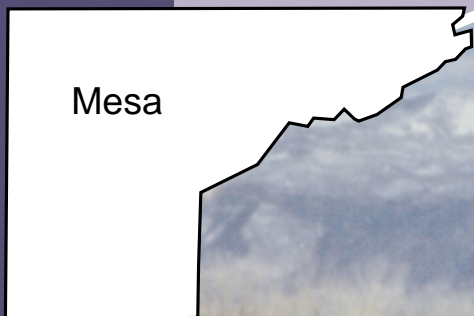


Mesa County



Job Vacancy Survey Fall 2003



Mesa



See Colorado First

Colorado River State Park
Photo by Dick Fletcher
Courtesy Colorado State Parks

Mesa County Job Vacancy Survey



Conducted
September 24–October 3, 2003

State of Colorado

Bill Owens, *Governor*

Colorado Department of Labor & Employment

Jeffrey M. Wells
Executive Director

Funding Provided in Part by
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Development Council

Released
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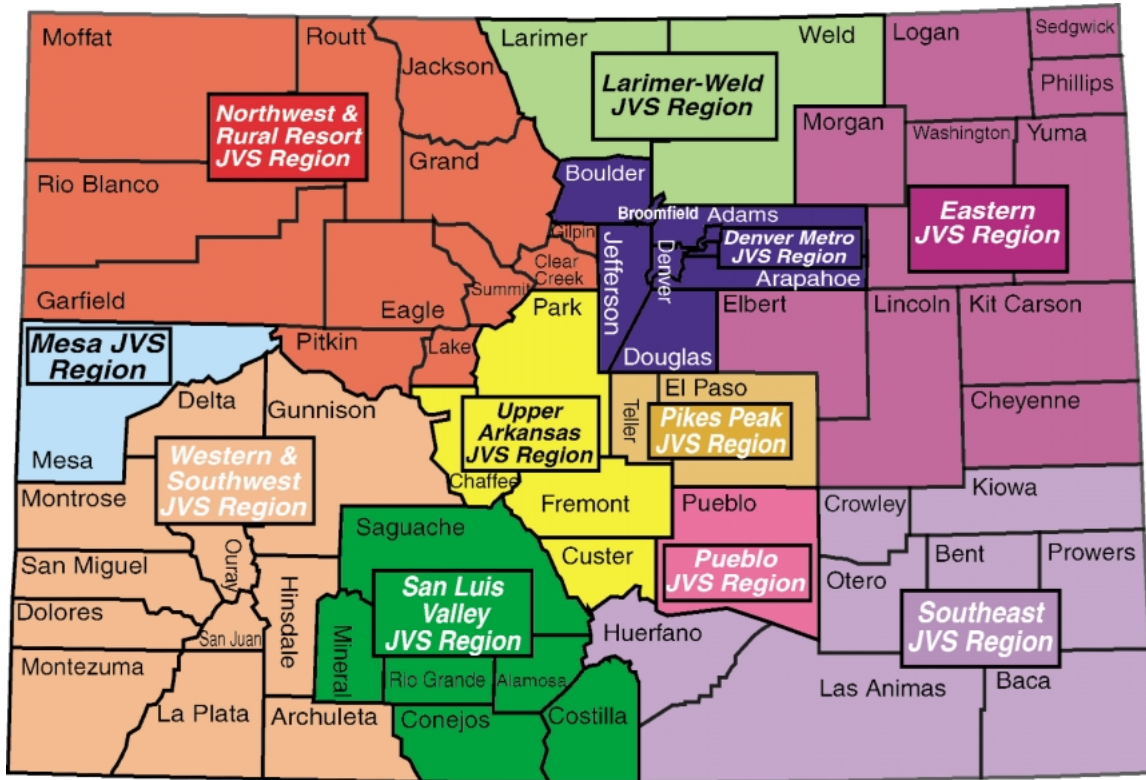
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Figure 1: Colorado Job Vacancy Survey Regions



Introduction to the Colorado Job Vacancy Survey

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

Job seekers and employers, as well as Workforce Centers and economic developers need more than a measure of demand for workers at a specific point in time. They also need a measure of where in the economy that demand is located and what education and experience levels are most preferred. The Colorado Department of Labor

and Employment (CDLE) developed the Job Vacancy Survey (JVS) to meet this need. The JVS is designed to provide a snapshot estimate of job vacancies along with detailed information and analysis on accompanying wages, skill requirements and work experience.

The CDLE's survey unit collects original data by conducting phone interviews with a representative sample of employers in a given region. The department's economists analyze the raw data, estimate the number of vacancies in the area and publish the report within weeks of the original data collection, providing a timely portrait of the employment situation.

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



Executive Summary

The Fall 2003 Mesa County Job Vacancy Survey (JVS) was conducted from September 24th through October 3rd, 2003. The survey provides a reliable estimate of the total number of job vacancies in the region while also relating demand-specific information about the available positions. The goal of the survey is to provide current information on the demand for workers so that employers, job seekers, economic developers, educators and workforce centers can make informed decisions in Mesa County.

The Job Vacancy Survey is conducted twice a year, in spring and fall, to provide frequent and timely analysis of the

demand for labor. The survey is directed at all government entities and private employers with five or more employees. Employers are asked if they are currently hiring, and if so, details about those positions they are seeking to fill.

A total of 875 employers representing 57% of the region's total employment responded to the survey. Of these surveyed, 48 are Government agencies, 45 are large employers and 782 are small to mid-size employers. The response rate for this survey is 83.7% while the cooperation rate is 99.9%. The margin of error for the overall vacancy estimate is plus or minus 4.2%, or about 15 vacancies. The major findings of the survey follow:

- ◆ An estimated 364 jobs were available for hire during the survey period, coinciding with a 0.9% vacancy rate.Page 6
- ◆ Health Care & Social Assistance employers offer the highest number of vacancies, 119.Page 6
- ◆ Ten percent of surveyed employers report at least one job vacancy.Page 8
- ◆ The average reported wage for vacancies in this survey is \$12.10 per hour.Page 6
- ◆ Seventy-nine percent of the reported openings are full-time, permanent positions.Page 9
- ◆ A majority of the reported job vacancies require educational attainment at the high school/GED level, or no diploma at all.Page 9
- ◆ Sixty-seven percent of the job vacancies require related or occupation specific experience.Page 11
- ◆ Fifty-five percent of the vacant positions have been open less than 30 days; only 6% have been open for 60 or more days.Page 12
- ◆ Healthcare Practitioner & Technical occupations are the most frequently reported of the 22 major occupational groups included in the survey.Page 15

Mesa County

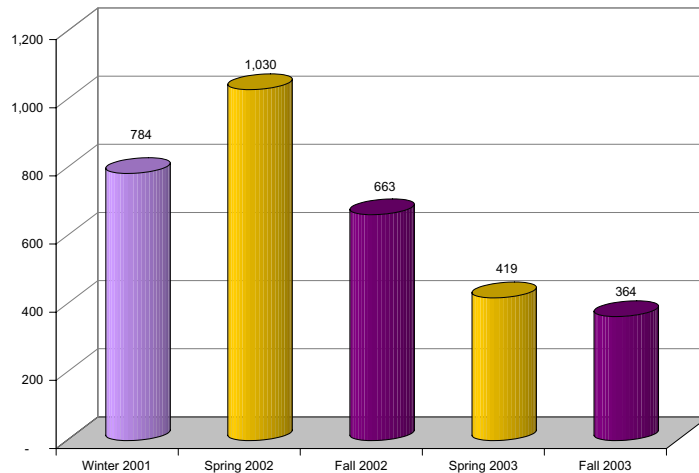
Mesa County in western-central Colorado is host to Interstate 70 along which the county's major cities lie. The city of Grand Junction is not only the population center for the county, but it also serves as an employment hub for surrounding counties.

The Demography Section of the Colorado Department of Local Affairs estimates Mesa County's population at 122,796 people¹. Meanwhile, the 2000 Census reports that high school graduation or its equivalency is the highest level of educational attainment for 30% of the population age 25 years and older. Almost 26% of Mesa residents have some college training, but no degree. Nearly 22% hold a bachelor's or higher-level degree; this compares with about 33% for Colorado as a whole.

Mesa county's per capita income as reported in the 2000 Census is \$18,715 compared to \$24,049 for the state. The difference in earnings between men and women for full-time, year-round workers is \$9,122 in the county. Some reasons for this disparity may be the type of work performed and the skill and education required.

Figure 2 highlights the number of vacancies for each Mesa County Job Vacancy Survey. The number of estimated job vacancies has declined consistently since the Spring 2002 survey. In Fall 2002 the county's unemployment rate was 4.4% with a labor force of more than 65,000. In September 2003, the unemployment rate stands at 4.7%, but with more than 2,000 additional people in the labor force—either working or looking for work².

Figure 2: Historical Vacancies—Mesa County



	Winter 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003
Vacancies	784	1,030	663	419	364
Employment	55,453	59,658	62,500	61,880	66,268
Unemployed	2,713	2,970	2,879	3,414	3,292
Unemployment Rate	4.7%	4.7%	4.4%	5.2%	4.7%

Source: CDLE, Local Area Unemployment Statistics Released October 2003

¹source: DOLA, Colorado Demography Section. 2002 County Population Yearly Estimates

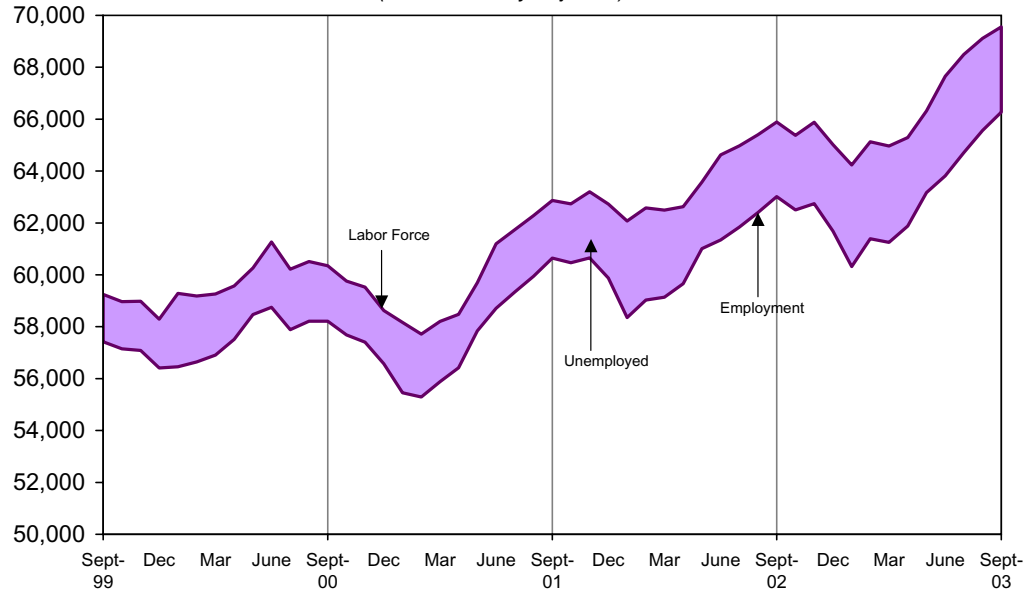
²source: CDLE Local Area Unemployment Statistics released October 2003.



