

# Colorado Northwest & Rural Resort Region

## Job Vacancy Survey Winter 2005



National Park Service Photo

Dinosaur National Monument, Moffat County

Survey Conducted  
January 28–February 14, 2005  
Released Spring 2005



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Analyst for this region: Todd Nielsen

Workforce Research & Analysis  
Labor Market Information  
Colorado Department of Labor & Employment  
633 17th Street, Suite 600  
Denver, CO 80202-3660

(303) 318-8890 Email: [lmi@state.co.us](mailto:lmi@state.co.us)  
[www.coworkforce.com/lmi/wra/home.htm](http://www.coworkforce.com/lmi/wra/home.htm)

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State of Colorado  
Bill Owens, *Governor*



Colorado Department of Labor & Employment  
Rick Grice, *Executive Director*

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**The unemployment rate and the level and growth rate of employment have been used as indicators of labor market conditions for decades.** While these indicators provide information about changes in the supply and demand for labor, they reveal 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.

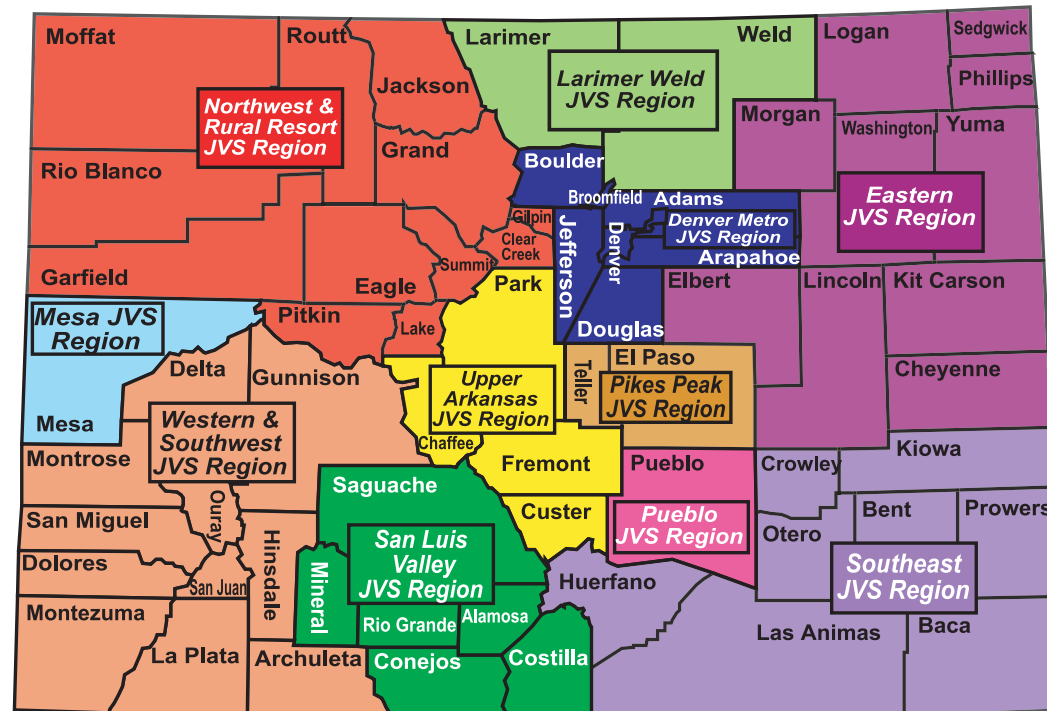
Job seekers and employers, as well as Workforce Centers and economic developers, need more than a measure of demand for workers at a specific point in time. They also need a measure of where in the economy that demand is located and what education and experience levels are most preferred. The Colorado 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 vacancies in the area and publish the report within weeks of the original data collection, providing a timely portrait of the employment situation.

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

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.

**Figure 1: Colorado Job Vacancy Survey Regions**



**T**his Northwest & Rural Resort Job Vacancy Survey (JVS) was conducted from January 28th through February 14th, 2005. 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 1,246 employers, representing 43% of the region’s total employment, responded to the survey. Of these, 191 are Government agencies, 62 are large employers and 993 are small to mid-size entities. The survey has an 81.3% response rate, while the cooperation rate is 91.1%. The margin of error for the overall vacancy estimate is plus or minus 4.7%, or about 93 vacancies.

### Major Findings of the Survey:

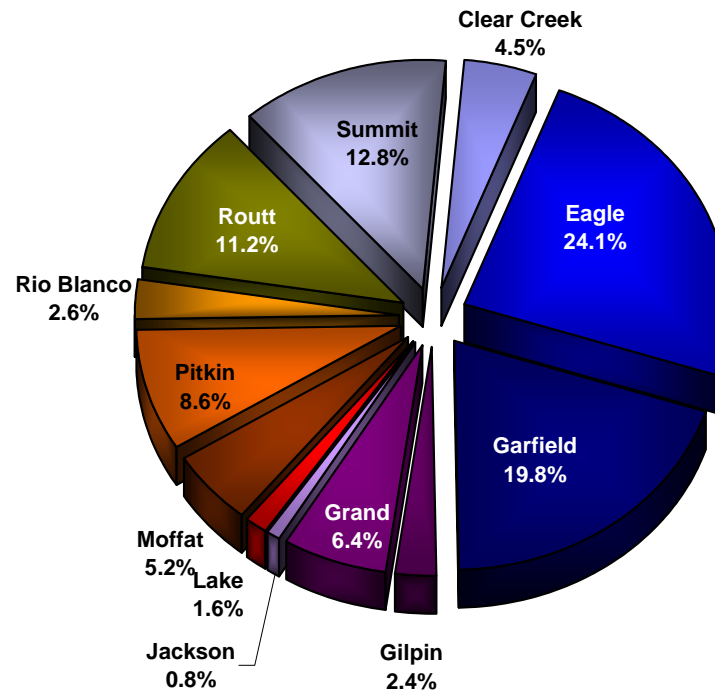
- ◆ An estimated 1,985 jobs were available for hire during the survey period, coinciding with a 1.7% vacancy rate. At this time last year 1,020 vacancies were estimated. ....Page 8
- ◆ Sixteen percent of the employers surveyed report at least one job vacancy .....Page 8
- ◆ Leisure & Hospitality, one of six JVS sectors surveyed, accounts for 686 of the estimated vacancies. The fewest are estimated for the Goods-Producing and Education & Health Services JVS sectors with around 170 vacancies per sector .....Page 8
- ◆ The average reported wage for vacancies in this survey is \$12.70 per hour. ....Page 8
- ◆ Sixty-three percent of the reported openings are permanent, full-time positions. ..Page 11
- ◆ Thirty-eight percent of the reported job vacancies require educational attainment beyond the high school/GED level. ....Page 12
- ◆ Either related or occupation specific experience is required for 68% of the job vacancies. ....Page 13
- ◆ Forty-six percent of the vacancies have been open for less than 30 days. ....Page 16
- ◆ Food Preparation & Serving Related occupations are the most frequently reported of the 22 major occupational groups covered in the survey. ....Page 19

**The Northwest & Rural Resort (NW&RR) Region encompasses a vast geographic area rich in environmental wealth and serves as the primary tourist destination for the state.** Much of the region’s labor force works in tourism related businesses 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.<sup>1</sup> 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 related to 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, December 2004**

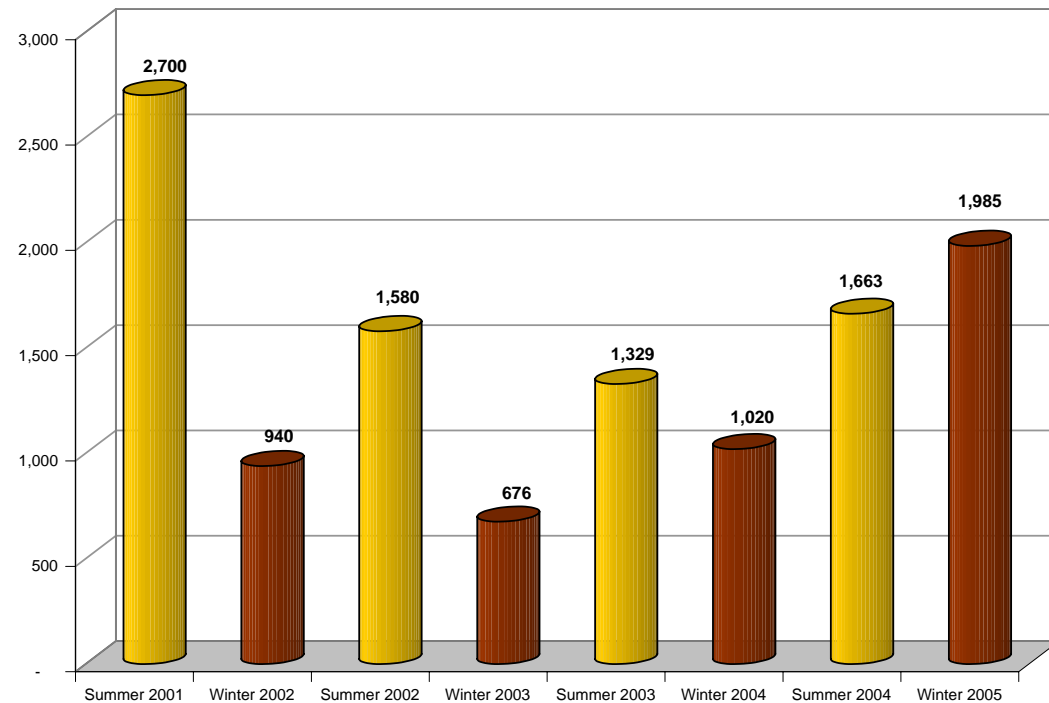


Source: CDLE, Local Area Unemployment Statistics, Released January 2005

1. Colorado Department of Local Affairs, Colorado, Demography Section, Draft 2002 County Estimates

The number of estimated vacancies is the highest recorded for a winter survey in the Northwest & Rural Resort Region. While the surveys conducted after Summer 2001 have shown decreasing estimated job vacancy levels, Winter 2004 results showed an upturn in vacancies for winter, the traditionally weaker hiring period. This upturn in vacancies increased even more for the Winter 2005 survey, showing how the state and the region are rebounding from the economic downturn in 2001. With 1,985 vacancies the Winter 2005 survey has 960 more openings than Winter 2004, quite possibly showing the rebound of employment associated with tourism and construction in the region.

**Figure 3: Historical Vacancies – Northwest & Rural Resort Region**



	Summer 2001	Winter 2002	Summer 2002	Winter 2003	Summer 2003	Winter 2004	Summer 2004	Winter 2005
<b>Vacancies</b>	2,700	940	1,580	676	1,329	1,020	1,663	1,985
<b>Employment</b>	107,307	110,280	108,315	111,868	111,767	114,726	98,506	114,846
<b>Unemployed</b>	2,620	5,119	3,414	5,126	4,435	5,109	3,663	3,929
<b>Unemployment Rate</b>	2.4%	4.4%	3.5%	4.4%	3.8%	4.3%	3.6%	3.3%

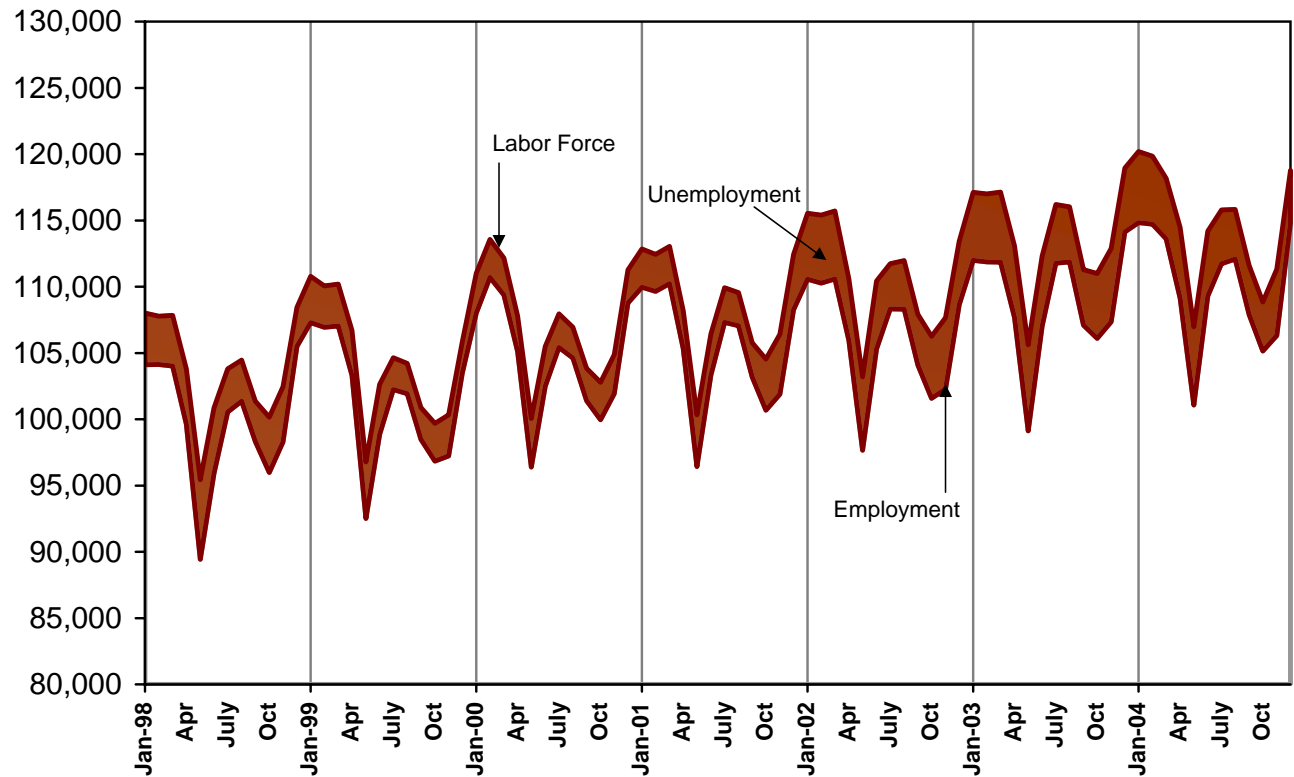
Source: CDLE, Local Area Unemployment Statistics Released January 2005

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 December of 2004. The net growth in the labor force over the same 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 of 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.

