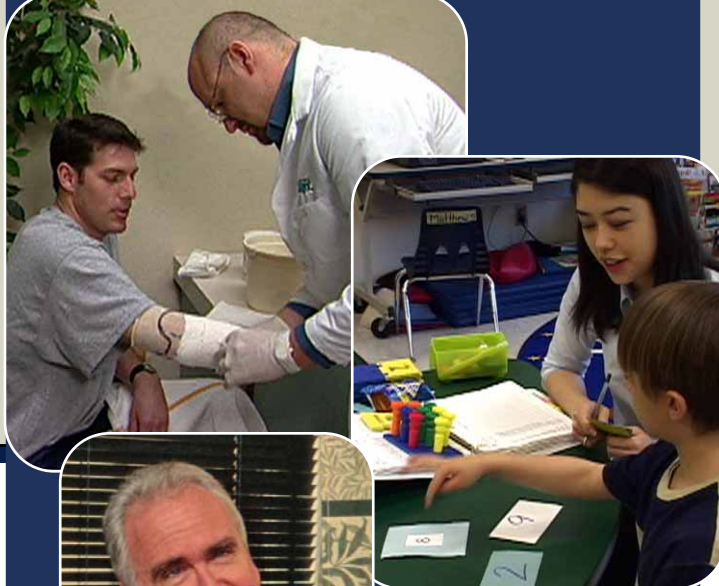


Denver Metro Region

Job Vacancy Survey

Spring 2004



Survey Conducted
April 1– June 1, 2004

Released
Summer 2004

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This publication is a product of the Colorado Department of Labor and Employment's Labor Market Information Section and was prepared by members of the Workforce Research and Analysis unit.

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State of Colorado
Bill Owens, *Governor*



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Introduction

The Colorado Job Vacancy Survey

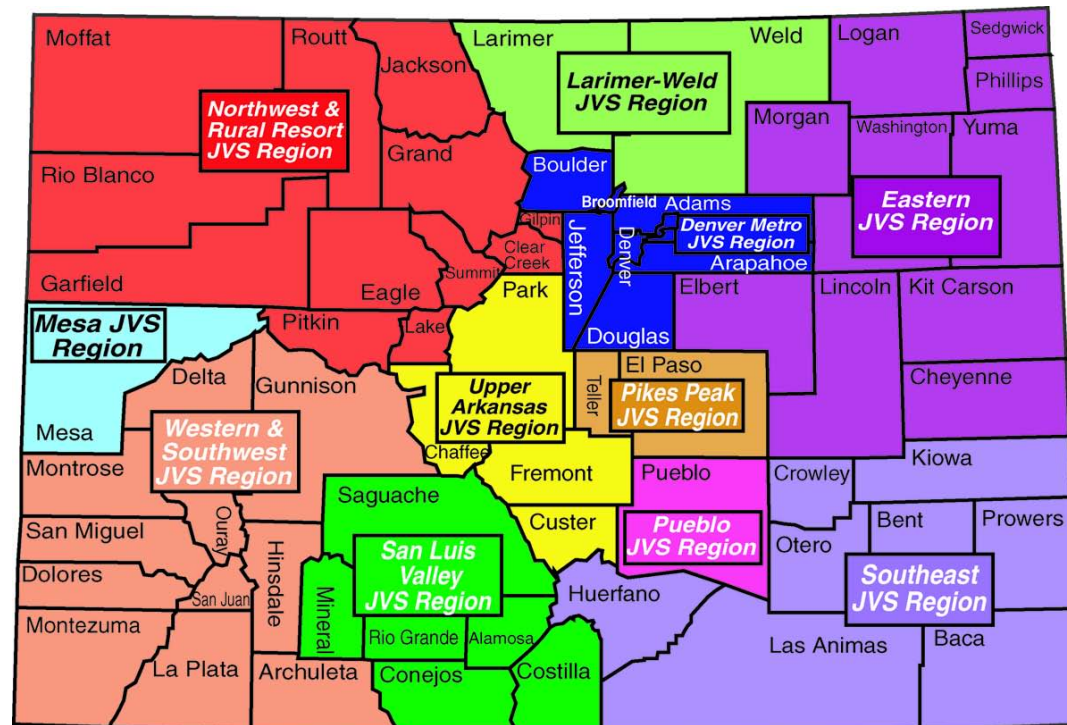
The unemployment rate, along with the level and growth rate of employment, has been used as an indicator of labor market conditions for decades. While this indicator provides information about changes in the supply and demand for labor, it reveals nothing about the skills most sought after by employers. 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

Figure 1: Colorado Job Vacancy Survey Regions



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

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

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

Executive Summary

The Spring 2004 Denver Metro Job

Vacancy Survey (JVS) was conducted from April 1st through June 1st, 2004. 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.

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 5,884 employers, representing 37% of the region's employment, responded to the survey. Of these, 320 are large employers, 330 are Government employers and 5,234 are small to mid-size employers. The survey has an effective response rate of 84.8% and a cooperation rate of 99.4%. The margin of sampling error for the overall vacancy estimate is plus or minus 1.75% or about 290 vacancies.

Major Findings of Survey:

- ◆ Vacancies open for immediate hire total 16,600, compared to 14,500 a year ago.Page 8
- ◆ The overall average wage is \$15.50 per hour.Page 8
- ◆ Fourteen percent of the employers responding to this survey report at least one vacancy.Page 8
- ◆ The Government sector has the most vacancies.Page 8
- ◆ The Finance and Insurance sector offers the highest average wage.Page 8
- ◆ Denver County has the most vacancies, while Douglas County has the fewest.Page 10
- ◆ Small to mid-size employers account for 46% of the total vacancies.Page 11
- ◆ Of the openings, 79% are full-time positions and 83% are for permanent employment.Page 12
- ◆ Post-secondary education is required for 58% of the openings.Page 13
- ◆ Related or specific experience is required by 79% of all openings.Page 14
- ◆ Compared to Spring 2003, vacancies reported as not difficult to fill decreased from 59% to 50%, while vacancies reported as very difficult to fill increased from 7% to 18%.Page 15
- ◆ Medical benefits are offered for 67% of the vacancies.Page 17



Regional Information

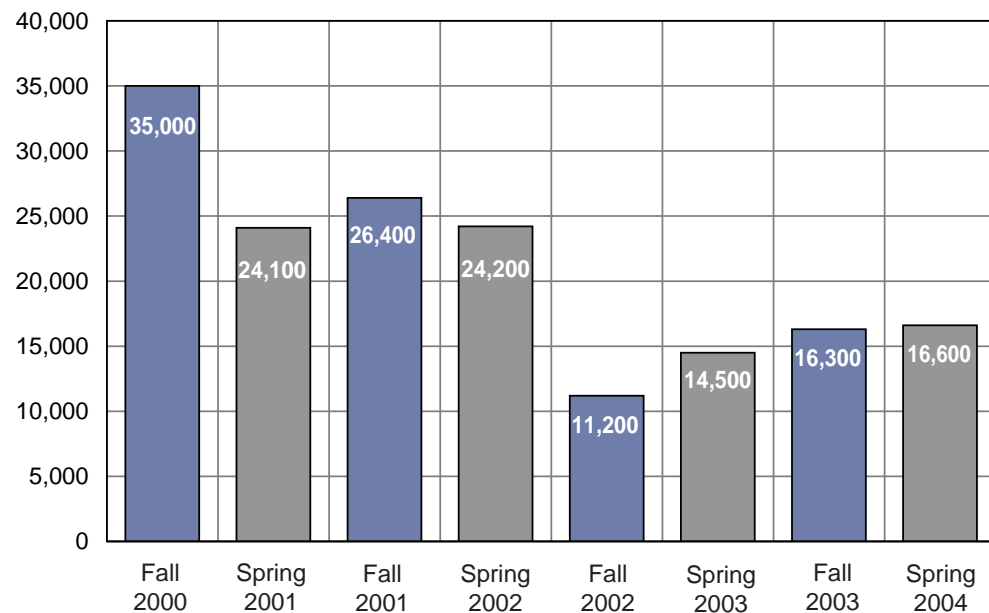
The Denver Metro Region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties. Until a complete census of the county's employers is compiled, Broomfield County will continue to be surveyed as part of the Boulder Metropolitan Statistical Area.

According to the State 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 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 it is estimated to be home to 2.5 million residents, representing 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 & Social Assistance; Government; Construction; and Accommodation & Food Services. Employment is lowest in the Mining & Agricultural, Forestry, and Fishing & 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 1,377,860 individuals from a labor force of about 1,444,614 in May 2004. Since conducting the Spring 2003 survey, the labor force increased by 22,000, while employment increased by 40,800 jobs. The unemployment rate significantly dropped from 6.0% to 4.6% between the two periods as the number of unemployed decreased by 18,800. Unemployment rates peaked in

Figure 2: Historical Vacancies—Denver Metro Region



	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004
Vacancies	35,000	24,100	26,400	24,200	11,200	14,500	16,300	16,600
Employment	1,320,773	1,341,197	1,343,048	1,330,038	1,343,484	1,350,265	1,357,994	1,377,860
Unemployed	30,984	36,157	71,100	75,397	82,790	79,326	82,378	66,754
Unemployment Rate	2.3%	2.6%	5.0%	5.4%	5.8%	5.5%	5.7%	4.6%

Source: CDLE, Local Area Unemployment Statistics, May 2004

early 2002 at levels above 6%, which have not been experienced in the region since early 1993. In May, the unemployment rate was highest in Denver County at 5.5%, followed by Adams County at 5.4%, with the lowest rate for any county in the region occurring in Douglas County at 3.2%.