Figure 3 illustrates the historical progression of both the region's labor force and employment levels. The shaded area between the labor force and employment lines represents the number of unemployed people. The upward trend illustrates the growth in both the labor force and employment over the years. Though the number of unemployed has increased, both the labor force and employment figures

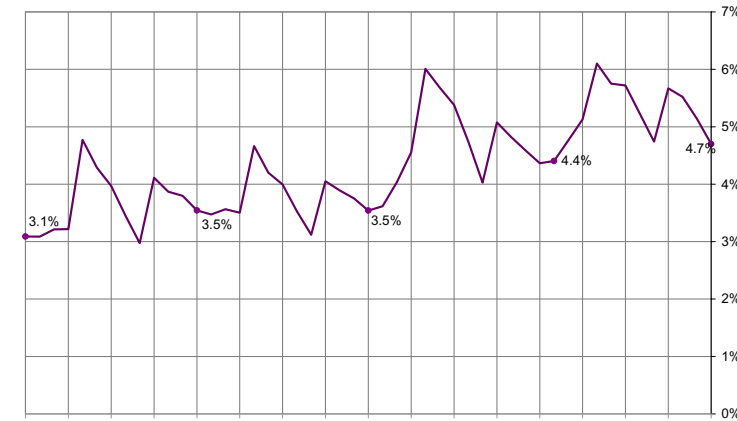
are climbing as well. The region's labor force grew at a compound annual rate of 4.1% while employment grew 3.6% from September of 1999 through September of 2003. The net growth in the labor force over the four-year period is almost 17.5%. The graph illustrates a general growth trend over the last three years.

Figure 3: Employment and Labor Force Trends for Mesa County
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics Released October 2003

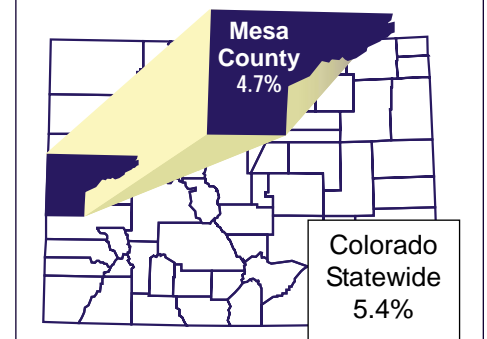
Figure 4: Mesa County Unemployment Rate Trend
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics Released October 2003

Figure 4 highlights unemployment rate changes in Mesa County. The unemployment rate, the ratio of unemployed to the labor force, has peaked each January in recent history. While the labor force experiences a seasonal decline at that time of year it is outweighed by a decline in the number of jobs, and so an increase in the unemployment rate. It is in the second quarter of the calendar year that the gap between the labor force and employment is

Figure 5: Unemployment Rates for September 2003
(Not Seasonally Adjusted)

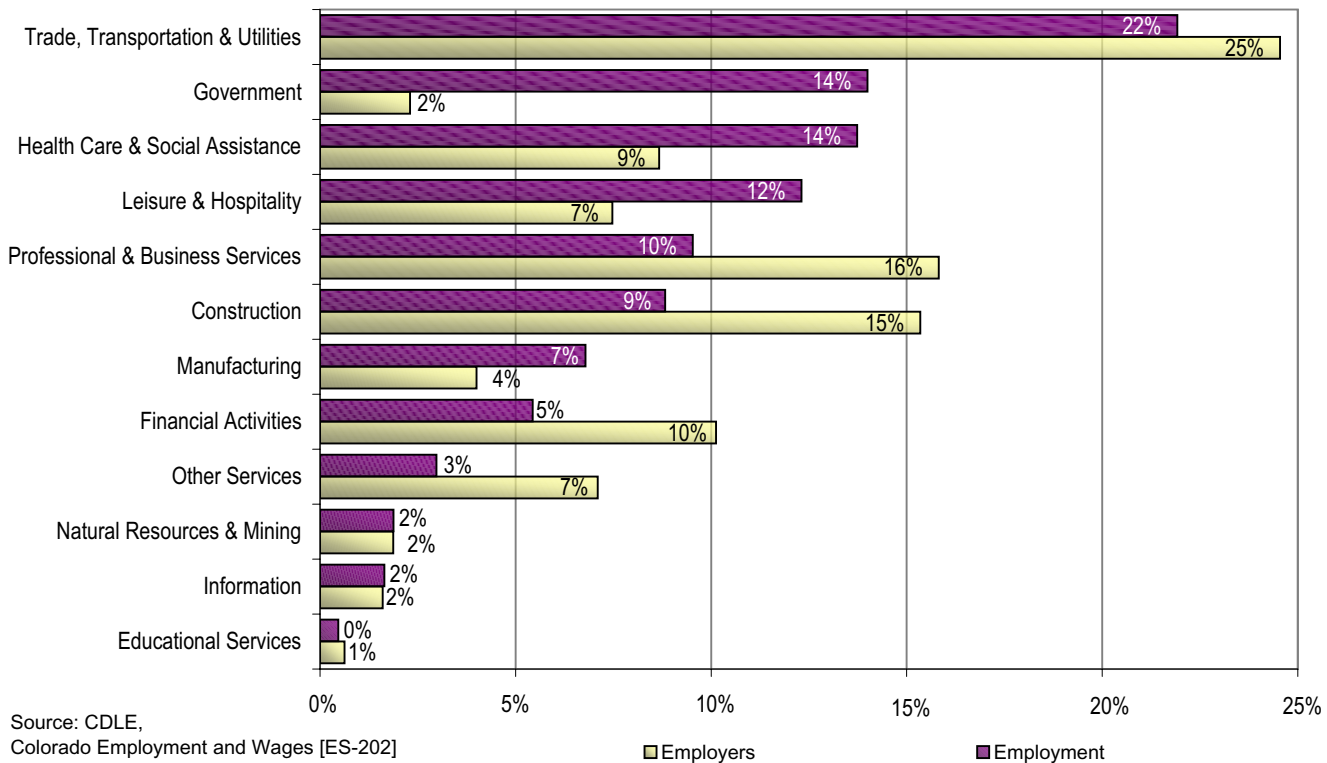


Source: CDLE, Local Area Unemployment Statistics Released October 2003

most narrow. For the time period shown, the highest rate of unemployment was recorded in January 2003, reaching 6.1%. The unemployment rate in the county has followed a slight upward trend with seasonal fluctuations since June of 2001.

Mesa's unemployment rate at 4.7% is below both the Colorado rate of 5.4% and the not-seasonally-adjusted U.S. level of 5.8%.

**Figure 6: Mesa County
Employers and Employees, 3rd Quarter, 2002**



Source: CDLE, Colorado Employment and Wages [ES-202]

Establishments in Mesa County are grouped into 12 JVS sectors derived from the North American Industrial Classification System (NAICS). These classifications provide a framework for understanding the region's economic activity in both labor and financial terms.

Figure 6 presents employers and employment data for the 12 JVS sectors used in most Metropolitan Statistical Areas (MSAs) in Colorado (Page 24). Data are gathered under the Covered Employment and Wages program and include employers required to pay Unemployment Insurance Tax. Although 98%³ of the nation's jobs are covered under the Unemployment Insurance program, positions typically excluded are agriculture, railroad, elected officials, student workers, certain non-profits, domestic workers, unpaid family workers and the self-employed.

Trade, Transportation & Utilities is the largest JVS sector representing 22% of the region's employment and 25% of employers. Retail businesses make up more than 60%

of this sector's employment. Trade, Transportation & Utilities is also the largest employment sector for the state of Colorado, but constitutes 20% of total employment as of 3rd Quarter, 2002.

Government is the second largest sector in terms of employment. All public employees are included in this sector. These entities perform functions in health care, social services and transportation, including postal services, among other industry categories. Forty-two percent of the region's Government employment is in Educational Services while 35% is in Public Administration.

The distribution of employment and employers across JVS sectors in the 3rd Quarter is consistent with 1st Quarter statistics shown in the last Job Vacancy Survey. In other words, the proportion of people employed in each of the 12 JVS Sectors is fairly consistent between the two quarters even though total employment is higher in the 3rd Quarter as indicated in Figure 3.