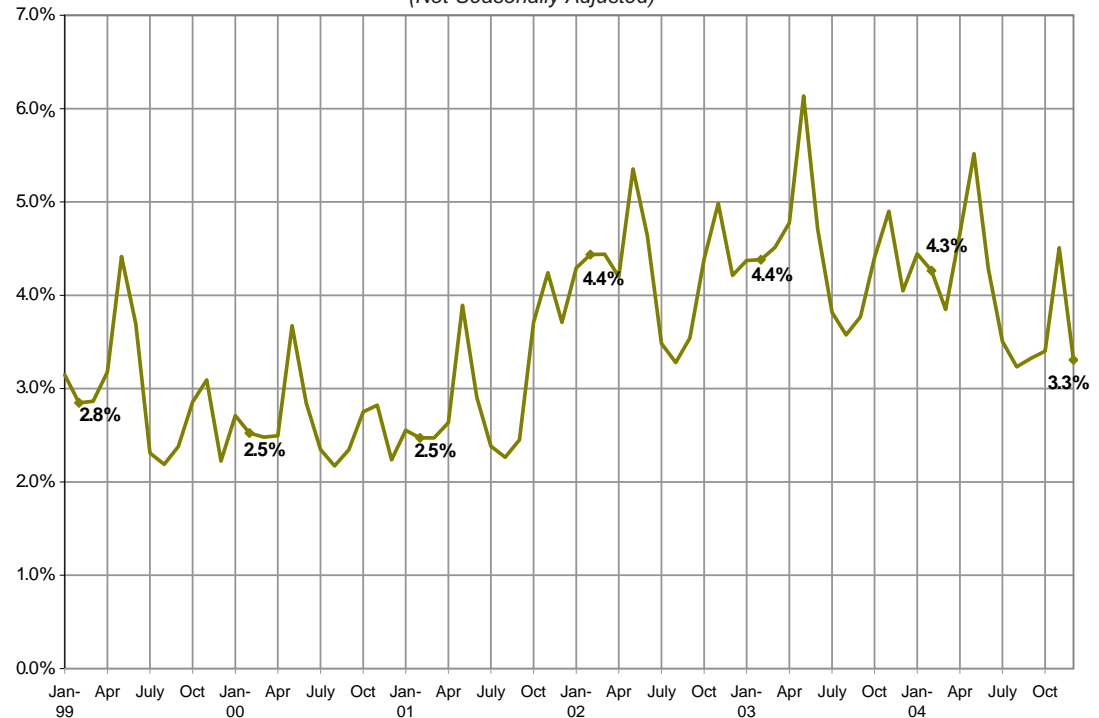
**Figure 4: Employment and Labor Force Trends for the Northwest & Rural Resort Region**  
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, January 2005

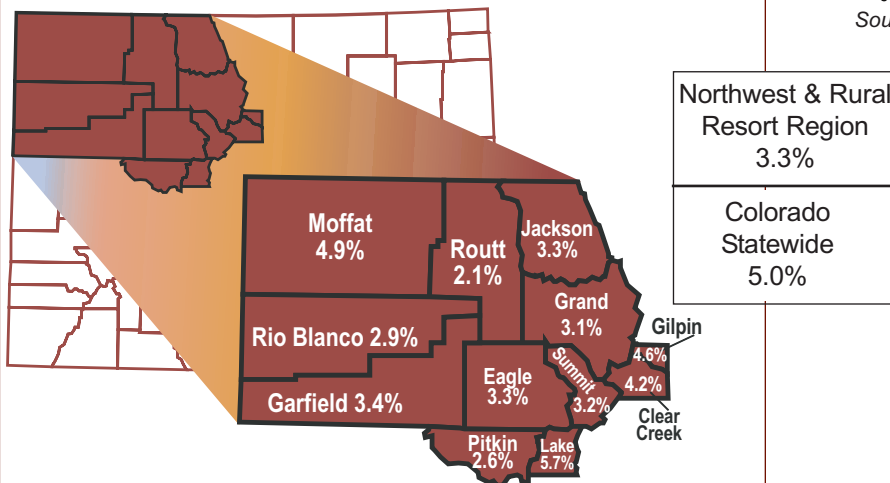
The unemployment rate tends to peak in May each year, then falls through late summer as the labor force thins and employers hire construction and tourism-related workers for the summer. As the labor force grows steeply again in the late fall in anticipation of hiring for the ski season, there is a short-term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



Source: CDLE, Local Area Unemployment Statistics, Released January 2005

**Figure 6: Unemployment Rates for December 2004**  
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, Released January 2005

It is estimated that 114,846 people were employed out of a labor force of 118,775 in December of 2004. Preliminary figures show that the region's unemployment rate of 3.3% is lower than both that of the state (5.0%) and the U.S. (5.4%).<sup>2</sup>

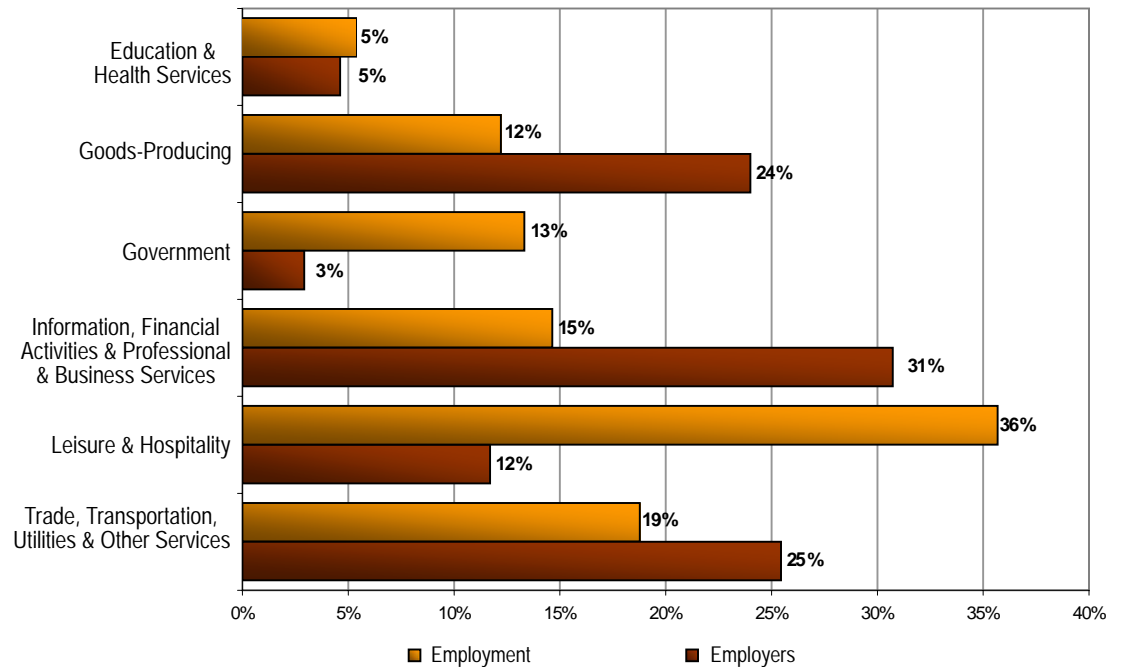
2. U.S. Department of Labor. Not Seasonally Adjusted, December U.S. unemployment rate.

Figure 7 presents employer and employee data for the six JVS sectors used in the rural areas in Colorado (Page 33). Data are gathered under the Quarterly Census of Employment & Wages Program that includes employers who pay unemployment insurance tax. Although 98%<sup>3</sup> of the nation's jobs are covered under the Unemployment Insurance program, positions typically excluded are agriculture, railroad, some state and local government, certain non-profits, domestic workers, unpaid family workers, and the self employed.

First quarter 2004 data reveals that 36% of the region's employment is in Leisure & Hospitality. This JVS sector constitutes a smaller proportion of the region's employment in the summer; last summer it accounted for 30% of total employment. The Goods-Producing sector moved from the third most prominent (15% of employment) in the Winter 2004 survey to fifth (12% of employment) this year. 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** JVS 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** JVS 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.

**Figure 7: Northwest & Rural Resort Region Employers and Employees, 1st Quarter, 2004**



Source: CDLE, Quarterly Census of Employment and Wages (QCEW)

- **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.

3. U.S. Department of Labor, Bureau of Labor Statistics. <http://www.bls.gov/cew/home.htm>



The survey captures information from private firms with five or more employees and all Government institutions, defined as the sample frame. All survey data refer to this subset of regional employment.

During the survey period, an estimated 1,985 vacancies were open for immediate hire with an average wage of \$12.70 per hour in the Northwest & Rural Resort Region. This is an increase of 965 vacancies compared to a year ago. The overall vacancy rate for this survey is 1.7%, i.e., there are 17 vacancies for every 1,000 positions. The vacancy rate is calculated by taking the number of vacancies and dividing it by the sum of the number of vacancies and universe employment.

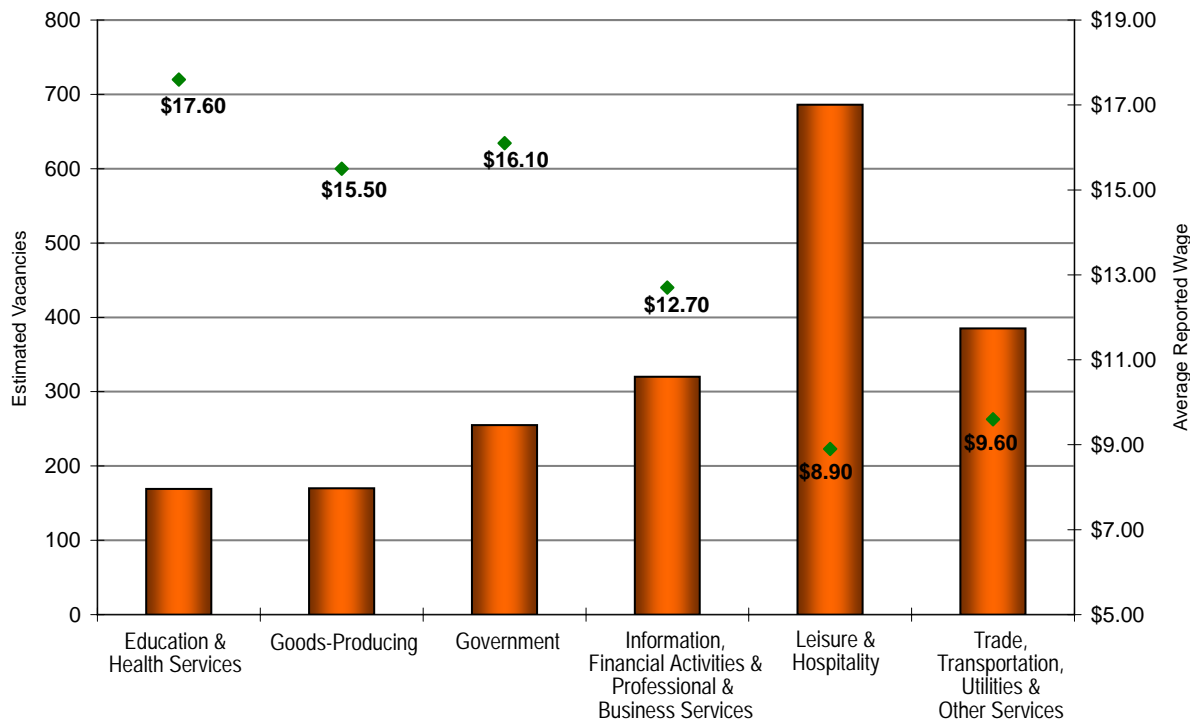
The Job Vacancy Survey is designed to reflect hiring activity by industry groups. In this survey, most job openings, 686, are in the Leisure & Hospitality JVS sector. This group of industries has almost twice the number

of vacancies as the Trade, Transportation, Utilities & Other Services. With a vacancy rate of 1.4%, there are 14 job openings for every 1,000 positions in this sector. Forty-one percent of reported Leisure & Hospitality vacancies are with Food Preparation & Serving Related businesses. Other reported vacancies in this sector are in Personal Care & Service (20%), and Accommodation Services Personnel (10%).

