs within Education \& Health Services. Assisted Living, Hospice, and Group Homes are typical within this subsector. No vacancies for this industry group are reported in the job vacancy survey.


> How to Use This Report

## Appendix

With the analysis of labor market conditions, many questions regarding labor demand and supply, as well as labor skills requirements, often arise...
-How many job openings are there?
What industries are hiring?
-What skills are employers seeking?

- Are employers having difficulty filling positions?

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

## Employers

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

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

Compensation and Benefits Planning-The Job Vacancy Survey provides wages offered for surveyed job openings. Tables in this report also detail current wages by occupation from Occupational Employment Statistics data. Together these pieces of information can be used to develop wage guidelines for compensation practices.
New Site Selection-Employers considering relocating or expanding to the area can study the survey and determine how easily the company's employment needs will be met by reviewing current vacancies. Companies need a sufficient, qualified labor pool to operate. High labor demand within a particular JVS sector segment along with indications of difficulty filling these positions should caution a firm requiring a similar labor profile.

## Job Seekers

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

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

## Workforce Centers

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

While this report is a picture of the area's current employment needs and historical seasonal patterns, other Labor Market Information products provide projections of occupational growth and anticipated openings. These can be accessed at www.coworkforce.com/lmi/oeo/oeo.htm. Projections highlight growing as well as declining occupations. Public officials, educational institutions, and Government agencies can use this survey information to effectively apply resources to education, training, and job placement programs. Investments in the workforce can be directed toward occupations or industries that continuously contribute to the local economy or to those where there is a constant need for workers.

## Economic Developers

Economic development professionals can use the Job Vacancy Survey to track the labor situation in key industries and evaluate the area's labor needs. The survey results help determine where bottlenecks may occur should current vacancies persist. Economic developers can also generate a comprehensive picture of the region by determining where labor demand stands today, as identified by the survey, and where the local market is trending using Labor Market Information's employment projections.

## Methodology

## Caveats

The Job Vacancy Survey uses sampling methods to estimate over-all job vacancies for regions. As such, readers should be mindful of sampling issues.
Sampling error results from the Job Vacancy Survey producing estimates from one particular sample, rather than examining the entire population. Different samples will likely result in different estimates for the population, thus we report the overall estimate with a confidence interval; i.e., the range of values within which the actual sample derived vacancy estimate is likely to fall $95 \%$ of the time.

Non-sampling error occurs primarily from reporting, translating data to standard terms, and incorrect information about firms in our sample frame. Some examples include placing reported vacancies in the wrong occupational codes, inadequate data collection in a JVS sector due to non-response, and estimating errors. The majority of non-sampling errors are corrected in the Job Vacancy Survey's extensive review and validation process that takes place before estimates are published.

The study provides estimates of job openings for a point-in-time and does not attempt to project the level of vacancies into the future. Readers should be aware that events having occurred since the time period analyzed such as plant closings or the migration of people in and out of the area might significantly affect the vacancy status of some occupations. Job openings are very dynamic-current openings are being filled, new positions are being created, and some positions are being phased-out.
Occupational demand is subject to seasonal changes and is affected by business cycles. For example, the reader would want to be aware that a decrease in vacancies for construction workers from April to November could represent seasonal variations, not necessarily a long-term decrease in the demand for such workers. When several years of survey data have been collected, patterns that more accurately reflect changing labor market conditions may be identified. Regional surveys are timed to make these comparisons possible.

The occupational detail provided is supplemental data believed to be of interest to the reader. The survey design does not allow for application of this detail to the region as a whole, but it can be used to understand characteristics of those job vacancies reported. These vacancy characteristics are not estimated and therefore do contain significant bias. Approximately $80 \%$ of the non-estimated information comes from large employers and government agencies, but they represent approximately $30 \%$ of the employment in the region. The vacancy characteristics therefore are heavily influenced by what is being demanded by large employers and government agencies. This information is still useful and important, but the user of this data needs to keep in mind its inherit bias

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

## Methodology

The Job Vacancy Survey (JVS) conducted by the Colorado Department of Labor and Employment involves the collection, processing, and dissemination of regional job vacancies and their characteristics. The survey design allows for estimation of a job vacancy rate and the total job vacancies within a region by industry and size of firm. Additional data related to these vacancies is informative of the occupations for which they are reported, but is not indicative of overall vacancy characteristics in the regional universe.
The number of vacancies-used to calculate the job vacancy rate-is an important measure of the unmet demand for labor. With this statistic, it is possible to paint a more complete picture of the regional labor market than by looking solely at the unemployment rate, a measure of the excess supply of labor.