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



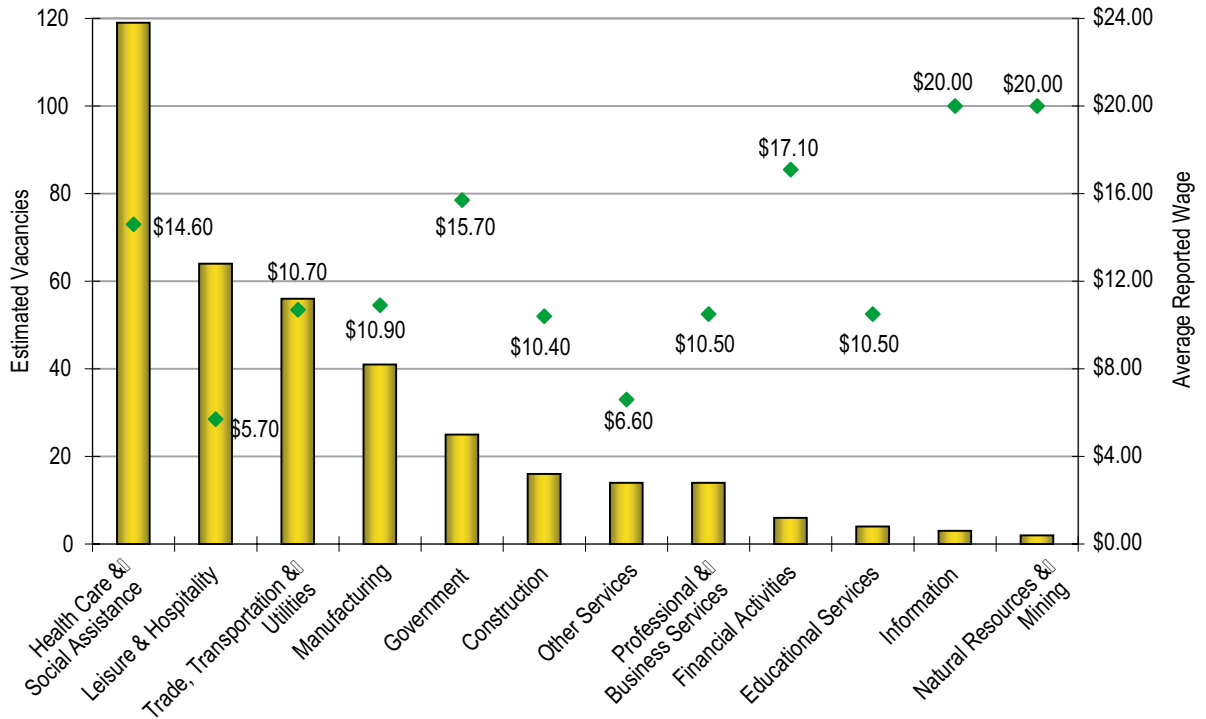
Estimated Vacancies

JVS Sectors and Employer Size

Survey results and employer and employment figures are discussed in the context of a subset of employers that includes all Government institutions and private firms with five or more employees in the region.

During the survey period, an estimated 364 vacancies were open for immediate hire with an average wage of \$12.10 per hour. The overall vacancy rate is 0.9%; this statistic represents the relative demand for additional labor in terms of current employment and open positions.

Figure 7: Estimated Vacancies and Average Wages by JVS Sectors



The Job Vacancy Survey is designed to reflect hiring activity by industry groups. In this survey, 33% of the estimated job openings, or 119 vacancies, are in the **Health-care & Social Assistance** JVS Sector. Organizations reporting these vacancies are:

- Hospitals: 59%
- Nursing & Residential Care Facilities: 24%
- Ambulatory Health Care Services: 12%
- Social Assistance: 5%

The **Leisure & Hospitality** JVS Sector is estimated to have the second highest number of vacancies. The 64 estimated job openings fall into these more detailed business groups:

- Food Service & Drinking Places: 79%
- Accommodation: 21%

Trade Transportation & Utilities has an estimated 56 job vacancies distributed among 12 NAICS Subsectors, the four most prominent in reporting vacancies are:

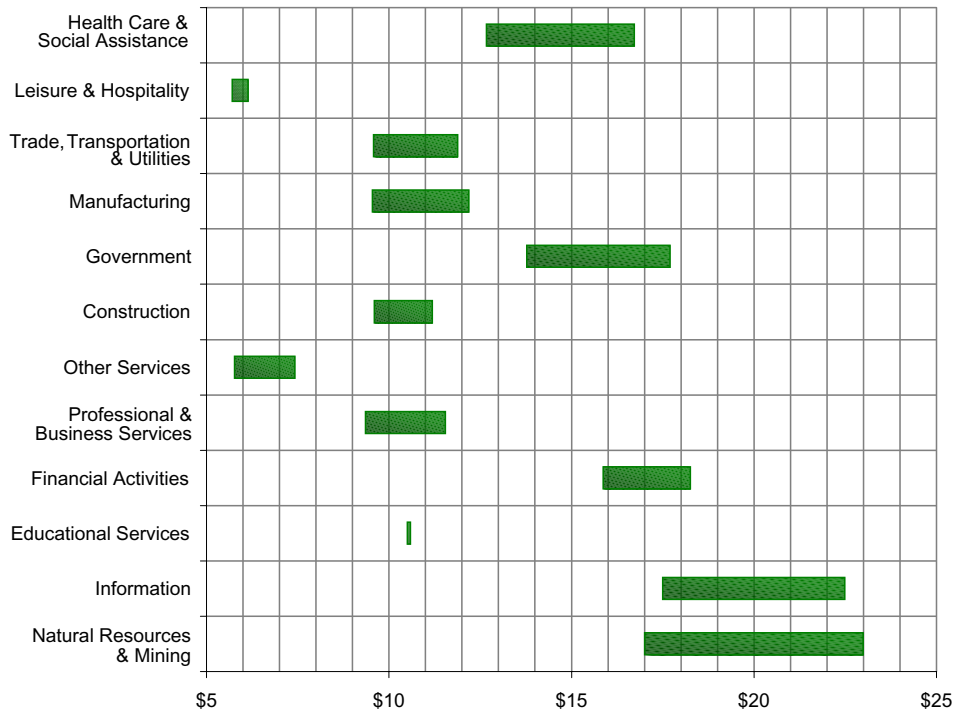
- Support Activities for Transportation: 24%
- General Merchandise Stores: 12%
- Transit & Ground Passenger Transportation: 12%
- Truck Transportation: 12%
- Eight other subsectors: 40%.

Manufacturing firms are estimated to have 41 job vacancies during the survey period. The following Subsectors represent a majority of these job openings:

- Fabricated Metal Product Manufacturing: 40%
- Transportation Equipment Manufacturing: 32%
- Other subsectors: 28%

The remaining eight JVS Sectors each offer job vacancies, from 25 in Government down to 2 in the group representing Natural Resources & Mining businesses.

Figure 8: Reported Average Wage Ranges by JVS Sectors



The average wage reported for each JVS sector is included on the graph with estimated vacancies. Average wage ranges are presented in *Figure 8*. These wages are based on data supplied by employers during the survey period and relate specifically to vacancies, not filled positions. In this survey, wages are reported for 79% of all vacancies. The type of occupation, the skills and knowledge required to fill the vacancy, and personnel practices

of the employer offering the position generally influence wages offered.

Five JVS sectors offer average wages above the overall survey average of \$12.10. Health Care & Social Assistance has the highest number of vacancies and higher than average wages. Leisure & Hospitality vacancies are second most frequent, and offer the lowest wages in the survey.



Overall, one in ten employers surveyed reported at least one job vacancy. That said, the likelihood of finding an open position at a business varies with employer size, as defined by ownership (government or private) and the number of employees at a firm. About 36% of large and 19% of Government employers surveyed report a vacancy, while 8% of the many small to mid-size employers have an opening.

Small to mid-size employers (those with 5 to 99 employees) offer 63% of the estimated vacancies. The highest number of reported job vacancies in this group of firms is with Leisure & Hospitality businesses followed by Health Care & Social Assistance organizations. This size group, heavily influenced by wages paid by the Leisure & Hospitality sector for non-specialized labor, offers the lowest wages.

Large businesses offer the second highest number of estimated vacancies. Health Care & Social Assistance employers account for 68% of reported vacancies while Trade, Transportation & Utilities offer 17%. Wages offered by this employer size group tend to pay above the \$12.10 average wage for the survey.

Only 25 vacancies are estimated to be open in Government institutions. Actual reported vacancies show 46% of the vacancies are with local governments, 38% with state, and 17% with federal. As a group, these job vacancies offer the highest wages.

Figure 9: Estimated Vacancies and Average Wages by Employer Size

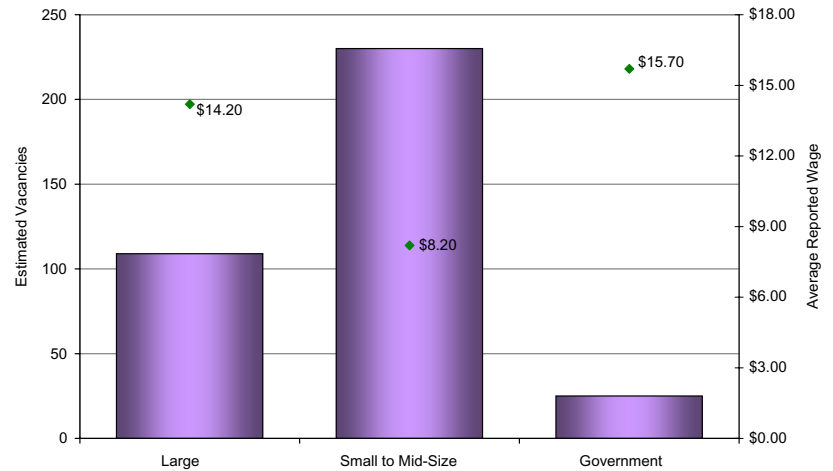
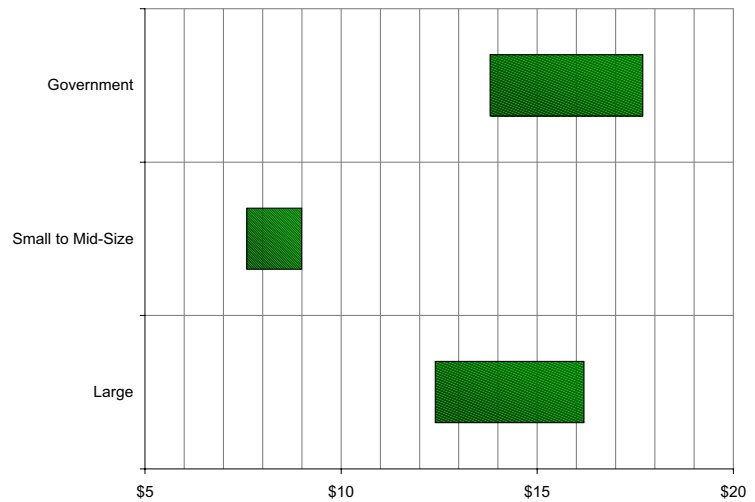


Figure 10: Reported Average Wage Ranges by Employer Size



Vacancies

Employment Status, Education, and Experience Requirements

The remainder of this report provides descriptive statistics on 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, the following information may be used to understand characteristics of those job vacancies and occupations reported.

While large and Government employers account for 2.5% and 3.5% respectively of the employers within the sample frame they each constitute more than 5% of the firms surveyed. Small to mid-size firms represent 94% of employers and account for 89% of the surveyed firms. Thus, survey results may over-represent characteristics of large and Government vacancies.

