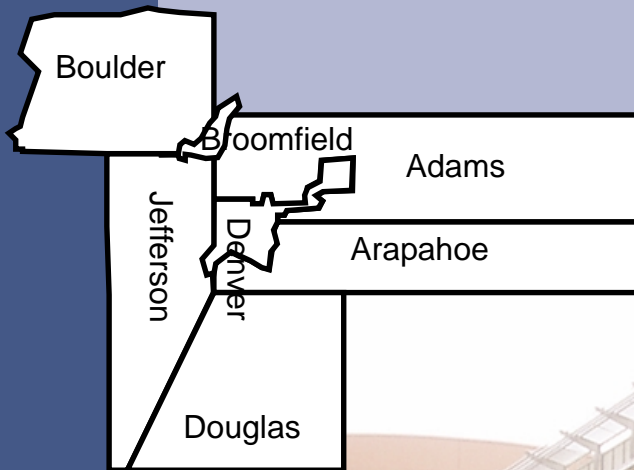


Denver Metro

Job Vacancy Survey

Fall 2003



See Colorado First

Hard Rock Cafe
Denver Pavilions
16th Street Mall—Downtown



Denver Metro Region Job Vacancy Survey

Conducted
October 7–December 9, 2003

State of Colorado

Bill Owens, *Governor*

Colorado Department of Labor & Employment

Jeffrey M. Wells
Executive Director

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Development Council

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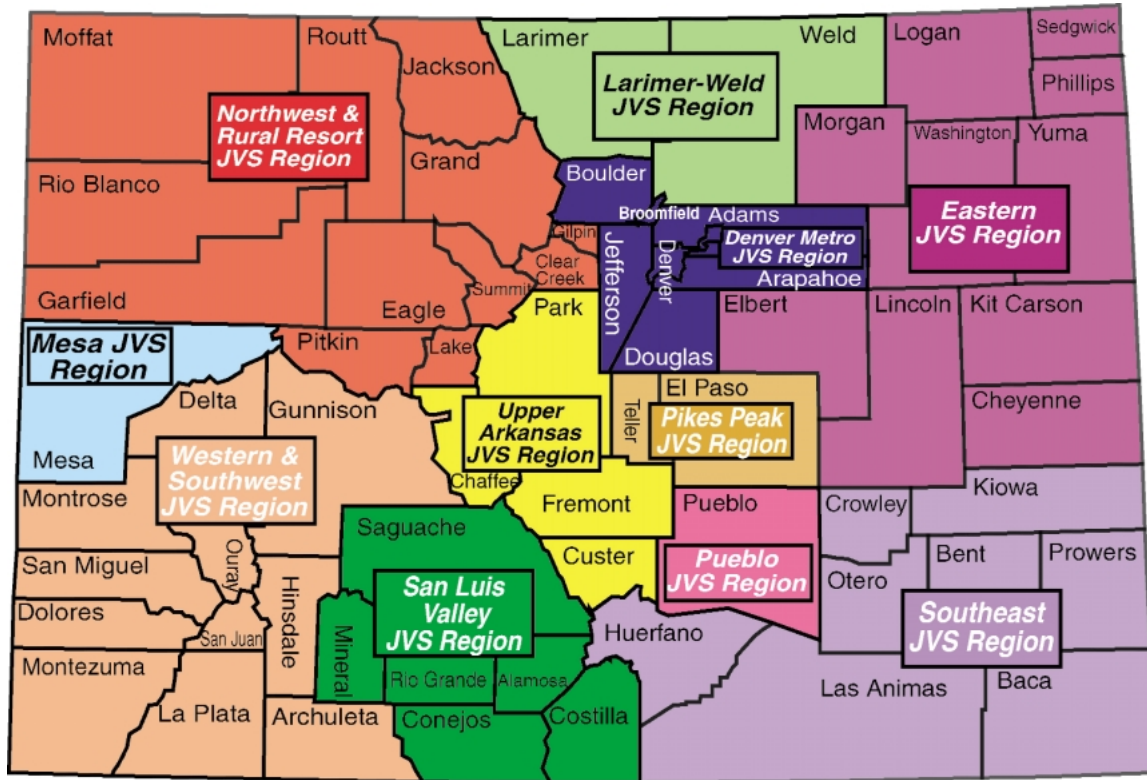
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Figure 1: Colorado Job Vacancy Survey Regions



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

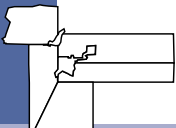
The Fall 2003 Denver Metro Job Vacancy Survey (JVS) was conducted from October 7th through December 9th, 2003. The goal of the survey is to provide current information on the demand for workers so that employers, job seekers, economic developers, educators and workforce centers can make more informed decisions in the Denver Metro Region.

Starting Spring 2003, the survey was conducted using the new North American Industry Classification System (NAICS). As a result, employers contacted were split into 20 different NAICS sectors compared to the traditional 11 industries surveyed prior to 2003 under the Standard Industrial Classification (SIC) system.

Over the survey period, all large and government employers as well as a random sample of private employers with at least five employees in the Denver Metro Region were contacted. Employers were asked if they were actively hiring at the time of the survey and a variety of questions about the positions they were seeking to fill.

A total of 5,841 employers, representing 39% of the region's employment responded to the survey. Of these, 315 are large employers, 224 are Government employers and 5,302 are small to mid-size employers. The survey has an effective response rate of 81.7% and a cooperation rate of 99.0%. The margin of sampling error for the overall vacancy estimate is plus or minus 2.6% or about 424 vacancies. The major findings of the survey follow:

- ◆ An estimated 16,300 vacancies were open for immediate hire in the Denver Metro Region during the survey period compared to 11,200 a year ago.Page 8
- ◆ The overall average wage is \$16.50 per hour.Page 8
- ◆ Twelve percent of the employers responding to the survey reported having at least one vacancy.Page 8
- ◆ The Retail Trade sector accounts for the highest number of estimated vacancies while the Manufacturing sector offer the highest average wages.Page 8
- ◆ Denver County accounts for the highest number of estimated vacancies while Douglas County has the lowest.Page 10
- ◆ Small to mid-size employers account for 57% of the total estimated vacancies.Page 11
- ◆ Eighty-one percent of the openings are full-time positions and 90% are for permanent employment.Page 12
- ◆ Sixty-three percent of the openings require education beyond high-school.Page 13
- ◆ Vacancies requiring related or specific experience to the vacant occupation account for 72% of all reported openings.Page 14
- ◆ The percentage of vacancies reported as not difficult to fill slightly decreased while that for vacancies reported as very difficult to fill increased compared to the Fall 2002 survey.Page 15
- ◆ Medical benefits are offered for 79% of the vacancies reported in this survey.Page 17



Denver Metro Region

The Denver Metro Region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties. Until a complete census of the county's employers is compiled, Broomfield County will continue to be surveyed as part of the Boulder Metropolitan Statistical Area.

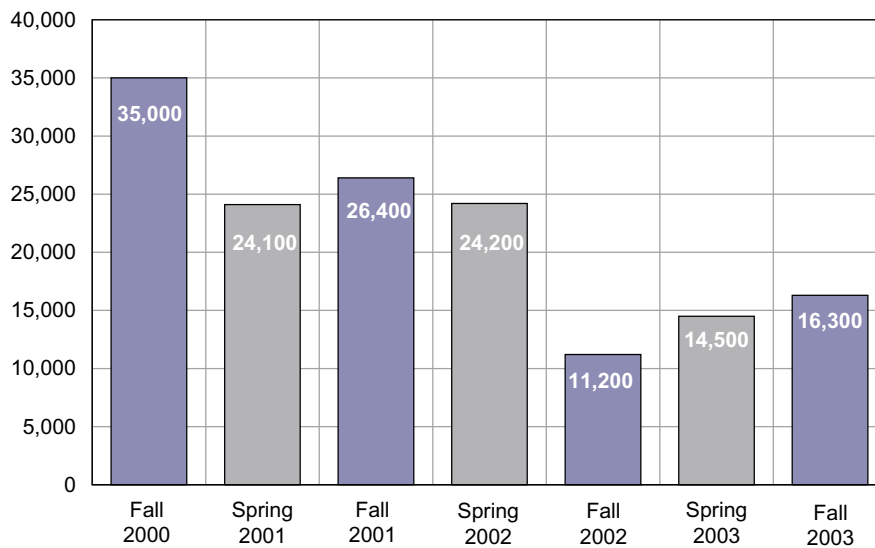
According to the State's Demographer's Office, the Denver Metro Region covers an area of 4,531 square miles or 4.3% of Colorado's total area. With 1,182 square miles, Adams County is the largest County in the region while Broomfield is the smallest with only 34 sq. miles. Although the region accounts for only 4.3% of Colorado's geographical size its estimated 2.5 million residents represent 56% of the State's population. The three most populated counties, Arapahoe, Denver, and Jefferson, make up 64% of the region's population. Since 1990, the region's population has grown by 33%, a rate slightly lower than the 34% growth rate experienced by the state as a whole.

The Denver Metro Region has a fairly diverse economy with no single sector dominating economic activity. The

region has strong employment in Retail Trade; Professional, Scientific & Technical Services; Manufacturing; HealthCare and Social Assistance; Educational Services; Construction; and Accommodation & Food Services Sectors. Employment is lowest in Mining and Agricultural, Forestry, Fishing and Hunting sectors.

The Denver Metro Region accounts for 58% of Colorado's total employment and labor force. According to Colorado's Labor Market Information, Local Area Unemployment Statistics, the region employed approximately 1,358,000 individuals from a labor force of about 1,440,373 in November 2003. Since the Fall 2002 Denver Metro JVS was conducted in November 2002, Labor force increased by 14,100 while employment increased by 14,500 jobs. The unemployment rate inched down from 5.8% to 5.7% between the two periods. Unemployment rates peaked in early 2002 at levels above 6% not experienced in the region since early 1993. At 6.9%, the unemployment rate was highest in Adams County in November followed by Denver County at 6.7%. The rate was lowest

Figure 2: Historical Vacancies Denver Metro Region



	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003
Vacancies	35,000	24,100	26,400	24,200	11,200	14,500	16,300
Employment	1,320,773	1,341,197	1,343,048	1,330,038	1,343,484	1,350,265	1,357,994
Unemployed	30,984	36,157	71,100	75,397	82,790	79,326	82,378
Unemployment Rate	2.3%	2.6%	5.0%	5.4%	5.8%	5.5%	5.7%

Source: CDLE, Local Area Unemployment Statistics, November 2003

in Douglas County for the same month at 4.1%. The improving national economy is evident in the results of this survey; the 16,300 estimated vacancies in this survey represent a 46% increase in the number of vacancies estimated in the fall of 2002 and a 23% increase from vacancies estimated in the spring of 2003. Overcapacity in most sectors resulting from the historically long economic boom of the 1990s, the shakeout in the technology sector, in addition to war and terrorism anxieties directly impacted recruitment activities in the region during the last two years, however, results from this survey may indicate diminishing effects of these factors.

Figure 3 illustrates the historical progression of both the region's labor force and employment levels. The upward trend illustrates growth in both the labor force and the employment over the years. The region's employment has grown at an average annual growth rate of 1.2% from November 1998 to November 2003. Annual employment in the region decreased by 0.8% between 2001 and 2002, however, it increased by 1.1% between 2002 and 2003.

The labor force has maintained positive annual growth rates in the Denver Metro Region since 1998. In some years such as 1998, 1999 and 2000 average annual employment growth exceeded that of the labor force.

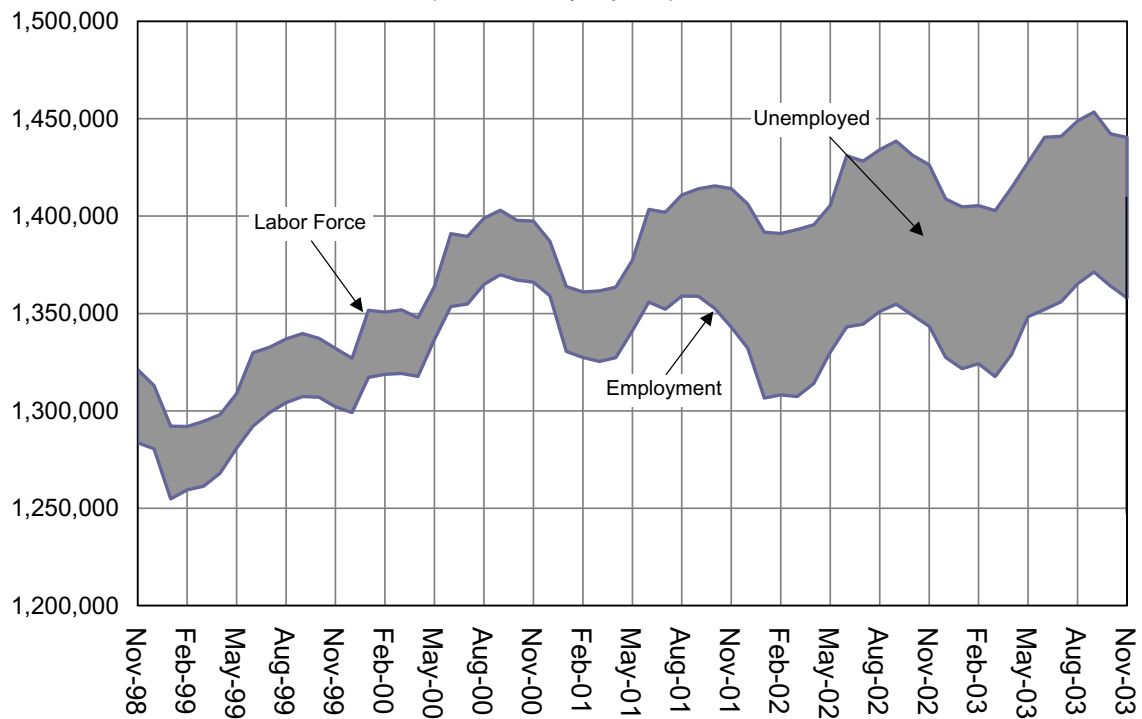
Record low unemployment rates were registered in these years at levels of 2.8% or lower. In 2003, both labor force and employment expanded at similar rates of 1.1% compared to 2002 levels.

Figure 3, along with Figure 4, also provides a visual representation of unemployment. In Figure 3, unemployment is represented by the gap between the labor force and the employment trend lines; the wider vertical distance between the two lines, the greater the number of unemployed. Unemployment tends to peak in or around the months January and June each year.

Analysis of historical employment trends for the Denver Metro Region indicates that employment levels are at their lowest levels in January and peak in or around the month of October. Employers in the region are contacted semi-annually in the spring and fall in order to measure the demand for labor at intervals that provide the most useful information.

Surveys conducted in spring represent the demand for labor at the time of the year when employment is expanding. Vacancies found in the fall survey reflect the demand for labor at a time when employment is at or around its peak, yet employers are still in the process of recruiting.

Figure 3: Employment & Labor Force Trends for the Denver Metro Region
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, November 2003

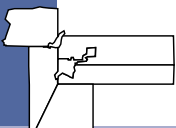
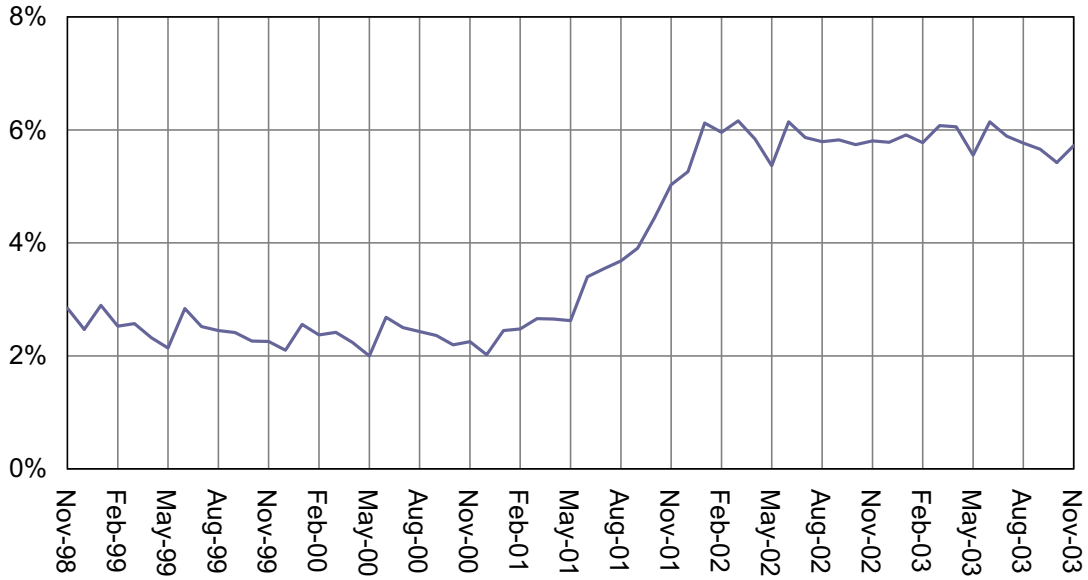
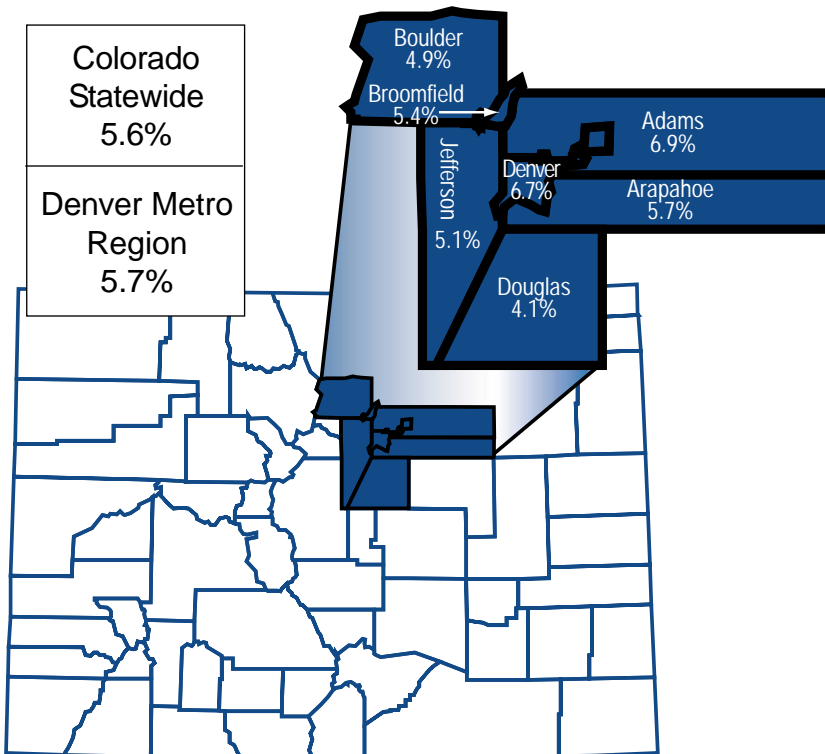


Figure 4: Denver Metro Region Unemployment Rate Trend
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, November 2003