## Survey Design

The Job Vacancy Survey was designed to accurately estimate the number of job vacancies for firms employing five or more people. The secondary purpose of the survey is to obtain and report significant vacancy characteristics.

The survey estimates vacancies based on the ratio of vacancies to employment size in each stratification. It attempts to determine how many positions in a region are filled and unfilled. A filled position is an employee and an unfilled position is a job vacancy. Because positions are not independent of one another or evenly dispersed, we collect this information in naturally occurring clusters, i.e. firms. Firms are asked how many employees they have and how many positions they are actively recruiting for. In each size and industry stratification a ratio of vacancies to employment is calculated based on the sampled firms. That ratio is then applied to the total number of employees in that stratification to obtain the estimated number of vacancies in that stratification. The total number of vacancies for a region is the sum of each stratification's estimated vacancies.

Stratifications containing small and medium sized private employers are randomly sampled. In order to report vacancy characteristics such as education and experience requirements demanded, the survey must contact more employers than would be necessary if the survey only estimated the total number of vacancies. For this reason all of the large employers and government agencies are contacted in the region. These employers provide the most cost effective means of obtaining large amounts of vacancy information. Approximately $30 \%$ of the region's employment is found with large and government employers that make up only $1.5 \%$ of the total number of firms. Conducting a census of these entities allows us to cover a large portion of the region's employment while contacting relatively few entities.

## Survey Sample

The Northwest \& Rural Resort survey was conducted from January 28th through February 12th. For the purpose of this report, all large employers, government and small to mid-size private employers with five or more employees are referred to as the sample frame. Firms with fewer than five employees make up a very large portion of all employers in the region, but a small proportion of the total employment. Employment in the sample frame accounts for $81 \%$ of the region's total employment.

The Job Vacancy Survey separates employers into either government or private industry. Private firms are then split into large and small to mid-size categories. Firms with at least 150 employees are considered large employers. Attempts are made to contact all government agencies and large firms in the sample frame. The remaining small to mid-size firms are split into JVS industry sectors.

The number of firms surveyed in each sector varies according to the number of employees and employers in the sector. In most JVS sectors half of all employers are contacted up to 200 employers. In JVS sectors with less than 1,000 employees, efforts are made to capture at least 500 employees in the sample. If less than 500 employees work in a sector then all employers are contacted. This sampling method insures that all the vacancy estimates are based on a sufficiently large sample size.

Government makes up almost $13 \%$ of the employment in the sample frame, while private industry employers make up the remaining $87 \%$. Large firms account for $27 \%$ of private industry employment in the sample frame. Firms employing from five to 149 individuals are considered small to mid-size employers, and account for the remaining $73 \%$ of private industry employment.

The margin of sampling error for the overall vacancy estimate is plus or minus $3.9 \%$, meaning that in 95 out of 100 surveys the number of vacancies in the region would be between 981 and 1059. Labor Market Information is confident that the estimates in this survey are accurate and that the survey was conducted according to recognized survey research standards.

The survey response rate is $83.5 \%$. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is $99.4 \%$ and measures the success in obtaining data once an employer is contacted.

## JVS Sectors

The new North American Industry Classification System increases the number of major groups to 20 from the Standard Industrial Classification System. The new coding system better reflects today's service based economy and allows comparison of industries in the United States, Mexico and Canada.

In NW\&RR, the 20 NAICS sectors have been combined into 6 JVS sectors. These groupings are based on the NAICS sectors, but are somewhat unique to the Job Vacancy Survey. The new groupings allow the Job Vacancy Survey to study local Colorado labor markets in a more relevant and meaningful way.

For more information on the North American Industry Classification System see Page 32.

| Northwest \& Rural Resort <br> Region JVS Sectors $\quad$ include - NAICS Sectors |  |
| :---: | :---: |
| Goods-Producing | Agriculture, Forestry, Fishing \& Hunting Mining <br> Construction Manufacturing |
| Trade, Transportation, Utilities \& Other Services | Utilities <br> Wholesale Trade <br> Retail Trade <br> Transportation \& Warehousing <br> Other Services (except Public Administration) |
| Information, Financial Activities \& Professional \& Business Services | Information <br> Finance \& Insurance <br> Real Estate \& Rental \& Leasing <br> Professional, Scientific \& Technical Services <br> Management of Companies \& Enterprises <br>  <br> Waste Management \& Remediation Services |
| Education \& Health Services | Educational Services <br> Health Care \& Social Assistance |
| Leisure \& Hospitality | Accommodation \& Food Services Arts, Entertainment \& Recreation |
| Government | Public Administration |

## 32 <br> Appendix: Methodology - continued

## North American Industry <br> Classification

## Data Collection

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

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

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

## Occupational Coding

The job title, duties, education and experience requirements reported by employers are used to code vacancies in accordance with the latest release of the Standard Occupational Classification system.