Figure 11: Vacancies by Employment Status

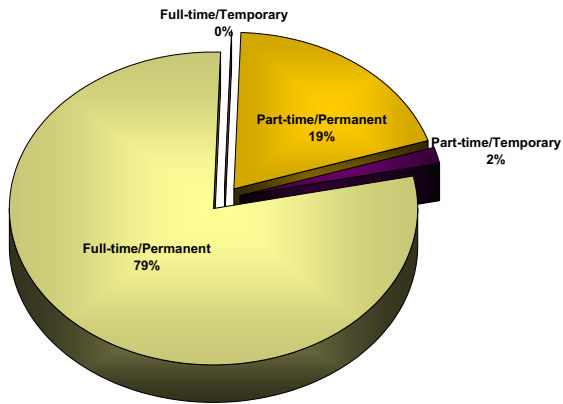
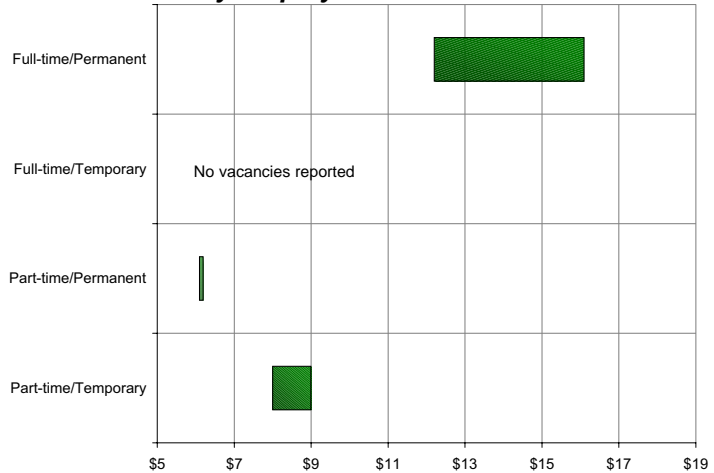


Figure 12: Reported Average Wage Ranges by Employment Status

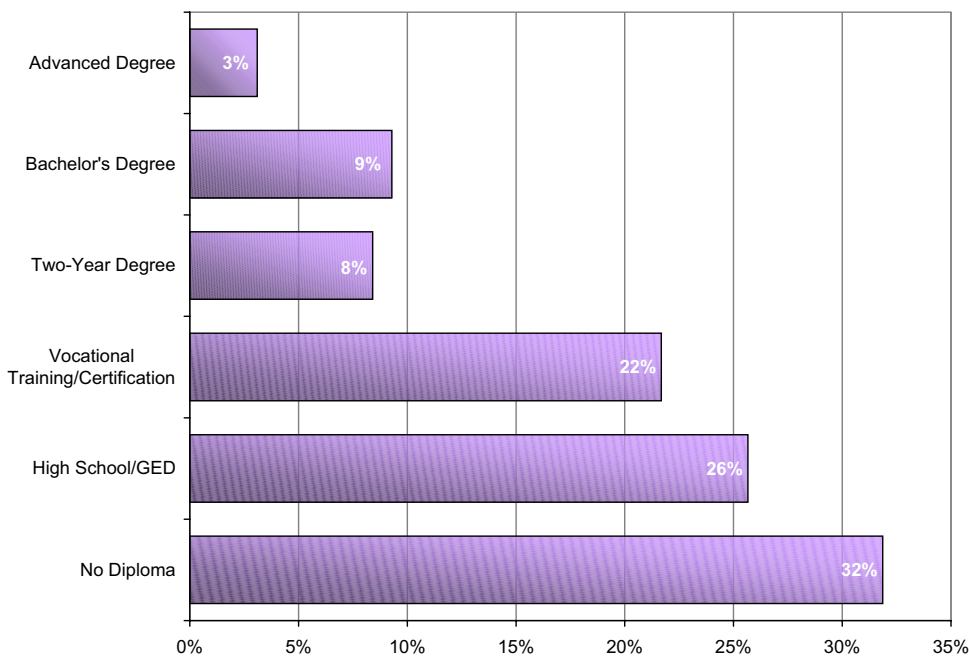


Figures 11 and 12 refer to employment status. Full-time/permanent positions account for the majority of job vacancies. The group of full-time/permanent job vacancies represents openings in each of the 12 JVS sectors, but is largely composed of Health Care & Social Assistance jobs (44%). Trade, Transportation & Utilities, Government, and Manufacturing offer many job openings for this employment status category just as they do for the survey as a whole.

The 19% of job vacancies that are part-time/permanent positions are mostly found in the Leisure & Hospitality sector (57%) with Health Care & Social Assistance jobs accounting for 16% and Trade, Transportation & Utilities another 14%.

Only 2% of the job vacancies are part-time/temporary. These positions are offered by Health Care & Social Assistance and Manufacturing firms.

Figure 13: Vacancies by Education



Assessing labor demand in terms of education and experience requirements provides valuable labor market information. About 95% of reported job vacancies include information on the education and experience requirements of hiring employers.

Advanced Degree

Job vacancies available to candidates with advanced degrees are offered by organizations in the Government and Health Care & Social Assistance JVS sectors. They include vacancies in the following major occupational groups: Education, Training, & Library; Life Physical & Social Science; and Health-care Practitioner & Technical

occupations. The average wage ranges mostly reflect the salaries offered for Life Physical & Social Science openings.

Bachelor’s Degree

Fifty-seven percent of the job vacancies requiring bachelor’s degrees are offered by Health Care & Social Assistance organizations. The remaining vacancies are with Government and Professional & Business Services firms. These employers are soliciting for candidates to fill Healthcare Practitioner & Technical occupations (62% of all vacancies for candidates with bachelor’s); Business & Financial Operations roles, Community & Social Services; Management; and Architecture & Engineering positions. Reported salaries are most indicative of wages offered for Healthcare Practitioner & Technical occupations.

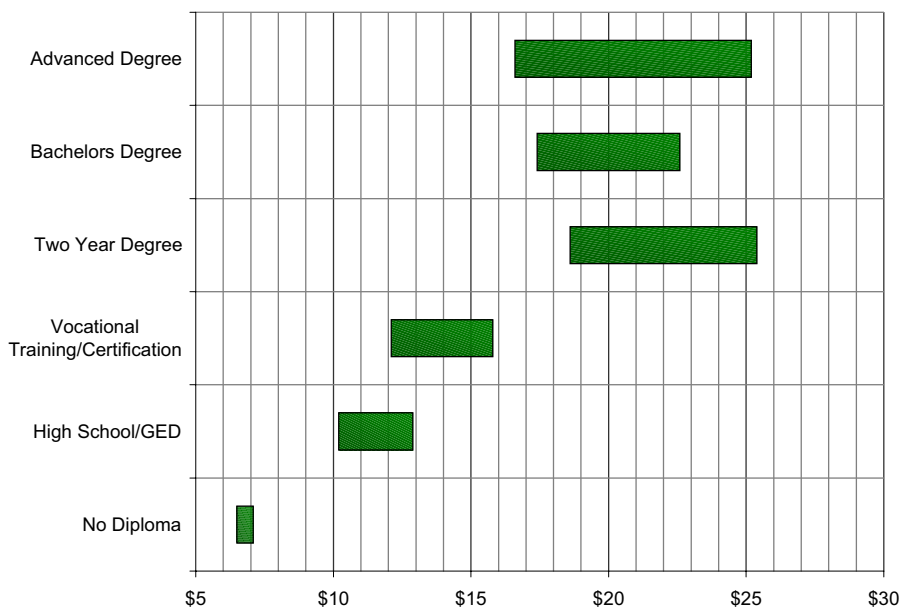
Two-Year Degree

Health Care & Social Assistance organizations account for 79% of the job vacancies requiring a two-year degree. Others include: Government; Trade, Transportation & Utilities; and Financial Activities firms. The types of occupations for which they are hiring are: Healthcare Practitioner & Technical; Community & Social Services; Business & Financial Operations; Management; and Architecture & Engineering. Healthcare Practitioner & Technical occupations have the greatest impact on the wages shown for this educational group while Management occupations are on the high end and Community & Social Services the low end.

Vocational Training/Certification

Once again, Health Care & Social Assistance organizations offer the highest number of job vacancies. Trade, Transportation & Utilities; Other Services; and Government also report job vacancies open to candidates with vocational training or certification. Ten out of the 22 major occupational groups (Page 15) are represented by the job vacancies for this education category. Together Healthcare Support and Healthcare Practitioner & Technical occupations account for more than 60% of the openings.

Figure 14: Reported Average Wage Ranges by Education



High School/GED

Eleven of the twelve JVS sectors include employers with vacancies that require high school or GED completion. Health Care & Social Assistance; Trade, Transportation & Utilities; Manufacturing; and Government are the top employers. The occupations represented by these job vacancies are Office & Administrative Support (22%); Production (22%); and Building & Grounds Cleaning & Maintenance (10%). Nine other occupational groups are also represented.

No Diploma

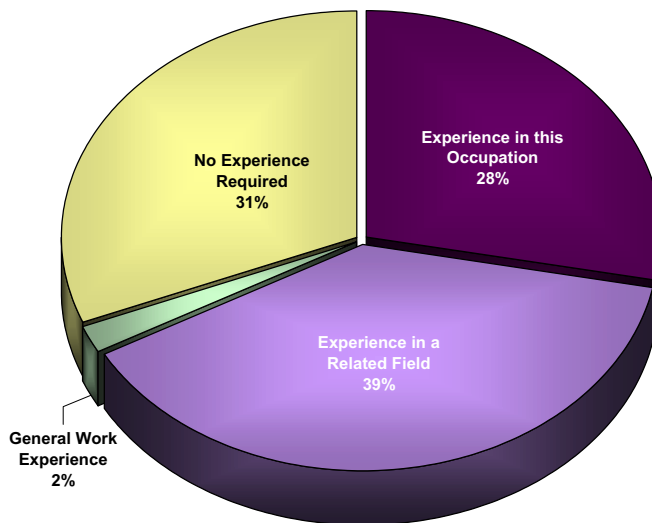
Forty-three percent of job vacancies requiring no diploma are offered by Leisure & Hospitality businesses. Trade, Transportation & Utilities represent 17% of the vacancies; Manufacturing 15%; and Health Care & Social Assistance, 10%. The occupations open to candidates with no diploma include:

- Food Preparation & Serving Related (40%);
- Transportation & Material Moving (15%);
- Sales & Related (11%);
- and Production (11%).