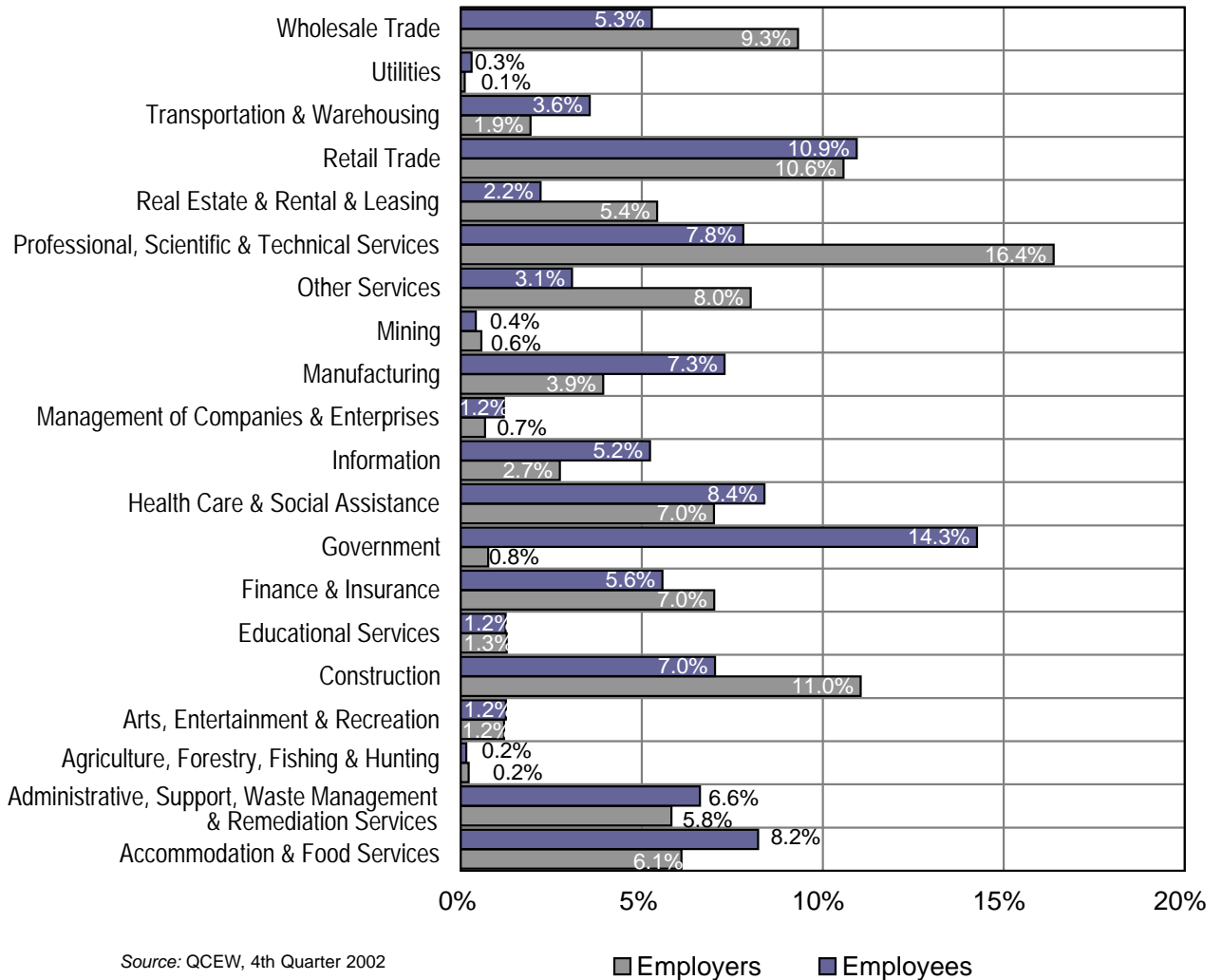
Figure 5: Unemployment Rates for November 2003
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, November 2003

The non-seasonally adjusted unemployment rate in the region was as high as 6.1% in March and April of last year but declined to its lowest rate of 5.4% in October. A steep increase in the unemployment rate was then recorded in November to 5.7% exceeding the 5.6% the state as a whole. This rate is still one-tenth of a percentage point lower than November of 2002. Between November 2002 and November 2003, the unemployment rate increased for all counties in the Denver Metro region except for Boulder and Douglas where the rate declined from 5.6% to 4.9% for Boulder and from 4.6% to 4.1% for Douglas County.

Figure 6: Denver Metro Region Employers and Employees, 4th Quarter, 2002



Source: QCEW, 4th Quarter 2002

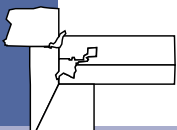
Firms in the Denver Metro Region are now grouped into 20 sectors under the North American Industry Classification System (NAICS). NAICS has replaced the Standard Industrial Classification System (SIC) as a better reflection of today's economic activity. Advantages to the new system include a greater breakdown of the old SIC Services industry, and direct comparability with industries in Mexico and Canada.

Data for Figure 6 are gathered under the Quarterly Census of Employment and Wages (QCEW), formerly the Covered Employment and Wages Program (ES-202), which includes employers who pay Unemployment Insurance Tax. Although 97% of the nation's civil employment is covered under the Unemployment Insurance program, positions typically excluded are agriculture, railroad, some state and local government, certain non-profits, the self-employed, domestic workers and unpaid family workers.

The Government sector comprises less than 1% of the regions employers yet accounts for 14.3% of the region's total employment. Thirty-nine percent of the sector's employment in the region is concentrated in Denver County while Jefferson County accounts for another 23%. The Government sector includes educational services owned by state or local governments.

The Retail Trade sector accounts for the second highest number of employees and the third highest number of employers in the region. This sector makes up about 10.9% of the region's employment and 10.6% of the region's employers. The Denver Metro Region accounts for 55% of Colorado's employment in this sector.

Healthcare Services & Social Assistance, with 8.4% of the region's employment, is the third largest sector in the region. Healthcare, generally, experienced great difficulties recruiting and retaining workers during the late 1990s



due to factors such as long working hours, inflexible schedules and the High-Tech boom that attracted young talent during that period. The Denver Metro Region accounts for 57% of Colorado's employment in this sector.

Sectors such as Finance & Insurance; Information; Management of Companies & Enterprises; Professional, Scientific & Technical Services; Transportation & Warehousing; and Wholesale Trade have the bulk of their statewide employment in the Denver Metro Region. Each of these sectors has 70% or more of its statewide employment in the region. All of these sectors, with the exception of Management of Companies & Enterprises, employ a significant number of people in the region.

Slightly over half of Colorado's manufacturing employment is in the Denver Metro Region. Seven percent of the region's workers are employed in this sector. Employment in manufacturing has been declining in the region since 1998. Job losses within this sector nationally are a major concern for labor union groups who charge that economic blocks such as NAFTA and the WTO are causing an outflow of manufacturing jobs to less developed countries. Twenty-eight percent of the manufacturing sector employment in the region is concentrated in Denver County, 24% in Boulder and 20% in Jefferson counties. The manufacturing activity in the region showed some positive signals in the 3rd quarter of 2003. The Purchasing Managers' Index (PMI), an index produced by the College of Business at

the University of Colorado at Denver, showed its highest reading for the year of 55.17 in October. A reading above 50 indicates increasing activity in manufacturing. This index, however, dropped to 47.60 in November followed by another decline in December to 45.62. In other words, manufacturing activity in the Denver Metro Region contracted in both months with a steeper decline recorded in December.

The Denver Metro Region has a sizeable Construction sector, which makes up 7% of the region's employment. Within this sector, the Residential Building Construction group continued to expand in recent periods spurred by record low interest rates. The Nonresidential Building group suffered some setbacks since late 2000 due to factors such as the burst of the technology bubble and overcapacity. This resulted in high office space vacancy rates. The Heavy and Civil Engineering Construction sub-sector received significant support from major construction projects undertaken by the State government such as the T-Rex and the Light Rail expansion.

Utilities; Mining; Management of Companies & Enterprises; and Agriculture, Forestry, Fishing & Hunting are the smallest sectors in the Denver Metro Region in terms of the number of employers and employees. These sectors combined account for 1.6% of the employers and 2.1% of the employees in the Denver Metro Region. These sectors are also small at the state level.

Estimated Vacancies

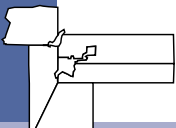
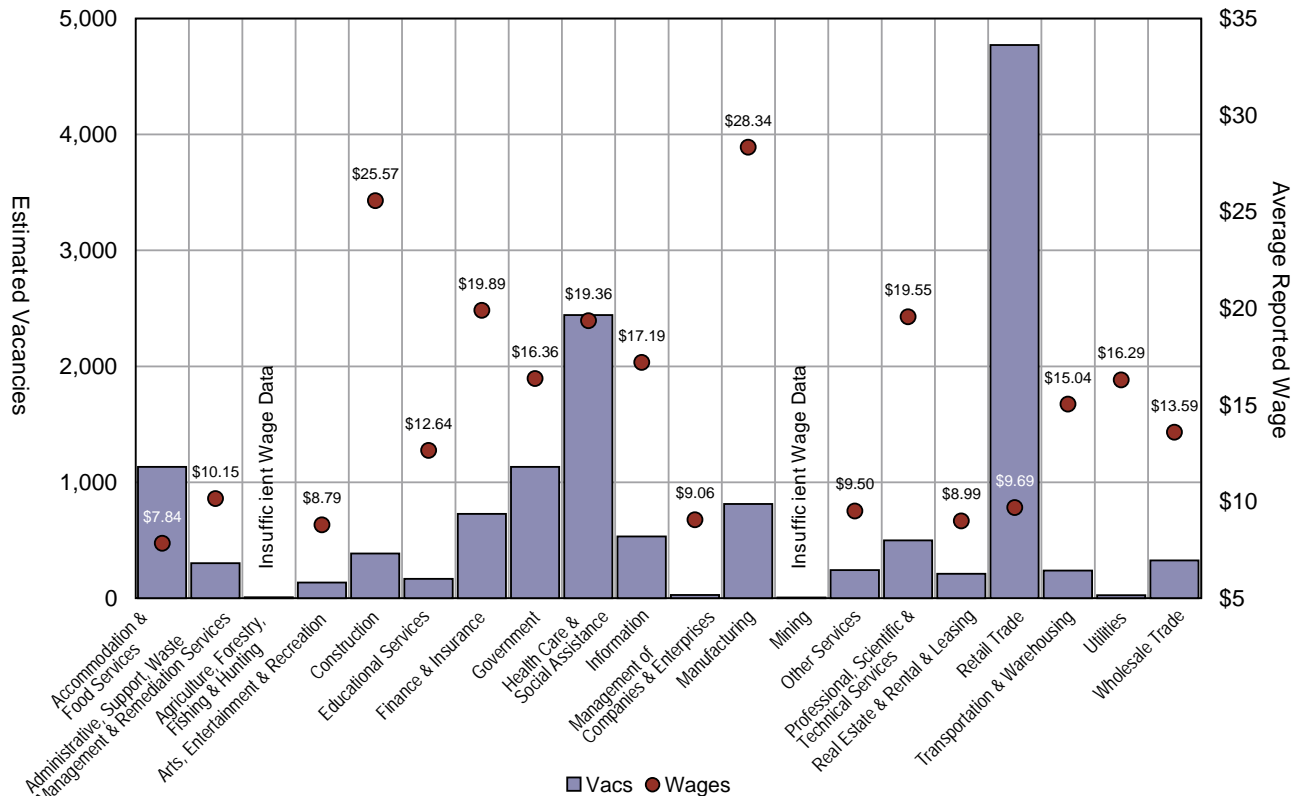
JVS Sectors and Employer Size

During the survey period, an estimated 16,300 vacancies were open for immediate hire in the Denver Metro Region. The overall average wage for the reported vacancies in this survey is \$16.50. Private firms from the American Labor Market Information System (ALMIS) employer database with five or more employees and all government agencies constitute the sample frame. All survey data refer to this subset of the population. Contrasting the results of this survey and the Fall 2002 is not possible at the sector level because of the shift from the SIC System to the NAICS. Under the new system, data is collected and reported for 20 NAICS sectors compared to the 11 traditional industries under the SIC system.

Twelve percent of the employers responding to the survey reported having at least one vacancy. The overall vacancy rate found in this survey is 1.3%. The overall vacancy rate is calculated by dividing the estimated vacancies by the sum of the estimated vacancies and total employment. This method results in a 0.9% vacancy rate for the fall 2002 survey.

Hiring activity in this survey is highest in the Retail Trade sector followed by the Health Care & Social Assistance sector. Together, they account for 14% of the regional employment and 36% of the estimated vacancies. These two sectors also accounted for most vacancies in the Spring 2003 survey but in reverse order. The average wage reported by employers within the Healthcare & Social Assistance sector was highest in the spring survey but is exceeded in this survey by other sectors including Manufacturing and Professional, Scientific & Technical Services. The average wage offered by vacancies in the Retail Trade sector is lower than the region's overall average wage. Higher wages commanded by the Healthcare & Social Assistance sector are due to the high demand for Registered Nurses. Forty-seven percent of vacancies reported in the Retail Trade sector are Sales & Related occupations and 13% are Transportation & Material Moving Occupations.

Figure 7: Estimated Vacancies and Average Wages by JVS Sectors



A relatively high number of vacancies was also found in the Accommodation & Food Services, Government, and the Manufacturing sectors. At \$7.84 per hour, Accommodation & Food Services, which accounts for 8% of the estimated vacancies, offers the lowest average wage among all sectors. Sixty-five percent of the vacancies reported in this sector are for Food Preparation & Serving Related occupations. The Government sector also accounts for 8% of the estimated vacancies with an average wage slightly below the overall average wage offered for all vacancies.

Manufacturing, with only 6% of all estimated vacancies, offers an average wage of \$28.34 per hour; the highest among all sectors. High wages offered in this sector are due to the abundance of highly skilled vacancies for which employers are hiring. Of these, thirty-five percent are for Computer & Mathematical occupations and 29% are for Architecture & Engineering occupations. Similarly, the Information sector accounts for almost 5% of the estimated vacancies.

Few vacancies are estimated in the Finance & Insurance; Information; and the Professional, Scientific & Technical Services sectors. Although activity within these sectors is slow, wages offered with vacancies are amongst the highest in the region. Over half of the vacancies

reported in this sector are for occupations in Office & Administrative Support and Business & Financial Operations.

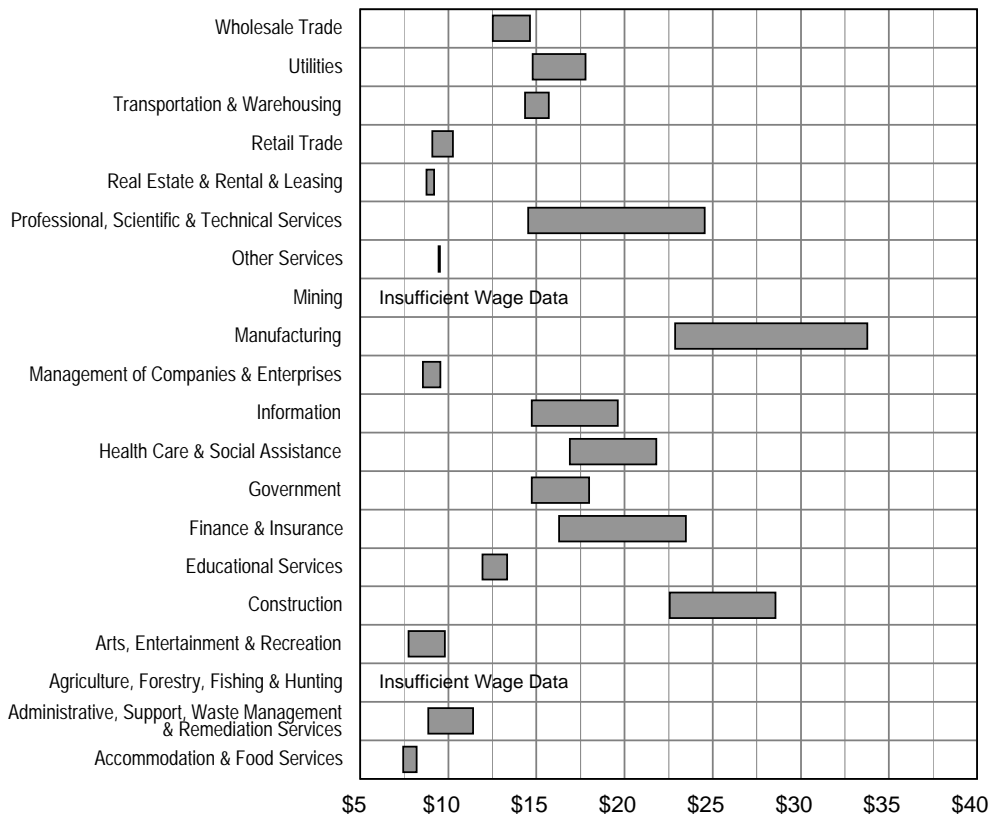
Hiring activity is low in all remaining sectors. Fifteen percent of the vacancies are estimated in those sectors, combined.

Less than 10 vacancies are estimated to be open in each of the Agriculture, Forestry, Fishing & Hunting; and Mining sectors. Wage information reported in each of these sectors is less than the required level for reporting.

Wages reflect labor force supply and demand along with the set of skill and experience requirements for occupations. A wide range between the average minimum and the average maximum wages within a sector reflects a wide range of skills and experience in occupations for which employers are hiring.

The Manufacturing; Professional, Scientific & Technical Services; and Finance & Insurance sectors offer the widest wage ranges. A wide range of wages in the Health Care & Social Assistance sector reflects employers' desire to hire Health Care workers at all levels of education and experience.

Figure 8: Reported Average Wage Ranges by JVS Sectors



The Accommodation & Food Services; Art, Entertainment & Recreation; Management of Companies & Enterprises; Real Estate, Rental & Leasing; Other Services; and the Retail Trade sectors offer the lowest average wages and the narrowest in range. Occupations for which employers are hiring require limited sets of skills and experience to perform the jobs needed. Such occupations include Telemarketers, Customer Service Representatives, and Waiters & Waitresses.

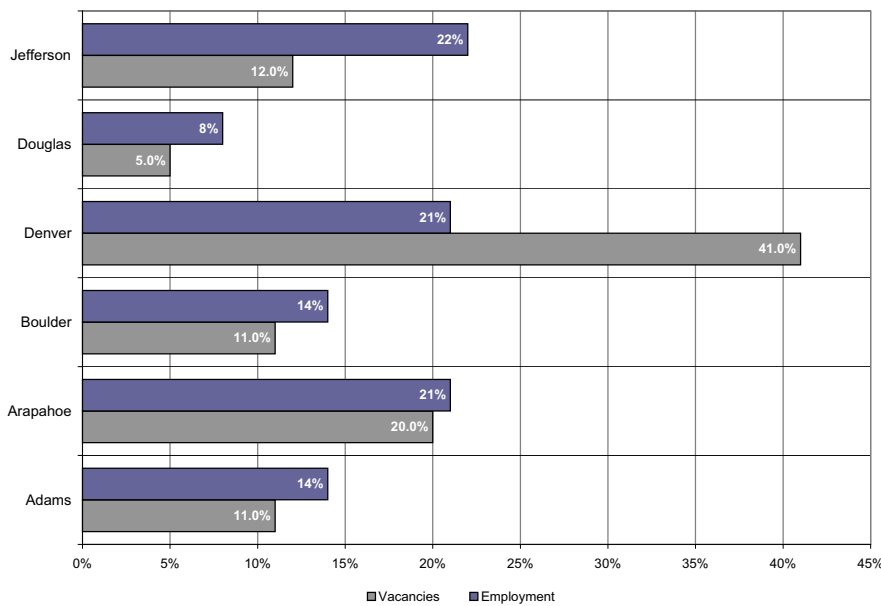
The shares of vacancies estimated in all counties except Denver County fell short of their individual shares of the region's employment. Denver County has the highest vacancy rate at 1.9% and its share of the regions estimated

vacancies almost doubled its share of the regions total employment. Arapahoe County, with a 1.0% vacancy rate, has the second largest share of vacancies in the region.