Trade, Transportation, Utilities & Other Services has 385 estimated vacancies, with a vacancy rate that translates to nineteen vacancies for every 1,000 positions. Vacancies are reported by firms representing the numerous detailed industries within this JVS sector. Transportation & Material Movers constitute 40% of total vacancies in the sector.

Education & Health Services and Goods-Producing JVS Sectors each represent 9% of the number of estimated vacancies at roughly 170 each; while

**Figure 8: Estimated Vacancies and Average Wages by JVS Sectors**



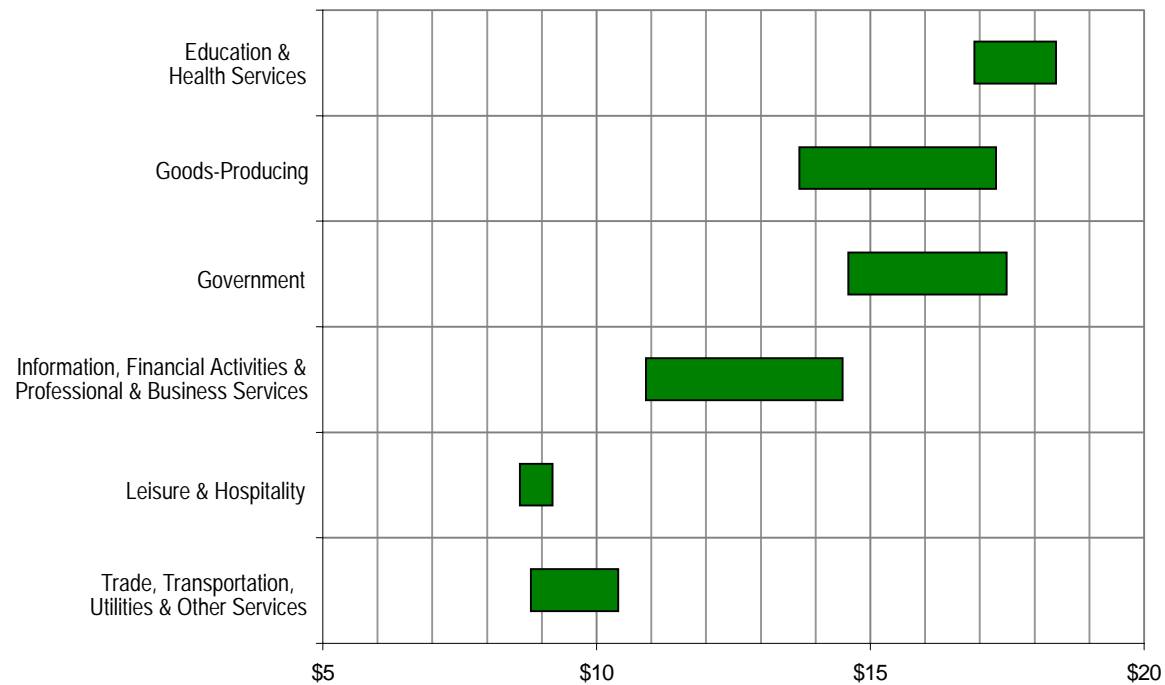
Information, Financial Activities & Professional & Business Services accounts for 16%; and Government represents 13% of total estimated job vacancies. Of all six JVS sectors, Information, Financial Activities & Professional & Business Services has the highest vacancy rate at 2.0%. This indicates higher job growth and/or turnover for this industry group. Education & Health Services, which had the highest vacancy rate last year, moved to second for this survey with a vacancy rate of 1.8%. Sixty-two percent of reported Education & Health Services job vacancies are concentrated in health-care occupations.

The Government JVS sector has a 1.7% vacancy rate and is among the top three sectors in terms of relative job demand. Sixteen percent of Government vacancies are found in Protective Services occupations.

The Goods-Producing group has the second lowest vacancy rate of 1.5%. One third of the vacancies in this industry are in Construction & Extraction occupations. Within the Construction & Extraction Occupations, 26% of vacancies are for Construction Laborers, and 22% are for Electricians.

Figure 9 illustrates average wage ranges by JVS sectors. The lower wage ranges are reported in the Leisure & Hospitality and Trade, Transportation, Utilities & Other Services sectors. The occupations in the higher wage ranges are in the Goods-Producing, Government and Health & Education Services sectors.

**Figure 9: Reported Average Wage Ranges by JVS Sectors**



Of all reported job vacancies, 65% are with small to mid-size businesses. They represent 95% of sample frame employers and 59% of employment. The types of businesses offering open positions in this employer size category are:

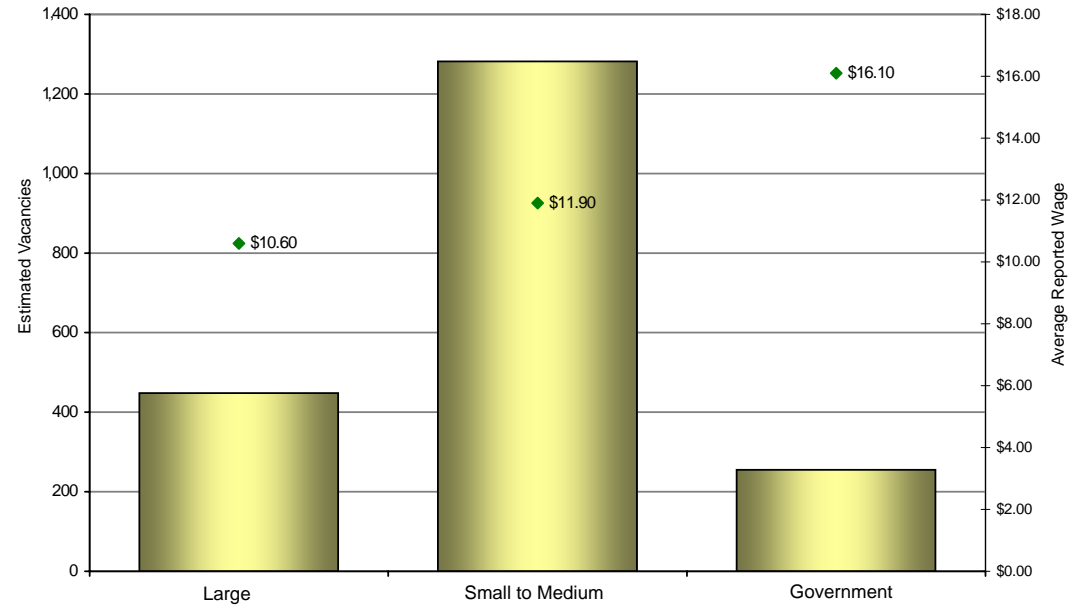
- Leisure & Hospitality (27%)
- Information, Financial Activities, & Professional & Business Services (25%)
- Goods-Producing (18%)
- Trade, Transportation, Utilities, & Other Services (18%)
- Education & Health Services (12%)

Large employers represent 29% of current employment, but are offering about 22% of the job openings. A majority (65%) of the vacancies for this employer size group are with Leisure & Hospitality, followed by Trade, Transportation, Utilities & Other Services (21%) and Education & Health Services (13%). The remaining 1% is split between the Information, Financial Activities & Professional & Business Services and Goods-Producing sectors.

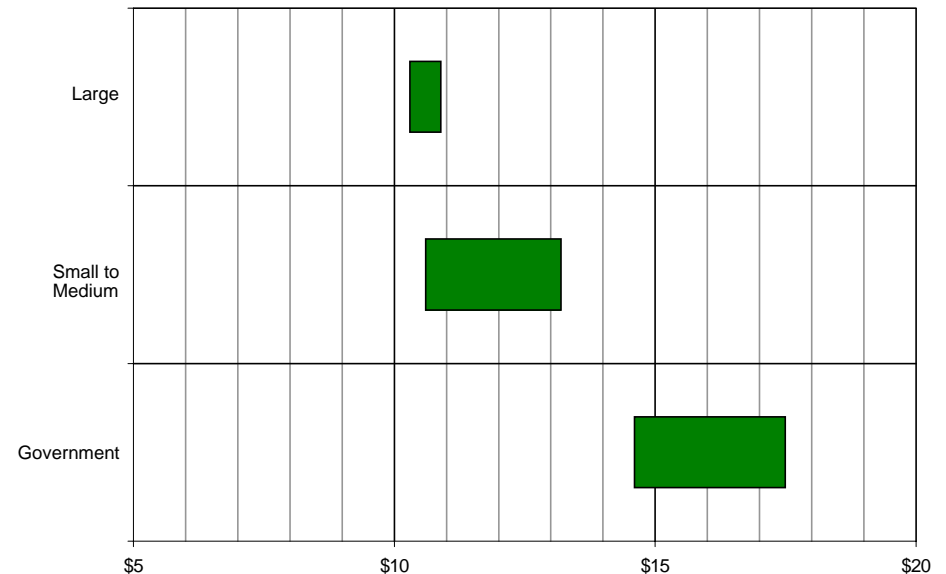
Twelve percent of current employment and 13% of reported job vacancies are found in Government entities. There are no job vacancies reported by federal agencies during the survey period. Eighty-five percent of Government vacancies are with local governments and 15% with state run institutions. Nine percent of all Government openings are in Highway Maintenance occupations, followed by General Office Clerks with 7% of the vacancies.

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.

**Figure 10: Estimated Vacancies and Average Wages by Employer Size**



**Figure 11: Reported Average Wage Ranges by Employer Size**



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.

The majority of open positions are Full-time/Permanent. A majority of Full-time/Temporary positions are available with Information, Financial Activities & Professional & Business Services and Leisure & Hospitality employers. Sixty-five Part-time/Temporary positions are reported for this survey, up from one, in Winter 2004.

Average wage ranges are fairly 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 Practitioner & Technical, and Food Preparation & Serving Related occupations. Wages reported for all Full-time/Permanent vacancies range between \$13.30 and \$15.20.

Part-time/Temporary positions had the second highest percentage of vacancies for this survey. A majority of these are in Food Preparation & Serving Related and Personal Care & Service occupations. Average wages reported for these vacancies range from \$9.20 to \$10.90.

Part-time/Permanent openings represent a wide range of occupations. Jobs in Protective Service within the Government are at the high end of the average wage scale while Food Preparation & Serving Related occupations represent the lowest average wage offered.

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 the few vacancies in Construction constituted the higher end.