The wage range for this educational group is most reflective of compensation paid for Food Preparation & Serving Related jobs, but Construction & Extraction vacancies offer higher wages.

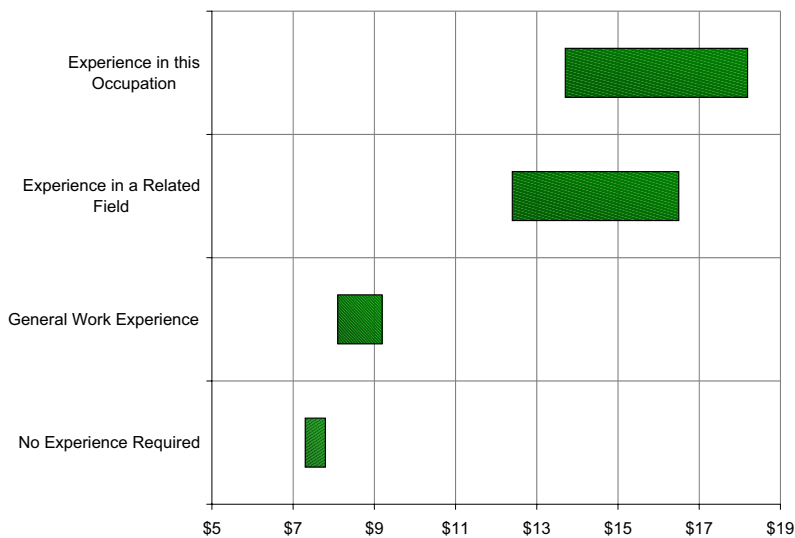
The JVS also collects experience requirements for job vacancies. The experience levels demanded by employers can be used to guide employment-training programs and to help job candidates plan for career development. *Figure 15* shows the percentage distribution of vacancies by experience requirement. Sixty-seven percent of the reported vacancies require at least experience in a related field.

Figure 15: Vacancies by Experience



The associated average wage ranges follow a logical pattern of higher wages offered to candidates with more applicable job experience. Job vacancies for which prior experience is required in the occupation pay the highest 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 for an experienced barista. Therefore, identifying the occupations within these experience categories enhances the relevance of the data:

Figure 16: Reported Average Wage Ranges by Experience



Experience in this Occupation

Eighteen of the 22 major occupational groups are represented in this category, but Healthcare Practitioner & Technical occupations represent the highest proportion of the total at 23%. Those healthcare and Architectural & Engineering vacancies offer the highest wages while Arts, Design, Entertainment, Sports & Media occupations are at the low end of the average wage range.

Experience in a Related Field

This experience category includes 15 of the major occupational groups. Again, Healthcare Practitioner & Technical occupations heavily influence wages as they represent 30% of the vacancies in this category. These healthcare positions along with Arts, Design, Entertainment, Sports & Media occupations offer the highest average wages for this category while Food Preparation & Serving Related vacancies offer the lowest.

General Work Experience

This category represents only 2% of all reported job vacancies. Some Production; Office & Administrative Support; and Transportation & Material Moving occupations are represented here.

No Experience Required

Eleven different occupational groups are represented by this category. Food Preparation & Serving Related occupations account for 37% of these vacancies, constituting the low-end of the wage scale. Meanwhile, Healthcare Practitioner & Technical and Community & Social Service vacancies offer wages on the high-end.



Vacancies

Difficulty to Fill and Time Open for Hire

Employers' ability to find and hire qualified candidates is an important indicator of the supply side of the labor force. Job Vacancy Surveys conducted for Mesa County show, over time, that employers are finding it easier to fill their vacant positions. The majority of job vacancies are considered not difficult to fill. The proportion of somewhat difficult to fill positions has been lower in fall surveys than in spring surveys.

Of the vacancies termed not difficult to fill, 36% are classified under Food Preparation & Serving Related occupations. Though the proportion of vacancies considered very difficult to fill has declined, certain Healthcare Practitioner & Technical; Production; Arts, Design, Entertainment, Sports & Media; and Sales & Related vacancies are a challenge for employers 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. Also, employers may allow more time to fill a vacancy in order to ensure the fit of the candidate with the organization.

The proportion of vacancies open for 60 or more days has declined while those open from 30 to 59 days has increased slightly. Also, the proportion of positions for which employers are always hiring has risen more than 20% as compared to the Fall 2003 survey.

Vacancies from seven different major occupational groups have been open for 60 or more days. Forty-five percent of the vacancies that employers reported as always being open are in the Food Preparation & Serving Related occupations.

A high number of health care occupations are found in the vacancies that have been open 30 to 59 days. Healthcare Practitioner & Technical occupations combined with Healthcare Support occupations account for 60% of the vacancies in this category. A majority of vacancies have been open for less than 30 days, supporting the employer responses of little difficulty in filling open positions. Employers most often cite Sales & Related occupations as those for which they are always hiring.

Figure 17: Vacancies by Difficulty to Fill

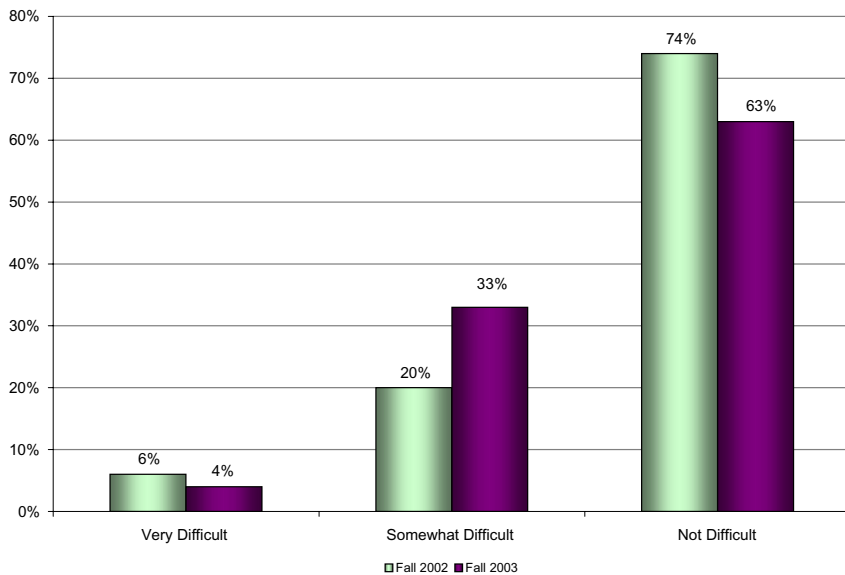


Figure 18: Vacancies by Time Open for Hire

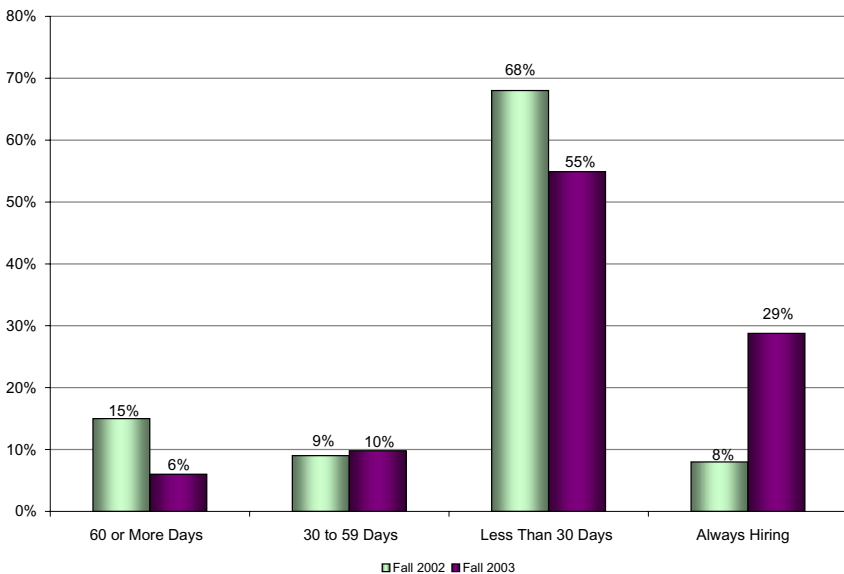
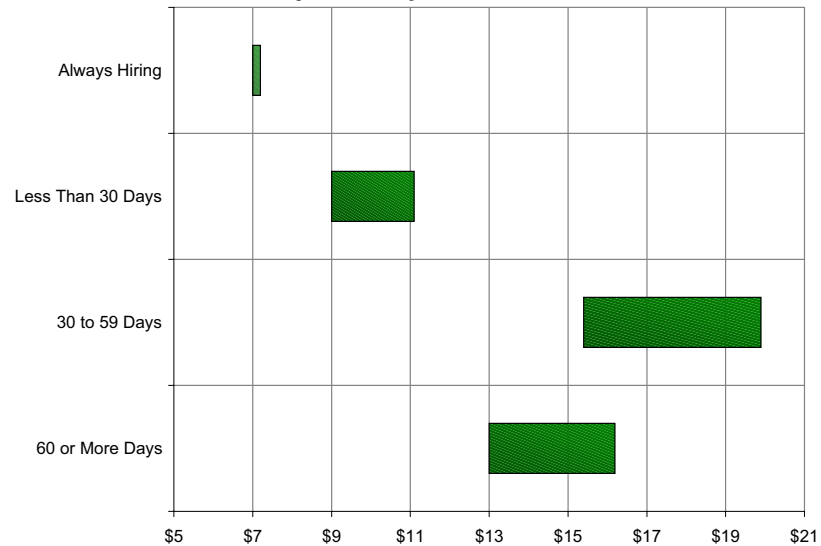


Figure 19: Reported Average Wage Ranges by Time Open for Hire



Reported vacancies open from 30 to 59 days offer the highest average wage with all reported wages lying above the survey average of \$12.10. Although there are some very high paying positions in the group of vacancies open 60 or more days, some Arts, Design, Entertainment, Sports, & Media and Sales & Related vacancies bring the average wage down.