## Data Editing

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

## Wage Conversion

Standard conversions are used to translate salaries into hourly wages: $\mathbf{2 , 0 8 0}$ hours for annual, 173.3 hours for monthly.

All wages reported below the federal minimum are adjusted to that amount. Currently, the federal minimum wage is $\$ 5.15$ per hour. Where only a single wage figure is reported, that wage is used as both the minimum and maximum wage for that job vacancy.

## North American Industry Classification System (NAICS)

The Office of Management and Budget (OMB) in cooperation with agencies from Mexico and Canada has developed an industry classification system called the North American Industry Classification System (NAICS pronounced nakes) that replaced the Standard Industrial Classification (SIC) system. While work has been underway since 1993, OMB formally adopted NAICS on January 16, 2001.

## History of Process

The Office of Management and Budget established the Economic Classification Policy Committee in 1992 to pursue a fresh slate examination of economic classifications for statistical purposes ${ }^{1}$. Since 1939 the U.S. has been using the Standard Industrial Classification (SIC) system. While SIC had undergone periodic revisions, the last one in 1987, rapid changes in the U.S. and world economies brought SIC under increased scrutiny. In response to the need for a classification system that better reflected the dynamic nature of economies, OMB established the Economic Classification Policy Committee ${ }^{2}$. Government agencies from the United States, Mexico and Canada ${ }^{3}$ were tasked with the development of a system that accounted for rapid changes in the U.S and world economies.

## Industrial Classification vs. Occupational Classification

NAICS is a system concerned with classifying organizations into different industries; as opposed to classification at the occupational level. The newly revised Standard Occupational Classification (SOC) system classifies occupations by job duties. Occupations specific to certain industries may be found in a different industry category because of the shift to NAICS, yet the Standard Occupational Classification Code remains the same. Systems like O*NET and other classification systems based on SOC are not subject to changes because of the shift to NAICS. Professionals who use information at the occupational level will not notice changes in job categories as a result of the shift to NAICS, unless they are looking at occupations by industry.

## Benefits

Comparable-NAICS is organized in such a way so as to allow direct comparison of economic data with our NAFTA trading partners Canada and Mexico.

Executive Office of the President Office of
Management and Budget. North American Industry Classification System. White Plains, MD: Bernan and U.S. Department of Commerce, 2002
${ }^{2}$ ECPC is chaired by the Bureau of Economic Analysis, U.S. Department of Commerce, with representatives from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor
${ }^{3}$ Specifically, Mexico's Instituto Nacional de Estadística, Geografía e Informàtica (INEGI) and Statistics Canada

Relevant- NAICS recognizes hundreds of new businesses in the economy with 20 broad industry sectors, up from SIC's 10. Some new industry categories include an Information sector and a Health Care \& Social Assistance sector formerly lumped into Services under SIC.

Consistent-NAICS classifies an organization based on how it produces something, not simply what it produces. Businesses that use identical or similar technologies and processes to produce something will be grouped together. For example, software creation falls under the new Information sector, while software duplication falls under Manufacturing. Under SIC both enterprises were grouped under the same major industry sector, because both were engaged in production of software.

Adaptable-Regular updates, which are scheduled in five-year intervals, account for emerging industries not currently known.

## Things to Consider

The shift to NAICS means a break in historical time series. SIC and NAICS industry groupings are not directly comparable since the code changes for NAICS have split some SIC groups.

## New Industries Reflected in NAICS

$\checkmark$ NAICS heralds the creation of a new Information sector that pulls businesses from communications, publishing, motion picture and sound recording and online services to recognize an information-based economy.