The vacancy rate of 0.58% for Jefferson is the lowest among all counties. Results from the Spring 2003 survey also shows weak hiring activity in Jefferson County. The high concentration of declining manufacturing and a financially troubled government sector in Jefferson County may have negatively affected vacancy estimates in this county.

The average wage offered for vacancies is highest in Boulder County. High wages are due to the fact that 27%

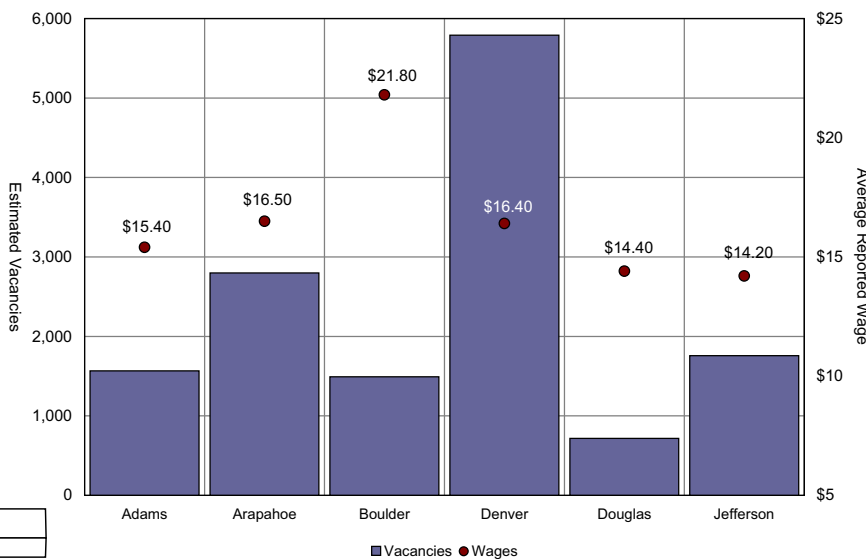
Figure 9: Estimated Vacancies—Distribution of Employment and Vacancies by County



of the vacancies in this county are reported in the Manufacturing sector while another 22% are reported by Health Care & Social Assistance employers. These employers typically offer higher average wage. The lowest average wages are offered in Jefferson County. The high concentration of Government and Retail Trade vacancies in Jefferson County may cause average wages to lag behind those in other counties. Both Arapahoe and Denver counties have almost identical average wages.

Seventy percent of the vacancies reported in Denver County are in the Health Care & Social Assistance and Government sectors. Arapahoe County has a more equitable distribution of vacancies among different sectors. Although HealthCare & Social Assistance and the Government sectors account for most jobs reported in Douglas County, the Retail Trade sector is also of significance with 15% of the estimated vacancies.

Figure 10: Vacancies and Wages by County



Small to mid-size employers account for 63% of the region's sample frame employment. This group of employers accounts for 57% of the estimated vacancies and has the second highest vacancy rate at 1.3%. Small to mid-size employers accounted for 45% of the vacancies in the Fall 2002 survey. Retail Trade employers reported the highest single concentration of vacancies (44%) within this size class.

Large employers account for 24% of the Denver Metro Region sample frame employment. Twenty-three percent of the region's vacancies are estimated within this class size. Health Care & Social Assistance employers, who account for only 17% of all large employers in the region, reported 42% of the vacancies within this size class.

Vacancies estimated in Government in this survey are 55% more than the Fall 2002 survey. Only 7% of the vacancies are estimated to be with government employers who account for 13% of the region's sample frame employment.

While employers with fewer than five employees, or micro-employers, are not contacted by the Colorado Department of Labor and Employment, the department estimates the vacancy rate for this size class by creating a vacancy index. It is estimated that employers in this size category have a vacancy rate of 1.6%. Thirteen percent of the estimated vacancies, or 2,140 vacancies, are estimated to be open with this size category. This number is about 14% higher than the estimated vacancies for micro employers in the Fall 2002 survey.

Of any size class, large employers offer the highest average wage of \$18.80. Once again, high wages in this category of employers are due to the large number of vacancies in the Health Care & Social Assistance sector. A high concentration of Education, Training, and Library and Office and Administrative Support occupations in Government vacancies slightly reduced the average wage for this category of employers to \$16.40. Small to mid-size firms offer the lowest average wage and the smallest in range between the average minimum and the average maximum. Sales and Related Occupations, Office and Administrative Support, and Food Preparation and Serving Related occupations account for 53% of the vacancies in this class size. Small to mid-size employers offered the lowest average wages in the Fall 2002 survey.

Figure 11: Estimated Vacancies and Average Wages by Employer Size

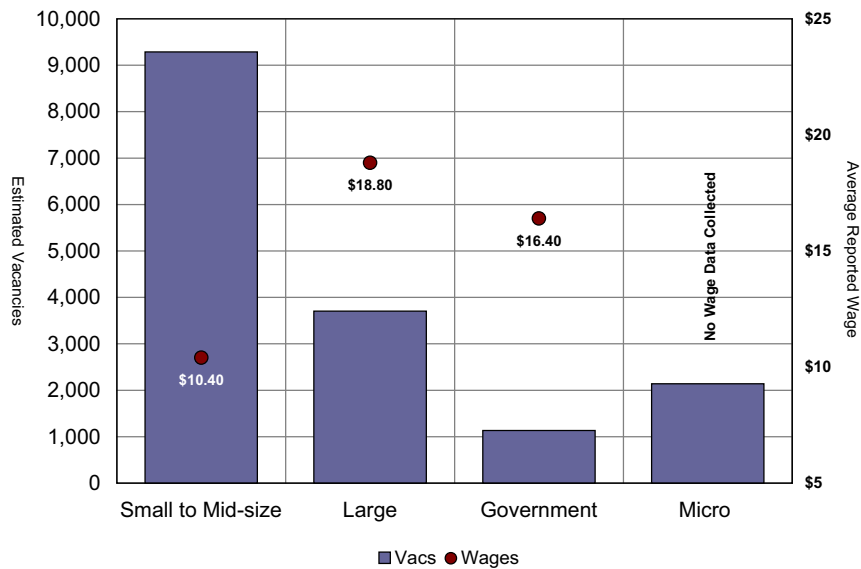
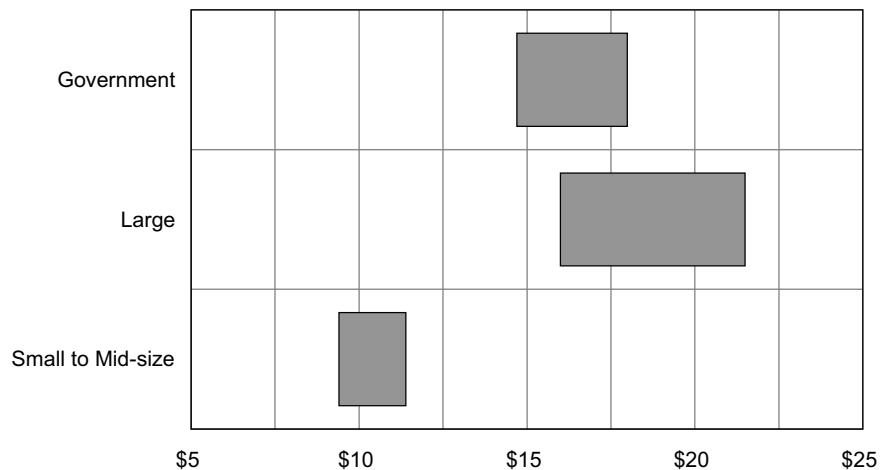


Figure 12: Reported Average Wage Ranges by Employer Size



Vacancies

Employment Status, Education, and Experience Requirements

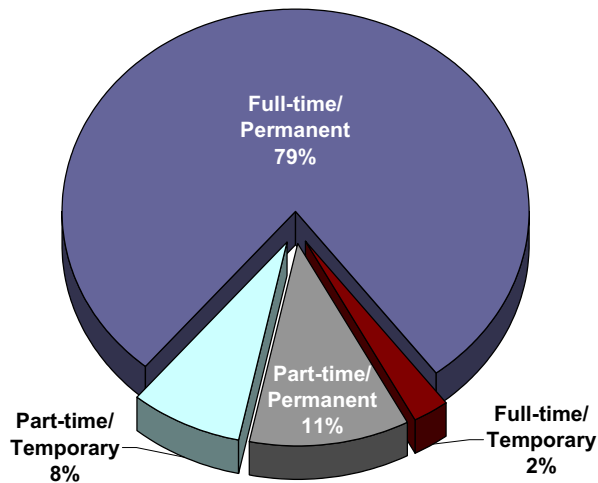
The remainder of this report provides descriptive statistics of the vacancies reported in and unique to this survey; this is supplemental data of interest to the reader. The survey design does not allow for application of this detail to the region as a whole, but it can be used to understand characteristics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

Ninety percent of the vacancies for which employment status is reported are permanent positions. Permanent positions accounted for 94% of the vacancies in the Fall 2002 report. Full-time/Permanent positions are offered with an average wage that ranges between \$16.20 and \$20.60 while Part-time/Permanent vacancies offer average wages that range between \$11.30 and \$14.10. Employers in the Health Care & Social Assistance sector reported 30% of the full-time/permanent positions. Government reported another 17%. Thirteen percent of all full-time/permanent positions are for Registered Nurses.

Part-time/permanent positions account for 11% of the vacancies that provided information about employment status. For vacancies with this employment status, 38% are reported by large employers and 27% are with the Government sector. This category of vacancies offers the lowest average wage.

Forty percent of the part-time/temporary positions are with small to mid-size employers while 39% are with

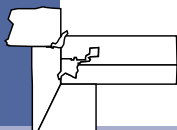
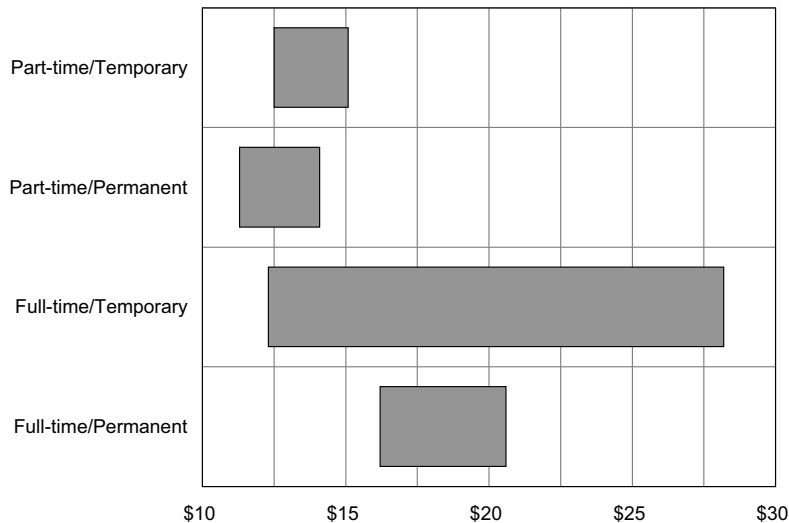
Figure 13: Vacancies by Employment Status



large employers. Forty-four percent of the part-time/temporary positions reported are within the Retail Trade sector and 43% are for Retail Salespersons opportunities. The average wage offered for vacancies with this status is the second from lowest among all categories.

Full-time/temporary positions, on the other hand, account for the smallest proportion of vacancies, 2%. This category of vacancies offers the highest average wage of \$20.20. Personal Care and Service and Computer and Mathematical occupations are the occupational groups most demanded at the full-time/temporary level.

Figure 14: Reported Average Wage Ranges by Employment Status



During periods of high unemployment, it might be assumed that there are too many qualified candidates and too few job openings. The reality is that even in recessions there are many employers who cannot find qualified candidates to fill their open positions. Actually, a region's overall labor force is made up of multiple smaller labor groups defined by various skills, experience, and education; only a certain number of qualified candidates can compete for any given job. It is important, therefore, that job seekers have accurate information regarding what types of education and experience levels are in highest demand.

Thirty-seven percent of the reported vacancies require a high school education or less. Vacancies with these minimal educational requirements are for occupations such as Sales and Related, Office & Administrative Support, and Food Preparation and Serving Related.

As with the Fall 2002 survey, positions requiring a bachelor's degree have the highest concentration of vacancies in this survey. The percentage of positions requiring advanced degrees slightly increases from 3% to 5% between the two surveys. Education, Training, & Library and Management occupations account for 53% of the vacancies requiring an advanced degree.

For vacancies requiring vocational training or certification, 65% are reported in the Health Care and Social Assistance sector, 23% are reported in the Government sector. Forty percent are for Registered Nurses positions.

Generally, the more education required for a position, the higher the wages offered and the wider the distance between the high and low amount in the range. The average wage offered for positions requiring bachelor's degrees is slightly higher than the average wage offered for positions requiring advanced degrees. High demand for Registered Nurses;

Figure 15: Vacancies by Education

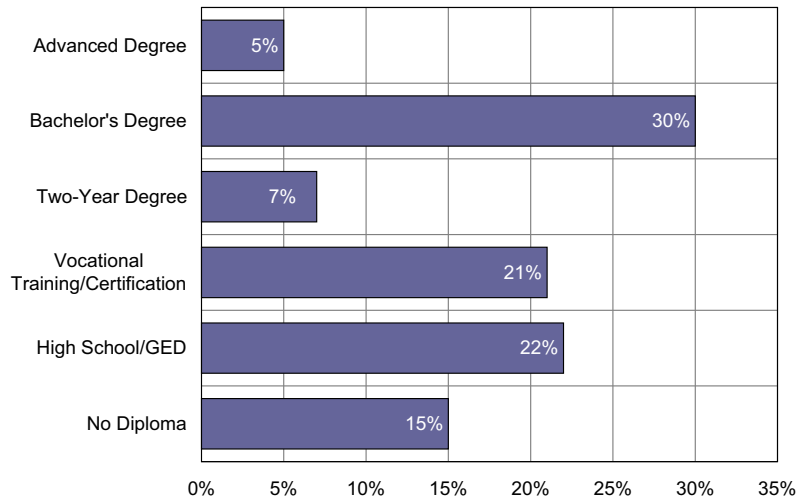
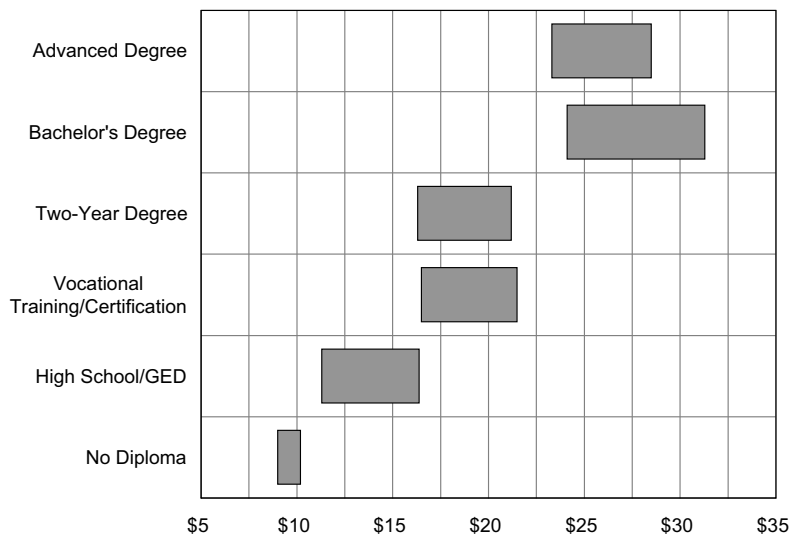


Figure 16: Reported Average Wage Ranges by Education



Computer Software Engineers, Systems Software; and Management Analysts with bachelor's degrees slightly raised average wages for this educational category.

Figure 17 shows the breakdown of vacancies by experience requirements. Results from this survey show employers requiring slightly lower levels of experience compared to positions open a year earlier. The percentage of positions requiring specific experience in the occupation decreased from 40% in the Fall 2002 to 32% in this report. Between the two surveys, positions requiring general work experience increased from 8% to 11% and positions with no experience requirements increased from 13% to 17%. A slight improvement in the retail trade activities this holidays season compared to last year might explain the increased need for retail employment that typically require lower levels of experience.

The percentage of positions requiring experience in a related field increased by 1% between the two surveys.

Figure 17: Vacancies by Experience

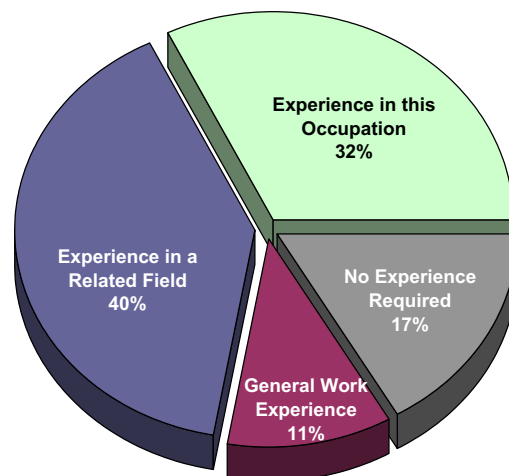
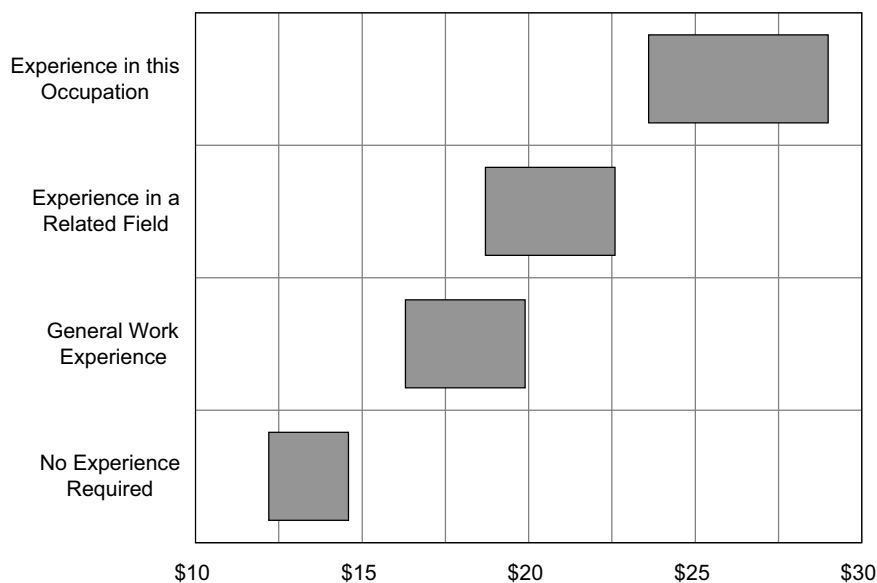


Figure 18: Reported Average Wage Ranges by Experience

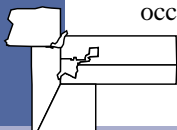


Wages offered for vacancies not only increase with higher levels of experience but also become wider in range. Variations in wages are mostly due to the types of occupations for which employers are hiring under each experience level. Higher levels of experience are mostly required for highly professional occupations that require specific experience and higher levels of education. Employers offer higher wages for these types of occupations to compensate candidates for their professionalism, education, and experience.

Of the vacancies for which experience in the specific occupation is required, 28% are Healthcare Practitioners & Technical, 13% are Management, and 10% are

Education, Training, & Library occupations. Healthcare Practitioners & Technical occupations account for 20% of vacancies requiring experience in a related field. Office & Administrative Support occupations followed with 13% of the reported vacancies.

Once again, Healthcare Practitioners & Technical occupations prove to be the most demanded occupations at all levels of experience: 25% of the vacancies requiring no previous work experience or just general work experience are within this occupational group. Sales & Related, and Office & Administrative Support occupations account for one-third of the vacancies in this experience category.