Vacancies Additional Compensation

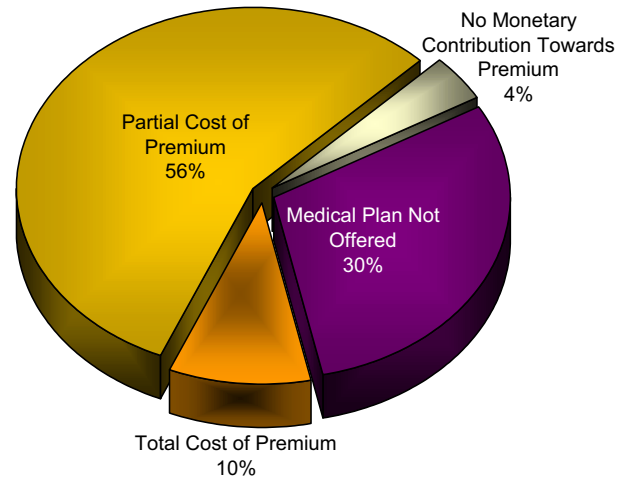
Medical Insurance

Employers frequently offer compensation related benefits to recruit qualified candidates. Some of these perks are paid time off, transportation or parking vouchers, and subsidized child-care. An important benefit offered to employees is a group medical insurance plan – the employer may pay all, part or none of the monthly insurance premium for employees.

Seventy percent of reported job vacancies are with employers who offer a company sponsored medical plan. Of these, four percent do not contribute to the employee’s medical premium.

Wages appear to be a factor in whether or not a medical benefit is offered for the vacancies reported. Vacancies where employers offer medical coverage, but do not contribute to the premium have the lowest average wage. The average wage for vacancies where no medical plan is offered is about 69% higher compared to that paid for vacancies where a plan is offered with no premium contribution. The

Figure 20: Employers’ Contribution to Medical Insurance



average wage increases an additional 46% for vacancies where employers pay partial premium, and 59% when the total cost of the premium is covered.

Sign-On Bonus

No job vacancies in this survey include a sign-on bonus. Sign-on bonuses are virtually nonexistent in this market characterized by a large supply of labor and a limited

number of vacancies. The sign-on bonus was a popular recruitment tool in the 1990s economy characterized by a tight labor market.



Occupations

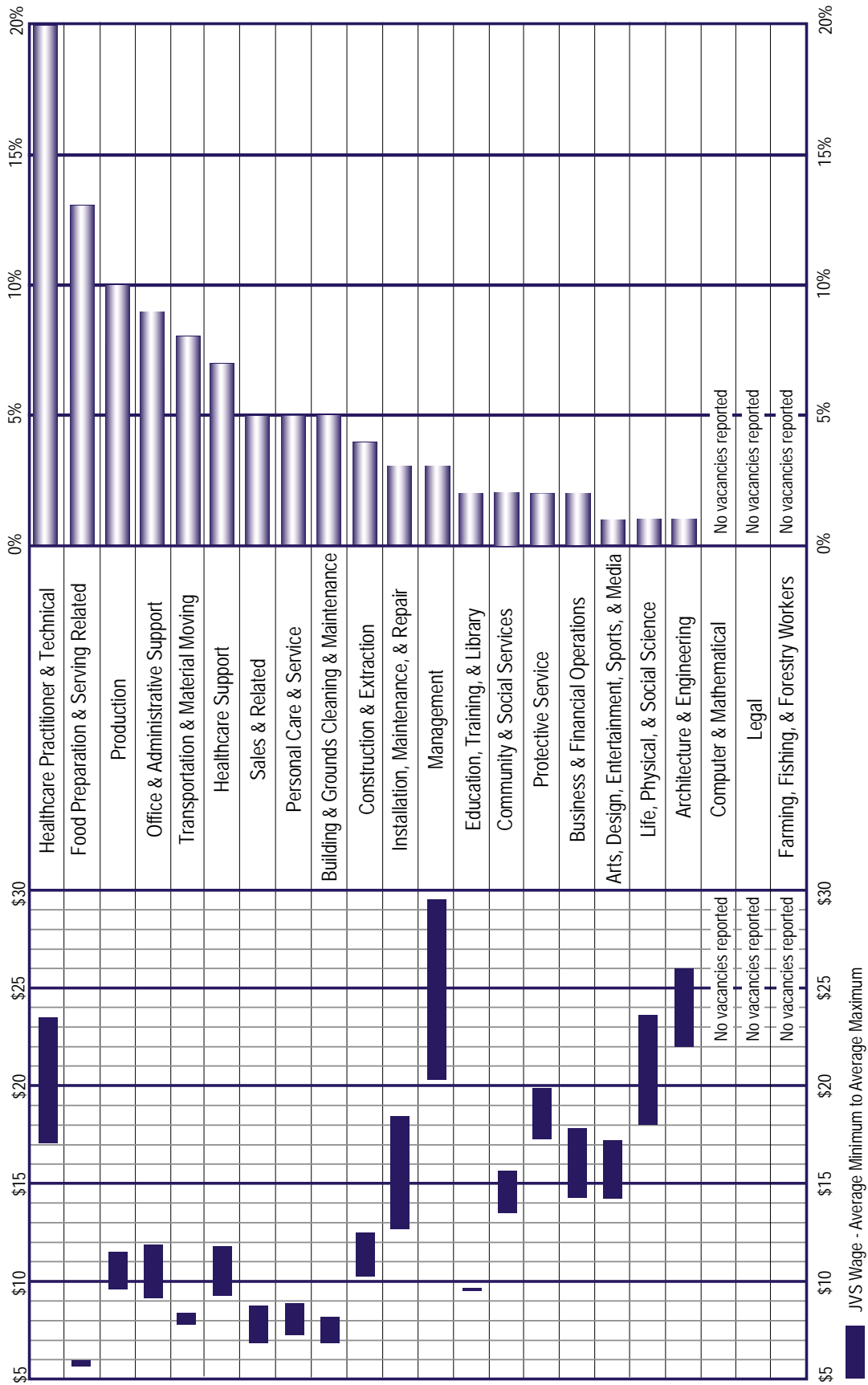
In order to help make comparisons between the results of this survey and other sources of employment statistics, all jobs reported are assigned a Standard Occupational Classification (SOC) code from the *2000 Standard Occupational Classification Manual*. The JVS utilizes 801 detailed SOC titles combined under 22 major groups.

At the major SOC occupation level shown in *Figure 21*, job vacancies in Healthcare Practitioner & Technical

occupations top the list as the category with the highest number of reported vacancies. Food Preparation & Serving Related occupations represent the second highest number of job vacancies with almost 13% of the total.

The wages associated with these occupations reflect the training and education required, as well as the supply of, and demand for labor appropriately skilled for the job.

Figure 21: Vacancies and Reported Average Wage Ranges by Major Occupational Groups



Occupational Estimates

Tables 1 and 2 contain a list of all of the detailed SOC job titles assigned to vacancies reported in this survey. As a census of large employers and Government agencies is conducted, the list contains titles for nearly all of the vacancies available at the time of the survey for those employers. Forty-six percent of small to mid-size employers were contacted for the random sample, and likewise the occupations associated with those vacancies are listed. Though the sample of small to mid-size employers is representative and significant, it is not exhaustive. Most likely, if a different random sample had been drawn there would be some differences in the job titles reported, but there would also be many of the same.

Vacancies estimated and reported are displayed in Table 1 for those occupations where at least ten vacancies are estimated.

Estimated Vacancies

Because nearly all large employers and Government agencies are contacted, the number of vacancies by occupation for those groups is not estimated; it is an actual accounting of the vacancies. However, in addition to the number 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

This column of Table 1 refers to the number of vacancies reported in the survey.

Average JVS Wage

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

Occupational Employment Statistics (OES) Wage Data

Occupational Employment Statistics (OES) wage data are provided for each 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 Mesa County when available and statewide otherwise. Data were collected over three years, from 1999 through 2001, and are aged to September 2002. A complete description of the OES survey is available on the Internet at: <http://www.bls.gov/>.

While the Job Vacancy Survey average wages reflect what is being offered to fill vacancies at the time of the survey, OES wage data reflect what 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 10 or More Estimated Vacancies

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
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	25	16	\$5.40	\$6.19	\$6.64	\$6.87	\$5.73	\$6.05	\$6.59	\$7.14	\$8.21
41-2031	Retail Salespersons	20	8	\$7.40	\$6.79	\$11.17	\$13.35	\$6.25	\$7.43	\$9.47	\$12.58	\$18.96
29-1111	Registered Nurses	19	18	\$22.40	\$17.71	\$20.73	\$22.24	\$16.70	\$18.38	\$20.08	\$21.76	\$26.38
31-1012	Nursing Aides, Orderlies, and Attendants	18	15	\$10.60	\$7.29	\$8.95	\$9.78	\$6.82	\$7.78	\$8.98	\$10.21	\$10.98
43-4171	Receptionists and Information Clerks	16	8	\$9.30	\$7.35	\$10.09	\$11.46	\$6.88	\$7.97	\$9.46	\$11.59	\$15.14
37-2012	Maids and Housekeeping Cleaners	14	9	\$7.90	\$6.22	\$7.59	\$8.28	\$5.89	\$6.41	\$7.22	\$8.61	\$10.37
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	12	9	†	\$9.94	\$11.54	\$12.34	\$9.33	\$9.96	\$11.00	\$12.84	\$14.91