Figure 12: Vacancies by Employment Status

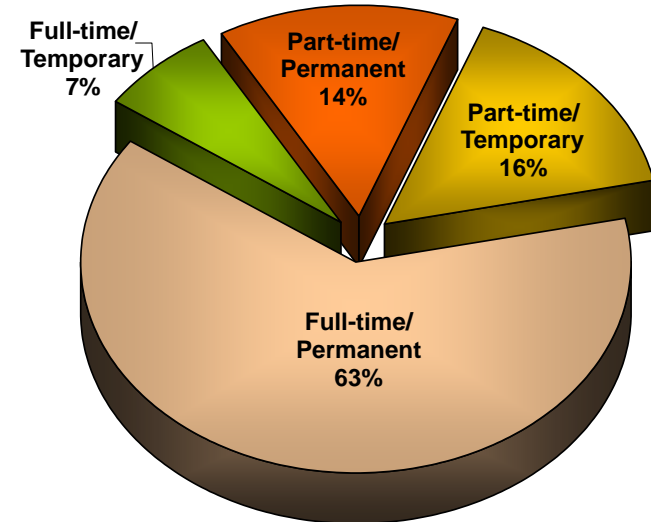
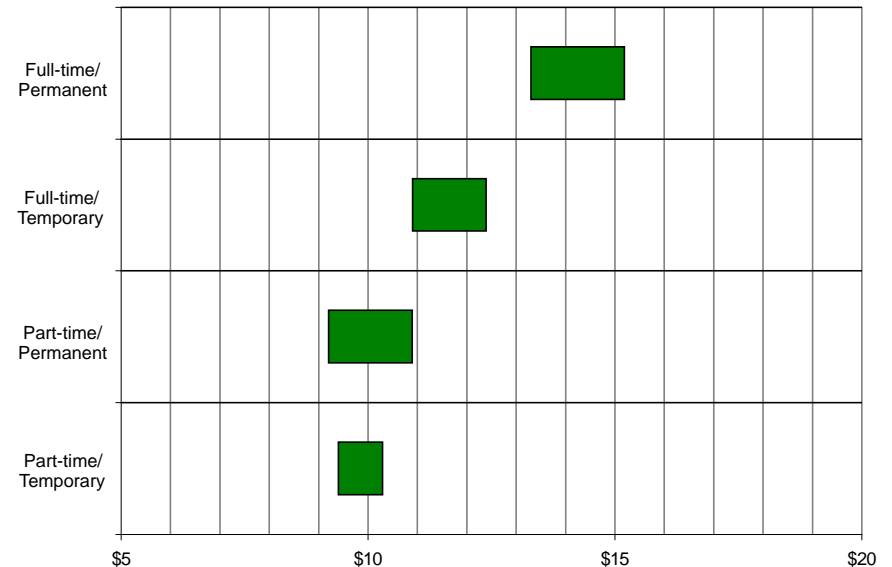


Figure 13: Reported Average Wage Ranges by Employment Status



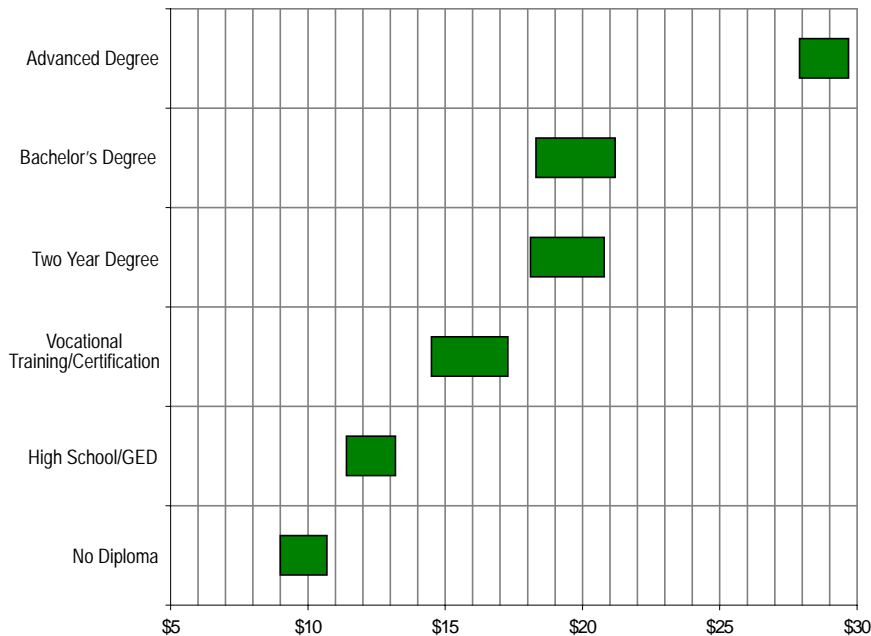
Assessing labor demand in terms of education and experience requirements provides valuable labor market information. About 80% of reported job vacancies have information on the education and experience requirements of surveyed employers.

Thirty-eight percent of the vacancies reported require educational attainment beyond the high school/GED level, while 62% require less. These lower education requirements are primarily reflective of the employment demands of the Leisure & Hospitality JVS sector.

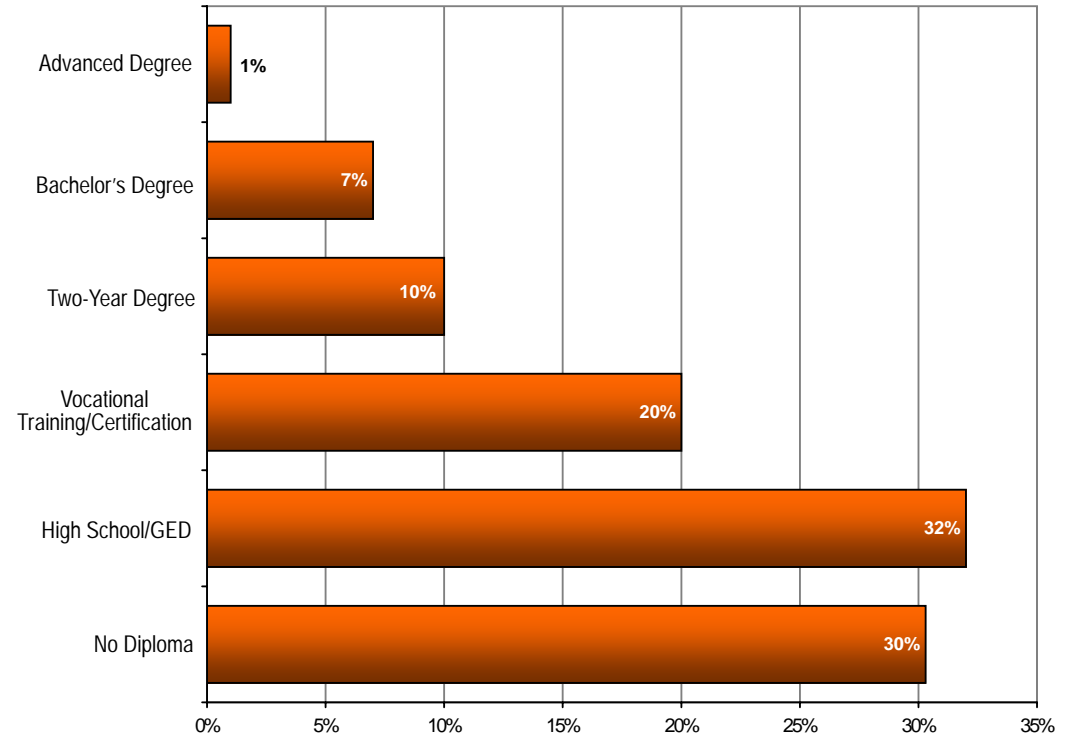
Figure 15 illustrates that wages offered tend to be correlated with educational attainment—higher levels of education command higher wages. Following are details of the occupations demanded and the wages offered for vacancies grouped by education required:

**Advanced Degree:** Job vacancies in four major occupational groups required advanced degrees: Healthcare Practitioner & Technical; Management; Community & Social Services; and Legal.

**Figure 15: Reported Average Wage Ranges by Education**



**Figure 14: Vacancies by Education**



**Bachelor's Degree:** Most vacancies requiring a Bachelor's degree are in Architecture & Engineering occupations followed by Managerial jobs. Others are Healthcare Practitioner & Technical and Management.

**Two-Year Degree:** Vacancies requiring two-year degrees fall into eleven different major occupational groups. Healthcare Practitioner & Technical positions are reported most often. Vacancies in this group offer the highest wages, while Personal Care & Service Occupation vacancies pay on the low end of the scale.

**Vocational Training/Certification:** Fifteen of the 22 major occupational groups represent vacancies for which employers require vocational training or certification. Protective Services and Transportation & Materials Moving

Occupations each accounted for 16% of vacancies requiring vocational training or certification. Healthcare Practitioner & Technical positions offer the highest wages while Food Preparation & Serving Related vacancies pay the lowest wages.

**High-School/GED:** Fifteen occupational groups represent vacancies requiring a high school diploma or GED. Office & Administrative Support positions provide the highest number of job opportunities during the survey period. Openings in Business & Financial Operations occupations, while limited, offer higher wages. Personal Care & Service openings offer the lowest wages in this category.

**No Diploma:** Thirty percent of vacancies do not require a diploma. Though opportunities span eleven different occupational groups, the majority are in Food Preparation & Serving Related Occupations. Production positions are at the top of the wage range, yet have few openings, while Food Preparation & Serving Related jobs, though plentiful, pay lower wages for this education scale.

The JVS also collects experience requirements for open positions. The experience levels demanded by employers can be used to guide employment-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. Sixty-eight percent of reported vacancies require at least experience in a related field.

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

**Figure 16: Vacancies by Experience**



occupations reported in the JVS enhances the relevance of these experience categories:

**Experience in This Occupation:**

Healthcare Practitioner & Technical jobs make up 17% of the vacancies in this experience category. These jobs offer wages at the high end of the scale along with Management positions. Sales & Related; and Food Preparation & Serving vacancies pay the lowest wages in this category.

**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. Higher paying positions are in Business & Financial Operations fields while many Food Preparation & Serving Related vacancies offer wages below the average minimum wage range charted.

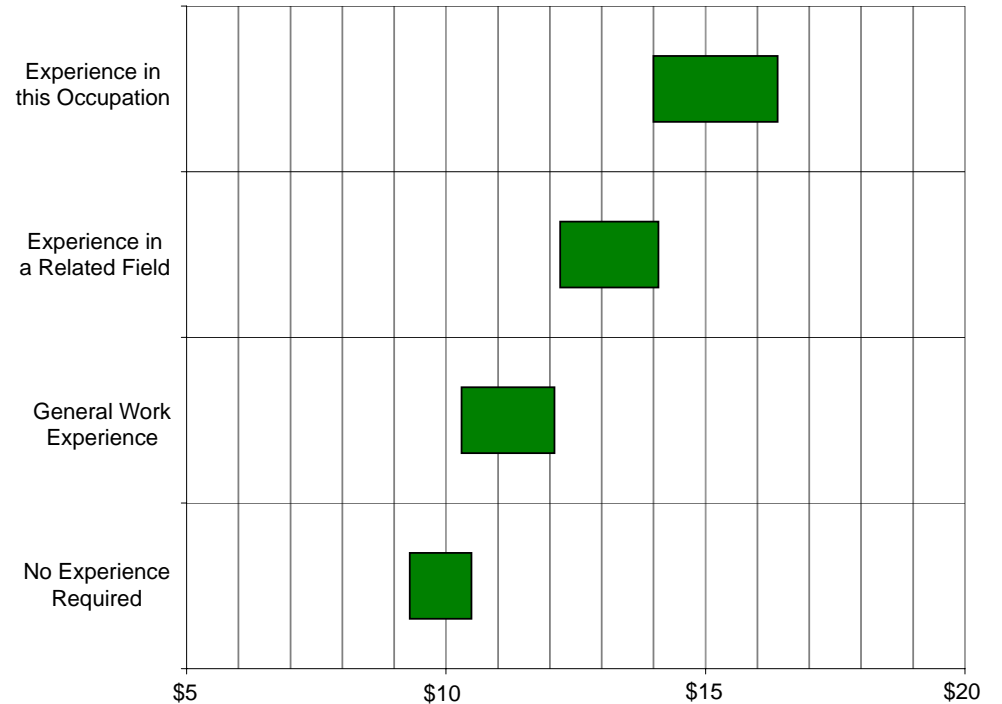
**General Work Experience:**

Building & Grounds Cleaning & Maintenance jobs are the most frequently reported vacancies of positions requiring general work experience. Protective Service Occupations offer the highest starting wage while Food Preparation & Serving Related 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 they do not increase significantly as evidenced by the lower offered wages 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 Sales & Related and Transportation & Material Moving occupations that do not require experience.

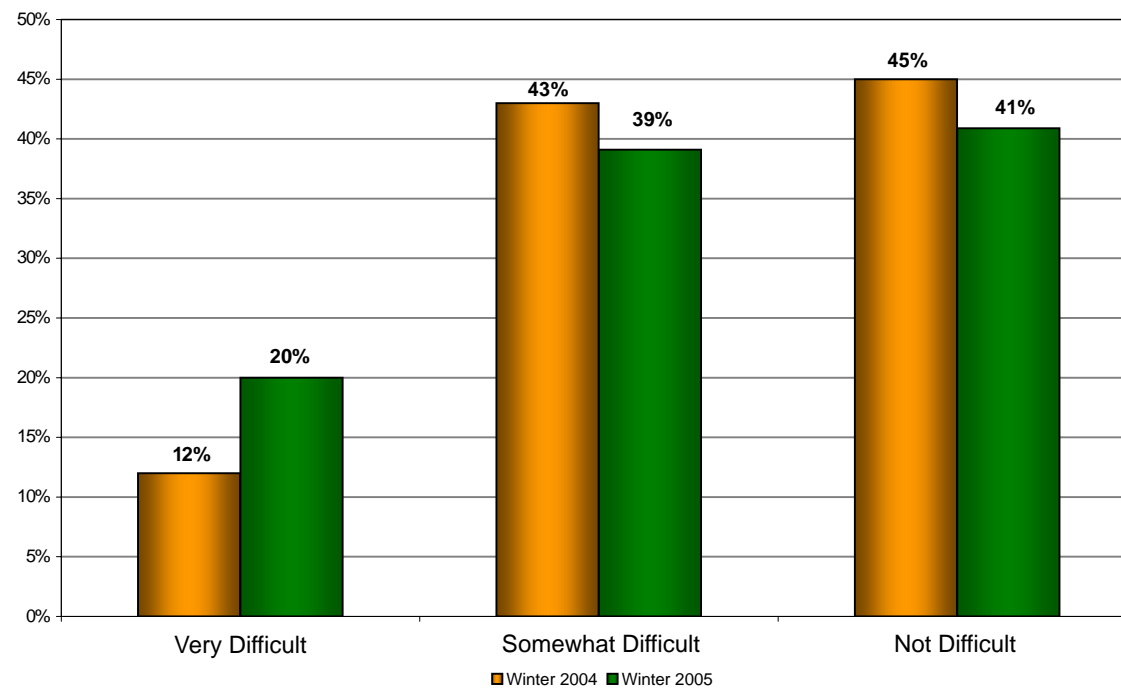
**Figure 17: Reported Average Wage Ranges by Experience**



**E**mployers' 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-nine 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 2004. Building & Grounds Cleaning & Maintenance occupations represent the largest proportion of vacancies employers describe as very difficult to fill.