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. More employers claim slightly higher levels of difficulty in filling their vacant positions in this survey compared to the fall survey of 2002.

The percentage of vacancies reported as not difficult to fill had a significant drop from 70% a year ago to 66% in this survey. Seventy percent of the vacancies reported in this survey as not difficult to fill are Sales and Related, Office and Administrative Support, or Food Preparation and Serving Related occupations. Wages offered for these occupations are among the lowest in the survey.

The proportion of positions reported as somewhat difficult to fill also decreased to 19% of the reported vacancies in this survey compared to 25% in the Fall 2002 survey.

The percentage of positions perceived by employers as very difficult to fill increased from 5% to 15% between the two surveys. Thirty-three percent of the vacancies reported as somewhat difficult or very difficult to fill are Healthcare Practitioners and Technical occupations. Personal Care and Service and Transportation and Material Moving occupations make up one-third of vacancies within this category.

Vacancies reported as difficult to fill are generally expected to offer higher average wages because they require more education and experience. Wage information provided in this survey confirms this general notion. Employers were found to offer higher pay and wider wage ranges as the perceived level of difficulty increases. Vacancies considered very difficult to fill offer the highest average wage of \$19.35 followed

Figure 19: Vacancies by Difficulty to Fill

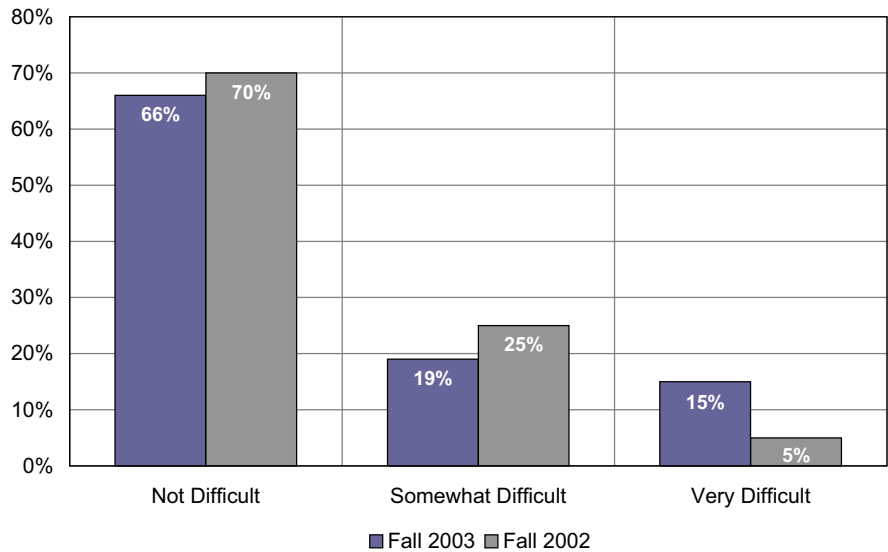
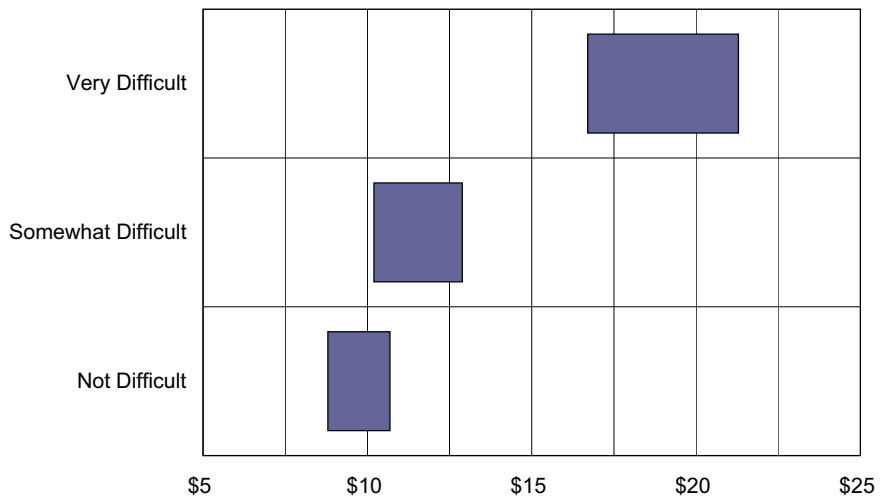


Figure 20: Reported Average Wage Ranges by Difficulty to Fill



by an average wage of \$14.10 offered for positions reported as somewhat difficult to fill. A high concentration of low paid occupations among vacancies perceived not difficult to fill reduced the average wage offered for this category of vacancies to \$11.35.

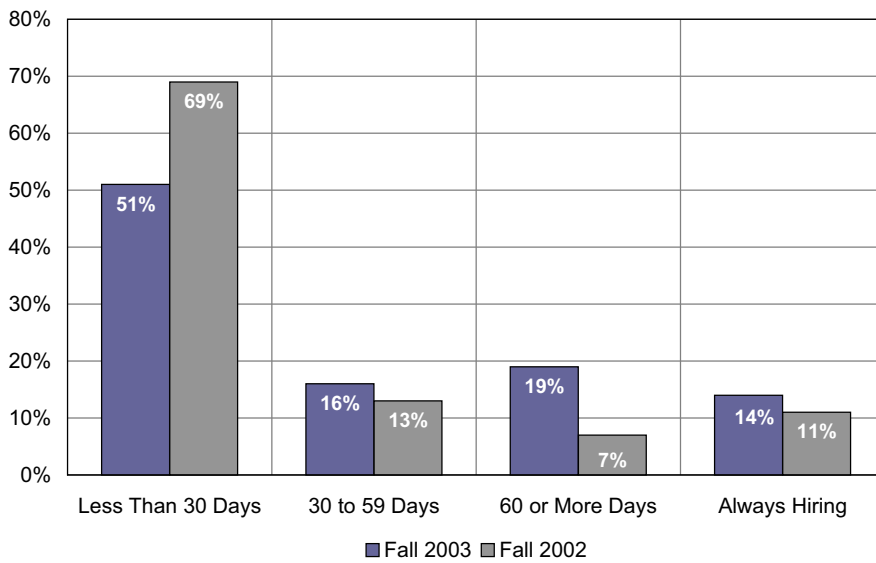
A slight increase is observed in the time periods for which positions are open between this survey and the Fall 2002 survey. Percentage of vacancies open for periods less than 30 days decreased from 69% to 51% between the two surveys. Positions open for all remaining time periods experienced some increase with the largest increased being observed in positions open for 60 or more days. Half of the vacancies open for this time period are Healthcare Practitioners and Technical occupations.

Survey results show a connection between the perceived level of difficulty in filling a vacant position and the time period for which the vacancy remains open. Eighty-five percent of the positions open for less than 30 days are reported as not difficult to fill. Similarly, 75% of

the positions reported as not difficult to fill have been open for a period less than 30 days. On the other hand, positions that remain open for longer periods are perceived to be more difficult to fill. Sixty-nine percent of the vacancies reported as being open for 60 or more days are also reported as very difficult to fill.

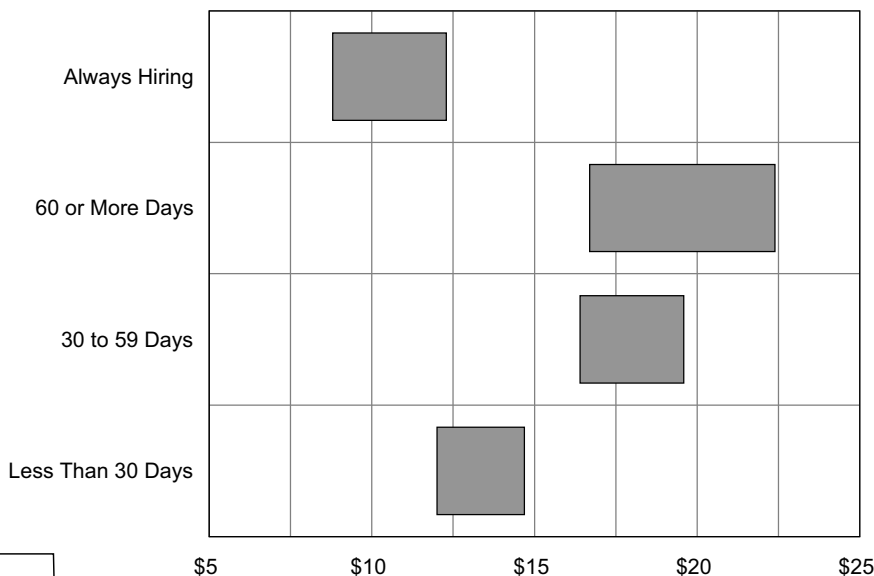
The correlation between the period a position is open and the level of difficulty employers perceive is also evident in positions open between 30 and 59 days. Fifty-one percent of the positions open between 30 and 59 days are reported as very difficult to fill. Employers also reported that 36% of the positions perceived as very difficult to fill have been open for periods that extended between 30 and 59 days.

Figure 21: Vacancies by Time Open for Hire

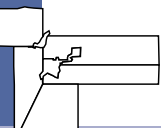


Positions always open for hire, but with low perceived levels of difficulty in filling may indicate that employers are having more difficulty retaining workers than getting them hired. Low wages, demanding work duties and harsh working conditions are some of the reasons a turnover rate may be high, leaving a position open for continuous hiring. Forty-nine percent of positions always open for hire are reported as not difficult to fill. Another 36% are reported as somewhat difficult to fill. Average wages offered for positions always open for hire are the lowest in this survey. Almost two-thirds of these vacancies are Sales & Related, Personal Care & Service, or Transportation and Material Moving occupations.

Figure 22: Reported Average Wage Ranges by Time Open for Hire



Positions open between 30 to 59 days and those open for 60 or more days are the only ones offering average wages above the overall average. Half of the positions within those two categories are either Healthcare Practitioners & Technical or Computer and Mathematical occupations, which typically command some of the highest average wages in the region.



Vacancies

Additional Compensation

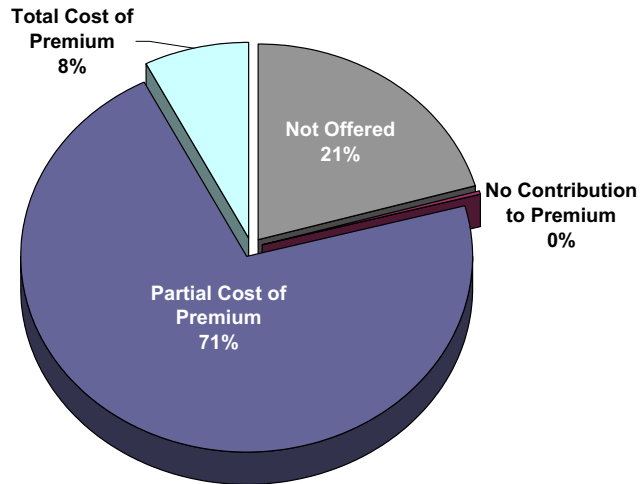
Medical Insurance

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. One of the most common benefits offered to employees is a group medical insurance plan- the employer may pay all, a part or none of the monthly insurance premium for employees.

Medical benefits are offered to 79% of the vacancies reported in this survey compared to 85% in the Fall 2002 report. This decrease should not be taken as an indication that fewer employers are offering healthcare benefits compared to last year. Rather, the increased hiring for Retail Sales occupations, which are rarely accompanied by benefit packages, may have resulted in this percentage decrease. Health Care & Social Assistance employers account for 29% of the vacancies reported to offer some form of medical insurance. Government employers account for 18% while Manufacturing accounts for another 11% of the vacancies offering medical insurance.

Thirty percent of the vacancies not offering any form of medical insurance premium are reported within the

Figure 23: Employers' Contribution to Medical Insurance



Government sector. These are mostly part-time vacancies for Teacher Assistants, Child Care Workers, or Coaches and Scouts occupations.

Sign-On Bonus

Employers offer sign-on bonus information for 96% of the reported vacancies. A sign-on bonus is offered for less than 1% for the vacancies for which the information was offered. The majority of the positions offering sign-on

bonuses are reported within the Accommodation and Food Services and Government sectors. The average bonus amount is \$500.

Occupations

The information reported in the Job Vacancy Survey is intended to provide job seekers and employers with useful and current information to help them make informed labor market decisions. Estimating the number of overall vacancies in a region and breaking those numbers down by sectors and size provides a useful overview of the job market, but when it comes down to filling a particular opening, the more detailed the information the better. Reporting vacancies at the individual occupation level is the most detailed information the survey can provide without breaking confidentiality with those employers who participated in the survey.

In order to help make comparisons between this survey and other sources of employment statistics, all jobs reported are assigned a Standard Occupational Classification (SOC) code from the *2000 Standard Occupational Classification Manual*. Eight out of the 22 major occupational groups offer an average wage above the overall average wage reported for all vacancies in this report of \$16.50. These eight major occupational groups account for 51% of the reported vacancies.

Survey results show major occupational groups with the most vacancies are not necessarily the groups offering the highest wages. Wages accompanying vacancy information reflect both the degree of skill and experience required to do the job, and/or the supply and demand for an occupation in the labor market.

The Healthcare Practitioners & Technical occupational group accounts for a large percentage of the vacancies while offering relatively high wages. This group of occupations accounts for 24% of all vacancies reported in the region and offers the seventh highest average wage among all major occupational groups. Other occupational groups that offer average wages higher than wages offered by Healthcare Practitioners & Technical occupations are Management; Architecture & Engineering; Life, Physical & Social Science; Computer & Mathematical, Legal; and Business and Financial occupations.

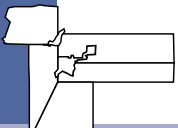
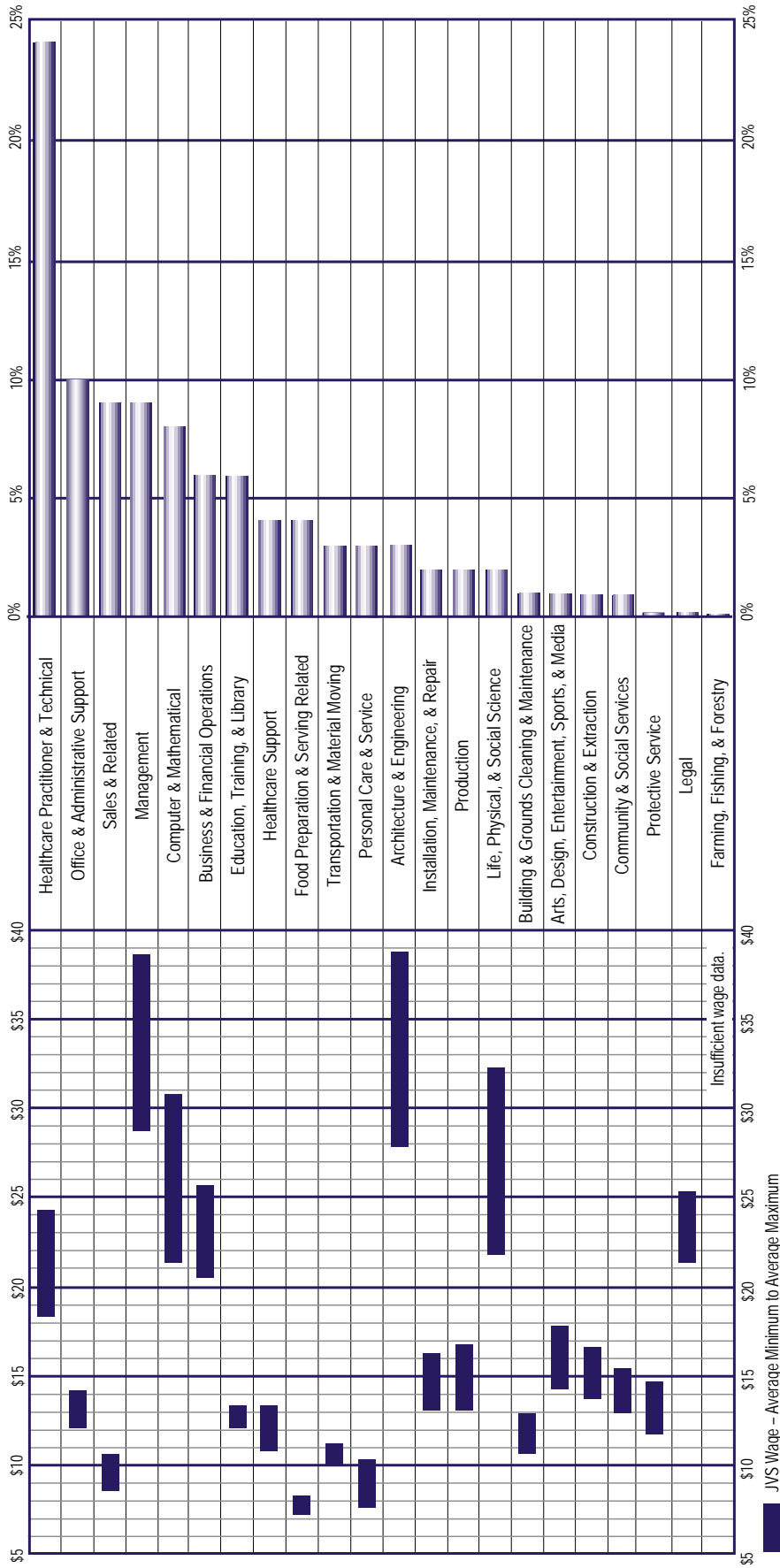


Figure 24: Vacancies and Reported Average Wage Ranges by Major Occupational Groups



Occupational Estimates

Table 1 contains a list of all detailed SOC job titles assigned to vacancies reported in this survey. Because 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. Nearly 14% of all small to mid-size employers were contacted from the random sample, so the list also includes occupations reported by those employers. Given the large size of the random sample collected, the list of occupations should be fairly comprehensive; however, it is not exhaustive. Most likely, a different random sample would have some differences in the job titles reported, but there would also be many of the same.

Estimated Vacancies

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

Average JVS Wage

The average of any and all wages reported in the survey is given for each occupation. The average wage is based

solely on information provided by employers responding to this survey and do 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 the Denver Metro Region when available and statewide otherwise. Data were collected over 3 years, from 1999 through 2001 and are aged to September 2002. A complete description of the OES survey is available on the Internet at: <http://www.bls.gov/>.

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

High Demand Occupations

From the 22 major occupational groups, one can find 800 detailed occupation titles designed to classify work activity. The top twenty occupations found in this survey

account for 58% of the total estimated vacancies. These occupations are accompanied by wage data as reported by surveyed employers.