In spite of the improving national and local economies, the 16,600 estimated vacancies in this survey represent only a 14% increase since the Spring of 2003, and less than a 2% increase since the Fall of 2003. Yet,

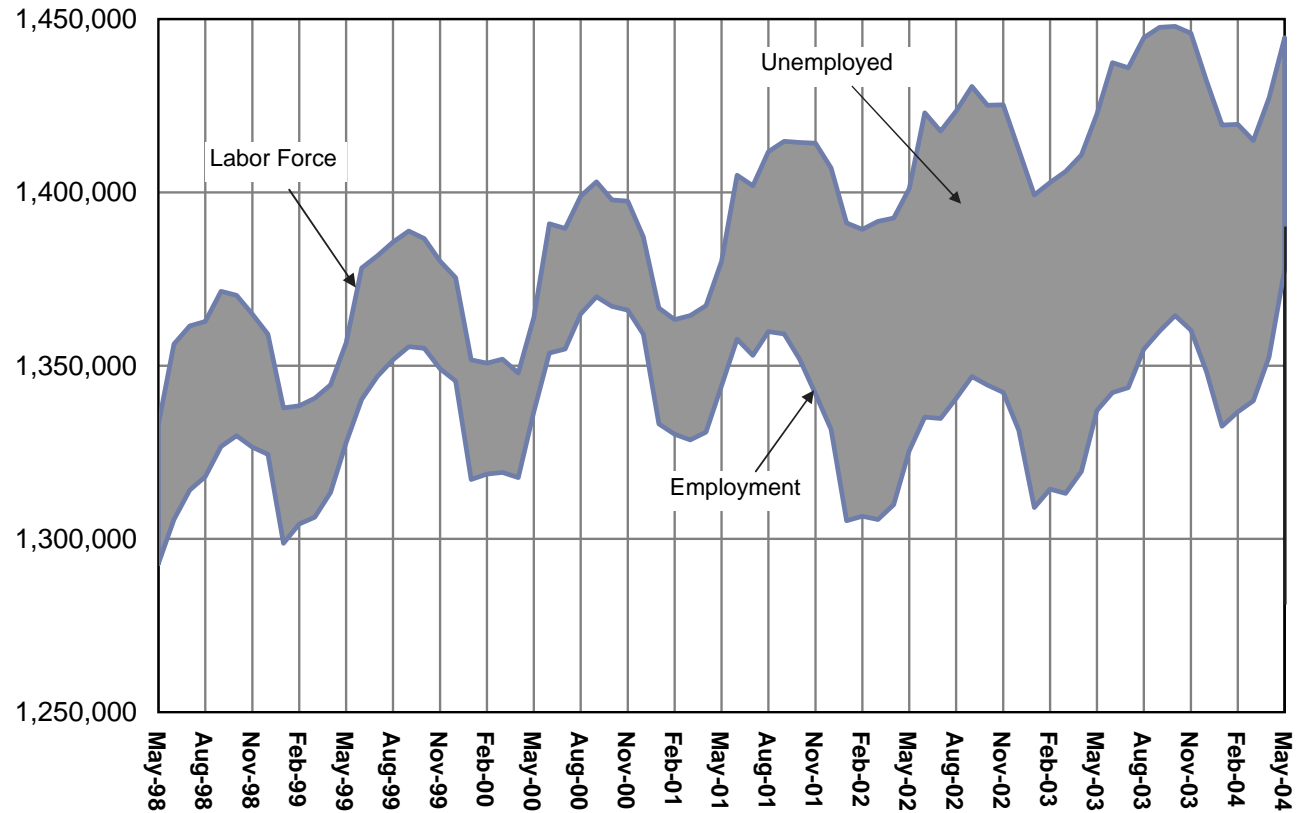
Regional Information —continued

results from this survey may still be inspiring since the number of vacancies estimated in this survey are higher than in the Fall of 2003. Typically, vacancy estimates for Fall Surveys are higher than those estimated in the Spring Surveys. The reversal of this trend since the Fall 2002 survey may indicate an upward trend for hiring activities. Another encouraging finding of this survey is the balanced distribution of vacancies between the high-paying sectors such as Government and Health Care & Social Assistance sectors and lower-paying sectors such as Accommodation and Food Services and Retail Trade.

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 employment over the years. The region's employment has grown annually at an average rate of only 0.3% from May, 2000 to May, 2004. Annual employment in the region decreased by 0.1% between 2000 and 2001 and by 1.2% between 2001 and 2002. A slight improvement to employment of 0.9% occurred between 2002 and 2003. Improvements in the labor market are expected to continue through the current year, as the average employment for the months of January through May is 2.2% higher than the average for the same months in 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, the average annual employment growth exceeded that of the labor force. Record low unemployment rates were registered in these years at levels

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



Source: CDLE, Local Area Unemployment Statistics, May 2004

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 and *Figure 4* provide visual representations of unemployment. In *Figure 3*, unemployment is represented by the gap between the labor force and the employment trend lines; the more vertical distance between the two lines, the greater the number of unemployed.

Analysis of historical employment trends for the Denver Metro Region indicates that employment levels are at their lowest levels in January and

Regional Information —continued

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 5: Unemployment Rates for June 2004
(Not Seasonally Adjusted)

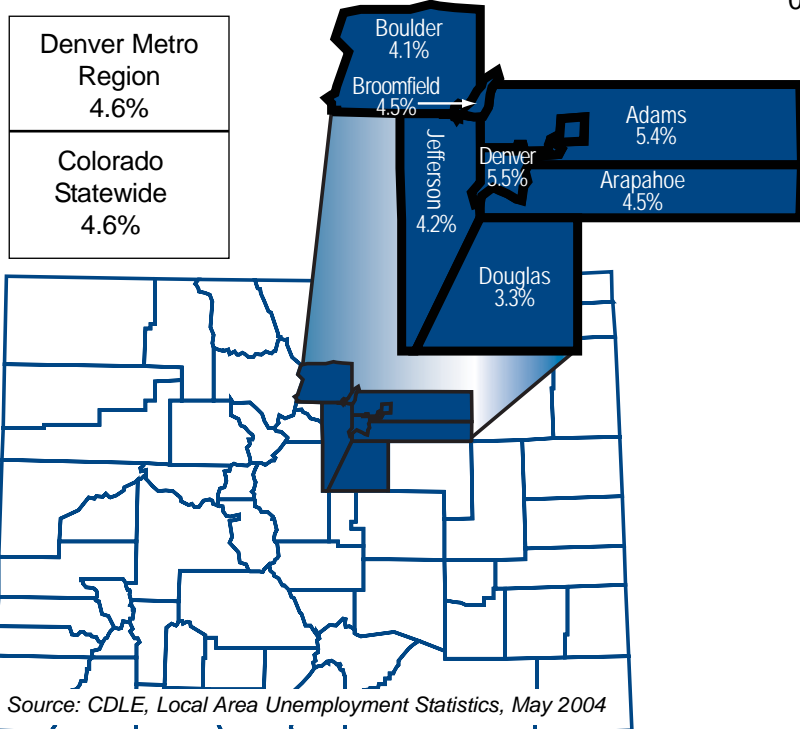
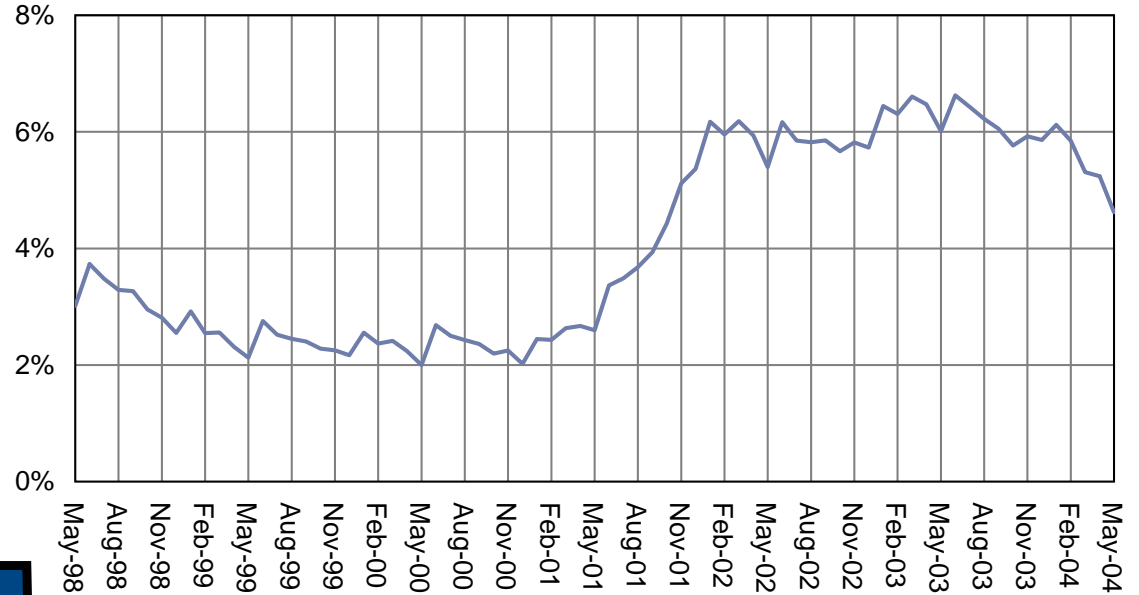


Figure 4: Denver Metro Region Unemployment Rate Trend
(Not Seasonally Adjusted)