**Figure 18: Vacancies by Difficulty to Fill**





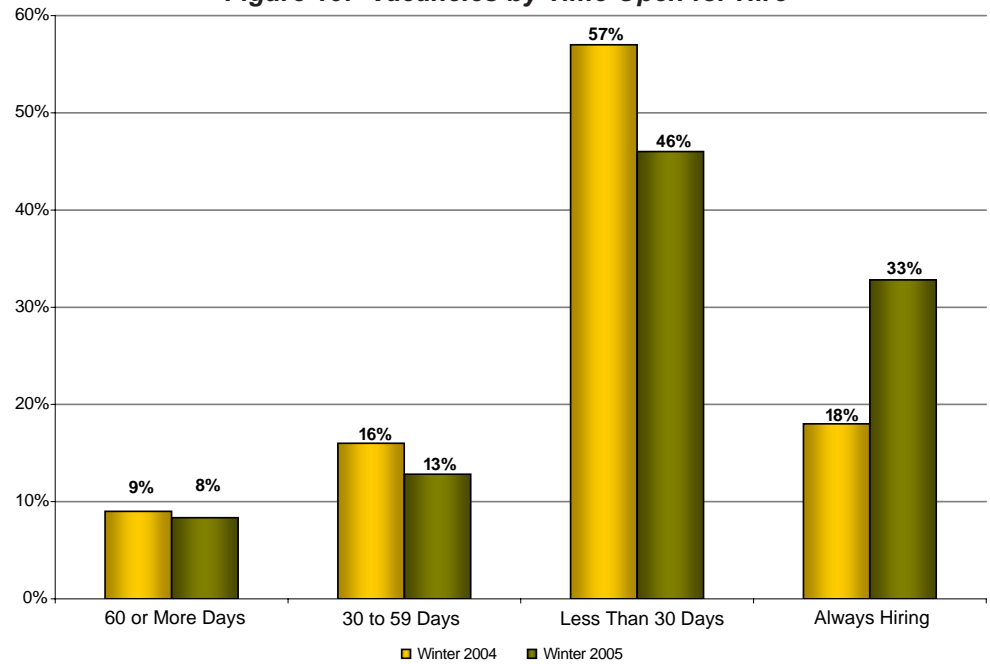
The length of time that a vacancy is open is a good indicator of the degree of difficulty an employer is having in filling a position. Factors include: the availability of qualified candidates, competition among employers for similar candidates, and the willingness of candidates to accept job duties 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. Twenty-four percent of vacancies in the open for less than 30 days category are in Building & Grounds Cleaning & Maintenance occupations, followed by Food Preparation & Serving Occupations with 19%.

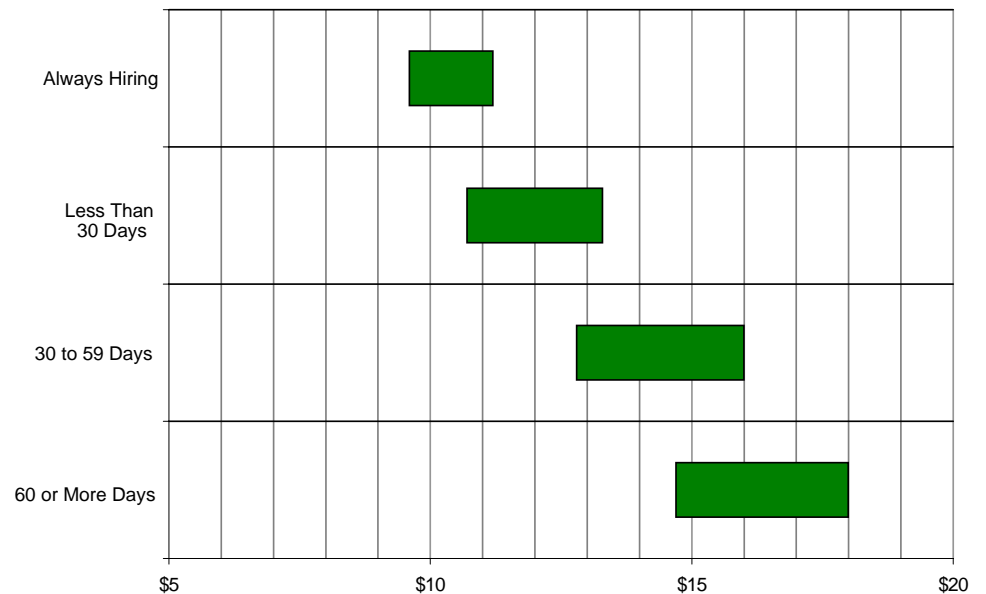
The greatest change from prior winter surveys is in the proportion of vacancies for which employers are always hiring. Over the past two years the percentage of employers with vacancies that were classified as always hiring has risen from three percent to 33%. This means that employers are always looking to hire qualified employees in certain occupations.

Food Preparation & Serving Related job openings are found in each of the time open for hire categories with the exception of the 'More than 60 days' category; they make up 24% of the vacancies classified as always hiring. The average minimum and maximum wages offered for vacancies in this category are relatively low. Unattractive compensation may be one reason that these positions have a high turnover and tend to remain open, while most of these vacancies rely on tips to supplement the income.

**Figure 19: Vacancies by Time Open for Hire**



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



### 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.

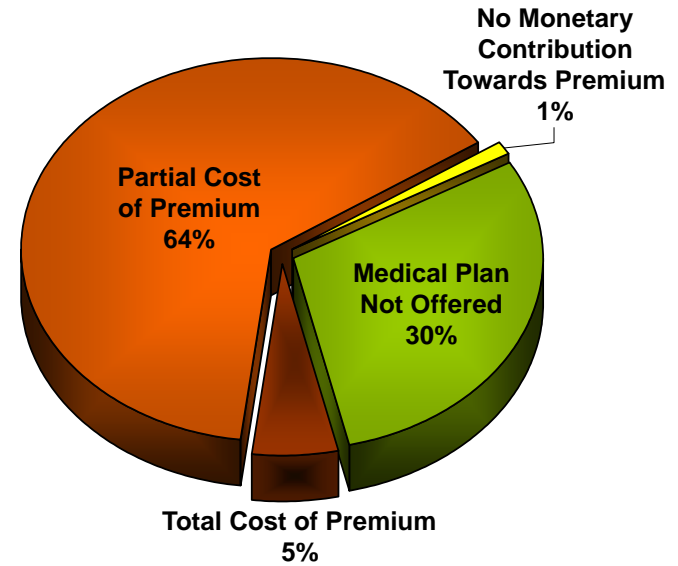
Thirty percent of all available job openings do not include a medical benefit. Reported vacancies in Leisure & Hospitality, followed by the Information, Financial Activities & Professional & Business Services JVS sector are the least likely to offer a medical benefit. The most likely organization for 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 for 81% of Full-time/Permanent positions, 63% of Part-time/Permanent vacancies, and 23% of temporary positions.

### Sign-On Bonus

There was insufficient data to report on sign-on bonuses.

Figure 21: Employers' Contribution to Medical Insurance



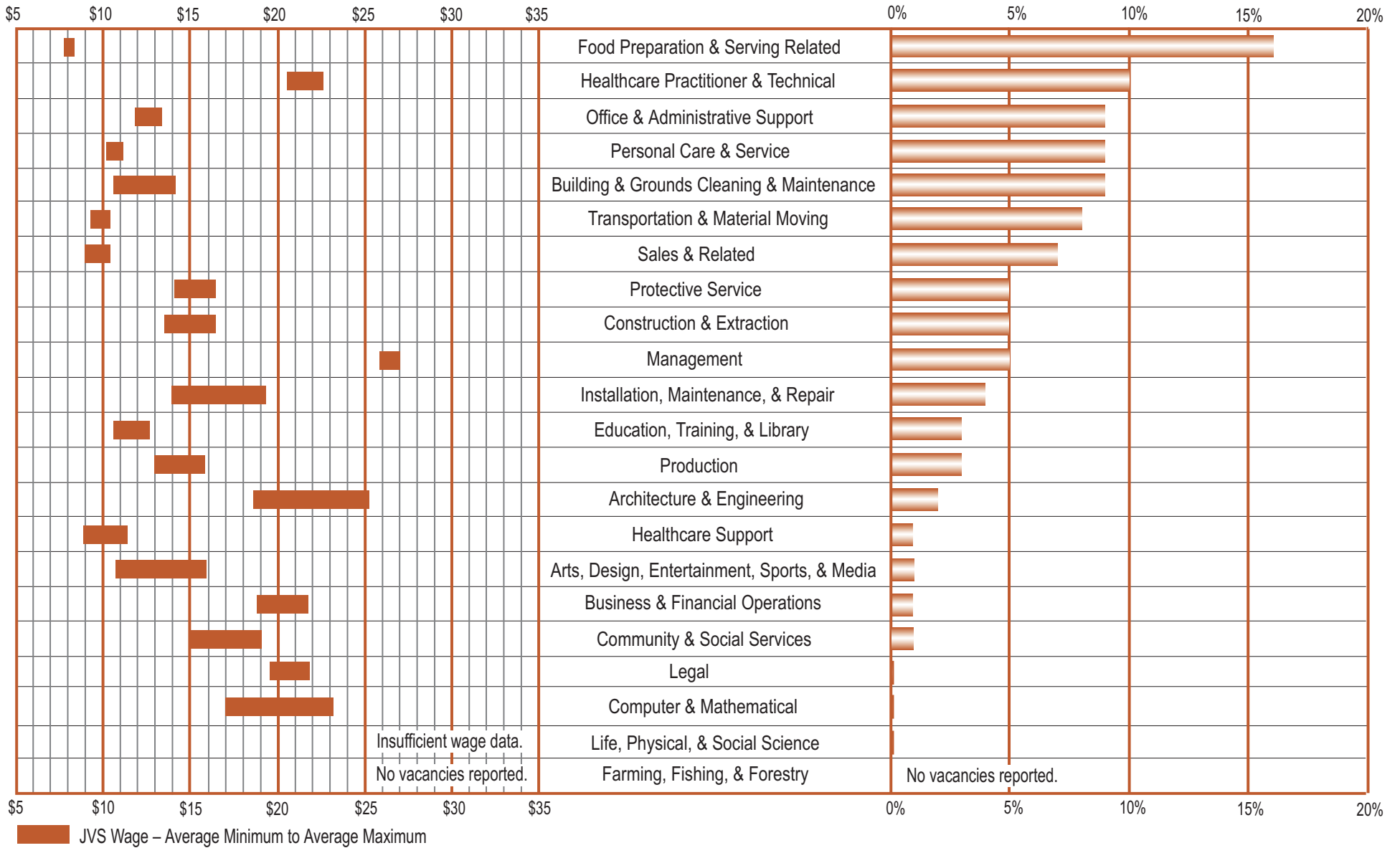
**I**n order to help make comparisons between this survey and other sources of employment statistics, all jobs reported are assigned a Standard Occupational Classification (SOC) code from the *2000 Standard Occupational Classification Manual*. The JVS utilizes 820 detailed SOC occupational titles combined 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 highest number of estimated vacancies, Food Preparation & Serving Related occupations account for the highest 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**



## Occupational Estimates

Tables 1 and 2 contain a list of all 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. Nearly 14% of small to mid-size employers were contacted for the random sample, and likewise the occupations associated with these vacancies are listed.

Vacancies estimated and reported along with wages offered are displayed in Table 1 for those occupations where at least 5 vacancies are estimated.