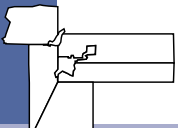


Table 1: Occupations with 10 or More Estimated Vacancies

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)									
				Average Wages				Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
41-2031	Retail Salespersons	3,170	\$7.80	\$7.40	\$11.93	\$14.18	\$6.98	\$7.90	\$9.29	\$13.27	\$19.84		
41-2011	Cashiers	950	\$7.69	\$7.07	\$9.39	\$10.55	\$6.50	\$7.51	\$8.54	\$10.48	\$14.86		
29-1111	Registered Nurses	930	\$22.75	\$18.74	\$24.46	\$27.31	\$17.91	\$20.83	\$24.44	\$27.77	\$32.61		
53-3033	Truck Drivers, Light or Delivery Services	360	\$7.75	\$8.89	\$13.47	\$15.77	\$8.08	\$10.16	\$12.98	\$16.25	\$19.75		
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	280	\$6.81	\$6.34	\$7.85	\$8.60	\$6.04	\$6.85	\$7.74	\$8.64	\$10.17		
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	230	\$10.67	\$7.37	\$9.74	\$10.92	\$7.00	\$7.77	\$8.99	\$11.16	\$13.91		
31-1012	Nursing Aides, Orderlies, and Attendants	220	\$11.91	\$9.50	\$11.10	\$11.88	\$8.93	\$9.84	\$11.01	\$12.48	\$13.85		
35-3031	Waiters and Waitresses	180	\$5.54	\$6.07	\$8.66	\$9.94	\$5.65	\$6.05	\$6.71	\$9.68	\$10.91		
41-2021	Counter and Rental Clerks	160	\$7.73	\$6.62	\$9.94	\$11.61	\$6.27	\$7.17	\$8.56	\$10.85	\$15.95		
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	160	\$12.36	\$11.56	\$19.51	\$23.50	\$10.77	\$12.91	\$16.31	\$21.45	\$31.74		
43-6014	Secretaries, Except Legal, Medical, and Executive	160	\$13.48	\$10.54	\$14.47	\$16.44	\$9.60	\$11.94	\$14.45	\$17.03	\$19.84		
43-4171	Receptionists and Information Clerks	150	\$11.91	\$8.69	\$11.82	\$13.38	\$7.86	\$9.63	\$11.65	\$13.79	\$16.52		
43-3071	Tellers	150	\$10.14	\$10	\$11	\$12	\$9	\$10	\$11	\$13	\$14		
25-2011	Preschool Teachers, Except Special Education	140	\$9.35	\$7.67	\$10.15	\$11.39	\$6.90	\$8.69	\$9.83	\$10.99	\$13.39		
15-1032	Computer Software Engineers, Systems Software	140	\$60.88	\$26.87	\$35.82	\$40.30	\$24.22	\$29.67	\$34.87	\$42.57	\$50.59		
43-6013	Medical Secretaries	120	\$11.18	\$11.51	\$16.70	\$19.30	\$10.86	\$12.39	\$14.96	\$22.76	\$25.84		
49-3023	Automotive Service Technicians and Mechanics	120	\$11.58	\$11.39	\$19.29	\$23.24	\$10.38	\$12.97	\$18.17	\$23.56	\$30.01		
53-3032	Truck Drivers, Heavy and Tractor-Trailer	110	\$14.05	\$12.70	\$16.89	\$18.99	\$11.98	\$14.08	\$16.54	\$19.75	\$22.30		
11-9111	Medical and Health Services Managers	110	\$27.62	\$22.43	\$34.13	\$39.99	\$20.01	\$25.56	\$32.61	\$41.40	\$51.91		
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	100	\$6.41	\$6.55	\$8.34	\$9.23	\$6.15	\$7.12	\$8.22	\$9.43	\$11.03		
13-2072	Loan Officers	90	\$16.20	\$15.39	\$31.72	\$39.89	\$13.97	\$18.15	\$26.94	\$41.35	\$68.99		
41-3031	Securities, Commodities, and Financial Services Sales Agents	90	\$12.05	\$14.77	\$27.16	\$33.35	\$13.51	\$16.53	\$21.40	\$32.81	\$53.80		
29-2034	Radiologic Technologists and Technicians	80	\$20.72	\$15.99	\$20.13	\$22.19	\$14.83	\$17.65	\$20.30	\$23.06	\$26.19		
49-3093	Tire Repairers and Changers	80	\$9.25	\$8.44	\$9.75	\$10.40	\$7.82	\$8.91	\$9.83	\$10.67	\$11.28		
29-2061	Licensed Practical and Licensed Vocational Nurses	80	\$15.19	\$14.77	\$16.92	\$17.99	\$13.91	\$15.10	\$16.54	\$18.19	\$21.00		

*OES wages reported for Colorado statewide
 † Insufficient wage data

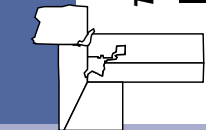


Table 1: Occupations with 10 or More Estimated Vacancies — Page 2

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)							
				Average Wages		Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
13-2011	Accountants and Auditors	80	\$23.04	\$17.87	\$27.67	\$32.57	\$16.31	\$19.42	\$24.16	\$32.37	\$44.05
17-2199	Engineers, All Other	80	\$33.35	\$23.71	\$35.52	\$41.42	\$21.96	\$26.90	\$34.65	\$43.56	\$52.69
25-9041	Teacher Assistants	70	\$10.52	\$15.294	\$20.315	\$22.824	\$14,502	\$16,668	\$19,995	\$23,053	\$27,782
11-9199	Managers, All Other	70	\$36.65	\$23.44	\$36.71	\$43.35	\$21.32	\$27.29	\$35.85	\$45.92	\$55.64
43-4051	Customer Service Representatives	70	\$14.17	\$10.48	\$14.26	\$16.14	\$9.75	\$11.44	\$13.48	\$16.59	\$20.17
43-6011	Executive Secretaries and Administrative Assistants	70	\$19.70	\$13.90	\$18.22	\$20.38	\$12.72	\$15.06	\$17.67	\$21.01	\$24.49
31-9092	Medical Assistants	70	\$13.61	\$11.72	\$14.50	\$15.89	\$11.01	\$12.53	\$14.44	\$16.41	\$18.16
43-3031	Bookkeeping, Accounting, and Auditing Clerks	60	\$13.50	\$10.99	\$15.24	\$17.37	\$10.30	\$12.37	\$15.01	\$17.82	\$21.22
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	60	\$17.37	\$15.53	\$22.17	\$25.48	\$14.69	\$17.28	\$20.70	\$26.08	\$33.09
49-9042	Maintenance and Repair Workers, General	60	\$13.68	\$10.54	\$15.35	\$17.77	\$9.58	\$12.05	\$14.88	\$18.49	\$21.99
15-1021	Computer Programmers	60	\$30.40	\$22.90	\$33.17	\$38.31	\$20.01	\$27.52	\$33.27	\$39.77	\$45.94
39-3031	Ushers, Lobby Attendants, and Ticket Takers	60	\$7.88	\$6.13	\$7.35	\$7.96	\$5.84	\$6.42	\$7.41	\$8.33	\$8.89
41-3021	Insurance Sales Agents	60	\$32.95	\$19.22	\$29.94	\$35.31	\$16.87	\$22.33	\$26.47	\$33.93	\$47.64
41-3099	Sales Representatives, Services, All Other	60	\$14.86	\$15.00	\$28.37	\$35.06	\$13.57	\$17.51	\$26.62	\$35.24	\$51.50
43-3011	Bill and Account Collectors	60	\$13.82	\$10.43	\$14.43	\$16.44	\$9.71	\$11.42	\$13.50	\$16.48	\$21.11
11-1021	General and Operations Managers	60	\$31.72	\$22.15	\$42.66	\$52.92	\$19.28	\$26.24	\$40.94	\$59.43	†
13-1111	Management Analysts	60	\$29.15	\$20.89	\$32.55	\$38.38	\$18.99	\$23.70	\$30.60	\$38.33	\$50.40
29-2011	Medical and Clinical Laboratory Technologists	60	\$17.70	\$15.44	\$20.22	\$22.61	\$14.60	\$16.77	\$20.12	\$23.07	\$26.79
39-2021	Nonfarm Animal Caretakers	60	\$8.75	\$7.40	\$10.16	\$11.54	\$6.80	\$7.91	\$9.18	\$11.15	\$14.78
11-3031	Financial Managers	60	\$52.12	\$25.08	\$40.26	\$47.84	\$22.57	\$28.53	\$37.76	\$50.21	\$70.72
31-9099	Healthcare Support Workers, All Other	60	\$11.98	\$9.74	\$13.06	\$14.73	\$9.29	\$10.57	\$12.49	\$14.62	\$17.56
29-1126	Respiratory Therapists	60	\$18.51	\$14.65	\$18.39	\$20.25	\$13.75	\$15.74	\$18.53	\$21.14	\$23.13
35-2014	Cooks, Restaurant	50	\$10.66	\$7.72	\$10.40	\$11.74	\$6.98	\$8.69	\$10.31	\$12.22	\$14.18
11-2021	Marketing Managers	50	\$50.39	\$25.09	\$39.89	\$47.29	\$22.29	\$29.04	\$39.15	\$49.84	\$62.34
27-4021	Photographers	50	\$8.45	\$8.55	\$13.07	\$15.33	\$7.56	\$9.51	\$10.91	\$16.12	\$22.52
15-1071	Network and Computer Systems Administrators	50	\$15.37	\$21.61	\$31.53	\$36.48	\$19.53	\$24.05	\$30.07	\$38.95	\$45.89
47-2031	Carpenters	50	\$12.22	\$12.97	\$17.58	\$19.90	\$11.10	\$14.82	\$17.30	\$20.62	\$23.63

* OES wages reported for Colorado statewide

† Insufficient wage data

Table 1: Occupations with 10 or More Estimated Vacancies — Page 3

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)							
				Average Wages			Percentile Distribution				
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
47-2211	Sheet Metal Workers	50	\$20.86	\$11.49	\$18.09	\$21.39	\$10.51	\$12.91	\$17.69	\$23.56	\$27.38
13-2051	Financial Analysts	50	\$26.80	\$18.60	\$30.98	\$37.18	\$17.22	\$20.68	\$26.70	\$35.37	\$58.34
29-2012	Medical and Clinical Laboratory Technicians	50	\$17.15	\$11.23	\$15.55	\$17.70	\$10.36	\$12.16	\$14.97	\$18.56	\$21.50
33-9032	Security Guards	50	\$12.21	\$9.61	\$12.27	\$13.60	\$9.10	\$9.86	\$10.93	\$13.09	\$19.92
29-1123	Physical Therapists	50	\$20.91	\$19.13	\$24.83	\$27.68	\$17.66	\$22.15	\$25.01	\$27.67	\$32.06
39-5012	Hairdressers, Hairstylists, and Cosmetologists	50	\$5.35	\$8.62	\$10.95	\$12.12	\$7.93	\$9.29	\$10.54	\$12.08	\$13.86
11-2022	Sales Managers	50	\$27.25	\$23.39	\$41.68	\$50.81	\$20.79	\$26.91	\$38.57	\$56.12	†
15-1041	Computer Support Specialists	50	\$19.19	\$14.97	\$23.19	\$27.30	\$14.27	\$16.45	\$20.25	\$26.95	\$40.61
15-1051	Computer Systems Analysts	50	\$30.51	\$24.53	\$34.27	\$39.14	\$22.06	\$27.97	\$35.85	\$41.03	\$44.27
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	50	\$9.57	\$9.14	\$14.12	\$16.61	\$7.83	\$10.91	\$14.29	\$17.13	\$20.72
39-9031	Fitness Trainers and Aerobics Instructors	40	\$12.16	\$9.52	\$16.23	\$19.57	\$8.40	\$10.86	\$13.99	\$20.91	\$27.00
51-4121	Welders, Cutters, Solderers, and Brazers	40	\$10.50	\$11.77	\$15.69	\$17.66	\$11.18	\$12.86	\$15.46	\$18.35	\$21.27
17-2051	Civil Engineers	40	\$37.13	\$20.64	\$29.24	\$33.54	\$19.43	\$22.00	\$27.02	\$34.63	\$43.22
29-2055	Surgical Technologists	40	\$16.17	\$11.53	\$15.29	\$17.17	\$10.55	\$12.66	\$15.20	\$17.89	\$20.69
35-2011	Cooks, Fast Food	40	\$7.00	\$6.36	\$8.96	\$10.27	\$6.12	\$6.94	\$9.07	\$10.79	\$12.55
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	40	\$8.13	\$6.19	\$8.07	\$9.01	\$5.92	\$6.64	\$7.77	\$8.75	\$10.62
41-9041	Telemarketers	40	\$9.52	\$7.36	\$11.24	\$13.18	\$6.66	\$8.35	\$10.57	\$13.34	\$16.80
13-2099	Financial Specialists, All Other	40	\$21.63	\$15.68	\$24.91	\$29.53	\$13.83	\$17.85	\$22.62	\$29.72	\$39.36
15-1031	Computer Software Engineers, Applications	40	\$22.93	\$24.19	\$37.98	\$44.88	\$21.25	\$27.85	\$36.58	\$45.38	\$60.80
39-9011	Child Care Workers	40	\$7.52	\$6.52	\$8.54	\$9.55	\$6.15	\$7.09	\$8.29	\$9.75	\$11.25
43-3021	Billing and Posting Clerks and Machine Operators	40	\$18.78	\$8.97	\$12.90	\$14.86	\$6.58	\$11.13	\$13.25	\$15.25	\$17.21
53-3021	Bus Drivers, Transit and Intercity	40	\$9.35	\$10.25	\$13.87	\$15.69	\$9.67	\$11.23	\$13.00	\$16.80	\$20.51
11-9041	Engineering Managers	40	\$22.84	\$33.19	\$46.39	\$52.99	\$30.76	\$37.13	\$45.66	\$56.42	\$69.01
11-3021	Computer and Information Systems Managers	40	\$39.18	\$32.11	\$45.66	\$52.44	\$29.19	\$36.80	\$45.16	\$55.89	\$68.00
15-1081	Network Systems and Data Communications Analysts	40	\$22.96	\$20.83	\$30.40	\$35.19	\$18.95	\$23.13	\$29.38	\$36.84	\$44.53
43-5032	Dispatchers, Except Police, Fire, and Ambulance	40	\$11.33	\$11.74	\$16.67	\$19.13	\$10.72	\$13.17	\$16.25	\$19.93	\$22.90

*OES wages reported for Colorado statewide

† Insufficient wage data

Table 1: Occupations with 10 or More Estimated Vacancies — Page 4

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)									
				Average Wages				Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
15-1099	Computer Specialists, All Other	30	\$16.23	\$19.66	\$30.22	\$35.50	\$17.01	\$23.27	\$29.39	\$36.68	\$44.71		
21-1021	Child, Family, and School Social Workers	30	\$11.38	\$13.66	\$19.94	\$23.09	\$12.18	\$15.61	\$19.50	\$23.83	\$28.70		
43-9021	Data Entry Keyers	30	\$11.75	\$8.67	\$11.47	\$12.88	\$7.93	\$9.48	\$11.41	\$13.42	\$15.32		
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	30	†	\$17.80	\$26.10	\$30.26	\$16.38	\$19.54	\$25.19	\$31.04	\$37.24		
47-2141	Painters, Construction and Maintenance	30	\$13.50	\$10.95	\$14.85	\$16.81	\$9.97	\$12.08	\$14.62	\$16.99	\$20.95		
29-1051	Pharmacists	30	\$33.82	\$28.00	\$34.21	\$37.31	\$27.58	\$31.49	\$35.35	\$39.65	\$43.39		
29-2032	Diagnostic Medical Sonographers	30	\$23.41	\$24.08	\$30.15	\$33.18	\$22.79	\$24.54	\$27.35	\$37.88	\$41.95		
39-9021	Personal and Home Care Aides	30	\$7.08	\$6.80	\$8.49	\$9.34	\$6.28	\$7.32	\$8.52	\$9.82	\$10.83		
19-4099	Life, Physical, and Social Science Technicians, All Other	30	\$20.73	\$10.17	\$16.53	\$19.71	\$8.87	\$11.93	\$15.37	\$19.37	\$25.52		
35-9099	Food Preparation and Serving Related Workers, All Other	30	\$8.98	\$7.50	\$9.62	\$10.68	\$7.18	\$7.97	\$9.33	\$10.74	\$12.77		
51-9199	Production Workers, All Other	30	\$10.33	\$7.25	\$10.95	\$12.80	\$6.65	\$8.19	\$10.22	\$12.99	\$16.70		
29-2071	Medical Records and Health Information Technicians	30	\$12.17	\$11.49	\$14.43	\$15.91	\$10.83	\$11.93	\$13.31	\$16.19	\$20.53		
47-2152	Plumbers, Pipefitters, and Steamfitters	30	\$15.50	\$12.58	\$19.93	\$23.61	\$10.88	\$14.55	\$19.44	\$24.94	\$28.26		
31-9094	Medical Transcriptionists	30	\$12.01	\$11.52	\$14.94	\$16.65	\$11.08	\$12.82	\$14.91	\$16.96	\$19.43		
37-3011	Landscaping and Groundskeeping Workers	30	\$9.33	\$7.79	\$10.43	\$11.75	\$7.53	\$8.29	\$9.62	\$11.99	\$15.00		
47-2073	Operating Engineers and Other Construction Equipment Operators	30	\$16.38	\$15.21	\$19.00	\$20.90	\$14.51	\$16.25	\$19.09	\$21.57	\$23.40		
13-1199	Business Operations Specialists, All Other	30	\$23.91	\$18.08	\$27.58	\$32.32	\$16.52	\$20.74	\$26.32	\$33.60	\$41.77		
17-2141	Mechanical Engineers	30	\$23.88	\$23.91	\$34.91	\$40.41	\$22.34	\$26.76	\$33.17	\$42.26	\$52.80		
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	30	\$23.64	\$18.58	\$33.84	\$41.47	\$16.52	\$21.54	\$30.02	\$44.92	\$59.79		
43-3051	Payroll and Timekeeping Clerks	20	\$15.63	\$12.82	\$18.14	\$20.79	\$12.08	\$13.87	\$16.01	\$18.56	\$21.93		
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	20	\$8.92	\$6.16	\$7.24	\$7.78	\$5.79	\$6.28	\$7.09	\$8.14	\$8.89		
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	20	\$10.14	\$8.55	\$11.27	\$12.63	\$7.76	\$9.35	\$10.81	\$12.98	\$15.71		
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	20	\$18.02	\$10.05	\$14.83	\$17.22	\$9.51	\$10.88	\$13.61	\$17.72	\$22.67		