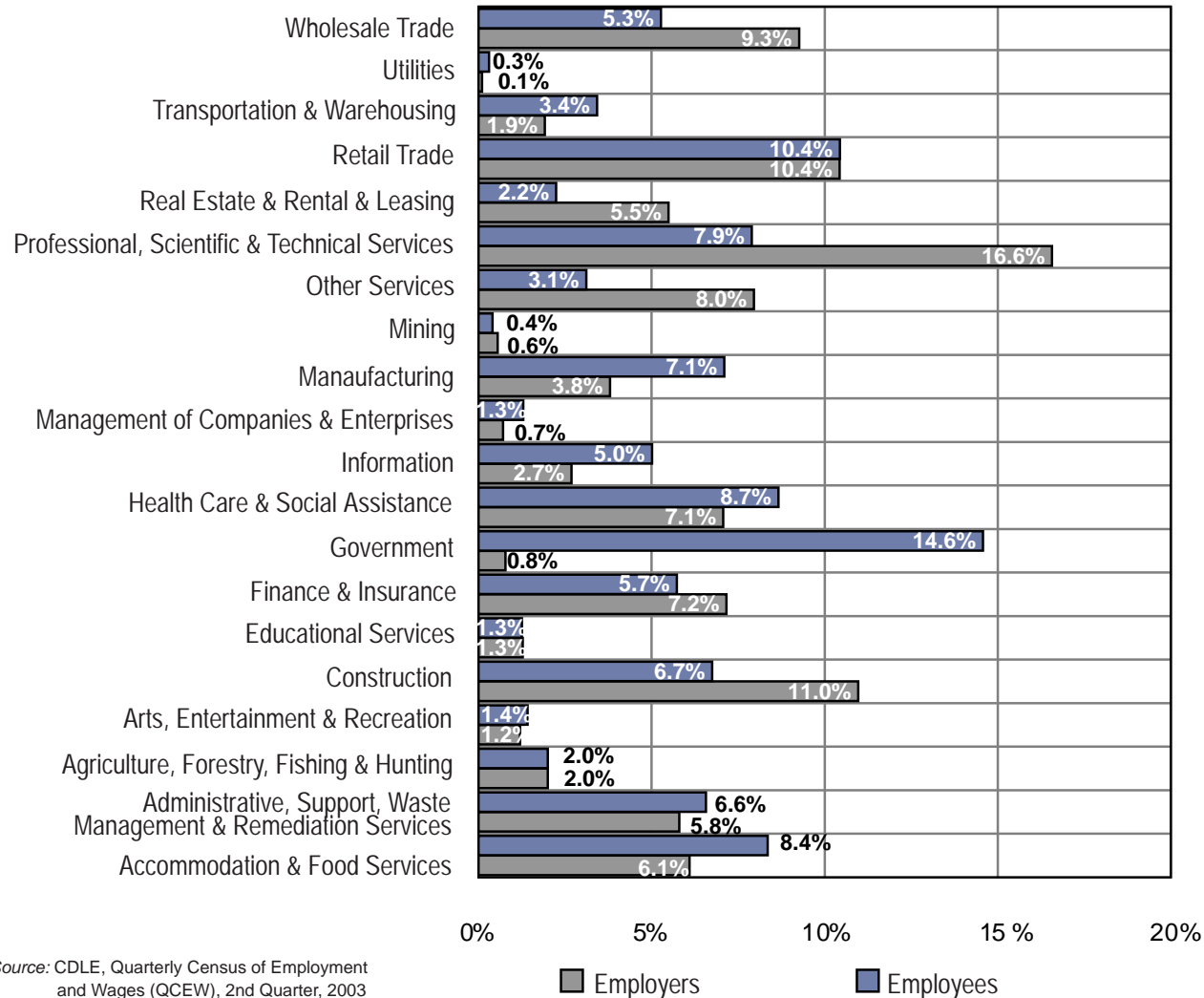


Source: CDLE, Local Area Unemployment Statistics, May 2004

The non-seasonally adjusted unemployment rate in the region was as high as 6.6% in March and June of last year but has gradually declined since then. The 4.6% rate estimated for May of this year is the lowest rate recorded since November, 2001. This rate is 1.4% lower than that of May, 2003. Between May, 2003 and May, 2004, the unemployment rate decreased for all counties in the Denver Metro Region, with significant drops in the rates of Arapahoe and Jefferson counties. Over 40,000 workers were added to the region over the year. Of these, 9,500 were in Jefferson, 9,100 in Denver and almost 9,000 were in Arapahoe County.

Regional Information —continued

Figure 6: Denver Metro Region Employers and Employees, 2nd Quarter, 2003



Firms in the Denver Metro Region are now grouped into 20 sectors under the North American Industry Classification System (NAICS). This system has replaced the Standard Industrial Classification System (SIC) and better reflects 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 program (QCEW), 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.

Although the Government sector comprises less than 1% of the region's employers it accounts for 14.6% of the region's total employment. Thirty-six percent of the sector's employment in the region is concentrated in Denver County while Jefferson County accounts for another 18%. 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 10.9% of the region's employment and 10.4% of the region's employers. The Denver Metro Region accounts for 55% of Colorado's employment in this sector.

Source: CDLE, Quarterly Census of Employment and Wages (QCEW), 2nd Quarter, 2003

Regional Information —continued

Healthcare Services & Social Assistance, with 8.7% 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. Difficulties in this sector appear to have continued through 2003 as numbers show that almost 6,400 jobs were lost in the sector between the second quarter of 2002 and the second quarter of 2003 in the Denver Metropolitan region. The 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. Of the manufacturing industry employment in the region, 27% is concentrated in Denver County, 22% in Boulder County, and 20% in Jefferson County. The manufacturing activity in the region showed significant expansion during the first half of 2004. The Purchasing Managers' Index (PMI), an index produced by the College of Business at the University of Colorado at Denver, showed a reading of 63.9 in June. This reading is the highest in a series of consecutive months of continuous growth. A reading above 50 indicates increasing activity in manufacturing. The index showed a reading of 58 in May of this year.

The Denver Metro Region has a sizeable Construction sector, which makes up 6.7% of the region's employment. According to the Current Employment Statistics (CES) produced by the Colorado Department of Labor and Employment, the Construction industry lost 5,600 jobs between June, 2003 and June, 2004. The Specialty Trade Contractors sub-sector accounts for the majority of job losses within the industry. The Heavy & Civil Engineering Construction sub-sector lost nearly 400 jobs over the year.

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 2.2% of the employees in the Denver Metro Region. These sectors are also small at the state level.



Survey Findings

Estimated Vacancies: JVS Sectors and Employer Size

During the survey period, an estimated 16,600 vacancies were open for immediate hire in the Denver Metro Region. The overall average wage for the reported vacancies in this survey is \$15.50. 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.

Fourteen percent of the employers responding to the survey reported having at least one vacancy.

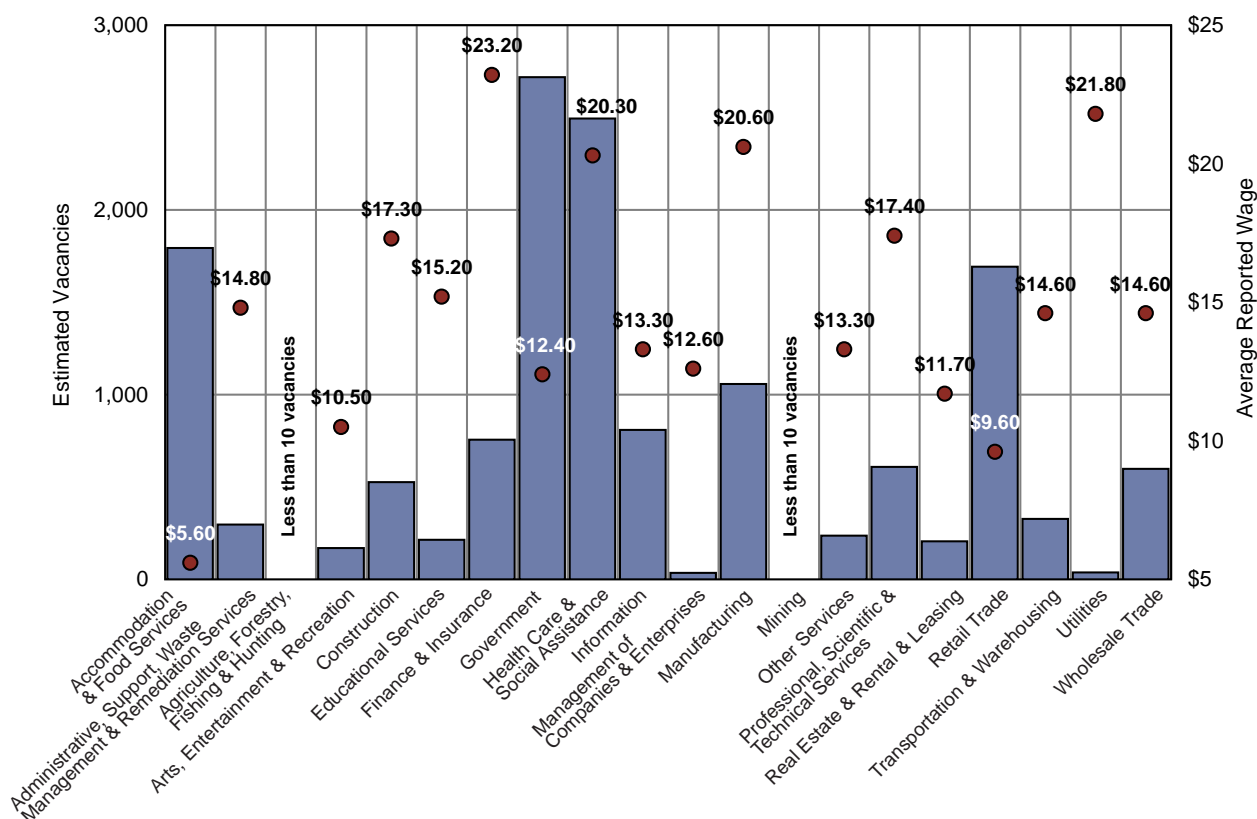
The overall vacancy rate found in this survey is 1.3%. The overall vacancy rate is calculated by dividing the estimated vacancies by the sum of the estimated vacancies and total employment. The vacancy rate for the Spring 2003 survey was 1.2%.

Hiring activity in this survey is highest in the Government Sector followed by the Health Care & Social Assistance sector. Together, they account for 23% of the regional employment and 36% of the estimated vacancies. Health Care & Social Assistance accounted for the highest number of vacancies in the Spring 2003 survey, however, hiring activity in the Government sector was much lower then. Average wage reported by employers within the Healthcare & Social Assistance sector is only exceeded in this survey by

wages offered in the Finance and Insurance and Utilities sectors. The Government Sector offers an average wage that is in the mid range. Higher wages commanded by the Healthcare & Social Assistance sector are due to the high demand for Registered Nurses. Twenty-one percent of the vacancies reported in the Government sector are Building and Grounds Cleaning and Maintenance occupations, while 18% are Education, Training, and Library occupations.