### Estimated Vacancies

Because nearly all large employers and Government agencies are contacted, the number of vacancies by occupation for these groups is not estimated; it is an actual count of the vacancies. However, in addition to the number found, 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 occupation titles reported in the survey.

### Vacancies Found

The number of vacancies by occupation found 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.

### Average OES Wage

Occupational Employment Statistics (OES) wage data are provided for each 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. 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 is being paid for already filled positions. Together, these data provide employers and job seekers with a good indication of the compensation available in the current job market.

Table 1: Occupations with Five or More Estimated Vacancies

SOC Code	SOC Occupational Title	Vacancies Estimated	Vacancies Found	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)							
					Average Wages			Percentile Distribution				
					Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	146	60	\$8.40	\$6.84	\$8.58	\$9.46	\$6.31	\$7.30	\$8.35	\$9.90	\$11.13
41-2011	Cashiers	88	36	\$9.40	\$8.16	\$10.91	\$12.29	\$7.42	\$9.02	\$10.38	\$12.82	\$15.96
37-3011	Landscaping and Groundskeeping Workers	77	28	\$12.50	\$9.35	\$12.25	\$13.70	\$8.35	\$10.65	\$12.44	\$13.84	\$15.81
41-2031	Retail Salespersons	75	18	\$9.60	\$8.45	\$12.46	\$14.47	\$7.56	\$9.42	\$11.29	\$14.39	\$17.68
29-1111	Registered Nurses	59	48	\$23.80	\$16.74	\$23.37	\$26.69	\$15.06	\$18.65	\$22.87	\$27.03	\$32.54
43-4081	Hotel, Motel, and Resort Desk Clerks	53	14	\$10.60	\$9.73	\$11.17	\$11.89	\$9.39	\$10.01	\$11.04	\$12.50	\$13.88
35-3031	Waiters and Waitresses	47	24	\$5.90	\$6.08	\$8.61	\$9.87	\$5.70	\$6.16	\$6.96	\$9.98	\$14.40
47-2061	Construction Laborers	47	7	\$12.00	\$10.34	\$13.21	\$14.65	\$9.65	\$11.21	\$12.83	\$14.90	\$17.39
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	40	18	\$7.60	\$8.92	\$11.93	\$13.43	\$8.25	\$9.63	\$11.17	\$13.86	\$17.32
53-3032	Truck Drivers, Heavy and Tractor-Trailer	33	7	\$15.60	\$13.18	\$18.20	\$20.72	\$11.95	\$15.22	\$18.31	\$21.02	\$23.91
39-3091	Amusement and Recreation Attendants	32	17	\$8.80	\$7.20	\$9.60	\$10.80	\$6.55	\$7.63	\$8.65	\$10.68	\$13.88
37-2012	Maids and Housekeeping Cleaners	30	20	\$8.90	\$8.95	\$10.67	\$11.53	\$8.31	\$9.41	\$10.42	\$11.65	\$13.60
39-9011	Child Care Workers	30	15	\$9.50	\$7.29	\$9.29	\$10.29	\$6.49	\$8.23	\$9.47	\$10.43	\$11.57
43-4051	Customer Service Representatives	29	9	\$11.90	\$6.35	\$11.49	\$14.06	\$6.11	\$6.87	\$11.20	\$14.70	\$18.91
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	28	20	\$11.70	\$7.95	\$11.26	\$12.91	\$7.02	\$8.92	\$10.69	\$13.20	\$16.56
43-4171	Receptionists and Information Clerks	28	8	\$10.70	\$8.76	\$11.73	\$13.21	\$7.87	\$9.81	\$11.70	\$13.47	\$15.80
25-2021	Elementary School Teachers, Except Special Education	27	9	\$11.10	\$29,558	\$37,921	\$42,102	\$27,593	\$31,344	\$36,722	\$44,276	\$52,084
39-9032	Recreation Workers	27	27	\$11.30	\$6.96	\$10.81	\$12.73	\$6.43	\$7.66	\$10.44	\$13.16	\$16.34
47-2111	Electricians	26	6	\$22.50	\$13.76	\$19.62	\$22.55	\$12.84	\$14.50	\$18.77	\$23.95	\$27.47
35-2014	Cooks, Restaurant	24	14	\$9.50	\$9.53	\$11.27	\$12.14	\$9.06	\$9.72	\$10.76	\$12.67	\$14.99
49-3023	Automotive Service Technicians and Mechanics	24	7	\$17.70	\$11.20	\$18.44	\$22.06	\$10.15	\$12.74	\$18.05	\$22.31	\$28.08

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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

SOC Code	SOC Occupational Title	Vacancies Estimated	Vacancies Found	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)							
					Average Wages			Percentile Distribution				
					Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
25-2011	Preschool Teachers, Except Special Education	23	5	\$10.80	\$8.16	\$10.40	\$11.51	\$7.44	\$8.89	\$9.99	\$11.34	\$13.79
47-2152	Plumbers, Pipefitters, and Steamfitters	23	3	\$12.00	\$16.10	\$22.01	\$24.97	\$14.98	\$17.81	\$21.73	\$26.11	\$31.28
51-6011	Laundry and Dry-Cleaning Workers	23	11	\$10.70	\$7.34	\$10.31	\$11.80	\$6.57	\$8.21	\$9.90	\$12.00	\$14.53
11-2021	Marketing Managers	22	3	\$17.30	\$20.23	\$34.09	\$41.01	\$16.77	\$23.34	\$27.85	\$40.07	\$57.57
43-5032	Dispatchers, Except Police, Fire, and Ambulance	22	2	\$25.00	\$11.67	\$16.67	\$19.16	\$10.73	\$12.48	\$14.53	\$17.31	\$25.29
51-4121	Welders, Cutters, Solderers, and Brazers	22	10	\$18.00	\$12.90	\$17.25	\$19.42	\$11.74	\$14.40	\$16.77	\$20.41	\$24.58
11-3011	Administrative Services Managers	21	2	†	\$18.18	\$32.64	\$39.88	\$16.81	\$20.40	\$27.32	\$36.38	\$57.42
49-9042	Maintenance and Repair Workers, General	21	13	\$15.00	\$10.47	\$15.33	\$17.77	\$9.30	\$12.10	\$14.38	\$18.44	\$22.82
11-1011	Chief Executives	20	1	†	\$32.48	\$61.72	\$76.34	\$27.45	\$39.50	\$54.15	†	†
43-6011	Executive Secretaries and Administrative Assistants	20	10	\$15.50	\$13.78	\$18.11	\$20.27	\$12.82	\$14.61	\$16.95	\$20.74	\$24.98
53-7064	Packers and Packagers, Hand	20	16	\$5.50	\$7.40	\$9.90	\$11.15	\$6.37	\$8.57	\$9.78	\$10.76	\$12.85
41-2021	Counter and Rental Clerks	19	6	\$9.70	\$7.41	\$10.15	\$11.52	\$6.88	\$8.25	\$9.78	\$11.61	\$14.13
39-1021	First-Line Supervisors/Managers of Personal Service Workers	18	10	\$9.50	\$11.38	\$16.97	\$19.77	\$10.90	\$13.25	\$16.60	\$20.66	\$25.04
47-4051	Highway Maintenance Workers	18	18	\$14.20	\$12.10	\$16.14	\$18.16	\$11.50	\$13.35	\$16.42	\$19.19	\$21.10
35-2012	Cooks, Institution and Cafeteria	17	13	\$9.80	\$8.16	\$11.26	\$12.81	\$7.67	\$8.78	\$10.48	\$13.92	\$16.56
25-2031	Secondary School Teachers, Except Special and Vocational Education	16	7	\$15.90	\$30,710	\$40,764	\$45,790	\$29,230	\$32,436	\$38,529	\$47,537	\$57,180
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	16	6	\$17.30	\$10.40	\$16.52	\$19.58	\$9.48	\$11.53	\$16.21	\$19.80	\$23.12
43-9061	Office Clerks, General	16	16	\$12.50	\$7.30	\$12.18	\$14.62	\$6.20	\$8.75	\$12.04	\$15.20	\$18.32
17-2051	Civil Engineers	15	9	\$22.30	\$19.83	\$29.65	\$34.56	\$16.94	\$23.18	\$28.37	\$33.69	\$41.64

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Table 1: Occupations with Five or More Estimated Vacancies — Page 3

					Occupational Employment Statistics Wage Data (2002)							
SOC Code	SOC Occupational Title	Vacancies Estimated	Vacancies Found	Average JVS Wage	Average Wages			Percentile Distribution				
					Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	15	2	\$22.50	\$18.79	\$26.48	\$30.33	\$17.35	\$20.96	\$25.40	\$30.25	\$36.71
47-2041	Carpet Installers	15	2	†	\$9.79	\$15.06	\$17.69	\$9.42	\$10.48	\$15.96	\$19.32	\$21.37
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	15	3	\$21.30	\$17.43	\$20.46	\$21.98	\$15.71	\$18.94	\$20.87	\$22.74	\$25.62
13-2011	Accountants and Auditors	14	5	\$16.20	\$15.36	\$29.38	\$36.39	\$13.70	\$17.43	\$23.09	\$28.09	\$51.69
29-2061	Licensed Practical and Licensed Vocational Nurses	13	9	\$14.40	\$11.88	\$14.24	\$15.42	\$11.30	\$12.44	\$14.17	\$16.27	\$17.66
33-3012	Correctional Officers and Jailers	12	12	\$17.30	\$12.24	\$16.54	\$18.69	\$10.28	\$14.17	\$15.99	\$19.37	\$24.13
33-3051	Police and Sheriff's Patrol Officers	12	12	\$19.60	\$15.14	\$19.05	\$21.00	\$14.39	\$15.80	\$18.17	\$21.90	\$26.09
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	12	8	\$8.20	\$10.05	\$15.11	\$17.64	\$8.75	\$11.66	\$13.94	\$17.23	\$21.53
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	12	2	\$9.00	\$8.89	\$12.18	\$13.82	\$7.93	\$10.07	\$11.99	\$13.57	\$16.71
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	12	8	\$16.50	\$14.98	\$19.69	\$22.04	\$14.03	\$16.76	\$19.80	\$22.99	\$26.58
13-1071	Employment, Recruitment, and Placement Specialists	11	2	\$11.80	\$14.97	\$21.97	\$25.47	\$14.12	\$16.08	\$19.91	\$28.45	\$33.69
29-2034	Radiologic Technologists and Technicians	11	5	\$20.00	\$16.59	\$20.70	\$22.76	\$15.40	\$17.91	\$20.50	\$23.52	\$27.14
31-1012	Nursing Aides, Orderlies, and Attendants	11	6	\$11.90	\$8.79	\$11.22	\$12.44	\$8.00	\$9.39	\$10.75	\$13.17	\$15.64
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	11	7	\$8.50	\$6.52	\$8.65	\$9.71	\$6.09	\$7.03	\$8.26	\$9.96	\$11.38
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	11	2	\$10.00	\$12.53	\$19.30	\$22.68	\$11.90	\$13.73	\$17.50	\$21.78	\$28.53
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Product	11	2	\$14.40	\$13.08	\$29.17	\$37.21	\$11.68	\$15.66	\$22.22	\$37.43	\$57.87
43-4131	Loan Interviewers and Clerks	11	1	†	\$11.15	\$14.32	\$15.90	\$10.12	\$11.92	\$13.71	\$16.60	\$20.18