*OES wages reported for Colorado statewide

† Insufficient wage data

Table 1: Occupations with 10 or More Estimated Vacancies — Page 5

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)									
				Average Wages				Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
51-2022	Electrical and Electronic Equipment Assemblers	20	\$10.00	\$7.46	\$10.80	\$12.48	\$6.71	\$8.51	\$10.56	\$12.98	\$15.34		
13-1073	Training and Development Specialists	20	\$12.08	\$15.01	\$22.98	\$26.96	\$14.34	\$16.61	\$21.57	\$28.54	\$35.16		
17-2071	Electrical Engineers	20	†	\$23.34	\$31.96	\$36.28	\$22.03	\$25.83	\$31.17	\$37.25	\$44.50		
29-2052	Pharmacy Technicians	20	\$15.80	\$10.87	\$13.26	\$14.47	\$9.84	\$11.79	\$13.38	\$15.17	\$16.84		
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	20	\$13.07	\$15.08	\$25.43	\$30.60	\$13.27	\$17.90	\$23.40	\$30.99	\$40.87		
43-4151	Order Clerks	20	\$8.00	\$9.74	\$13.59	\$15.52	\$9.38	\$10.70	\$13.26	\$16.06	\$18.45		
43-4081	Hotel, Motel, and Resort Desk Clerks	20	\$8.27	\$8.10	\$9.58	\$10.31	\$7.75	\$8.51	\$9.63	\$10.69	\$11.34		
53-6021	Parking Lot Attendants	20	\$7.89	\$6.12	\$7.85	\$8.72	\$5.76	\$6.25	\$7.12	\$9.21	\$11.07		
* 11-3049	Human Resources Managers, All Other	20	\$32.99	†	†	†	†	†	†	†	†		
13-2031	Budget Analysts	20	\$21.93	\$17.85	\$25.86	\$29.87	\$16.06	\$20.04	\$25.36	\$31.52	\$36.99		
19-2031	Chemists	20	\$31.78	\$14.27	\$25.02	\$30.41	\$13.13	\$15.71	\$22.25	\$32.44	\$42.25		
25-1199	Postsecondary Teachers, All Other	20	\$15.46	\$25,820	\$43,396	\$52,184	\$22,722	\$29,947	\$37,110	\$53,887	\$70,738		
* 25-3099	Teachers and Instructors, All Other	20	\$17.65	†	†	†	†	†	†	†	†		
39-2011	Animal Trainers	20	\$8.00	\$9.91	\$12.56	\$13.88	\$9.42	\$10.22	\$11.63	\$14.55	\$16.82		
41-2022	Parts Salespersons	20	†	\$10.51	\$16.88	\$20.07	\$9.70	\$11.58	\$15.27	\$21.41	\$27.67		
* 47-2131	Insulation Workers, Floor, Ceiling, and Wall	20	†	†	†	†	†	†	†	†	†		
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	20	\$12.00	\$10.66	\$15.23	\$17.51	\$9.66	\$11.91	\$14.49	\$18.23	\$22.42		
49-3092	Recreational Vehicle Service Technicians	20	\$19.50	\$10.78	\$17.29	\$20.55	\$9.85	\$12.57	\$17.42	\$22.89	\$25.93		
51-3011	Bakers	20	†	\$9.11	\$13.24	\$15.29	\$8.40	\$10.14	\$12.99	\$15.75	\$17.35		
23-1011	Lawyers	20	\$26.80	\$27.56	\$43.62	\$51.66	\$24.75	\$31.86	\$41.74	\$55.47	†		
25-2021	Elementary School Teachers, Except Special Education	20	\$13.81	\$28,068	\$38,627	\$43,905	\$25,850	\$30,718	\$36,507	\$46,019	\$55,356		
29-2031	Cardiovascular Technologists and Technicians	20	\$19.06	\$12.27	\$18.68	\$21.89	\$11.29	\$13.77	\$18.58	\$23.27	\$27.24		
29-2081	Opticians, Dispensing	20	\$10.50	\$10.25	\$14.91	\$17.23	\$9.36	\$12.32	\$15.55	\$17.67	\$19.98		
39-9032	Recreation Workers	20	\$12.63	\$7.40	\$10.77	\$12.45	\$7.00	\$8.05	\$9.81	\$12.49	\$16.75		
21-1022	Medical and Public Health Social Workers	20	\$17.49	\$14.64	\$19.05	\$21.24	\$13.53	\$15.72	\$18.22	\$22.25	\$26.31		
29-1122	Occupational Therapists	20	\$19.80	\$18.93	\$24.23	\$26.88	\$18.02	\$20.70	\$24.10	\$26.97	\$29.19		

*OES wages reported for Colorado statewide

† Insufficient wage data

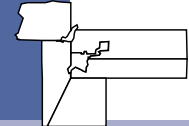


Table 1: Occupations with 10 or More Estimated Vacancies — Page 6

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)							
				Average Wages		Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
31-9093	Medical Equipment Preparers	20	\$9.51	\$9.68	\$12.43	\$13.80	\$9.22	\$10.40	\$12.11	\$13.70	\$16.58
43-9061	Office Clerks, General	20	\$10.87	\$9.06	\$12.96	\$14.90	\$8.42	\$10.23	\$12.71	\$15.59	\$17.98
53-7061	Cleaners of Vehicles and Equipment	20	\$6.83	\$7.06	\$10.29	\$11.90	\$6.51	\$7.78	\$9.78	\$12.28	\$15.24
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	20	\$19.15	\$16.69	\$25.26	\$29.54	\$15.77	\$19.84	\$24.70	\$30.22	\$35.95
41-1012	First-Line Supervisors/Managers of Non-Retail Sales Workers	20	†	\$17.74	\$29.80	\$35.82	\$15.44	\$20.90	\$27.27	\$37.50	\$48.29
41-9031	Sales Engineers	20	†	\$20.23	\$33.60	\$40.28	\$18.00	\$23.35	\$30.95	\$41.99	\$55.66
25-2022	Middle School Teachers, Except Special and Vocational Education	20	\$14.99	\$30,674	\$42,740	\$48,774	\$28,954	\$33,037	\$41,016	\$51,915	\$60,493
43-4131	Loan Interviewers and Clerks	20	\$14.26	\$12.73	\$16.85	\$18.91	\$11.88	\$13.91	\$16.55	\$19.51	\$22.10
47-2061	Construction Laborers	20	\$7.66	\$8.36	\$12.06	\$13.91	\$7.63	\$9.34	\$11.64	\$14.47	\$17.50
47-2071	Paving, Surfacing, and Tamping Equipment Operators	20	\$14.00	\$12.66	\$16.02	\$17.70	\$11.68	\$14.01	\$16.13	\$18.26	\$20.89
49-2011	Computer, Automated Teller, and Office Machine Repairs	20	†	\$12.57	\$17.33	\$19.71	\$10.86	\$14.22	\$16.61	\$20.61	\$24.24
51-5023	Printing Machine Operators	20	\$13.17	\$12.03	\$17.32	\$19.96	\$10.87	\$13.75	\$16.67	\$21.19	\$25.57
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	20	†	\$9.74	\$15.12	\$17.81	\$8.75	\$11.13	\$14.33	\$18.28	\$22.97
53-7064	Packers and Packagers, Hand	20	\$12.62	\$6.32	\$8.64	\$9.81	\$6.08	\$6.79	\$7.99	\$9.87	\$12.38
11-9033	Education Administrators, Postsecondary	20	\$25.47	\$20.14	\$33.68	\$40.45	\$18.22	\$22.54	\$30.66	\$41.02	\$58.31
* 21-1029	Social Workers, All Other	20	\$20.97	†	†	†	†	†	†	†	†
35-3011	Bartenders	10	\$5.15	\$6.19	\$8.00	\$8.91	\$5.84	\$6.35	\$7.22	\$9.64	\$11.14
35-3041	Food Servers, Nonrestaurant	10	\$8.72	\$7.34	\$10.10	\$11.48	\$6.80	\$8.24	\$10.30	\$12.17	\$13.39
37-2012	Maids and Housekeeping Cleaners	10	\$9.50	\$6.82	\$8.69	\$9.63	\$6.34	\$7.33	\$8.56	\$10.07	\$11.31
* 13-1081	Logisticians	10	\$36.78	†	†	†	†	†	†	†	†
25-2012	Kindergarten Teachers, Except Special Education	10	\$8.13	\$20,217	\$37,850	\$46,667	\$17,180	\$24,626	\$36,264	\$50,664	\$59,969
27-2022	Coaches and Scouts	10	\$13.47	\$17,784	\$35,184	\$43,883	\$15,523	\$20,494	\$26,171	\$40,448	\$58,343
* 33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	10	\$9.12	†	†	†	†	†	†	†	†

*OES wages reported for Colorado statewide

† Insufficient wage data

Table 1: Occupations with 10 or More Estimated Vacancies — Page 7

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)									
				Average Wages				Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	10	\$7.00	\$18.33	\$26.16	\$30.06	\$16.50	\$21.00	\$25.49	\$30.16	\$36.32		
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	10	\$26.28	\$14.98	\$22.44	\$26.17	\$13.60	\$16.95	\$21.36	\$27.27	\$33.62		
51-2099	Assemblers and Fabricators, All Other	10	\$10.00	\$7.89	\$10.68	\$12.08	\$7.47	\$8.58	\$9.79	\$11.44	\$15.86		
53-3031	Driver/Sales Workers	10	\$14.03	\$6.50	\$12.55	\$15.57	\$6.09	\$6.98	\$11.14	\$16.94	\$21.91		
17-2061	Computer Hardware Engineers	10	†	\$28.38	\$38.34	\$43.32	\$26.11	\$31.04	\$37.54	\$44.68	\$54.56		
17-3025	Environmental Engineering Technicians	10	†	\$15.98	\$22.98	\$26.50	\$15.34	\$16.92	\$21.19	\$29.18	\$33.93		
25-2031	Secondary School Teachers, Except Special and Vocational Education	10	\$12.12	\$30,551	\$45,590	\$53,110	\$28,795	\$33,916	\$44,318	\$56,740	\$67,766		
27-1024	Graphic Designers	10	\$12.25	\$12.49	\$18.04	\$20.82	\$10.75	\$14.45	\$17.24	\$21.58	\$26.64		
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	10	\$16.29	\$12.08	\$16.61	\$18.88	\$10.69	\$13.73	\$16.15	\$19.51	\$22.76		
* 11-3042	Training and Development Managers	10	\$22.98	†	†	†	†	†	†	†	†		
* 11-9039	Education Administrators, All Other	10	\$20.42	†	†	†	†	†	†	†	†		
13-1051	Cost Estimators	10	†	\$17.52	\$25.19	\$29.02	\$15.98	\$19.20	\$24.39	\$30.59	\$35.28		
* 13-1079	Human Resources, Training, and Labor Relations Specialists, All Other	10	\$29.71	†	†	†	†	†	†	†	†		
13-2041	Credit Analysts	10	\$26.23	\$13.87	\$21.93	\$25.97	\$12.49	\$15.64	\$20.73	\$26.16	\$29.78		
29-1127	Speech-Language Pathologists	10	\$20.60	\$18.39	\$24.51	\$27.57	\$16.92	\$20.07	\$24.12	\$27.94	\$33.31		
31-9091	Dental Assistants	10	†	\$15.35	\$18.74	\$20.44	\$13.69	\$17.51	\$19.16	\$20.96	\$23.17		
35-2012	Cooks, Institution and Cafeteria	10	\$10.81	\$8.09	\$10.43	\$11.60	\$7.70	\$8.70	\$10.22	\$11.83	\$13.86		
51-4041	Machinists	10	\$14.75	\$11.25	\$17.06	\$19.97	\$9.94	\$13.04	\$16.94	\$21.03	\$24.77		
11-2011	Advertising and Promotions Managers	10	†	\$19.07	\$32.38	\$39.03	\$17.12	\$22.10	\$29.88	\$40.66	\$54.10		
13-2053	Insurance Underwriters	10	†	\$17.66	\$27.90	\$33.02	\$15.81	\$20.06	\$26.31	\$35.21	\$42.47		
15-1061	Database Administrators	10	\$14.45	\$19.22	\$29.36	\$34.42	\$17.12	\$22.12	\$27.90	\$37.01	\$44.10		
25-1011	Business Teachers, Postsecondary	10	\$15.85	\$32,445	\$60,481	\$74,499	\$30,559	\$36,892	\$53,693	\$79,767	\$108,386		
25-1194	Vocational Education Teachers, Postsecondary	10	\$13.91	\$14.37	\$21.58	\$25.19	\$13.40	\$15.59	\$19.89	\$26.70	\$34.01		
27-4099	Media and Communication Equipment Workers, All Other	10	\$8.00	\$11.29	\$19.25	\$23.23	\$10.60	\$12.37	\$15.51	\$23.97	\$33.09		
* 29-1021	Dentists, General	10	†	†	†	†	†	†	†	†	†		

*OES wages reported for Colorado statewide

† Insufficient wage data

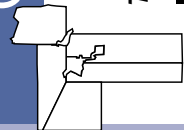


Table 1: Occupations with 10 or More Estimated Vacancies — Page 8

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2002)									
				Average Wages				Percentile Distribution					
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
35-2015	Cooks, Short Order	10	†	\$8.45	\$9.45	\$9.95	\$7.80	\$8.90	\$9.64	\$10.39	\$10.84		
43-4071	File Clerks	10	\$11.73	\$8.22	\$10.87	\$12.19	\$7.58	\$9.13	\$10.66	\$12.71	\$14.73		
43-9041	Insurance Claims and Policy Processing Clerks	10	\$14.50	\$11.49	\$16.34	\$18.75	\$10.43	\$12.66	\$15.47	\$17.96	\$23.49		
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	10	\$18.14	\$14.00	\$18.57	\$20.85	\$12.82	\$15.26	\$18.41	\$21.79	\$25.37		
51-9081	Dental Laboratory Technicians	10	†	\$10.16	\$15.72	\$18.50	\$8.56	\$11.73	\$14.43	\$20.06	\$25.31		
53-7051	Industrial Truck and Tractor Operators	10	\$12.83	\$10.21	\$13.61	\$15.30	\$9.69	\$11.06	\$13.19	\$15.88	\$17.87		
11-2031	Public Relations Managers	10	\$42.49	\$18.36	\$34.11	\$42.00	\$14.85	\$21.96	\$29.95	\$43.98	\$63.57		
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	10	\$35.00	\$16.75	\$24.11	\$27.78	\$15.40	\$18.32	\$22.17	\$28.63	\$35.19		
13-1031	Claims Adjusters, Examiners, and Investigators	10	\$25.00	\$16.64	\$23.74	\$27.29	\$15.52	\$18.39	\$22.43	\$27.50	\$34.36		
25-1022	Mathematical Science Teachers, Postsecondary	10	†	\$30,019	\$47,322	\$55,974	\$28,547	\$33,767	\$41,899	\$55,559	\$78,887		
25-1066	Psychology Teachers, Postsecondary	10	†	\$32,015	\$55,667	\$67,493	\$30,527	\$34,720	\$51,937	\$70,031	\$91,313		
25-1112	Law Teachers, Postsecondary	10	†	\$58,478	\$83,088	\$95,393	\$54,899	\$69,803	\$84,112	\$96,147	\$118,438		
27-3042	Technical Writers	10	\$23.80	\$18.16	\$24.55	\$27.74	\$16.81	\$20.27	\$24.68	\$28.14	\$32.61		
29-1131	Veterinarians	10	†	\$19.43	\$28.22	\$32.60	\$18.39	\$20.03	\$23.28	\$33.65	\$49.83		

*OES wages reported for Colorado statewide

† 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		
41-3011	Advertising Sales Agents	\$14.06	\$23.07	\$27.59	\$12.64	\$16.23	\$20.87	\$26.54	\$35.55		
41-9099	Sales and Related Workers, All Other	\$11.87	\$23.70	\$29.61	\$10.27	\$14.17	\$20.12	\$31.15	\$44.80		
47-4051	Highway Maintenance Workers	\$13.03	\$16.80	\$18.67	\$12.16	\$14.19	\$17.11	\$19.83	\$21.43		
11-3061	Purchasing Managers	\$19.34	\$31.83	\$38.09	\$17.41	\$21.88	\$29.07	\$40.18	\$52.34		
13-1071	Employment, Recruitment, and Placement Specialists	\$14.32	\$21.23	\$24.68	\$13.23	\$15.94	\$19.07	\$25.54	\$32.54		
25-1121	Art, Drama, and Music Teachers, Postsecondary	\$35,519	\$52,142	\$60,453	\$33,239	\$39,983	\$49,207	\$61,012	\$73,923		
27-3091	Interpreters and Translators	\$12.56	\$18.22	\$21.05	\$11.16	\$14.52	\$18.37	\$22.03	\$25.93		
35-1011	Chefs and Head Cooks	\$11.83	\$16.87	\$19.40	\$11.31	\$12.40	\$15.19	\$20.37	\$25.79		
39-1021	First-Line Supervisors/Managers of Personal Service Workers	\$8.71	\$13.33	\$15.64	\$7.97	\$9.37	\$11.48	\$14.46	\$22.91		
43-5071	Shipping, Receiving, and Traffic Clerks	\$9.02	\$12.54	\$14.30	\$8.22	\$9.99	\$12.23	\$14.53	\$17.42		
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	\$8.88	\$11.58	\$12.94	\$8.17	\$9.45	\$11.31	\$13.33	\$15.57		
47-2111	Electricians	\$16.31	\$23.20	\$26.65	\$14.41	\$19.21	\$24.16	\$27.12	\$30.76		
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	\$18.27	\$23.64	\$26.32	\$16.67	\$20.61	\$24.99	\$27.43	\$29.04		
49-9099	Installation, Maintenance, and Repair Workers, All Other	\$9.51	\$14.75	\$17.37	\$9.03	\$10.23	\$13.61	\$18.49	\$22.04		
11-3071	Transportation, Storage, and Distribution Managers	\$19.27	\$30.14	\$35.56	\$15.86	\$22.91	\$28.35	\$36.81	\$46.14		
11-9032	Education Administrators, Elementary and Secondary School	\$56,201	\$69,569	\$76,253	\$50,295	\$62,266	\$70,074	\$79,409	\$91,760		
13-1072	Compensation, Benefits, and Job Analysis Specialists	\$17.04	\$25.45	\$29.67	\$15.64	\$18.49	\$22.49	\$29.34	\$37.05		
13-1121	Meeting and Convention Planners	\$14.78	\$20.28	\$23.04	\$13.76	\$16.38	\$19.75	\$23.55	\$27.77		
25-1071	Health Specialties Teachers, Postsecondary	\$19,387	\$58,056	\$77,390	\$17,123	\$21,312	\$52,615	\$79,971	\$125,610		
29-2053	Psychiatric Technicians	\$10.74	\$13.95	\$15.57	\$9.71	\$12.08	\$14.47	\$16.11	\$17.13		
49-9043	Maintenance Workers, Machinery	\$7.75	\$14.67	\$18.14	\$6.37	\$9.58	\$14.82	\$19.97	\$22.63		
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$12.40	\$16.30	\$18.24	\$11.10	\$13.96	\$16.31	\$18.65	\$21.47		
51-9031	Cutters and Trimmers, Hand	\$6.75	\$9.07	\$10.23	\$6.36	\$7.26	\$8.39	\$10.34	\$14.00		
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	\$8.48	\$13.84	\$16.51	\$7.75	\$9.57	\$12.78	\$15.79	\$18.57		
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	\$14.33	\$23.66	\$28.32	\$12.77	\$16.56	\$22.99	\$28.24	\$34.87		
11-3011	Administrative Services Managers	\$16.49	\$30.52	\$37.54	\$14.07	\$19.86	\$28.36	\$39.38	\$51.63		
13-2052	Personal Financial Advisors	\$14.72	\$30.97	\$39.11	\$13.27	\$16.59	\$24.70	\$40.26	\$67.20		
17-2011	Aerospace Engineers	\$24.39	\$32.95	\$37.22	\$23.45	\$26.38	\$32.09	\$39.73	\$44.99		