A relatively significant number of vacancies are found in the Accommodation & Food Services; Retail Services; and the Manufacturing sectors. At \$5.60 per hour, Accommodation & Food Services, which accounts for 12% of the estimated vacancies, offers the lowest average wage among all sectors. Sixty-nine percent of the vacancies reported in this sector are for Food Preparation & Serving Related occupations. The Retail Trade sector accounts for slightly less than 12% of the estimated vacancies and offers the second to lowest

Figure 7: Estimated Vacancies and Average Wages by JVS Sectors



Survey Findings *Estimated Vacancies: JVS Sectors and Employer Size – continued*

average wage among all sectors. Fifty-four percent of the vacancies reported within Retail Trade are for Sales and Related occupations.

The \$20.60 average wage offered by Manufacturing occupations is among the top four wages offered by all sectors surveyed. Only 7% of all estimated vacancies are accounted for by this sector. High wages offered in this sector are due to the abundance of highly skilled vacancies for which employers are hiring. Twenty percent of the reported vacancies in this sector are for Management occupations and 18% are for Computer and Mathematical occupations.

Information accounts for slightly over 5% of all estimated vacancies. This sector offers an average wage below the overall average. Similarly, the Finance and Insurance sector accounts for 5% of the estimated vacancies, however, its offered wages are the highest in the region. Almost one-third of the vacancies open within this sector are for Management occupations.

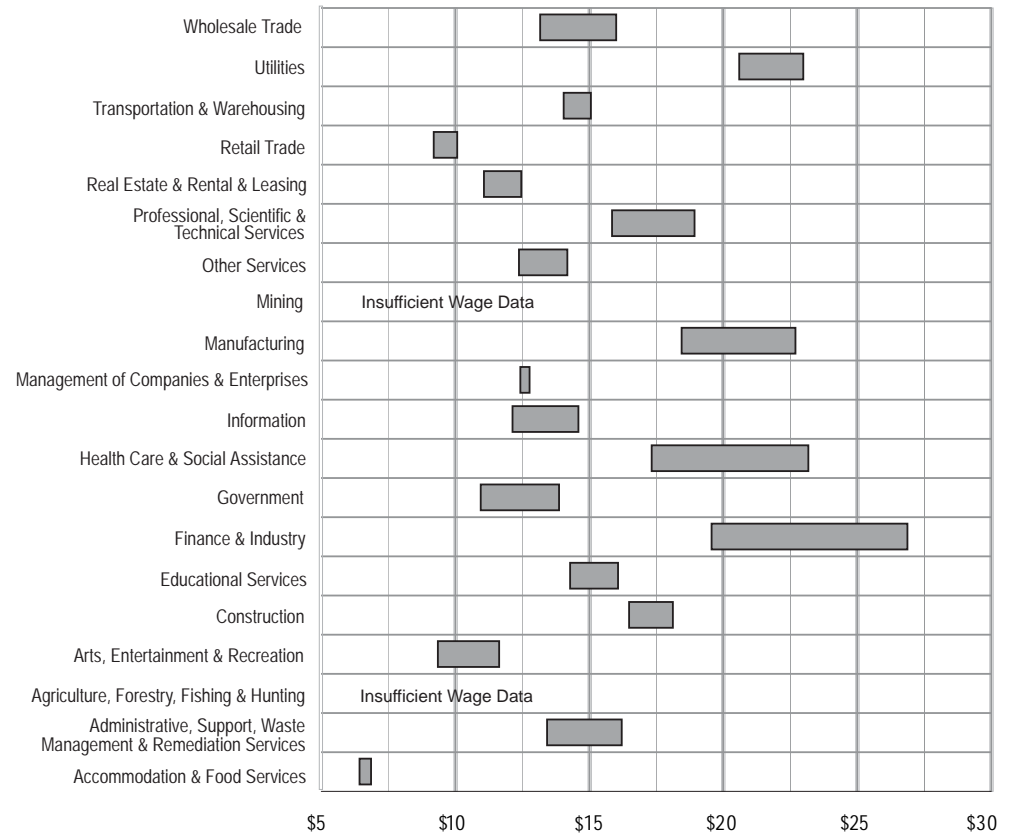
Few vacancies are estimated in the Professional, Scientific & Technical Services, Wholesale Trade, and Construction sectors. Although activity within these sectors is slow, wages offered are above the overall average with the exception of the Wholesale Trade sector. Thirty-seven percent of the vacancies reported in the Wholesale Trade sector are for occupations in Office & Administrative Support operations.

Hiring activity is low in all remaining sectors, accounting for only 8% of all vacancies combined. Less than 10 vacancies are estimated in the Agriculture, Forestry, Fishing & Hunting and Mining sectors. Wage information reported in both of these sectors is less than the required level needed for reporting.

Wages reflect labor force supply and demand along with the set of skills and experience required 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 Finance & Insurance, Health Care & Social Assistance, and Manufacturing sectors offer the widest wage ranges. A wide range of wages

Figure 8: Reported Average Wage Ranges by JVS Sectors



in the Health Care & Social Assistance sector reflects employers' need for Health Care workers at all levels of education and experience.

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

Survey Findings *Estimated Vacancies: JVS Sectors and Employer Size –continued*

The shares of vacancies estimated in Denver and Boulder counties exceed their individual shares of regional employment. Boulder County has the highest vacancy rate of 1.5%, followed by Denver County at 1.3%.

Jefferson County has the most employment in the region and a vacancy rate of 0.92%, which is exceeded by Arapahoe County at 0.94%. Adams County, with the lowest vacancy rate in the region at 0.78%, was also low in the Spring of 2003. Weak hiring activity in the Transportation & Warehousing sector may have resulted in this low vacancy rate.

Arapahoe County offers the highest average wages in the Denver Metro Region. Average wages in this county are affected by the concentration of high paying jobs in Business and Financial Operations, Management, Healthcare Practitioners & Technical, and Computer & Mathematical occupations, which account for 42% of the vacancies. On the contrary, the lowest average wages are offered in Boulder County. High concentrations of low paying occupations such as Building & Grounds Cleaning & Maintenance (25%) and Personal Care & Service (10%) occupations in Boulder County may have caused average wages to lag behind those in other counties.

Adams and Jefferson County have identical average wages. Adams County has a high concentration of Healthcare Practitioners & Technical, Computer & Mathematical, and Transportation & Material Moving occupations. Jefferson County has a high concentration of Architecture and Engineering, Management, and Healthcare Practitioners & Technical occupations.

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

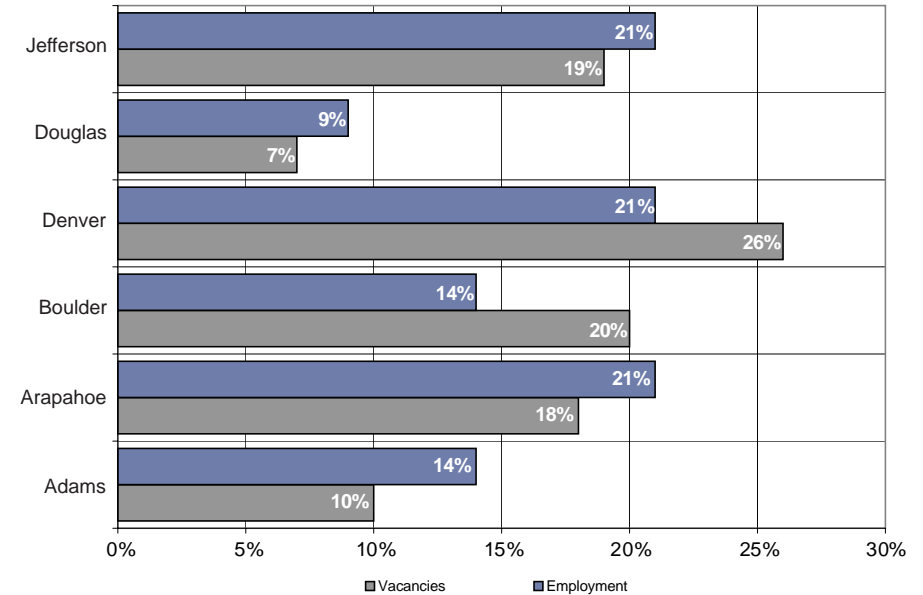
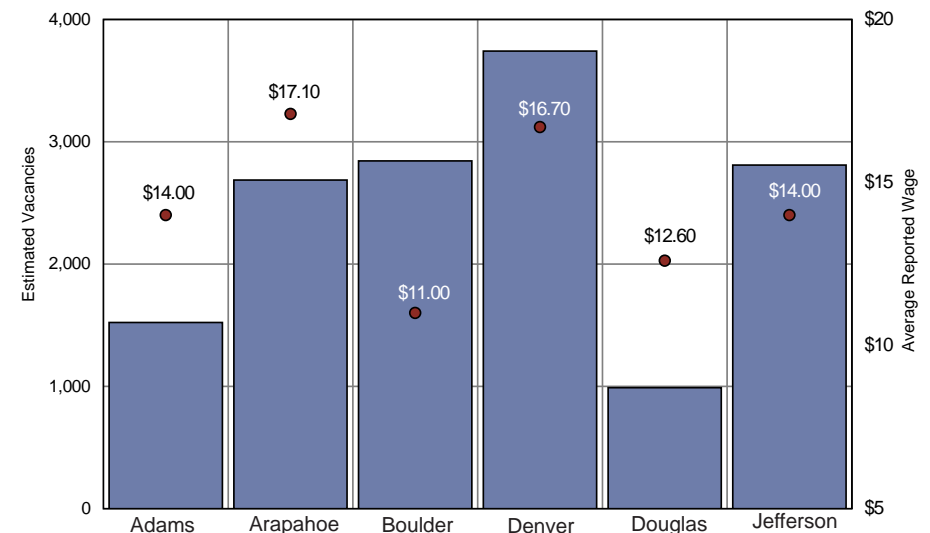


Figure 10: Vacancies and Wages by County



Survey Findings *Estimated Vacancies: JVS Sectors and Employer Size — continued*

Small to mid-size employers account for 66% of the region’s employment in the survey sample and 46% of the estimated vacancies. They have the lowest vacancy rate at 1.1%. Accommodation & Food Services employers reported the highest single concentration of vacancies (22%) within this size class, followed by Retail Trade at 17%. Small to mid-size employers accounted for 53% of the vacancies in the Spring 2003 Survey.