† Insufficient wage data



Table 2: Occupations with Fewer than 10 Estimated Vacancies

SOC Code		SOC Occupational Title		Occupational Employment Statistics Wage Data (2002)										
				Average Wages				Percentile Distribution						
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th			
13-2011	Accountants and Auditors	\$14.39	\$23.50	\$28.04	\$13.13	\$16.51	\$22.43	\$27.15	\$30.27					
* 49-3011	Aircraft Mechanics and Service Technicians	†	†	†	†	†	†	†	†					
51-2099	Assemblers and Fabricators, All Other	\$7.64	\$10.16	\$11.43	\$6.86	\$8.64	\$10.04	\$11.27	\$13.79					
* 49-2091	Avionics Technicians	\$14.89	\$18.69	\$20.58	\$14.63	\$16.54	\$18.98	\$21.12	\$22.68					
35-3011	Bartenders	\$6.22	\$6.80	\$7.09	\$5.78	\$6.09	\$6.61	\$7.15	\$8.28					
43-3011	Bill and Account Collectors	10.85	16.21	18.9	9.47	12.3	16.56	20.47	22.2					
* 51-5011	Bindery Workers	\$6.94	\$10.63	\$12.48	\$6.39	\$7.50	\$9.14	\$12.98	\$17.46					
* 53-3022	Bus Drivers, School	\$8.38	\$11.31	\$12.78	\$7.37	\$9.44	\$11.19	\$13.43	\$15.56					
41-2011	Cashiers	\$6.37	\$9.07	\$10.41	\$6.07	\$6.93	\$8.15	\$10.48	\$14.65					
47-2051	Cement Masons and Concrete Finishers	\$11.82	\$14.20	\$15.38	\$11.25	\$12.14	\$13.37	\$15.95	\$19.50					
* 25-1052	Chemistry Teachers, Postsecondary	\$38,338	\$58,785	\$69,008	\$35,619	\$43,356	\$54,499	\$70,991	\$90,671					
39-9011	Child Care Workers	\$6.18	\$7.71	\$8.46	\$5.94	\$6.60	\$7.67	\$8.71	\$10.02					
17-2051	Civil Engineers	\$22.42	\$29.22	\$32.62	\$20.65	\$23.68	\$27.51	\$32.73	\$40.03					
53-7061	Cleaners of Vehicles and Equipment	\$6.49	\$8.18	\$9.03	\$6.11	\$7.00	\$8.10	\$9.20	\$10.74					
19-3031	Clinical, Counseling, and School Psychologists	\$16.13	\$22.83	\$26.18	\$14.22	\$18.15	\$23.72	\$27.88	\$30.96					
47-2061	Construction Laborers	\$9.31	\$11.29	\$12.28	\$8.75	\$9.66	\$10.92	\$12.87	\$14.44					
35-2014	Cooks, Restaurant	\$6.33	\$7.97	\$8.80	\$6.04	\$6.61	\$7.43	\$9.07	\$10.84					
* 33-3012	Correctional Officers and Jailers	\$14.11	\$18.74	\$21.06	\$13.46	\$15.68	\$18.83	\$21.78	\$25.51					
41-2021	Counter and Rental Clerks	\$6.07	\$8.74	\$10.08	\$5.67	\$6.11	\$6.85	\$10.46	\$14.88					
43-5021	Couriers and Messengers	\$6.83	\$8.82	\$9.81	\$6.29	\$7.26	\$8.36	\$10.34	\$12.35					
43-9021	Data Entry Keyers	\$9.20	\$19.88	\$25.23	\$8.59	\$10.11	\$12.25	\$14.91	\$55.39					
* 29-2032	Diagnostic Medical Sonographers	\$22.95	\$28.74	\$31.62	\$21.85	\$23.76	\$26.36	\$35.53	\$41.30					
29-1031	Dietitians and Nutritionists	\$15.20	\$21.06	\$23.98	\$11.75	\$18.75	\$21.62	\$25.15	\$28.80					
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	\$6.25	\$6.52	\$6.66	\$5.77	\$6.06	\$6.54	\$7.03	\$7.43					
35-9021	Dishwashers	\$6.16	\$6.78	\$7.09	\$5.73	\$6.11	\$6.74	\$7.50	\$8.35					
53-3031	Driver/Sales Workers	\$9.66	\$12.15	\$13.39	\$9.14	\$9.88	\$11.04	\$13.45	\$17.07					
* 11-9033	Education Administrators, Postsecondary	\$19.00	\$31.89	\$38.33	\$17.48	\$21.17	\$28.62	\$38.59	\$54.87					
* 21-1012	Educational, Vocational, and School Counselors	\$14.37	\$21.87	\$25.61	\$13.48	\$16.35	\$21.21	\$27.40	\$32.82					
* 17-3012	Electrical and Electronics Drafters	\$13.45	\$19.82	\$23.00	\$12.22	\$14.87	\$18.67	\$24.56	\$28.46					
13-1071	Employment, Recruitment, and Placement Specialists	\$11.09	\$22.07	\$27.55	\$9.95	\$12.61	\$17.17	\$24.47	\$47.36					
* 19-4091	Environmental Science and Protection Technicians, Including Health	\$15.38	\$21.41	\$24.43	\$14.33	\$17.40	\$20.86	\$25.80	\$29.43					
43-6011	Executive Secretaries and Administrative Assistants	\$11.74	\$16.23	\$18.48	\$10.81	\$12.91	\$15.86	\$19.03	\$21.66					

Table 2: Occupations with Fewer than 10 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		
* 33-1011	First-Line Supervisors/Managers of Correctional Officers	\$21.09	\$24.97	\$26.90	\$19.81	\$23.06	\$25.38	\$27.70	\$32.20		
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	\$14.32	\$21.41	\$24.95	\$13.43	\$16.18	\$20.08	\$25.29	\$32.47		
* 39-9031	Fitness Trainers and Aerobics Instructors	\$8.62	\$15.38	\$18.76	\$7.86	\$9.84	\$13.56	\$19.38	\$26.54		
27-1023	Floral Designers	\$7.27	\$9.24	\$10.23	\$6.77	\$7.71	\$8.84	\$10.57	\$12.77		
35-3041	Food Servers, Nonrestaurant	\$6.12	\$7.81	\$8.66	\$5.75	\$6.22	\$7.03	\$9.36	\$11.34		
* 11-9061	Funeral Directors	\$13.42	\$19.53	\$22.58	\$12.53	\$14.52	\$16.76	\$21.05	\$38.29		
* 53-7071	Gas Compressor and Gas Pumping Station Operators	\$19.20	\$23.63	\$25.84	\$18.43	\$20.29	\$23.08	\$26.53	\$29.97		
39-5012	Hairdressers, Hairstylists, and Cosmetologists	\$6.18	\$8.18	\$9.17	\$5.79	\$6.28	\$7.06	\$9.25	\$12.23		
* 47-4051	Highway Maintenance Workers	\$12.19	\$16.24	\$18.27	\$11.57	\$13.53	\$16.50	\$19.34	\$21.19		
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$6.13	\$7.06	\$7.53	\$5.74	\$6.19	\$6.94	\$7.96	\$8.76		
11-3051	Industrial Production Managers	\$18.03	\$27.75	\$32.61	\$15.98	\$20.51	\$25.79	\$32.01	\$36.76		
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$6.63	\$9.25	\$10.55	\$6.17	\$7.20	\$8.95	\$11.16	\$13.01		
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	\$7.69	\$9.66	\$10.65	\$7.33	\$8.03	\$9.15	\$11.27	\$13.23		
* 25-4021	Librarians	\$14.45	\$20.27	\$23.19	\$13.39	\$16.19	\$19.94	\$24.11	\$28.12		
29-2061	Licensed Practical and Licensed Vocational Nurses	\$13.11	\$14.82	\$15.67	\$12.15	\$13.88	\$15.09	\$16.35	\$17.10		
51-4041	Machinists	\$10.51	\$16.32	\$19.23	\$9.76	\$11.61	\$15.57	\$18.44	\$22.34		
49-9042	Maintenance and Repair Workers, General	\$8.35	\$12.70	\$14.88	\$7.38	\$9.44	\$12.05	\$15.75	\$19.12		
* 39-5092	Manicurists and Pedicurists	\$6.71	\$9.48	\$10.87	\$6.28	\$7.17	\$8.29	\$10.32	\$15.34		
* 25-1022	Mathematical Science Teachers, Postsecondary	\$31,583	\$49,224	\$58,044	\$29,601	\$35,893	\$44,180	\$58,585	\$79,657		
* 49-9011	Mechanical Door Repairers	\$12.59	\$17.07	\$19.31	\$11.57	\$13.96	\$16.85	\$19.91	\$22.40		
29-2011	Medical and Clinical Laboratory Technologists	\$14.84	\$19.32	\$21.56	\$13.06	\$16.67	\$19.77	\$22.13	\$25.45		
11-9111	Medical and Health Services Managers	\$23.05	\$32.86	\$37.77	\$21.39	\$24.86	\$29.52	\$41.14	\$52.17		
31-9092	Medical Assistants	\$9.76	\$11.45	\$12.29	\$9.23	\$10.06	\$11.28	\$12.95	\$14.13		
43-6013	Medical Secretaries	\$9.32	\$11.30	\$12.29	\$8.47	\$9.73	\$10.97	\$12.63	\$14.36		
27-1026	Merchandise Displayers and Window Trimmers	\$9.14	\$10.50	\$11.18	\$8.51	\$9.31	\$10.07	\$10.83	\$15.46		
49-3051	Motorboat Mechanics	\$11.05	\$12.75	\$13.59	\$10.16	\$11.55	\$12.73	\$13.93	\$15.91		
* 29-2033	Nuclear Medicine Technologists	\$19.26	\$22.78	\$24.55	\$18.46	\$20.30	\$23.07	\$25.90	\$27.71		
43-9061	Office Clerks, General	\$7.17	\$10.25	\$11.79	\$6.46	\$8.07	\$9.90	\$11.93	\$14.53		
47-2073	Operating Engineers and Other Construction Equipment Operators	\$12.39	\$14.89	\$16.15	\$11.75	\$12.73	\$14.72	\$16.84	\$18.70		
29-2081	Opticians, Dispensing	\$9.35	\$11.41	\$12.44	\$8.56	\$9.70	\$10.79	\$12.12	\$15.24		
* 51-9122	Painters, Transportation Equipment	\$9.65	\$16.29	\$19.61	\$8.37	\$11.13	\$15.80	\$19.98	\$25.50		
41-2022	Parts Salespersons	\$7.95	\$13.10	\$15.68	\$7.25	\$8.89	\$10.74	\$16.87	\$21.84		