*OES wages reported for Colorado statewide
 † Insufficient wage data

Table 2: Occupations with Fewer than 10 Estimated Vacancies – Page 2

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)											
		Average Wages				Percentile Distribution							
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th				
* 25-1069	Social Sciences Teachers, Postsecondary, All Other	†	†	†	†	†	†	†	†	†	†	†	†
41-9022	Real Estate Sales Agents	\$12.34	\$23.79	\$29.52	\$11.03	\$14.07	\$19.23	\$23.06	\$23.06	\$50.81			
51-9132	Photographic Processing Machine Operators	\$7.89	\$10.11	\$11.22	\$7.51	\$8.21	\$9.63	\$11.73	\$11.73	\$13.59			
53-3022	Bus Drivers, School	\$9.15	\$12.43	\$14.07	\$8.42	\$10.49	\$12.62	\$14.43	\$14.43	\$16.61			
19-3021	Market Research Analysts	\$17.17	\$29.19	\$35.20	\$15.67	\$18.96	\$26.26	\$36.19	\$36.19	\$49.31			
21-1012	Educational, Vocational, and School Counselors	\$15.63	\$23.71	\$27.75	\$14.69	\$17.39	\$23.94	\$30.24	\$30.24	\$34.07			
25-1021	Computer Science Teachers, Postsecondary	\$31,045	\$46,222	\$53,810	\$29,201	\$32,704	\$38,476	\$49,816	\$49,816	\$80,069			
25-1126	Philosophy and Religion Teachers, Postsecondary	\$33,361	\$52,138	\$61,527	\$30,922	\$36,724	\$49,339	\$64,936	\$64,936	\$80,900			
25-2043	Special Education Teachers, Secondary School	\$32,371	\$47,420	\$54,946	\$29,709	\$36,039	\$47,900	\$57,624	\$57,624	\$68,293			
27-1025	Interior Designers	\$19.11	\$27.92	\$32.32	\$16.72	\$22.50	\$30.58	\$33.64	\$33.64	\$35.48			
27-4012	Broadcast Technicians	\$8.21	\$16.25	\$20.25	\$7.54	\$9.13	\$14.16	\$20.12	\$20.12	\$27.47			
33-3051	Police and Sheriffs Patrol Officers	\$18.15	\$23.83	\$26.67	\$17.00	\$19.90	\$23.97	\$27.85	\$27.85	\$32.20			
33-9091	Crossing Guards	\$6.94	\$9.66	\$11.01	\$6.49	\$7.50	\$9.55	\$10.86	\$10.86	\$14.30			
43-4121	Library Assistants, Clerical	\$7.97	\$10.50	\$11.77	\$7.58	\$8.72	\$10.34	\$12.50	\$12.50	\$14.04			
43-5081	Stock Clerks and Order Fillers	\$8.20	\$12.41	\$14.51	\$7.61	\$9.02	\$11.72	\$15.58	\$15.58	\$18.53			
43-9071	Office Machine Operators, Except Computer	\$8.84	\$11.65	\$13.04	\$8.11	\$9.47	\$11.21	\$13.58	\$13.58	\$15.93			
47-4011	Construction and Building Inspectors	\$13.44	\$19.40	\$22.40	\$12.01	\$14.98	\$18.81	\$23.63	\$23.63	\$27.84			
49-2098	Security and Fire Alarm Systems Installers	\$12.29	\$17.18	\$19.63	\$11.60	\$13.71	\$16.47	\$19.37	\$19.37	\$25.40			
51-7011	Cabinetmakers and Bench Carpenters	\$9.70	\$13.48	\$15.37	\$9.29	\$10.50	\$13.03	\$16.22	\$16.22	\$18.84			
51-8031	Water and Liquid Waste Treatment Plant and System Operators	\$13.47	\$18.61	\$21.17	\$12.67	\$14.27	\$18.79	\$22.31	\$22.31	\$25.56			
* 53-2011	Airline Pilots, Copilots, and Flight Engineers	†	†	†	†	†	†	†	†	†	†	†	†
11-1011	Chief Executives	\$42.53	\$61.63	\$71.17	\$37.19	\$52.95	†	†	†	†			
* 19-1029	Biological Scientists, All Other	†	†	†	†	†	†	†	†	†			
25-1072	Nursing Instructors and Teachers, Postsecondary	\$33,706	\$46,864	\$53,444	\$32,130	\$34,876	\$41,146	\$54,494	\$54,494	\$60,662			
25-1123	English Language and Literature Teachers, Postsecondary	\$30,159	\$47,697	\$56,466	\$29,230	\$33,571	\$42,466	\$56,498	\$56,498	\$76,640			
25-1125	History Teachers, Postsecondary	\$34,858	\$52,942	\$61,983	\$32,150	\$39,759	\$49,973	\$64,809	\$64,809	\$80,494			
25-4021	Librarians	\$15.90	\$21.49	\$24.28	\$14.76	\$17.57	\$21.10	\$25.53	\$25.53	\$29.31			
27-3041	Editors	\$12.36	\$20.33	\$24.30	\$11.67	\$13.55	\$18.10	\$26.05	\$26.05	\$33.01			
27-4032	Film and Video Editors	\$11.83	\$21.32	\$26.06	\$10.48	\$13.36	\$18.88	\$27.28	\$27.28	\$38.07			
35-9021	Dishwashers	\$6.95	\$7.96	\$8.47	\$6.47	\$7.28	\$7.97	\$8.66	\$8.66	\$9.72			

*OES wages reported for Colorado statewide

† Insufficient wage data

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						
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	\$11.76	\$16.01	\$18.14	\$10.88	\$13.32	\$15.77	\$18.28	\$21.51		
49-9062	Medical Equipment Repairers	\$19.90	\$24.41	\$26.67	\$17.89	\$22.51	\$25.14	\$27.61	\$30.09		
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	\$8.89	\$13.41	\$15.68	\$7.68	\$10.49	\$14.86	\$16.45	\$17.44		
51-5021	Job Printers	\$16.28	\$18.91	\$20.22	\$14.53	\$17.75	\$19.29	\$20.90	\$21.85		
51-7099	Woodworkers, All Other	\$7.89	\$10.95	\$12.48	\$7.60	\$8.45	\$10.00	\$13.08	\$16.20		
51-9083	Ophthalmic Laboratory Technicians	\$9.05	\$12.06	\$13.56	\$8.27	\$9.64	\$11.18	\$15.00	\$17.08		
11-3051	Industrial Production Managers	\$21.99	\$34.94	\$41.42	\$19.60	\$25.03	\$32.83	\$43.11	\$56.50		
11-9051	Food Service Managers	\$13.60	\$21.61	\$25.61	\$11.68	\$15.41	\$19.11	\$25.36	\$39.16		
11-9121	Natural Sciences Managers	\$29.63	\$41.98	\$48.15	\$27.23	\$33.95	\$42.51	\$51.38	\$57.07		
13-1022	Wholesale and Retail Buyers, Except Farm Products	\$13.53	\$21.71	\$25.81	\$11.69	\$15.48	\$19.70	\$26.51	\$34.87		
13-2071	Loan Counselors	\$11.84	\$14.88	\$16.40	\$11.25	\$12.22	\$13.74	\$17.06	\$20.30		
17-2081	Environmental Engineers	\$22.05	\$31.54	\$36.29	\$20.24	\$24.82	\$31.68	\$38.44	\$43.21		
* 17-3029	Engineering Technicians, Except Drafters, All Other	†	†	†	†	†	†	†	†		
19-1099	Life Scientists, All Other	\$16.33	\$26.59	\$31.72	\$14.54	\$18.86	\$25.40	\$33.47	\$41.59		
21-1013	Marriage and Family Therapists	\$12.90	\$15.97	\$17.51	\$11.84	\$14.23	\$15.95	\$17.55	\$20.32		
23-2011	Paralegals and Legal Assistants	\$15.79	\$20.91	\$23.47	\$14.47	\$17.39	\$19.93	\$22.94	\$27.49		
* 25-1032	Engineering Teachers, Postsecondary	†	†	†	†	†	†	†	†		
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	\$36.696	\$60.666	\$72.651	\$33,130	\$40,333	\$56,492	\$78,060	\$97,370		
25-1081	Education Teachers, Postsecondary	\$31,835	\$49,961	\$59,024	\$28,876	\$36,314	\$46,818	\$59,714	\$79,999		
25-1122	Communications Teachers, Postsecondary	\$33,474	\$49,913	\$58,132	\$29,877	\$37,819	\$46,662	\$60,778	\$77,007		
* 27-1029	Designers, All Other	†	†	†	†	†	†	†	†		
29-1031	Dietitians and Nutritionists	\$14.97	\$19.84	\$22.27	\$14.44	\$16.54	\$19.76	\$23.37	\$26.63		
* 29-2033	Nuclear Medicine Technologists	†	†	†	†	†	†	†	†		
29-2041	Emergency Medical Technicians and Paramedics	\$9.75	\$14.62	\$17.07	\$9.37	\$10.68	\$13.06	\$16.83	\$24.61		
* 29-2099	Health Technologists and Technicians, All Other	†	†	†	†	†	†	†	†		
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	\$13.43	\$19.15	\$22.01	\$12.56	\$14.60	\$18.29	\$22.19	\$26.81		
43-2011	Switchboard Operators, Including Answering Service	\$8.96	\$11.80	\$13.22	\$8.13	\$10.20	\$12.18	\$13.58	\$14.66		
43-4061	Eligibility Interviewers, Government Programs	\$12.66	\$15.47	\$16.87	\$12.01	\$12.96	\$14.47	\$17.27	\$20.78		

* OES wages reported for Colorado statewide

† Insufficient wage data

Table 2: Occupations with Fewer than 10 Estimated Vacancies — Page 4

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)									
		Average Wages			Percentile Distribution						
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
43-6012	Legal Secretaries	\$15.26	\$16.76	\$17.50	\$14.23	\$14.97	\$16.17	\$17.38	\$21.32		
* 49-3011	Aircraft Mechanics and Service Technicians	†	†	†	†	†	†	†	†	†	
51-5022	Prepress Technicians and Workers	\$11.73	\$17.15	\$19.85	\$11.31	\$13.26	\$17.69	\$20.84	\$22.78		
51-8021	Stationary Engineers and Boiler Operators	\$15.23	\$21.34	\$24.40	\$12.77	\$18.15	\$22.75	\$25.66	\$27.48		
53-6051	Transportation Inspectors	\$17.08	\$28.01	\$33.47	\$14.97	\$19.83	\$26.84	\$36.98	\$43.11		
53-6099	Transportation Workers, All Other	\$9.48	\$16.52	\$20.04	\$8.98	\$10.58	\$15.42	\$22.65	\$26.98		
* 11-3041	Compensation and Benefits Managers	†	†	†	†	†	†	†	†	†	
11-9021	Construction Managers	\$22.69	\$34.88	\$40.98	\$20.34	\$25.94	\$32.77	\$41.31	\$55.11		
11-9141	Property, Real Estate, and Community Association Managers	\$11.79	\$22.10	\$27.25	\$11.47	\$13.21	\$17.86	\$26.48	\$39.95		
11-9151	Social and Community Service Managers	\$14.08	\$21.75	\$25.60	\$13.46	\$16.79	\$20.56	\$25.46	\$32.77		
13-2061	Financial Examiners	\$21.87	\$32.03	\$37.12	\$20.15	\$25.28	\$31.41	\$38.16	\$44.74		
13-2081	Tax Examiners, Collectors, and Revenue Agents	\$17.55	\$25.50	\$29.47	\$15.99	\$18.93	\$23.80	\$32.10	\$39.55		
15-2041	Statisticians	\$19.65	\$28.25	\$32.55	\$18.66	\$21.30	\$27.26	\$33.33	\$41.32		
17-1011	Architects, Except Landscape and Naval	\$17.58	\$26.94	\$31.63	\$16.04	\$19.27	\$25.39	\$32.73	\$41.14		
17-2072	Electronics Engineers, Except Computer	\$24.73	\$34.99	\$40.12	\$23.31	\$27.44	\$33.31	\$42.01	\$51.85		
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	\$22.41	\$31.78	\$36.47	\$20.74	\$24.74	\$29.98	\$39.12	\$47.28		
19-1042	Medical Scientists, Except Epidemiologists	\$22.00	\$32.22	\$37.32	\$20.40	\$23.32	\$27.62	\$37.17	\$53.56		
21-1091	Health Educators	\$11.66	\$19.73	\$23.77	\$10.35	\$13.32	\$19.29	\$25.50	\$29.54		
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	\$32,798	\$53,468	\$63,803	\$31,342	\$34,818	\$48,931	\$64,374	\$90,730		
25-1063	Economics Teachers, Postsecondary	\$35,722	\$61,493	\$74,378	\$32,300	\$41,661	\$60,489	\$77,265	\$93,416		
25-1067	Sociology Teachers, Postsecondary	\$35,309	\$58,559	\$70,184	\$32,179	\$40,140	\$54,621	\$72,002	\$94,756		
* 25-1193	Recreation and Fitness Studies Teachers, Postsecondary	†	†	†	†	†	†	†	†	†	
25-9031	Instructional Coordinators	\$14.20	\$27.70	\$34.45	\$12.66	\$16.37	\$22.56	\$40.99	\$53.53		
* 27-3011	Radio and Television Announcers	†	†	†	†	†	†	†	†	†	
27-3043	Writers and Authors	\$14.64	\$22.34	\$26.20	\$12.91	\$16.80	\$21.19	\$26.96	\$34.08		
29-1124	Radiation Therapists	\$22.79	\$26.79	\$28.79	\$21.35	\$23.86	\$26.56	\$30.03	\$34.31		
* 29-1129	Therapists, All Other	†	†	†	†	†	†	†	†	†	
29-2054	Respiratory Therapy Technicians	\$8.82	\$14.53	\$17.39	\$7.18	\$10.80	\$15.25	\$17.57	\$21.05		
31-1011	Home Health Aides	\$9.24	\$12.60	\$14.28	\$8.72	\$9.70	\$11.58	\$15.75	\$17.51		
31-2021	Physical Therapist Assistants	\$13.32	\$16.48	\$18.06	\$12.52	\$14.21	\$16.18	\$18.50	\$21.37		

* OES wages reported for Colorado statewide
† Insufficient wage data

Table 2: Occupations with Fewer than 10 Estimated Vacancies — Page 5

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)									
		Average Wages				Percentile Distribution					
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th		
39-3091	Amusement and Recreation Attendants	\$6.87	\$8.53	\$9.36	\$6.38	\$7.32	\$8.15	\$9.00	\$10.87		
* 41-9012	Models	†	†	†	†	†	†	†	†		
43-5031	Police, Fire, and Ambulance Dispatchers	\$13.83	\$17.19	\$18.87	\$12.81	\$14.89	\$16.90	\$19.70	\$22.36		
47-2181	Roofers	\$11.65	\$14.70	\$16.22	\$11.03	\$12.86	\$14.81	\$16.60	\$18.32		
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$15.03	\$18.44	\$20.14	\$14.20	\$16.11	\$18.58	\$20.91	\$22.57		
49-9052	Telecommunications Line Installers and Repairers	\$11.36	\$16.02	\$18.34	\$10.46	\$12.58	\$15.30	\$17.99	\$22.40		
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$9.64	\$15.52	\$18.46	\$9.03	\$10.85	\$14.96	\$20.02	\$23.77		
15-1011	Computer and Information Scientists, Research	\$27.48	\$43.67	\$51.78	\$24.79	\$31.97	\$41.10	\$56.91	†		
17-2112	Industrial Engineers	\$22.94	\$31.74	\$36.15	\$21.20	\$24.92	\$30.72	\$38.22	\$44.32		
17-3012	Electrical and Electronics Drafters	\$13.75	\$20.33	\$23.60	\$12.52	\$15.13	\$18.90	\$25.01	\$29.17		
17-3021	Aerospace Engineering and Operations Technicians	\$19.54	\$25.40	\$28.33	\$17.93	\$21.83	\$25.34	\$28.67	\$34.28		
17-3022	Civil Engineering Technicians	\$13.49	\$20.23	\$23.60	\$10.84	\$15.87	\$19.90	\$24.92	\$29.57		
19-2041	Environmental Scientists and Specialists, Including Health	\$20.04	\$29.48	\$34.19	\$17.87	\$22.61	\$29.00	\$36.30	\$42.64		
19-2099	Physical Scientists, All Other	\$21.75	\$33.31	\$39.10	\$19.22	\$25.80	\$33.74	\$40.92	\$47.93		
19-3051	Urban and Regional Planners	\$15.53	\$22.78	\$26.40	\$14.90	\$16.52	\$21.94	\$27.65	\$33.57		
19-4031	Chemical Technicians	\$14.26	\$18.75	\$21.00	\$13.05	\$15.34	\$17.58	\$21.56	\$26.66		
19-4041	Geological and Petroleum Technicians	\$11.50	\$19.24	\$23.12	\$10.87	\$13.12	\$18.18	\$24.37	\$30.59		
21-1011	Substance Abuse and Behavioral Disorder Counselors	\$10.78	\$15.05	\$17.19	\$9.90	\$11.60	\$14.40	\$17.44	\$22.28		
21-1014	Mental Health Counselors	\$10.34	\$14.24	\$16.19	\$9.83	\$10.91	\$12.92	\$16.07	\$19.98		
21-1023	Mental Health and Substance Abuse Social Workers	\$11.90	\$16.56	\$18.89	\$11.39	\$12.90	\$15.72	\$19.65	\$23.66		
* 21-2099	Religious Workers, All Other	†	†	†	†	†	†	†	†		
23-2092	Law Clerks	\$13.90	\$17.83	\$19.79	\$12.94	\$15.09	\$17.89	\$20.15	\$21.54		
* 25-1041	Agricultural Sciences Teachers, Postsecondary	†	†	†	†	†	†	†	†		
25-1042	Biological Science Teachers, Postsecondary	\$34,281	\$63,275	\$77,772	\$31,506	\$40,260	\$56,846	\$81,682	\$111,200		
25-1065	Political Science Teachers, Postsecondary	\$36,637	\$58,856	\$69,965	\$33,722	\$42,055	\$55,007	\$73,434	\$95,331		
25-4031	Library Technicians	\$9.75	\$13.33	\$15.13	\$9.26	\$10.78	\$13.00	\$15.85	\$18.27		
27-2023	Umpires, Referees, and Other Sports Officials	\$17,739	\$25,696	\$29,673	\$16,553	\$19,236	\$24,555	\$29,741	\$35,728		
* 27-2099	Entertainers and Performers, Sports and Related Workers, All Other	†	†	†	†	†	†	†	†		
27-4014	Sound Engineering Technicians	\$10.51	\$16.93	\$20.13	\$9.69	\$12.14	\$16.37	\$19.79	\$22.81		

*OES wages reported for Colorado statewide

† Insufficient wage data

Table 2: Occupations with Fewer than 10 Estimated Vacancies — Page 6

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)								
		Average Wages			Percentile Distribution					
Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th			
29-1066	Psychiatrists	\$46.84	\$61.13	\$68.27	\$43.64	\$54.76	\$67.55	†	†	†
29-1069	Physicians and Surgeons, All Other	\$33.79	\$50.40	\$58.70	\$35.05	\$40.29	\$50.61	\$66.08	†	†
31-2011	Occupational Therapist Assistants	\$13.21	\$15.90	\$17.25	\$12.48	\$13.93	\$15.78	\$17.65	\$20.36	\$20.36
31-2022	Physical Therapist Aides	\$7.62	\$10.13	\$11.37	\$7.27	\$7.94	\$9.77	\$12.01	\$13.56	\$13.56
31-9011	Massage Therapists	\$11.24	\$15.33	\$17.37	\$11.03	\$11.58	\$12.57	\$13.57	\$30.97	\$30.97
33-1099	First-Line Supervisors/Managers, Protective Service Workers, All Other	\$13.14	\$22.36	\$26.97	\$12.47	\$14.28	\$17.68	\$28.65	\$42.14	\$42.14
33-2011	Fire Fighters	\$17.77	\$22.96	\$25.55	\$16.68	\$19.70	\$23.69	\$26.75	\$28.76	\$28.76
33-9099	Protective Service Workers, All Other	\$7.48	\$11.82	\$13.99	\$7.11	\$7.91	\$9.25	\$13.20	\$21.83	\$21.83
* 35-2019	Cooks, All Other	†	†	†	†	†	†	†	†	†
35-2021	Food Preparation Workers	\$7.35	\$9.29	\$10.25	\$6.81	\$7.74	\$8.69	\$10.70	\$13.22	\$13.22
* 39-3099	Entertainment Attendants and Related Workers, All Other	†	†	†	†	†	†	†	†	†
39-6012	Concierges	\$8.45	\$10.05	\$10.84	\$7.79	\$8.93	\$9.93	\$10.85	\$12.69	\$12.69
39-6021	Tour Guides and Escorts	\$10.72	\$12.69	\$13.68	\$9.88	\$11.57	\$12.69	\$13.92	\$16.43	\$16.43
41-3041	Travel Agents	\$9.38	\$12.90	\$14.66	\$8.81	\$10.24	\$12.65	\$15.41	\$17.35	\$17.35
41-9011	Demonstrators and Product Promoters	\$8.76	\$12.03	\$13.66	\$8.03	\$9.43	\$10.77	\$14.24	\$17.57	\$17.57
43-2021	Telephone Operators	\$7.27	\$10.64	\$12.32	\$6.63	\$8.26	\$11.16	\$13.19	\$14.29	\$14.29
43-4011	Brokerage Clerks	\$10.39	\$16.45	\$19.48	\$9.46	\$11.98	\$15.34	\$18.93	\$25.73	\$25.73
43-4031	Court, Municipal, and License Clerks	\$12.11	\$15.69	\$17.48	\$11.66	\$12.98	\$15.36	\$18.39	\$20.92	\$20.92
43-4111	Interviewers, Except Eligibility and Loan	\$9.89	\$13.32	\$15.02	\$9.24	\$10.92	\$13.12	\$15.62	\$17.76	\$17.76
43-9022	Word Processors and Typists	\$11.34	\$14.43	\$15.99	\$10.32	\$12.31	\$14.32	\$16.70	\$18.86	\$18.86
43-9031	Desktop Publishers	\$12.81	\$17.13	\$19.29	\$12.12	\$14.19	\$17.03	\$20.26	\$22.72	\$22.72
45-1011	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers	\$16.33	\$23.29	\$26.77	\$13.28	\$19.07	\$22.81	\$28.18	\$33.21	\$33.21
47-5081	Helpers--Extraction Workers	\$10.06	\$14.56	\$16.81	\$8.57	\$12.18	\$15.85	\$17.46	\$18.45	\$18.45
49-2092	Electric Motor, Power Tool, and Related Repairs	\$11.91	\$16.53	\$18.84	\$11.36	\$13.24	\$15.76	\$18.43	\$23.55	\$23.55
49-3021	Automotive Body and Related Repairs	\$15.50	\$24.35	\$28.77	\$14.32	\$17.89	\$22.48	\$29.97	\$38.95	\$38.95
49-9041	Industrial Machinery Mechanics	\$14.12	\$19.34	\$21.96	\$12.75	\$16.05	\$19.29	\$22.84	\$26.70	\$26.70
49-9094	Locksmiths and Safe Repairs	\$11.67	\$16.80	\$19.35	\$10.67	\$12.92	\$16.28	\$20.07	\$24.45	\$24.45
51-2092	Team Assemblers	\$8.76	\$11.33	\$12.62	\$8.09	\$9.40	\$11.01	\$13.11	\$15.00	\$15.00
51-4012	Numerical Tool and Process Control Programmers	\$15.76	\$23.58	\$27.50	\$11.16	\$18.92	\$22.69	\$30.93	\$34.22	\$34.22