Large employers account for 20% of Denver Metro Region employment in the survey sample. Twenty-five percent of the region’s vacancies are estimated within this class size. Health Care & Social Assistance employers, who account for only 10% of all large employers in the region, reported 34% of the vacancies within this size class.

Vacancies estimated in the Government sector this time around are more than double the number estimated in the Spring 2003 Survey. Sixteen percent of the vacancies are estimated to be with government employers, compared to 8% a year earlier. Government accounts for 14% 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 does estimate 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 1.4%. Thirteen percent of the vacancies, or approximately 2,000 vacancies, are estimated to be open within this size category. This number is about 8% higher than the estimated vacancies for micro employers in the Spring 2003 survey.

Of any size class, large employers offer the highest average wage of \$18.20. Once again, high wages in this category of employers are due to the high presence of vacancies in the Health Care & Social Assistance sector. A high concentration of Building & Grounds Cleaning & Maintenance and Education, Training, & Library occupations reduced the average Government sector wage to \$12.40. Small to mid-size firms offer the lowest average wage and the narrowest range between the average minimum and maximum. Sales & Related, Office & Administrative Support, Transportation & Material Moving, and Food Preparation & Serving Related occupations account for 52% of the vacancies in this class size. Small to mid-size employers offered the lowest average wages in the Spring 2003 survey as well.

Figure 11: Estimated Vacancies and Average Wages by Employer Size

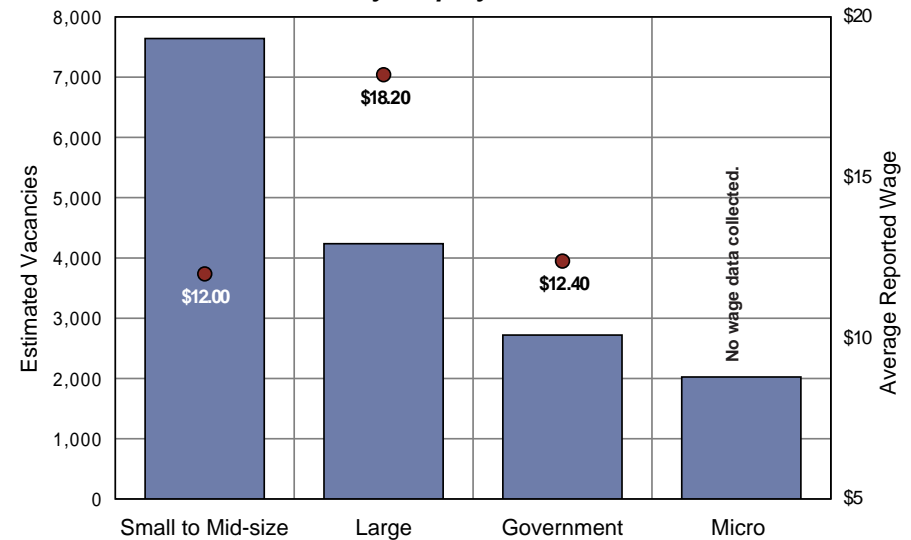
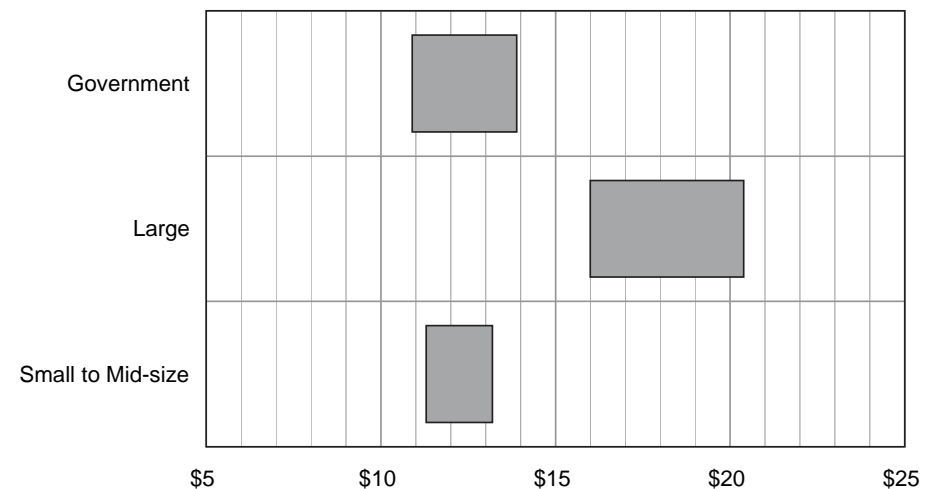


Figure 12: Reported Average Wage Ranges by Employer Size



Survey Findings

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

Eighty-four percent of the vacancies for which employment status is reported are permanent positions. Permanent positions accounted for 78% of the vacancies last year, in the Spring 2003 report. Full-time/Permanent positions offer an average wage that ranges between \$13.90 and \$18.00 while Part-time/Permanent vacancies offer average wages that range between \$11.00 and \$12.80. Employers in the Government sector has 28% of the full-time/permanent positions. Health Care & Social Assistance has another 18%. Sixteen percent of all full-time/permanent positions are for Healthcare Practitioners and Technical occupations.

Part-time/permanent positions account for 12% of the vacancies. Of these, 59% are reported with large employers, and 50% are in the Health Care & Social Assistance sector. These positions offer the second highest average wage of \$11.90.

Seventy-seven percent of the part-time/temporary positions are with Government employers, while 15% are with large employers. Twenty-six percent of the part-time/temporary positions are for Arts, Design, Entertainment, Sports, & Media occupations while another 21% are for Building & Grounds Cleaning & Maintenance occupations. The average wage offered for part-time/temporary positions is the second from the lowest among all employment status categories.

Full-time/temporary positions, on the other hand, account for the smallest proportion of vacancies, 7%. This category of vacancies offer the highest average wage of \$8.30. Building and Grounds Cleaning and Maintenance and Protective Service occupations make up over half of the full-time/temporary vacancies reported.

Figure 13: Vacancies by Employment Status

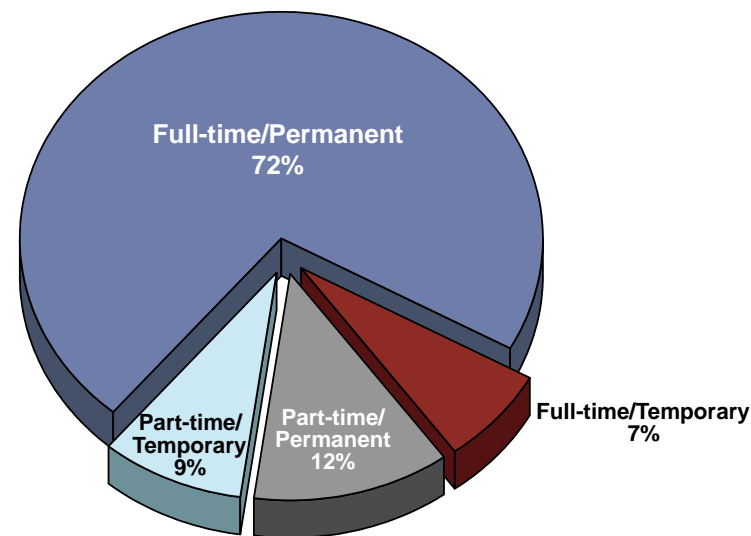
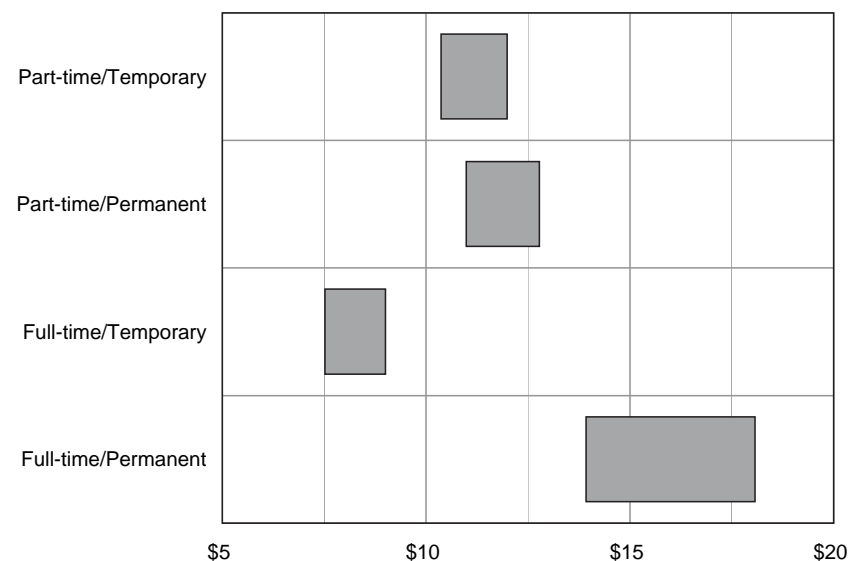


Figure 14: Reported Average Wage Ranges by Employment Status



Survey Findings *Vacancies: Employment Status, Education and Experience Requirements—continued*

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 type of education and experience levels are in highest demand.

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

As with the Spring 2003 survey, positions requiring a bachelor's degree have the highest concentration of vacancies in this survey. The percentage of positions requiring advanced degrees slightly increased from 4% to 5% between the two surveys. Education, Training, & Library and Management occupations account for 64% of the vacancies requiring an advanced degree.

For vacancies requiring vocational training or certification, 49% are reported in Government and 27% in Health Care and Social Assistance. Twenty-three percent of these openings are for Registered Nurse 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. Wages offered in this survey fall in line with this general notion. Fifty-three percent of the vacancies requiring either Bachelor's or Advanced degrees are Management, Computer & Mathematical, or Healthcare Practitioners & Technical occupations.