Formerly, under SIC, corporate headquarters were not distinguished from the

| Comparison of NAICS and SIC Major Industry Groups |  |
| :---: | :---: |
| SIC <br> Standard Industrial Classification | NAICS <br> North American Industry Classification System |
| Agriculture, Forestry \& Fishing | Agriculture, Forestry, Fishing \& Hunting |
| Mining | Mining |
| Construction | Construction |
| Manufacturing | Manufacturing |
| Transportation, Communications \& Public Utilities | Utilities <br> Transportation \& Warehousing |
| Wholesale Trade | Wholesale Trade |
| Retail Trade | Retail Trade <br> Accommodation \& Food Services |
| Finance, Insurance \& Real Estate | Finance \& Insurance <br> Real Estate \& Rental \& Leasing |
| Services | Information <br> Professional, Scientific \& Technical Services <br> Administrative \& Support \& Waste Management <br> \& Remediation Services <br> Educational Services <br> Health Care \& Social Assistance <br> Arts, Entertainment, \& Recreation <br> Other Services (except Public Administration) |
| Public Administration | Public Administration |
| (parts of all divisions) | Management of Companies \& Enterprises | industry category of the product or service they produced. Now corporate headquarters are recognized in the new Management sector.

Manufacturing is restructured to account for high-tech industries.
$\checkmark$ An increase in the amount of detail overall accompanies the shift to NAICS including a further breakdown of SIC's Services sector into nine new sectors.

Eating and drinking places move out of Retail Trade into a new category called Accommodation \& Food Services.

- The difference between Retail and Wholesale is now based on how each store conducts business. For example, many computer stores are reclassified from Wholesale to Retail.

[^5]
## Appendix

## Glossary

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

## Average Maximum Wage

An average maximum wage is calculated by summing the maximum wages offered for all vacancies in a given category and then dividing by the number of vacancies in that category.

## Average Minimum Wage

An average minimum wage is calculated by summing the minimum wages offered for all vacancies in a given category and then dividing by the number of vacancies in that category.

## Computer Assisted Telephone Interviewing (CATI)

A structured system of data collection by telephone that speeds up the collection and editing of such data.

## Cooperation Rate

The number of completed interviews divided by the number of all units surveyed that are eligible. Measures the effectiveness of surveyors in gaining information once an eligible employer is contacted.

## Educational Attainment

The highest diploma or degree, or level of work towards a diploma or degree, an individual has completed. In this survey, an individual recorded in the bachelor's degree category has completed the degree.

## Effective Response Rate

The number of completed interviews divided by the sum of all units surveyed that are eligible as well as those with unknown eligibility. This is a measure of how well the survey obtains completed interviews from employers in the sample.

## Employed Persons (Employment)

Persons 16 years and over in the civilian non-institutional population who, during the reference period
a) did any work at all (at least one hour) as paid employees, worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family, and
b)all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or
other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs.

## Employer

A person or establishment that employs one or more people for wages or salary.

## Full-time Employee

Employees who usually work 35 hours per week or more.

## Goods Producing Industries (NAICS)

Includes manufacturing, construction, mining, and agriculture, forestry, fishing and hunting.

## Industry

A group of establishments that use similar processes and technologies to produce goods and services. The North American Industry Classification System (NAICS) groups establishments using closely similar technologies into industries.

## Job Seeker

A person actively looking for employment or researching career options.

## Job Vacancy

A specific position of employment at an establishment with the condition that there is work available for the position and the employer is actively recruiting for the position.

## Job Vacancy Rate

The estimated number of vacancies divided by the sum of current employment and estimated vacancies.

## Labor Force

The labor force includes all persons classified as employed or unemployed in accordance with the definitions contained in this glossary.

## Medical Insurance

Refers to any insurance plan that includes coverage for medical and related care.

## Medical Insurance Premium

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

## North American Industry Classification System (NAICS)

The successor to the Standard Industrial Classification (SIC) system; this system of classifying business establishments is used by the United States, Canada and Mexico. See full description within Appendix.

## 35 Appendix: Glossary -continued

## Not Seasonally Adjusted

This term is used to describe data series not subject to the seasonal adjustment process. In other words, the effects of regular, or seasonal, patterns have not been removed from these series.

## Occupation

Represents a set of activities and skills for which an employee is paid to perform. Employees that perform essentially the same tasks are grouped into the same occupation whether or not they are in the same industry. Some occupations are concentrated in a few particular industries, other occupations are found in most or all industries.

## Part-time Employee

An employee who usually works between one and 34 hours per week.

## Percentile Wage Estimate

Shows what percentage of workers in an occupation earn less than a given wage and what percentage earn more. For example, a 25 th percentile wage of $\$ 15.00$ indicates that $25 \%$ of workers (in a given occupation in a given area) earn at or less than $\$ 15.00$; therefore $75 \%$ of workers earn at or more than $\$ 15.00$,

## Permanent Employment

A vacancy is classified as a permanent position if the employee is hired to be employed for more than six months.