* OES wages reported for Colorado statewide

† Insufficient wage data

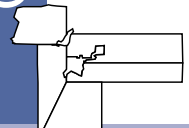


Table 2: Occupations with Fewer than 10 Estimated Vacancies –Page 7

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)							
		Average Wages		Percentile Distribution					
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 51-7031	Model Makers, Wood	†	†	†	†	†	†	†	†
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	\$9.51	\$12.48	\$13.96	\$8.88	\$10.38	\$12.29	\$14.14	\$16.71
53-1021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	\$12.96	\$19.44	\$22.68	\$11.87	\$14.63	\$18.62	\$23.31	\$28.65
53-3041	Taxi Drivers and Chauffeurs	\$8.01	\$10.14	\$11.21	\$7.54	\$8.77	\$10.05	\$11.17	\$13.12
* 53-4011	Locomotive Engineers	†	†	†	†	†	†	†	†
11-9031	Education Administrators, Preschool and Child Care Center/Program	\$13.78	\$17.56	\$19.44	\$12.95	\$14.58	\$16.33	\$18.81	\$25.67
11-9081	Lodging Managers	\$12.19	\$18.18	\$21.17	\$11.33	\$13.08	\$17.01	\$22.23	\$26.79
15-2011	Actuaries	\$23.08	\$36.47	\$43.17	\$21.62	\$26.04	\$34.06	\$44.03	\$59.54
17-1022	Surveyors	\$15.02	\$19.68	\$22.01	\$14.36	\$15.93	\$19.02	\$22.91	\$26.77
17-2131	Materials Engineers	\$23.35	\$34.64	\$40.30	\$21.18	\$26.89	\$34.72	\$42.33	\$50.71
17-3011	Architectural and Civil Drafters	\$14.11	\$18.93	\$21.34	\$12.94	\$15.87	\$19.05	\$21.80	\$25.63
* 17-3019	Drafters, All Other	†	†	†	†	†	†	†	†
17-3023	Electrical and Electronic Engineering Technicians	\$15.55	\$26.04	\$31.28	\$13.24	\$18.24	\$23.71	\$32.92	\$44.03
17-3031	Surveying and Mapping Technicians	\$13.74	\$18.64	\$21.10	\$12.27	\$15.79	\$19.05	\$21.22	\$24.63
19-1022	Microbiologists	\$20.30	\$26.14	\$29.05	\$18.37	\$22.45	\$25.81	\$29.53	\$34.82
19-2042	Geoscientists, Except Hydrologists and Geographers	\$21.06	\$35.73	\$43.07	\$18.40	\$24.40	\$34.82	\$45.21	\$55.83
19-3022	Survey Researchers	\$8.22	\$12.53	\$14.69	\$7.81	\$8.46	\$10.01	\$15.69	\$20.70
19-3031	Clinical, Counseling, and School Psychologists	\$15.33	\$23.45	\$27.50	\$14.30	\$17.03	\$23.44	\$29.22	\$33.90
19-4011	Agricultural and Food Science Technicians	\$12.27	\$18.27	\$21.27	\$11.54	\$13.39	\$16.27	\$21.38	\$28.70
19-4021	Biological Technicians	\$11.77	\$17.76	\$20.75	\$10.91	\$13.06	\$17.58	\$21.82	\$26.10
19-4091	Environmental Science and Protection Technicians, Including Health	\$15.82	\$22.12	\$25.27	\$14.38	\$17.77	\$21.09	\$26.65	\$30.99
21-1015	Rehabilitation Counselors	\$9.88	\$14.42	\$16.68	\$9.53	\$10.43	\$11.97	\$17.08	\$24.45
21-1093	Social and Human Service Assistants	\$9.08	\$12.88	\$14.77	\$8.50	\$10.26	\$12.59	\$15.20	\$17.94
* 21-1099	Community and Social Service Specialists, All Other	†	†	†	†	†	†	†	†
21-2011	Clergy	\$6.85	\$14.32	\$18.05	\$6.03	\$7.50	\$12.54	\$18.57	\$25.01
25-1052	Chemistry Teachers, Postsecondary	\$38.874	\$58.630	\$68.508	\$35.598	\$43.799	\$54.432	\$71.078	\$91.431
25-1054	Physics Teachers, Postsecondary	\$41.080	\$63.571	\$74.817	\$38.458	\$44.959	\$57.202	\$81.764	\$98.976
25-1061	Anthropology and Archeology Teachers, Postsecondary	\$35.302	\$58.711	\$70.415	\$32.051	\$42.045	\$55.696	\$75.101	\$95.353

*OES wages reported for Colorado statewide

† Insufficient wage data

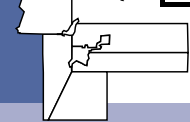


Table 2: Occupations with Fewer than 10 Estimated Vacancies —Page 8

SOC Code	SOC Occupational Title	Occupational Employment Statistics Wage Data (2002)							
		Average Wages			Percentile Distribution				
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
25-1064	Geography Teachers, Postsecondary	\$35,903	\$57,297	\$67,995	\$33,372	\$42,057	\$53,945	\$74,983	\$90,192
* 25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	†	†	†	†	†	†	†	†
25-1113	Social Work Teachers, Postsecondary	\$41,007	\$61,594	\$71,888	\$35,683	\$47,649	\$60,572	\$77,952	\$90,832
25-1124	Foreign Language and Literature Teachers, Postsecondary	\$27,264	\$39,780	\$46,037	\$25,881	\$28,128	\$34,139	\$46,346	\$65,083
25-1191	Graduate Teaching Assistants	\$12,760	\$20,565	\$24,467	\$12,210	\$13,601	\$18,547	\$25,870	\$32,583
25-2042	Special Education Teachers, Middle School	\$32,463	\$44,420	\$50,399	\$30,661	\$35,166	\$43,657	\$52,907	\$59,047
25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors	\$10.40	\$14.40	\$16.40	\$9.79	\$10.52	\$11.75	\$17.66	\$23.70
* 25-4012	Curators	†	†	†	†	†	†	†	†
27-1011	Art Directors	\$14.83	\$27.83	\$34.35	\$12.89	\$16.97	\$24.50	\$34.03	\$51.53
27-1023	Floral Designers	\$9.19	\$11.83	\$13.15	\$8.69	\$9.43	\$10.59	\$13.47	\$18.04
* 27-2031	Dancers	†	†	†	†	†	†	†	†
27-3031	Public Relations Specialists	\$16.05	\$22.31	\$25.44	\$14.54	\$18.12	\$20.87	\$25.69	\$33.69
29-1062	Family and General Practitioners	\$36.48	\$48.89	\$55.09	\$29.95	\$44.99	\$50.68	\$56.11	\$70.31
* 29-1064	Obstetricians and Gynecologists	\$63.50	\$68.50	\$70.99	†	†	†	†	†
29-1071	Physician Assistants	\$18.10	\$27.43	\$32.09	\$16.24	\$21.05	\$28.83	\$33.68	\$38.54
29-1121	Audiologists	\$18.21	\$21.31	\$22.85	\$17.63	\$19.04	\$20.91	\$23.39	\$26.72
29-1125	Recreational Therapists	\$10.23	\$14.63	\$16.83	\$9.78	\$11.10	\$13.98	\$17.84	\$21.02
29-1199	Health Diagnosing and Treating Practitioners, All Other	\$15.89	\$36.24	\$46.40	\$15.15	\$17.49	\$22.62	\$67.84	†
29-2051	Dietetic Technicians	\$6.70	\$10.74	\$12.76	\$6.31	\$7.30	\$10.00	\$13.55	\$17.01
29-2056	Veterinary Technologists and Technicians	\$9.76	\$11.93	\$13.02	\$9.23	\$10.01	\$11.41	\$13.11	\$15.04
* 29-9099	Healthcare Practitioners and Technical Workers, All Other	†	†	†	†	†	†	†	†
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$7.42	\$11.44	\$13.44	\$6.88	\$8.08	\$9.80	\$11.70	\$14.70
* 33-2022	Forest Fire Inspectors and Prevention Specialists	†	†	†	†	†	†	†	†
33-9021	Private Detectives and Investigators	\$10.62	\$19.48	\$23.91	\$9.46	\$12.12	\$22.17	\$26.09	\$29.80

*OES wages reported for Colorado statewide

† Insufficient wage data

The Retail Trade Sector

The Retail Trade sector accounts for 16% of Denver Metro's employers and employs about 13% of the region's workers. However, this sector was found to account for 34% of the vacancies estimated in this survey. This section of the report details information specifically provided by employers in the Retail Trade sector.

The number of vacancies estimated in this survey for the Retail Trade sector is over 2,300 vacancies above the level found in the Fall 2002 survey. This represents a 97% increase in the number of vacancies estimated for this sector in the Fall 2002. The slight improvement in consumer confidence and spending this holiday season compared to last year created an additional need for workers in this sector. Vacancies estimated for this sector are yet 28% fewer than the vacancies estimated for the same sector in the Fall 2001 survey.

Wages offered for vacancies in retail trade are amongst the lowest in this survey. Low wages in this sector are highly biased by the fact that 40% of the vacancies reported in this sector are for Retail Salespersons positions while another 14% are for Cashier positions. These two occupations offer average wages below the \$8 level. Opportunities in highly paying occupations are also available within this sector: 12% of the sector's vacancies are

for Computer Software Engineers, Systems Software which offer some of the highest wages in this survey.

Half of the vacancies reported within the sector are full-time/permanent openings while 34% are part-time/Temporary positions. Seventy-six percent of the reported vacancies within the sector do not require a High School Diploma or a High School/GED. Twenty-one percent require a Bachelors Degree. Experience requirements are also low within this sector, 57% percent of the vacancies require no previous experience or just general work experience. Only 8% of the sector vacancies require specific experience in the occupation for which the employer is hiring. Retail Trade employers are having much less difficulty filling positions than employers overall in the region. Eighty-nine percent of the vacancies reported within the sector are not difficult to fill while only 3% are very difficult to fill. The majority of the vacant positions appear to have been open for short periods with 74% of the vacancies being open for a period of less than 30 days. Medical insurance is offered for 53% of the vacancies reported within the sector with the majority of these vacancies offering partial payment towards the medical insurance premium.

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?

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

- ◆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.

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

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.

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

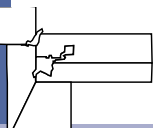
www.coworkforce.com/lmi/oeo/oeo.htm. Projections highlight growing as well as declining occupations. Public officials, educational institutions, and Government agencies can use this survey information to effectively apply resources to education, training, and job placement programs. Investments in the 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 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 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.

The occupational detail provided is supplemental data believed to be of interest to the reader. The survey design does not allow for application of this detail to the region as a whole, but it can be used to understand characteristics of those job vacancies reported. These vacancy characteristics are not estimated and therefore do contain significant bias. Approximately two-thirds of the non-estimated information comes from large employers and government agencies, but they represent approximately 40% of the employment in the region. The vacancy characteristics therefore are heavily influenced by what is being demanded by large employers and government agencies. This information is still useful and important, but the user of this data needs to keep in mind its inherent bias.

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

Methodology

The Job Vacancy Survey (JVS) conducted by the Colorado Department of Labor and Employment involves the collection, processing, and dissemination of regional job vacancies and their characteristics. The survey design allows for estimation of a job vacancy rate and the total job vacancies within a region by

industry and size of firm. Additional data related to these vacancies is informative of the occupations for which they are reported, but is not indicative of overall vacancy characteristics in the regional *universe*.

The number of vacancies—used to calculate the job vacancy rate—is an important

measure of the unmet demand for labor. With this statistic, it is possible to paint a more complete picture of the regional labor market than by looking solely at the unemployment rate, a measure of the excess supply of labor.

Survey Design

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

The survey estimates vacancies based on the ratio of vacancies to employment size in each stratification. It attempts to determine how many positions in a region are filled and unfilled. A filled position is an employee and an unfilled position is a job vacancy. Because positions are not independent of one another or evenly dispersed, we collect this information in naturally occurring clusters, *i.e.*, firms. Firms are

asked how many employees they have and how many positions they are actively recruiting. 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 37% of the employment in the region is found in large and government employers that make up only 1%–2% of the total number of firms with five or more employees. 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 Denver Metro Region survey was conducted from October 7th through December 9th, 2003. 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 80% 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 250 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 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 60 employers. In 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 13% of the employment in the sample frame, while private industry employers make up the remaining 87%. Large firms account for 21% of private industry employment in the sample frame. Firms employing from five to 249 individuals are considered small to mid-size employers, and account

for the remaining 79% of private industry employment.

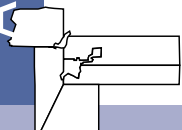
The margin of error for the overall vacancy estimate is plus or minus 2.6% or 424 vacancies at a .95 certainty level. In other words, in 95 out of 100 samples taken, the estimated number of vacancies in the region will be between 15,876 and 16,724 in the survey period. Labor Market Information is confident 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 81.7%. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is 98.9% and measures the success in obtaining data once an employer is contacted.

Denver Metro JVS Sectors	include →	NAICS Sectors
Agriculture, Forestry, Fishing & Hunting		Agriculture, Forestry, Fishing & Hunting
Mining		Mining
Utilities		Utilities
Construction		Construction
Manufacturing		Manufacturing
Wholesale Trade		Wholesale Trade
Retail Trade		Retail Trade
Transportation & Warehousing		Transportation & Warehousing
Information		Information
Finance & Insurance		Finance & Insurance
Real Estate & Rental & Leasing		Real Estate & Rental & Leasing
Professional, Scientific & Technical Services		Professional, Scientific & Technical Services
Management of Companies & Enterprises		Management of Companies & Enterprises
Administrative, Support, Waste Management & Remediation Services		Administrative & Support & Waste Management & Remediation Services
Educational Services		Educational Services
Health Care & Social Assistance		Health Care & Social Assistance
Arts, Entertainment & Recreation		Arts, Entertainment & Recreation
Accommodation & Food Services		Accommodation & Food Services
Other Services		Other Services (except Public Administration)
Government		Public Administration

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. Stratification of employers in the Denver Metro Region survey is based on these 20 NAICS sectors.

For more information on the North American Industry Classification System see *Page 41*.



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 develop-

ment 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

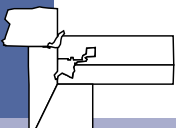
including a further breakdown of SIC's Services sector into nine new sectors.

- ◆ 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
Wholesale Trade		Transportation & Warehousing
Retail Trade		Wholesale Trade
Finance, Insurance & Real Estate		Retail Trade
Services		Accommodation & Food Services
		Finance & Insurance
		Real Estate & Rental & Leasing
		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

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 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

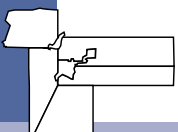
Persons 16 years of age and over who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the four-week period ending with the reference week. Persons who were waiting to be recalled to a job 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.



WORKFORCE CENTERS IN THE DENVER METRO JOB VACANCY SURVEY REGION

Arapahoe/Douglas WORKS!

Arapahoe Centre Point Plaza
14980 E. Alameda Dr.
Aurora, CO 80012
Phone: 303-636-1160
Fax: 303-636-1250

Aurora

3508 Peoria St.
Aurora, CO 80010
Phone: 303-363-9380
Fax: 303-363-9381

Bear Valley

3100 S. Sheridan Blvd., #A-5
Denver, CO 80227
Phone: 303-922-2450
Fax: 303-922-2618

Brighton

1931 E. Bridge St.
Brighton, CO 80601
Phone: 303-659-4250
Fax: 303-659-9178

Broomfield Workforce Center

6650 W. 120th Ave., A3
Broomfield, CO 80020
Phone: 303-464-5855
Fax: 303-465-0117

Commerce City

7190 Colorado Blvd., 5th Floor
Commerce City, CO 80222
Phone: 303-227-2000
Fax: 303-227-2045

Douglas County

101 Third St.
Castle Rock, CO 80104
Phone: 303-688-4825
Fax: 303-688-0292

East Campus

3532 Franklin St.
Denver, CO 80205
Phone: 303-295-1550
Fax: 303-295-4309

Front Range Community College

3645 W. 112th Ave., Rm. B-1315
Westminster, CO 80031
Phone: 303-404-5163
Fax: 303-438-9524

Littleton

1610 W. Littleton Blvd., Ste. 100
Littleton, CO 80120
Phone: 303-734-5200
Fax: 303-734-5229

Longmont

1500 Kansas Ave., Ste. 4D
Longmont, CO 80501
Phone: 303-678-8103
303-651-1510
Fax: 303-651-0288

Mayor's Office of Workforce Development

1391 N. Speer Blvd., #710
Denver, CO 80204
Phone: 720-865-5700
Fax: 720-865-5681

Quigg Newton

4440 Navajo St.
Denver, CO 80211
Phone: 303-458-4891
Fax: 303-433-3567

Stapleton Plaza

3401 Quebec, Ste. 7700
Denver, CO 80207
Phone: 720-865-0060
Fax: 720-865-0091

Thornton

550 Thornton Pkwy.
Thornton, CO 80229
Phone: 303-452-2304
Fax: 303-452-7072

Tri-County Workforce Center

730 Simms, Ste. 300
Golden, CO 80401
Phone: 303-271-4700
Fax: 303-271-4708

Westside

1200 Federal Blvd.
Denver, CO 80204
Phone: 720-944-1615
Fax: 720-944-4131

Workforce Boulder County

2905-C Center Green Court S.
Boulder, CO 80301
Phone: 303-441-3985
Fax: 303-939-0054

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



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



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