Table 2: Occupations with Fewer than 10 Estimated Vacancies — Page 3

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)									
		Average Wages		Percentile Distribution					Percentile Distribution		
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
39-9021	Personal and Home Care Aides	\$6.92	\$7.75	\$8.17	\$6.50	\$7.19	\$7.82	\$8.46	\$9.01		
29-1051	Pharmacists	\$30.65	\$35.64	\$38.13	\$30.05	\$32.70	\$36.47	\$40.52	\$43.36		
29-1123	Physical Therapists	\$21.94	\$24.73	\$26.13	\$20.35	\$22.38	\$24.37	\$26.68	\$29.18		
29-1071	Physician Assistants	\$19.62	\$27.22	\$31.01	\$10.59	\$24.13	\$26.84	\$32.46	\$41.21		
47-2152	Plumbers, Pipefitters, and Steamfitters	\$14.18	\$19.33	\$21.91	\$13.09	\$15.54	\$18.17	\$24.47	\$27.12		
* 33-3051	Police and Sheriff's Patrol Officers	\$16.34	\$22.34	\$25.34	\$15.17	\$18.18	\$22.45	\$26.77	\$30.32		
25-2011	Preschool Teachers, Except Special Education	\$7.46	\$11.91	\$14.14	\$7.12	\$7.82	\$9.44	\$14.98	\$21.46		
51-5023	Printing Machine Operators	\$13.41	\$18.47	\$21.00	\$12.11	\$14.77	\$17.50	\$23.43	\$27.05		
* 21-1092	Probation Officers and Correctional Treatment Specialists	\$16.77	\$23.41	\$26.74	\$15.25	\$18.50	\$23.62	\$28.97	\$32.61		
* 29-1124	Radiation Therapists	\$23.15	\$26.98	\$28.90	\$21.92	\$24.05	\$26.78	\$30.42	\$34.35		
* 27-3011	Radio and Television Announcers	†	†	†	†	†	†	†	†		
29-2034	Radiologic Technologists and Technicians	\$12.59	\$17.43	\$19.85	\$12.02	\$14.31	\$17.32	\$20.69	\$24.79		
* 29-1126	Respiratory Therapists	\$14.88	\$18.36	\$20.10	\$14.15	\$15.89	\$18.52	\$20.99	\$22.61		
* 47-5071	Roustabouts, Oil and Gas	\$9.53	\$12.50	\$13.97	\$9.07	\$10.17	\$12.06	\$14.15	\$17.01		
43-6014	Secretaries, Except Legal, Medical, and Executive	\$8.42	\$11.52	\$13.07	\$7.60	\$9.46	\$11.25	\$13.90	\$16.19		
41-3031	Securities, Commodities, and Financial Services Sales Agents	\$17.64	\$31.13	\$37.88	\$11.05	\$24.39	\$32.04	\$39.05	\$44.23		
51-6031	Sewing Machine Operators	\$6.39	\$8.63	\$9.75	\$6.06	\$6.94	\$8.19	\$9.82	\$11.86		
47-2211	Sheet Metal Workers	\$13.95	\$17.42	\$19.16	\$12.48	\$15.45	\$17.66	\$20.01	\$22.16		
* 29-1127	Speech-Language Pathologists	\$17.90	\$24.11	\$27.21	\$16.37	\$19.68	\$23.96	\$27.58	\$32.81		
43-5081	Stock Clerks and Order Fillers	\$7.28	\$10.87	\$12.66	\$6.78	\$7.88	\$9.64	\$13.09	\$18.11		
21-1011	Substance Abuse and Behavioral Disorder Counselors	\$9.88	\$12.87	\$14.36	\$9.33	\$10.83	\$12.91	\$14.47	\$16.89		
29-2055	Surgical Technologists	\$11.41	\$16.28	\$18.70	\$10.28	\$12.84	\$15.91	\$18.52	\$24.61		
43-2011	Switchboard Operators, Including Answering Service	\$8.25	\$10.24	\$11.25	\$7.68	\$8.89	\$10.25	\$11.80	\$13.27		
53-3032	Truck Drivers, Heavy and Tractor-Trailer	\$11.97	\$14.94	\$16.42	\$11.39	\$12.76	\$15.11	\$17.11	\$18.52		
53-3033	Truck Drivers, Light or Delivery Services	\$7.50	\$13.05	\$15.83	\$6.63	\$8.54	\$12.06	\$16.22	\$23.34		
29-2056	Veterinary Technologists and Technicians	\$7.32	\$9.79	\$11.03	\$6.60	\$8.27	\$9.96	\$11.21	\$13.25		
* 25-1194	Vocational Education Teachers, Postsecondary	\$13.98	\$21.47	\$25.22	\$12.77	\$15.54	\$20.90	\$26.82	\$31.87		
35-3031	Waiters and Waitresses	\$6.06	\$6.94	\$7.37	\$5.60	\$5.94	\$6.49	\$7.16	\$9.86		

* OES wages reported for Colorado statewide

† Insufficient wage data

Health Care & Social Assistance

Health Care & Social Assistance is the third largest JVS sector in Mesa County in terms of employment, representing 14% of employment and 9% of employers in the region⁴. In this Job Vacancy Survey this sector accounts for 33% of all estimated vacancies, or 119 positions.

The Health Care & Social Assistance JVS sector is composed of four NAICS Subsectors:

Ambulatory Health Care Services

This subsector accounts for 35% of the sector employment and 74% of sector employers. These establishments provide medical, diagnostic, and treatment services in an outpatient setting. Typical businesses in this sector are medical and dental practices, outpatient surgical centers, medical laboratories, ambulance services and blood banks. Most of these are categorized as small to mid-size employers as they employ less than 100 people.

Hospitals

Hospitals constitute 34% of sector employment, but only represent 1% of all employers in the sector. Institutions in this subsector provide services congruent with those offered by Ambulatory Health Care Services establishments, but in an inpatient setting, although they may also provide outpatient care as a secondary activity.

Services provided usually require specialized facilities and equipment as an integral part of the process. Saint Mary's Hospital in Grand Junction is recognized as the largest medical center between Denver and Salt Lake City serving Western Colorado and Eastern Utah, and is certainly a major employer for the county.

Nursing & Residential Care Facilities

These institutions mix health and social services in providing residential care. A facility will often focus services to a particular patient or needs-based group. Examples of such businesses are nursing homes, boot camps, residential rehabilitation centers, and assisted-living facilities either with or without nursing care. Such facilities account for 10% of the businesses and 19% of the employment in the Health Care & Social Assistance sector in Mesa County.

Social Assistance

These organizations provide an array of social assistance services directly to clients. Adoption and foster care services, suicide crisis centers, soup kitchens, and nursery schools are examples. This subsector accounts for 15% of employment and 16% of employers within the JVS sector. Child Day Care Services represent the highest number of employers in this sector for Mesa County.

⁴source: ES-202, 3rd Quarter 2002



How to Use This Report

With the analysis of labor market conditions, many questions regarding labor demand and supply, as well as labor skills requirements, often arise...

- ◆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. 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 bottle-

necks 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 over-all job vacancies for regions. As such, readers should be mindful of sampling issues.

Sampling error results from the Job Vacancy Survey producing estimates from one particular sample, rather than examining the entire population. Different samples will likely result in different estimates for the population, thus we report the overall estimate with a confidence interval; *i.e.*, the range of values within which the actual sample derived vacancy estimate is likely to fall 95% of the time.

Non-sampling error occurs primarily from reporting, translating data to standard terms, and incorrect information about firms in our sample frame. Some examples

include placing reported vacancies in the wrong occupational codes, inadequate data collection in a JVS sector due to non-response, and estimating errors. The majority of non-sampling errors are corrected in the Job Vacancy Survey's extensive review and validation process that takes place before estimates are published.

The study provides estimates of job openings for a point-in-time and does not attempt to project the level of vacancies into the future. Readers should be aware that events having occurred since the time period analyzed such as plant closings or the migration of people in and out of the area might significantly affect the vacancy status of some occupations. Job openings are very dynamic—current openings are

being filled, new positions are being created, and some roles 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 42% of the employment in the region is found in large and government employers that make up only 6% 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 Mesa County survey was conducted from September 24 through October 3. 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 a small proportion of the total employment. Employment in the sample frame accounts for 84% 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 100 employees are considered large employers. Attempts are made to contact all government agencies and large firms in the sample frame. The remaining small to mid-size firms are split into JVS industry sectors.

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

Government makes up 21% of the employment in the sample frame, while private industry employers make up the remaining 79%. Large firms account for 27% of private industry employment in the sample frame. Firms employing from five to 99 individuals are considered small to mid-size employers, and account for the

remaining 73% of private industry employment.

The margin of error for the overall vacancy estimate is plus or minus 4.2% or 15 vacancies at a .95 certainty level. In other words, in 95 out of 100 samples taken, the actual number of vacancies for the region will be between 349 and 379 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 83.7%. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is 99.9% 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 Mesa County, the 20 NAICS sectors have been combined into 12 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 25*.

Mesa County JVS Sectors	include →	NAICS Sectors
Natural Resources & Mining		Agriculture, Forestry, Fishing & Hunting Mining
Construction		Construction
Manufacturing		Manufacturing
Trade, Transportation & Utilities		Utilities Wholesale Trade Retail Trade Transportation & Warehousing
Other Services		Other Services (except Public Administration)
Information		Information
Financial Activities		Finance & Insurance Real Estate & Rental & Leasing
Professional & Business Services		Professional, Scientific & Technical Services Management of Companies & Enterprises Administrative & Support & Waste Management & Remediation Services
Educational Services		Educational Services
Health Care & Social Assistance		Health Care & Social Assistance
Leisure & Hospitality		Accommodation & Food Services Arts, Entertainment & Recreation
Government		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 opened. Employers are also asked if sign-on bonuses and health insurance coverage are offered for these positions. These data are collected in addition to the minimum and maximum wages in order to describe more fully the compensation offered.

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 purposes¹. 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 Committee². Government agencies from the United States, Mexico and Canada³ 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.

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

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

²ECPC 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

³Specifically, Mexico's Instituto Nacional de Estadística, Geografía e Informática (INEGI) and Statistics Canada

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 (parts of all divisions)		Public Administration Management of Companies & Enterprises

U.S. Bureau of the Census, U.S. Department of Commerce

Glossary

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

Average Maximum Wage

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

Average Minimum Wage

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

Computer Assisted Telephone Interviewing (CATI)

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

Cooperation Rate

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

Educational Attainment

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

Effective Response Rate

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

Employed Persons (Employment)

Persons 16 years and over in the civilian non-institutional population who, during the reference period

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

Employer

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

Full-time Employee

Employees who usually work 35 hours per week or more.

Goods Producing Industries (NAICS)

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

Industry

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

Job Seeker

A person actively looking for employment or researching career options.

Job Vacancy

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

Job Vacancy Rate

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

Labor Force

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

Medical Insurance

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

Medical Insurance Premium

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

North American Industry Classification System (NAICS)

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

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 ES-202 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.

Tourism and our State Parks are important parts of Colorado's economy.



Colorado River State Park, Photo Courtesy Colorado State Parks

We urge you to

... See
COLORADO
first
Mesa County
Explore

Colorado River State Park

Highline Lake State Park

Vega State Park

Colorado State Parks

<http://parks.state.co.us/home>



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For a listing of all Colorado Workforce Centers: www.coworkforce.com/EMP/WFCs.asp

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