## Sample

A subset of the population selected for interview as a representative subset of the sample frame.

## Sample Frame

A listing of all units in a population. For this report the sample frame includes employers with five or more employees; government entities are drawn from the Quarterly Census of Employment and Wages while private companies come from the ALMIS (America's Labor Market Information System) database.

## Seasonally Adjusted

Seasonal adjustment removes the effects of events that follow a more or less regular pattern each year. These adjustments make it easier to observe the cyclical and other non-seasonal movements in a data series.

## Service Producing Industries (NAICS)

Includes utilities; wholesale trade; retail trade; transportation and warehousing; information; finance and insurance; real estate and rental and leasing; professional,
scientific, and technical services; management of companies and enterprises; administrative and support and waste management and remediation services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; other services (except public administration); public administration.

## Sign-on Bonus

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

## Standard Occupational Classification (SOC) System

This system is used by all Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of over 820 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 23 major groups, 96 minor groups, and 449 broad occupations. Each broad occupation includes detailed occupations requiring similar job duties, skills, education, or experience.

## Temporary Employment

A vacancy is classified as a temporary position if the employee is hired to be employed for six months or less.

## Unemployed Persons

Persons 16 years of age and over who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the four-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

## Unemployment Rate

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

## Wages

Hourly straight-time wage rate or, for workers not paid on an hourly basis, straighttime earnings divided by the corresponding hours. Straight-time wage and salary rates are total earnings before payroll deductions, excluding premium pay for overtime and for work on weekends and holidays, shift differentials, and non-production bonuses such as lump-sum payments provided in lieu of wage increases.

## Workforce Centers in the Northwest \& Rural Resort Job Vacancy Survey Region

Craig Workforce Center
480 Barclay
Craig, CO 81625
Phone: 970-824-3246 Fax: 970-824-7108 craig@cwfc.net

Edwards Workforce Center
Edwards Access Road \#23
Edwards, CO 81632
Phone: 970-926-4440
Fax: 970-926-7287
edwards@cwfc.net
Frisco Workforce Center
602 Galena Street
Frisco, CO 80443
Phone: 970-668-5360
Fax: 970-668-3216
frisco@cwfc.net

## Glenwood Springs

Workforce Center
51027 Highway 6 \& 24, Ste 173
Glenwood Springs, CO 81601
Phone: 970-945-8638
Fax: 970-928-0885
glenwoodsprings@cwfc.net
Granby Workforce Center
469 East Topaz Avenue
Granby, CO 80446
Phone: 970-887-1857
Fax: 970-887-1858
granby@cwfc.net

Leadville Workforce Center

## Satellite Office

505 Harrison Avenue
Leadville, CO 80461 Phone: 719-486-2428 Fax: 719-486-297 leadville@cwfc.net

## Meeker Workforce Center

Satellite Office
345 Market Stree
Meeker, CO 81641
Phone: 970-878-4211 Fax: 970-878-3355
meeker@cwfc.net
Rangely Workforce Center
Social Services Building
209 E. Main Street
Rangely, CO 81648 Phone: 970-675-5072 Fax: 970-675-8250 rangely@cwfc.net

Rifle Workforce Center Satellite Office
310 West Third Stree
Rifle, CO 81650 Phone: 970-625-5627 Fax: 970-625-1120 rifle@cwfc.net

Steamboat Springs
Workforce Center
1250 South Lincoln Avenue
Steamboat Springs, CO 80488 Phone: 970-879-3075
Fax: 970-879-3547
steamboatsprings@cwfc.net

## Tri-County Workforce

Center / Gilpin County
2960 Dory Hill Road, Ste. 100
Blackhawk, CO 80403 Phone: 303-582-6003 Fax: 303-582-5798
nbelk@cc.trico1stop.org
Tri-County Workforce /
Mountain Center
1531 Colorado Blvd.
Idaho Springs, CO 80452 Phone: 303-567-3135
Fax: 303-567-3132
nbelk@cc.trico1stop.org


[^0]:    * OES wages reported for Colorado statewide
    $\dagger$ Insufficient wage data

[^1]:    * OES wages reported for Colorado statewide
    $\dagger$ Insufficient wage data

[^2]:    * OES wages reported for Colorado statewide
    $\dagger$ Insufficient wage data

[^3]:    * OES wages reported for Colorado statewide
    $\dagger$ Insufficient wage data

[^4]:    * OES wages reported for Colorado statewide
    $\dagger$ Insufficient wage data

[^5]:    U.S. Bureau of the Census, U.S. Department of Commerce