Figure 15: Vacancies by Education

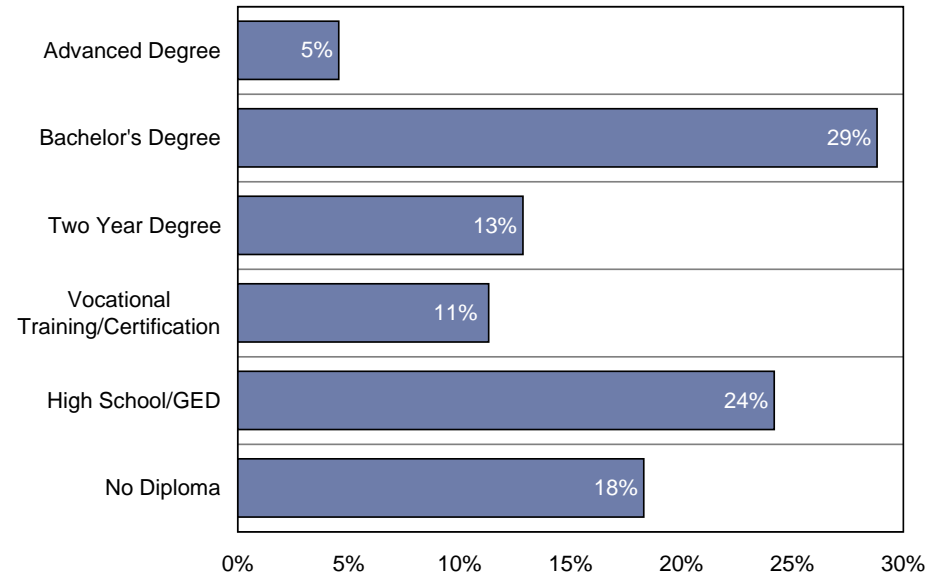
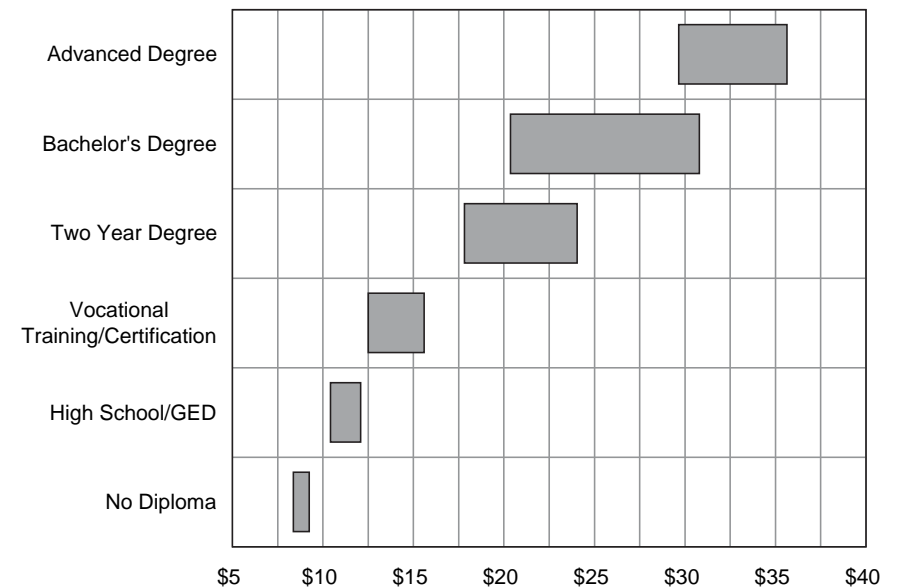


Figure 16: Reported Average Wage Ranges by Education



Survey Findings

Vacancies: Employment Status, Education and Experience Requirements—continued

Figure 17: Vacancies by Experience

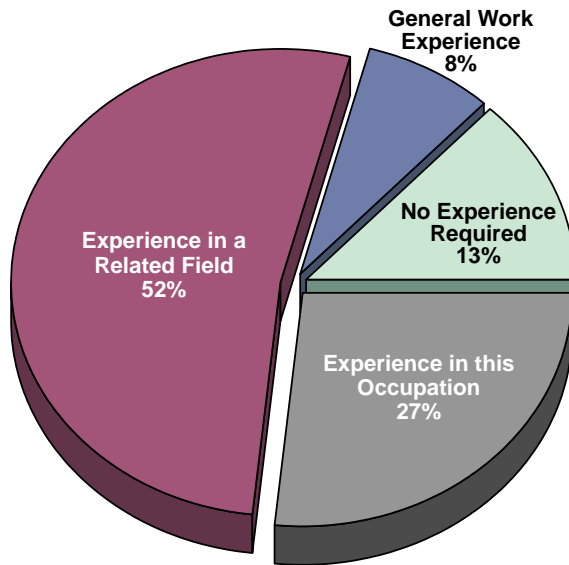
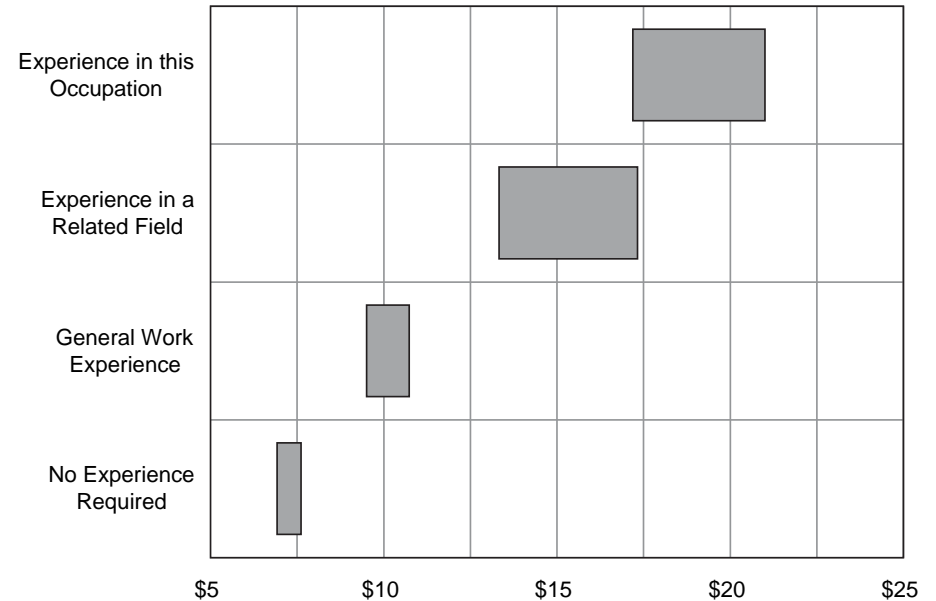


Figure 17 shows the breakdown of vacancies by experience requirements. Results from this survey show employers lowering the levels of experience required to fill vacancies, compared to positions open a year earlier. The percentage of positions requiring specific experience in the occupation significantly decreased from 43% in the Spring 2003 Survey to 27% in this report. Between the two surveys, positions requiring experience in a related field increased from 35% to 52%. Minimal changes occurred in the percentage of vacancies requiring general work experience or no experience requirements.

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.

Figure 18: Reported Average Wage Ranges by Experience



Healthcare Practitioner & Technical occupations are the most demanded occupations that require high levels of experience. Of the vacancies which require experience in the specific occupation, 25% are Healthcare Practitioner & Technical, 14% are Management, and 10% are Computer & Mathematical occupations. Topping the list again, with 18% of all vacancies requiring experience in a related field, is the Healthcare Practitioner & Technical occupational group.

One-third of the vacancies requiring general work experience are Office and Administrative Support occupations and 15% are Sales and Related occupations. Over half of the vacancies in Building & Grounds Cleaning & Maintenance and Sales & Related occupations require no previous work experience.

Vacancies: Difficulty to Fill and Time Open for Hire

Survey Findings

Employers' ability to find and hire qualified candidates is an important indicator of the supply side of the labor force. More employers claim higher levels of difficulty in filling their vacant positions in this survey, compared to the Spring 2003 Survey.

The percentage of vacancies reported as not difficult to fill had a significant drop from 59% to 50% between the two surveys. One-third of the vacancies reported in this survey as not difficult to fill are Sales & Related and Office & Administrative Support, while 12% of them were Food Preparation & Serving Related. Wages offered for these occupations are among the lowest in the survey. The proportion of positions reported as somewhat difficult to fill slightly decreased to 32%, compared to 34% in the Spring 2003 Survey.

Most noticeable is the increase in the percentage of positions perceived by employers as very difficult to fill. This percentage increased from 7% to 18% between the two surveys. Sixty-six percent of the vacancies reported as very difficult to fill are Healthcare Practitioners and Technical occupations.

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 are found to offer higher and wider ranges of wages as the perceived level of difficulty increases. Vacancies considered very difficult to fill offer the highest average wage of \$21.70, followed by an average wage of \$13.95 offered for positions reported as somewhat difficult to fill. Vacancies perceived as not difficult to fill offer an average wage of \$10.95.