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data



**Table 1: Occupations with Five or More Estimated Vacancies – Page 4**

					<b>Occupational Employment Statistics Wage Data (2002)</b>							
<b>SOC Code</b>	<b>SOC Occupational Title</b>	Vacancies Estimated	Vacancies Found	Average JVS Wage	<b>Average Wages</b>			<b>Percentile Distribution</b>				
					Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
43-4141	New Accounts Clerks	11	1	†	\$10.42	\$12.51	\$13.56	\$9.91	\$10.84	\$12.38	\$14.04	\$15.73
* 43-4199	Information and Record Clerks, All Other	11	1	†	†	†	†	†	†	†	†	†
* 43-6012	Legal Secretaries	11	1	†	\$13.40	\$17.17	\$19.05	\$11.27	\$14.86	\$16.75	\$19.88	\$23.77
13-2099	Financial Specialists, All Other	10	1	\$12.00	\$16.03	\$21.01	\$23.49	\$15.33	\$16.08	\$17.31	\$18.50	\$21.93
29-1123	Physical Therapists	10	6	\$22.70	\$18.64	\$22.70	\$24.74	\$17.96	\$19.45	\$21.88	\$26.21	\$29.75
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	10	10	\$17.60	\$11.65	\$16.47	\$18.88	\$10.95	\$12.47	\$15.49	\$19.91	\$24.27
49-2098	Security and Fire Alarm Systems Installers	10	2	\$12.00	\$12.75	\$16.96	\$19.07	\$11.42	\$14.12	\$16.73	\$20.19	\$22.69
53-3033	Truck Drivers, Light or Delivery Services	10	3	\$10.80	\$8.82	\$15.41	\$18.70	\$7.04	\$10.65	\$15.27	\$18.33	\$25.64
31-1011	Home Health Aides	9	4	\$8.50	\$7.23	\$9.50	\$10.64	\$6.76	\$7.65	\$8.99	\$11.64	\$13.35
53-3022	Bus Drivers, School	9	9	\$21.70	\$9.79	\$12.85	\$14.39	\$9.25	\$10.90	\$12.41	\$14.29	\$18.24
11-9111	Medical and Health Services Managers	8	8	\$26.80	\$21.36	\$29.67	\$33.82	\$19.77	\$23.29	\$27.17	\$35.78	\$44.83
33-9032	Security Guards	8	8	\$12.20	\$8.91	\$10.93	\$11.94	\$8.54	\$9.46	\$10.78	\$12.60	\$13.77
47-2021	Brickmasons and Blockmasons	8	1	\$21.50	\$11.08	\$17.89	\$21.29	\$10.47	\$12.51	\$18.75	\$22.60	\$26.44
* 47-3019	Helpers, Construction Trades, All Other	8	1	\$14.80	\$9.14	\$13.23	\$15.28	\$8.37	\$9.94	\$12.54	\$16.42	\$19.00
53-3021	Bus Drivers, Transit and Intercity	8	8	\$14.00	\$11.37	\$13.95	\$15.23	\$10.59	\$12.26	\$14.23	\$16.15	\$17.36
11-9032	Education Administrators, Elementary and Secondary School	6	6	\$43.30	\$53,216	\$65,125	\$71,079	\$51,188	\$57,058	\$64,799	\$73,342	\$84,533
25-2043	Special Education Teachers, Secondary School	6	6	†	\$31,094	\$40,724	\$45,539	\$29,454	\$32,646	\$37,992	\$46,532	\$58,731
33-2011	Fire Fighters	6	6	\$12.20	\$10.20	\$16.67	\$19.91	\$7.21	\$12.83	\$16.24	\$20.74	\$25.96
* 33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service	6	6	\$9.80	†	†	†	†	†	†	†	†
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	6	6	\$7.80	\$6.16	\$7.69	\$8.46	\$5.79	\$6.31	\$7.20	\$8.71	\$10.45
35-9021	Dishwashers	6	4	\$8.30	\$6.22	\$8.27	\$9.30	\$5.91	\$6.71	\$8.19	\$9.95	\$10.93
39-9031	Fitness Trainers and Aerobics Instructors	6	6	\$20.60	\$8.77	\$17.17	\$21.37	\$7.24	\$10.44	\$17.25	\$21.48	\$28.53

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Table 1: Occupations with Five or More Estimated Vacancies — Page 5

					Occupational Employment Statistics Wage Data (2002)							
					Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Vacancies Found	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	6	3	\$18.30	\$8.96	\$13.94	\$16.43	\$8.18	\$10.16	\$12.78	\$15.62	\$18.21
53-3041	Taxi Drivers and Chauffeurs	6	6	\$10.50	\$8.04	\$10.62	\$11.91	\$7.64	\$8.49	\$9.95	\$11.95	\$15.88
29-1126	Respiratory Therapists	5	5	\$18.40	\$16.42	\$19.30	\$20.75	\$15.01	\$17.81	\$19.59	\$21.39	\$23.36
35-1011	Chefs and Head Cooks	5	3	†	\$12.26	\$23.15	\$28.59	\$11.35	\$14.24	\$18.82	\$26.85	\$32.76
35-2021	Food Preparation Workers	5	3	†	\$7.14	\$9.77	\$11.08	\$6.56	\$7.82	\$9.41	\$10.96	\$14.09
35-9099	Food Preparation and Serving Related Workers, All Other	5	5	\$8.50	\$8.56	\$11.17	\$12.47	\$7.76	\$9.32	\$10.96	\$12.80	\$14.38
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	5	5	\$19.40	\$13.63	\$20.76	\$24.32	\$12.25	\$15.22	\$18.71	\$24.97	\$32.72
43-5031	Police, Fire, and Ambulance Dispatchers	5	5	\$14.90	\$8.75	\$13.44	\$15.79	\$7.27	\$10.50	\$13.49	\$16.55	\$19.52
* 49-2092	Electric Motor, Power Tool, and Related Repairers	5	1	\$13.50	\$10.11	\$14.80	\$17.15	\$9.63	\$10.60	\$14.10	\$18.05	\$22.56
53-1021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	5	1	†	\$13.94	\$20.79	\$24.21	\$12.76	\$15.25	\$18.29	\$26.03	\$33.28

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Table 2: Occupations with Fewer than Five Estimated Vacancies

		Occupational Employment Statistics Wage Data (2002)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
13-2021	Appraisers and Assessors of Real Estate	\$14.01	\$18.55	\$20.81	\$12.93	\$15.05	\$18.31	\$21.56	\$25.21
17-1011	Architects, Except Landscape and Naval	\$18.88	\$26.22	\$29.89	\$16.19	\$21.79	\$24.91	\$30.22	\$39.95
17-3011	Architectural and Civil Drafters	\$17.49	\$19.97	\$21.21	\$16.57	\$18.09	\$19.70	\$21.31	\$25.78
27-4011	Audio and Video Equipment Technicians	\$11.43	\$14.48	\$16.01	\$11.25	\$12.56	\$14.57	\$16.29	\$17.32
35-3011	Bartenders	\$6.09	\$7.98	\$8.93	\$5.69	\$6.10	\$6.80	\$8.57	\$13.62
43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$10.73	\$15.65	\$18.11	\$9.77	\$12.30	\$15.39	\$18.53	\$21.88
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	\$14.86	\$18.67	\$20.58	\$14.30	\$16.32	\$18.89	\$21.11	\$23.33
21-1021	Child, Family, and School Social Workers	\$13.58	\$17.54	\$19.53	\$12.54	\$14.54	\$17.48	\$20.64	\$22.60
17-3022	Civil Engineering Technicians	\$12.88	\$17.44	\$19.72	\$12.17	\$13.74	\$16.66	\$20.99	\$24.87
‡ 27-2022	Coaches and Scouts	\$18,272	\$26,291	\$30,301	\$16,515	\$19,895	\$23,169	\$27,723	\$37,101
11-3021	Computer and Information Systems Managers	\$30.75	\$40.94	\$46.03	\$29.37	\$32.95	\$37.25	\$47.48	\$58.94
43-9011	Computer Operators	\$11.93	\$16.13	\$18.23	\$11.28	\$12.81	\$15.27	\$19.69	\$21.59
15-1031	Computer Software Engineers, Applications	\$25.18	\$32.80	\$36.61	\$22.47	\$28.41	\$32.08	\$36.17	\$46.66
15-1041	Computer Support Specialists	\$10.40	\$17.43	\$20.94	\$9.43	\$11.72	\$15.88	\$21.71	\$28.08
39-6012	Concierges	\$9.36	\$12.63	\$14.26	\$9.01	\$10.21	\$12.33	\$14.35	\$17.35
47-4011	Construction and Building Inspectors	\$14.00	\$19.49	\$22.23	\$12.60	\$15.39	\$18.81	\$23.60	\$27.79
11-9021	Construction Managers	\$23.63	\$36.33	\$42.68	\$21.44	\$26.84	\$34.64	\$44.12	\$55.07
35-2011	Cooks, Fast Food	\$7.96	\$9.28	\$9.94	\$7.49	\$8.63	\$9.51	\$10.36	\$10.86
* 51-9193	Cooling and Freezing Equipment Operators and Tenders	\$11.86	\$14.64	\$16.03	\$11.50	\$12.55	\$14.16	\$16.92	\$19.47
43-4031	Court, Municipal, and License Clerks	\$10.71	\$14.79	\$16.83	\$8.44	\$13.01	\$15.18	\$17.14	\$20.08
* 27-3011	Dancers	†	†	†	†	†	†	†	†
* 27-2030	Dancers and Choreographers	†	†	†	†	†	†	†	†
* 15-1061	Database Administrators	\$18.92	\$29.67	\$35.05	\$16.89	\$21.87	\$27.85	\$37.96	\$44.34
* 29-2032	Diagnostic Medical Sonographers	\$17.25	\$26.80	\$31.58	\$13.19	\$21.63	\$25.69	\$32.45	\$41.12

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

**Table 2:**  
**Occupations with Fewer than Five Estimated Vacancies — Page 2**

		Occupational Employment Statistics Wage Data (2002)							
SOC Code	SOC Occupational Title	Average Wages			Percentile Distribution				
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
11-9031	Education Administrators, Preschool and Child Care Center/Program	\$8.97	\$15.17	\$18.27	\$8.33	\$9.39	\$14.14	\$17.34	\$23.67
21-1012	Educational, Vocational, and School Counselors	\$16.15	\$21.41	\$24.05	\$14.82	\$17.64	\$21.21	\$25.41	\$28.45
43-4061	Eligibility Interviewers, Government Programs	\$11.03	\$15.25	\$17.36	\$10.14	\$11.83	\$13.86	\$17.89	\$23.96
* 13-1061	Emergency Management Specialists	\$19.44	\$31.28	\$37.19	\$17.25	\$22.39	\$32.59	\$40.16	\$45.14
29-2041	Emergency Medical Technicians and Paramedics	\$10.85	\$14.98	\$17.05	\$10.76	\$12.10	\$14.20	\$16.89	\$21.67
* 39-3099	Entertainment Attendants and Related Workers, All Other	†	†	†	†	†	†	†	†
53-7032	Excavating and Loading Machine and Dragline Operators	\$14.26	\$19.06	\$21.45	\$14.03	\$15.82	\$18.77	\$22.89	\$26.69
11-3031	Financial Managers	\$23.35	\$39.29	\$47.26	\$21.51	\$26.92	\$36.43	\$47.66	\$60.00
33-1021	First-Line Supervisors/Managers of Fire Fighting and Prevention Workers	\$23.09	\$28.85	\$31.73	\$17.35	\$28.63	\$31.08	\$33.53	\$35.00
41-1012	First-Line Supervisors/Managers of Non-Retail Sales Workers	\$14.92	\$26.58	\$32.40	\$13.66	\$17.06	\$22.84	\$30.74	\$36.95
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	\$16.81	\$24.35	\$28.12	\$15.12	\$18.82	\$22.56	\$29.98	\$37.16
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle	\$16.80	\$23.23	\$26.45	\$15.27	\$18.55	\$21.85	\$26.85	\$34.20
33-1099	First-Line Supervisors/Managers, Protective Service Workers, All Other	\$14.28	\$20.72	\$23.94	\$13.40	\$15.99	\$19.49	\$25.18	\$31.19
35-3041	Food Servers, Nonrestaurant	\$6.47	\$9.38	\$10.84	\$6.12	\$6.99	\$8.93	\$10.95	\$14.69
11-9051	Food Service Managers	\$15.36	\$22.11	\$25.49	\$14.39	\$16.62	\$20.70	\$26.37	\$33.64
39-3011	Gaming Dealers	\$6.01	\$10.02	\$12.03	\$5.58	\$5.92	\$6.49	\$7.61	\$26.01
* 39-3019	Gaming Service Workers, All Other	†	†	†	†	†	†	†	†
39-1011	Gaming Supervisors	\$15.32	\$18.35	\$19.87	\$14.50	\$15.61	\$17.76	\$21.11	\$23.40
11-1021	General and Operations Managers	\$21.09	\$40.60	\$50.35	\$18.02	\$25.03	\$34.67	\$49.41	
* 19-4041	Geological and Petroleum Technicians	\$11.16	\$18.52	\$22.21	\$10.31	\$12.35	\$17.78	\$23.18	\$30.72
* 11-3049	Human Resource Manager, All Other	†	†	†	†	†	†	†	†
53-7051	Industrial Truck and Tractor Operators	\$10.64	\$14.27	\$16.09	\$9.91	\$11.80	\$14.26	\$17.14	\$19.32

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

**Table 2:**  
**Occupations with Fewer than Five Estimated Vacancies — Page 3**

		Occupational Employment Statistics Wage Data (2002)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
27-1025	Interior Designers	\$16.01	\$23.29	\$26.94	\$14.68	\$17.29	\$20.42	\$25.86	\$39.40
23-1011	Lawyers	\$24.50	\$50.11	\$62.91	\$22.91	\$26.45	\$42.60	\$62.82	†
43-4121	Library Assistants, Clerical	\$8.93	\$9.78	\$10.21	\$8.64	\$9.29	\$9.97	\$10.65	\$11.08
* 53-7033	Loading Machine Operators, Underground Mining	\$16.15	\$19.39	\$21.01	\$15.24	\$16.38	\$18.16	\$22.22	\$26.64
11-9199	Managers, All Other	\$18.55	\$29.03	\$34.27	\$17.15	\$20.53	\$26.62	\$36.04	\$44.96
31-9011	Massage Therapists	\$10.50	\$18.46	\$22.44	\$9.29	\$11.68	\$13.43	\$24.73	\$36.52
43-6013	Medical Secretaries	\$10.72	\$13.41	\$14.76	\$9.95	\$11.51	\$13.52	\$15.55	\$17.00
* 47-5042	Mine Cutting and Channeling Machine Operators	†	†	†	†	†	†	†	†
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	\$19.75	\$35.27	\$43.03	\$16.80	\$22.76	\$34.15	\$42.91	\$50.48
29-1122	Occupational Therapists	\$16.50	\$20.88	\$23.07	\$14.62	\$18.16	\$20.80	\$24.26	\$27.04
43-9071	Office Machine Operators, Except Computer	\$11.31	\$13.74	\$14.95	\$9.97	\$12.38	\$13.96	\$15.41	\$16.75
47-2073	Operating Engineers and Other Construction Equipment Operators	\$15.35	\$19.44	\$21.49	\$14.80	\$16.34	\$18.97	\$22.53	\$26.41
29-2081	Opticians, Dispensing	\$11.24	\$13.70	\$14.93	\$10.33	\$11.80	\$13.58	\$15.89	\$17.41
23-2011	Paralegals and Legal Assistants	\$14.64	\$17.40	\$18.78	\$13.85	\$15.02	\$16.99	\$19.68	\$21.38
* 33-3041	Parking Enforcement Workers	\$10.48	\$14.94	\$17.17	\$9.69	\$11.57	\$14.91	\$18.18	\$20.70
53-6021	Parking Lot Attendants	\$6.61	\$8.61	\$9.62	\$6.22	\$7.11	\$8.30	\$10.03	\$11.44
43-3051	Payroll and Timekeeping Clerks	\$10.97	\$15.62	\$17.95	\$10.25	\$12.60	\$15.57	\$19.45	\$21.49
* 51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	\$15.56	\$22.27	\$25.63	\$13.03	\$18.92	\$23.81	\$26.37	\$28.12
27-4021	Photographers	\$6.44	\$11.38	\$13.85	\$5.98	\$6.92	\$11.54	\$13.30	\$17.05
31-2021	Physical Therapist Assistants	\$12.28	\$15.13	\$16.56	\$11.72	\$13.13	\$15.35	\$17.27	\$18.64
43-5061	Production, Planning, and Expediting Clerks	\$11.79	\$21.50	\$26.35	\$10.84	\$13.25	\$20.58	\$29.11	\$34.39
11-9141	Property, Real Estate, and Community Association Managers	\$13.23	\$29.48	\$37.61	\$11.09	\$15.63	\$23.74	\$33.02	\$65.43
33-9099	Protective Service Workers, All Other	\$6.75	\$10.54	\$12.43	\$6.27	\$7.30	\$9.99	\$12.54	\$14.83

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

**Table 2:**  
**Occupations with Fewer than Five Estimated Vacancies – Page 4**

		<b>Occupational Employment Statistics Wage Data (2002)</b>							
		<b>Average Wages</b>			<b>Percentile Distribution</b>				
<b>SOC Code</b>	<b>SOC Occupational Title</b>	<b>Entry-Level</b>	<b>Overall</b>	<b>Experienced</b>	<b>10th</b>	<b>25th</b>	<b>50th</b>	<b>75th</b>	<b>90th</b>
11-2031	Public Relations Managers	\$17.89	\$28.20	\$33.35	\$16.49	\$18.78	\$25.67	\$30.60	\$42.63
* 29-2054	Respiratory Therapy Technicians	\$9.72	\$15.02	\$17.66	\$8.20	\$11.64	\$15.48	\$18.14	\$21.28
11-2022	Sales Managers	\$22.25	\$36.23	\$43.23	\$20.39	\$24.94	\$34.42	\$44.51	\$57.70
43-6014	Secretaries, Except Legal, Medical, and Executive	\$8.79	\$12.61	\$14.51	\$7.88	\$10.24	\$12.73	\$15.18	\$17.15
39-1012	Slot Key Persons	\$10.93	\$13.35	\$14.56	\$10.30	\$11.56	\$12.78	\$14.55	\$17.65
* 21-1029	Social Workers, All Other	†	†	†	†	†	†	†	†
11-9151	Social and Community Service Managers	\$16.89	\$24.96	\$28.99	\$15.44	\$19.29	\$24.74	\$31.29	\$35.34
29-1127	Speech-Language Pathologists	\$16.67	\$21.94	\$24.57	\$15.43	\$17.91	\$21.72	\$25.90	\$29.77
43-5081	Stock Clerks and Order Fillers	\$9.01	\$11.96	\$13.44	\$8.35	\$9.60	\$10.94	\$13.42	\$17.83
29-2055	Surgical Technologists	\$10.35	\$14.93	\$17.23	\$9.70	\$10.94	\$14.09	\$18.64	\$21.45
43-2011	Switchboard Operators, Including Answering Service	\$8.24	\$10.57	\$11.73	\$7.56	\$9.02	\$10.40	\$12.29	\$14.02
25-9041	Teacher Assistants								
41-3041	Travel Agents	\$8.88	\$12.97	\$15.01	\$8.40	\$9.64	\$11.07	\$15.62	\$20.26
‡ 27-2023	Umpires, Referees, and Other Sports Officials	\$21,003	\$35,060	\$42,088	\$12,487	\$30,186	\$40,517	\$43,987	\$46,221
29-1131	Veterinarians	\$20.43	\$23.80	\$25.48	\$19.17	\$21.62	\$24.16	\$26.43	\$27.94
25-1194	Vocational Education Teachers, Postsecondary	\$15.73	\$26.56	\$31.98	\$13.89	\$18.36	\$24.35	\$33.10	\$46.41
51-8031	Water and Liquid Waste Treatment Plant and System Operators	\$10.21	\$17.43	\$21.05	\$8.20	\$12.52	\$17.64	\$22.16	\$26.63
* 19-1023	Zoologists and Wildlife Biologists	\$19.21	\$26.38	\$29.97	\$16.39	\$22.50	\$25.66	\$30.41	\$38.02

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

**T**he Leisure & Hospitality JVS sector represents a mix of private-sector businesses that offer a variety of services throughout the region. This sector represents the largest proportion of employment as compared to the other five JVS sectors. Thirty-six percent of the region's employment was associated with this sector in the 1st quarter of 2004. On the other hand, there are few employers in this industry group, comprising 12% of the regions employers.<sup>4</sup> Leisure & Hospitality has the lowest vacancy rate of all JVS sectors for this survey, 1.4%, yet has the highest number of vacancies.

The Leisure & Hospitality sector has the lowest average wage of all JVS sectors at \$8.90. This could be a result of the many Food Preparation & Serving Related positions paying wages that tend to be close to minimum wage, with supplemental income coming from tips and gratuities.

- Eight percent of vacancies in Leisure & Hospitality require education beyond a High School Diploma/GED, while 56% of the vacancies in the sector require no diploma.
- Fifty-eight percent of openings in the Leisure & Hospitality JVS sector call for either experience in the occupation, or a related field, while 36% of vacancies have "no experience" as a requirement.
- Sixty percent of vacancies in this sector have been open for less than 30 days, 8% between 30 and 59 days, and the remaining 32% are classified as always hiring.

Looking at the occupational classifications within the SOC system allows us to take a more detailed look at the Leisure & Hospitality JVS sector.

**•Food Preparation & Serving Related Occupations:** Forty-nine percent of vacancies within the Leisure & Hospitality sector were for positions within Food Preparation & Serving Related Occupations. The average wage for Food Preparation & Serving Related positions for this survey is \$7.90.

Within this group, 22% are Combined Food Preparation & Serving Workers, Including Fast Food, which pay an average wage of \$7.40 per hour.

Nine percent of vacancies within the Food Serving & Serving Related Occupations are for positions such as Waiters and Waitresses. The average wage for these positions is \$6.00 per hour.

There are many other vacancies within the Food Preparation & Serving Related occupational group. They range from Management of Servers to Bussers.

**•Building & Grounds Cleaning & Maintenance Occupations:**

Opportunities in the Building & Grounds Cleaning & Maintenance Occupations account for 11% of vacancies within Leisure & Hospitality. The average wage offered for this group is \$10.10 per hour. More than half of the occupations within this group are for Maids & Housekeeping Cleaners, which have an average wage of \$9.10.

**•Personal Care & Service Occupations:**

Personal Care & Service Occupations cover a variety of opportunities in very different categories. Included in this category are occupations that involve gaming, amusement attendants, hotels, care of children and recreation. This group accounts for 17% of Leisure & Hospitality Occupations. The average wage associated with vacancies in the Personal Care & Service Occupations category for the Winter 2005 Survey is \$9.10 per hour.

**•Office & Administrative Support Occupations:** Nearly 10% of vacancies in Leisure & Hospitality are in the Office & Administrative Support fields. With an average wage of \$11.00 per hour, this group has the third highest average wage of all groups in this JVS sector. Sixty-five percent of vacancies in this occupational group are for Customer Service Representative positions.

**•Other Occupations in the Leisure & Hospitality JVS Sector:**

In this survey, **Management Occupations** within the Leisure & Hospitality sector had an average wage of \$15.50, the highest average wage among all occupational groups.

There were very few vacancies in **Arts, Design, Entertainment, Sports & Media Occupations** and **Production Occupations** for this survey. Positions within **Protective Service Occupations** have an average wage of \$11.60. All of the vacancies in this occupational group were for Security positions.

Occupations associated with **Sales & Related** include Retail Salespeople and Cashiers among many others. The average wage for this group is \$8.90.

**Transportation & Material Moving Occupations** pay the second lowest average wage in the Leisure & Hospitality Industry at \$8.70 per hour.

**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 work-experience to fit future high-demand positions.

## Workforce Centers

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



## Caveats

The Job Vacancy Survey uses sampling methods to estimate overall 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.

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 34% of the employment in the region is found in large and government employers that make up only 2% 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 Region survey was conducted from January 28th through February 14th, 2005. For the purpose of this report, private and government 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 provide only 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 fewer 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 12% of the employment in the sample frame, while private industry employers make up the remaining 88%. Large firms account for 33% 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 67% of private industry employment.

The margin of error for the overall vacancy estimate is plus or minus 4.7% or about 93 vacancies at a 0.95 certainty level. In other words, in 95 out of 100 samples, the actual number of vacancies in the region will be between 1892 and 2078 in the survey period. 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 81.3%. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is 91.1% 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 the Northwest & Rural Resort Region, 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 34.

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

## 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 open. Employers are also asked if sign-on bonuses and health insurance coverage are offered for these positions. These data are collected in addition to the minimum and maximum wages in order to describe more fully the compensation offered.

## 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: 2,080 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<sup>1</sup>. 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<sup>2</sup>. Government agencies from the United States, Mexico and Canada<sup>3</sup> 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.

<sup>1</sup>Executive Office of the President Office of Management and Budget. *North American Industry Classification System*. White Plains, MD: Berman and U.S. Department of Commerce, 2002

<sup>2</sup>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

<sup>3</sup>Specifically, Mexico’s Instituto Nacional de Estadística, Geografía e Informática (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**

◆ 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 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.

◆ 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.

Comparison of NAICS and SIC Major Industry Groups	
SIC Standard Industrial Classification	NAICS North American Industry Classification System
Agriculture, Forestry & Fishing	Agriculture, Forestry, Fishing & Hunting
Mining	Mining
Construction	Construction
Manufacturing	Manufacturing
Transportation, Communications & Public Utilities	Utilities Transportation & Warehousing
Wholesale Trade	Wholesale Trade
Retail Trade	Retail Trade Accommodation & Food Services
Finance, Insurance & Real Estate	Finance & Insurance Real Estate & Rental & Leasing
Services	Information Professional, Scientific & Technical Services Administrative & Support & Waste Management & Remediation Services Educational Services Health Care & Social Assistance Arts, Entertainment, & Recreation Other Services (except Public Administration)
Public Administration	Public Administration
(parts of all divisions)	Management of Companies & Enterprises

**T**hese 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*.

**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 25th 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, straight-time 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.



### **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**

115 W. 6th  
P.O. Box 1263  
Leadville, CO 80461  
Phone: 719-486-2428  
Fax: 719-486-2971  
leadville@cwfc.net

### **Meeker Workforce Center Satellite Office**

345 Market Street  
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 Street  
Rifle, CO 81650  
Phone: 970-625-5627  
Fax: 970-625-1120  
rifle@cwfc.net

### **Steamboat Springs Workforce Center**

425 Anglers Dr.  
Steamboat Springs, CO 80487  
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