Figure 19: Vacancies by Difficulty to Fill

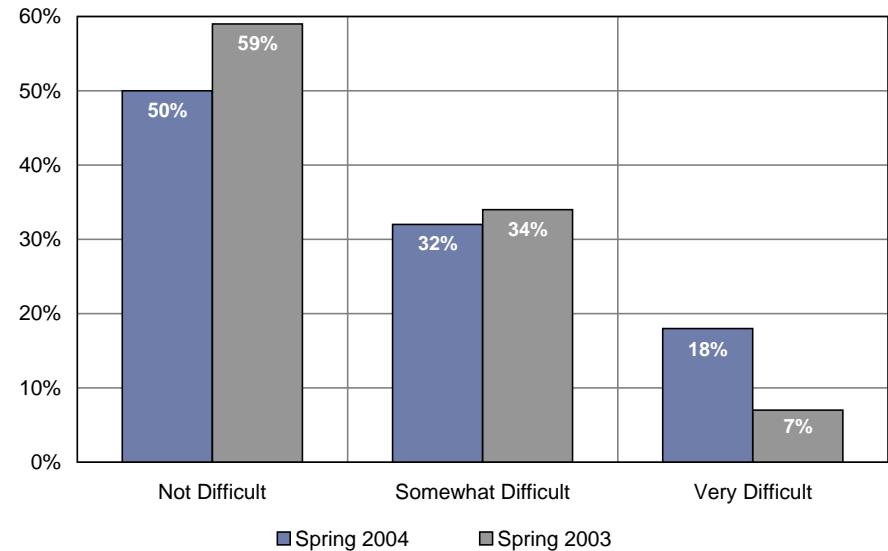
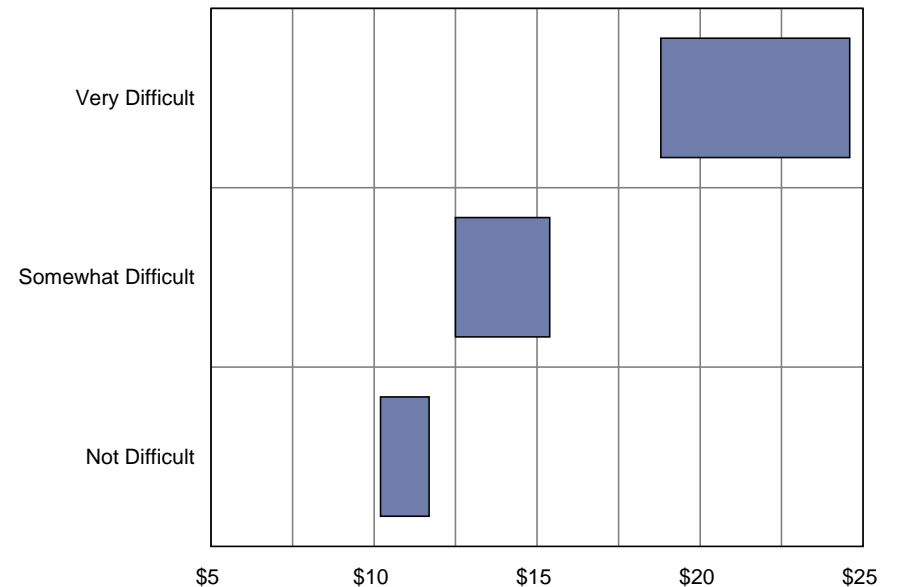
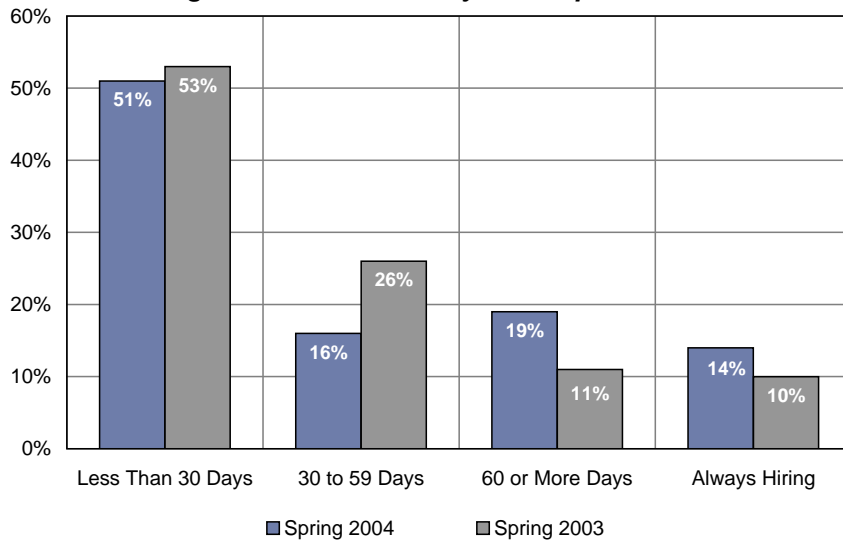


Figure 20: Reported Average Wage Ranges by Difficulty to Fill



Survey Findings *Vacancies: Difficulty to Fill and Time Open for Hire —continued*

Figure 21: Vacancies by Time Open for Hire

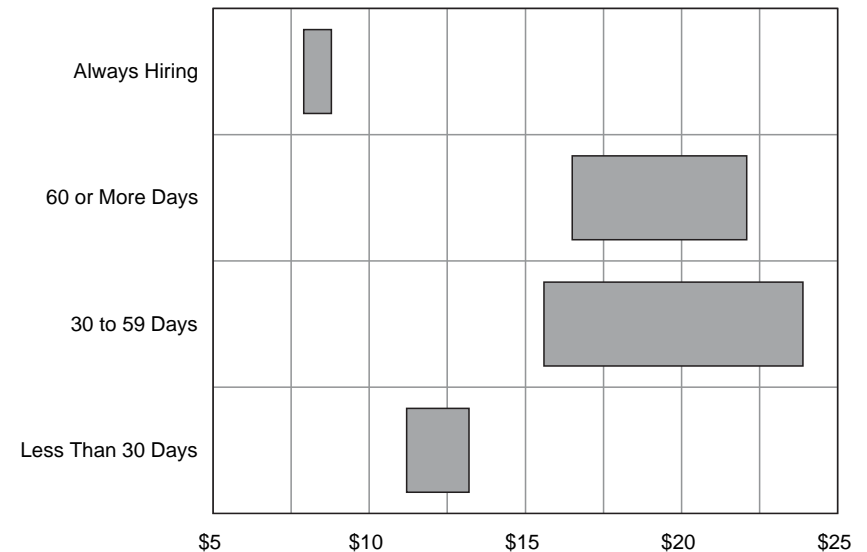


There is a slight increase in the time periods for which positions remain open between this survey and the Spring 2003 Survey. The percentage of vacancies open for less than 30 days decreased from 53% to 51%, while the percentage of positions open between 30 and 59 days decreased from 26% to 16% between the two surveys. Significantly more positions remain open for 60 or more days and for positions which employers are always hiring. Sixty percent of the positions open for 60 or more days are Healthcare Practitioners and Technical occupations. Half of the positions which employers are always hiring include Building & Grounds Cleaning & Maintenance and Sales & Related 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. Seventy-six percent of the positions open for less than 30 days are reported as not difficult to fill. Similarly, 78% of the positions reported as not difficult to fill have been open for less than 30 days. On the other hand, positions that remain open for longer periods are perceived to be more difficult to fill. Seventy 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 and position open for 60 days or more. Sixty-nine percent of the

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



positions open between 30 and 59 days are reported as somewhat difficult to fill. Employers also report that 43% of the positions perceived as somewhat difficult to fill have been open for 30 to 59 days. Sixty-nine percent of the positions reported by employers as very difficult to fill have been open for more than 60 days. Moreover, 80% of the positions open for 60 or more days are reported as very difficult to fill.

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. Fifty-three percent of positions always open for hire are reported as not difficult to fill. Another 43% 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 Building & Grounds Cleaning & Maintenance, Sales & Related, and Transportation & Material Moving occupations.

Positions open 30 to 59 days and those open for 60 or more days are the only ones offering average wages above the overall average wage. Forty percent of the positions within these two categories are for Healthcare Practitioners & Technical occupations. Fifty-eight percent of Healthcare Practitioners & Technical vacancies have been open for more than 60 days.

Additional Compensation

Survey Findings

Medical Insurance

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

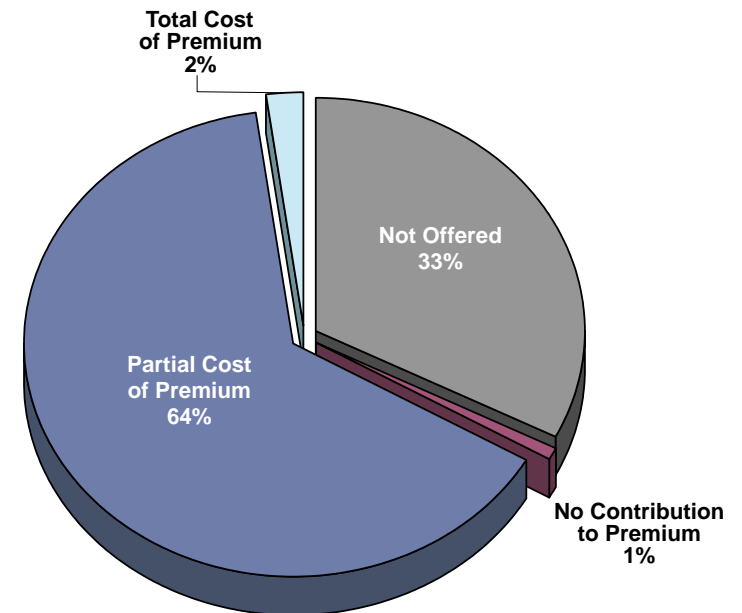
Medical benefits are offered for only 66% of the vacancies reported in this survey, compared to 81% in the Spring 2003 report. Twenty-five percent of the vacancies offered with no medical insurance coverage are for Building & Grounds Cleaning & Maintenance occupations, and another 25% are for Personal Care & Service and Protective Service occupations. Of the vacancies offered with medical insurance benefits, 12% are Building & Grounds Cleaning & Maintenance, 13% are Personal Care & Service, and 19% are Protective Service occupations. Almost all vacancies in Architecture & Engineering, Business & Financial Operations, Computer & Mathematical, and Management occupations are offered with medical insurance benefits.

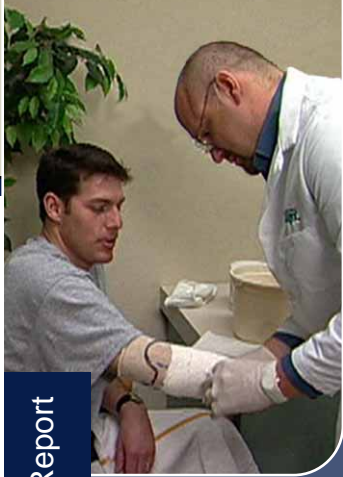
Construction, Manufacturing & Utilities each provide medical insurance benefits, offering them to 97% or more of their vacancies.

Sign-On Bonus

Employers offer sign-on bonus information for 89% of the reported vacancies. A sign-on bonus is offered for slightly more than 1% of the vacancies. Of the positions offering sign-on bonuses, 94% are reported within the Building & Grounds Cleaning & Maintenance occupations. The average bonus amount for these vacancies is \$100.

Figure 23: Employers' Contribution to Medical Insurance





Introduction

Occupational Details

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. When it comes down to filling a particular opening, the more detailed information is 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*. Nine out of the 22 major occupational groups offer an

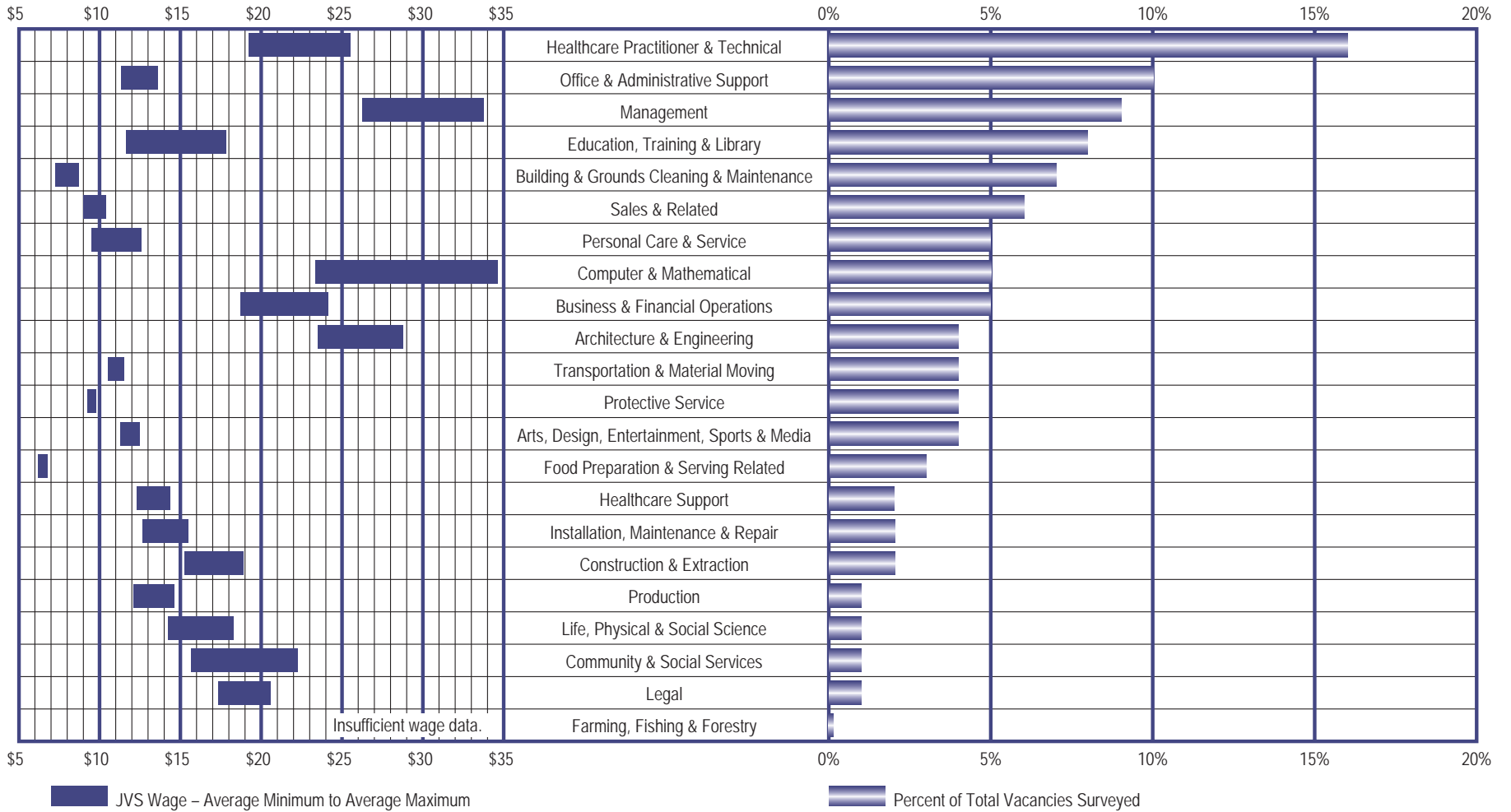
average wage above the overall average of \$15.50 reported for all vacancies in this report. These nine major occupational groups account for 43% of the reported vacancies.

Survey results show that the major occupational groups with the most vacancies are not necessarily offering the highest wages. Wages accompanying vacancy information reflects 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 16% of all vacancies reported in the region and offers the fourth highest average wage among all major occupational groups. Occupational groups offering higher wages than Healthcare Practitioners & Technical occupations are Management, Computer & Mathematical, and Architecture & Engineering occupations.

Occupational Details *—continued*

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



Occupational Details *—continued*

Occupational Estimates

Tables 1 and 2 contain a list of all the detailed SOC job titles that were assigned to vacancies 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 for those employers. Nearly 14% of all small to mid-size employers were contacted for 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, if a different random sample had been drawn, there would be some differences in the job titles reported, but there would also be many of the same.

Vacancies estimated and reported along with wages offered are displayed in *Table 1* for those occupations where at least 10 vacancies are estimated.

Estimated Vacancies

Because nearly all large employers and government agencies are contacted, the number of vacancies by occupation for those groups is not estimated; it is an actual accounting of the vacancies. However, in addition to the number found, vacancies are estimated for occupations reported by small to mid-size private firms. The estimated vacancies are calculated per the current mix of occupations filled in the region at the major occupational group level. Estimated vacancies by major occupational group are then proportionally distributed among the specific detailed occupations reported in the survey.

Average JVS Wage Offered

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

Average OES Wage Paid

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. A complete description of the OES survey is available on the Internet at: <http://www.bls.gov/>.

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

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 40% of the total estimated vacancies. These occupations are accompanied by wage data, as reported by surveyed employers.

Occupational Details —continued

Table 1: Occupations with 10 or More Estimated Vacancies

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
29-1111	Registered Nurses	1,210	\$24.50	\$19.91	\$25.68	\$28.57	\$18.70	\$22.03	\$25.42	\$28.90	\$34.26
41-2011	Cashiers	520	\$8.09	\$7.12	\$9.68	\$10.97	\$6.59	\$7.60	\$8.85	\$10.88	\$15.12
35-3031	Waiters and Waitresses	471	\$2.52	\$6.09	\$7.68	\$8.47	\$5.70	\$6.13	\$6.85	\$9.20	\$11.05
41-2031	Retail Salespersons	450	\$8.73	\$7.23	\$11.95	\$14.31	\$6.68	\$7.90	\$9.68	\$13.17	\$19.35
37-3011	Landscaping and Groundskeeping Workers	378	\$8.23	\$8.13	\$11.04	\$12.49	\$7.56	\$8.76	\$10.21	\$12.67	\$16.30
35-3021	Combined Food Preparation and Serving Workers, IncludTableing Fast Food	320	\$6.61	\$6.69	\$8.19	\$8.94	\$6.21	\$7.12	\$8.01	\$9.03	\$10.59
43-4051	Customer Service Representatives	252	\$10.94	\$10.33	\$14.60	\$16.74	\$9.55	\$11.35	\$13.79	\$17.09	\$20.89
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	243	\$9.25	\$8.54	\$11.28	\$12.65	\$7.75	\$9.35	\$10.88	\$13.03	\$15.71
39-9032	Recreation Workers	213	\$9.59	\$7.74	\$11.68	\$13.64	\$7.29	\$8.55	\$10.60	\$13.68	\$18.00
53-3032	Truck Drivers, Heavy and Tractor-Trailer	204	\$15.24	\$13.83	\$17.50	\$19.34	\$12.86	\$14.93	\$16.97	\$20.29	\$22.99
* 33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	186	\$8.90	†	†	†	†	†	†	†	†
15-1032	Computer Software Engineers, Systems Software	180	\$21.09	\$27.43	\$38.11	\$43.45	\$25.06	\$30.63	\$37.65	\$45.38	\$53.69
53-3033	Truck Drivers, Light or Delivery Services	178	\$8.85	\$8.80	\$13.86	\$16.39	\$7.78	\$10.21	\$13.26	\$16.91	\$21.14
43-5032	Dispatchers, Except Police, Fire, and Ambulance	166	\$9.50	\$10.80	\$15.80	\$18.30	\$9.92	\$12.13	\$15.48	\$18.98	\$22.47
27-2023	Umpires, Referees, and Other Sports Officials	151	\$14.20	\$17,022	\$25,211	\$29,306	\$15,414	\$19,148	\$24,756	\$29,576	\$35,926
11-3031	Financial Managers	146	\$29.63	\$27.03	\$44.05	\$52.56	\$24.69	\$30.49	\$39.71	\$51.81	\$69.99
13-2011	Accountants and Auditors	137	\$25.28	\$18.04	\$29.40	\$35.09	\$16.81	\$20.04	\$25.03	\$33.06	\$44.50
15-1031	Computer Software Engineers, Applications	136	\$35.65	\$23.72	\$38.51	\$45.91	\$20.87	\$27.37	\$36.53	\$43.99	\$56.19
43-6014	Secretaries, Except Legal, Medical, and Executive	129	\$11.66	\$11.12	\$14.90	\$16.79	\$10.24	\$12.20	\$14.67	\$17.29	\$20.53
39-9031	Fitness Trainers and Aerobics Instructors	128	\$15.29	\$9.20	\$16.26	\$19.79	\$8.18	\$10.50	\$15.65	\$20.42	\$25.89
11-3021	Computer and Information Systems Managers	126	\$35.31	\$32.09	\$48.88	\$57.28	\$28.32	\$37.50	\$46.91	\$57.96	†
11-9111	Medical and Health Services Managers	124	\$27.37	\$23.96	\$36.81	\$43.24	\$21.82	\$27.10	\$34.27	\$43.58	\$54.01
* 37-3019	Grounds Maintenance Workers, All Other	123	\$6.41	†	†	†	†	†	†	†	†

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 25-3099	Teachers and Instructors, All Other	119	\$10.65	†	†	†	†	†	†	†	†
17-2199	Engineers, All Other	119	\$38.38	\$23.61	\$37.85	\$44.97	\$20.96	\$28.57	\$37.91	\$46.63	\$55.39
15-1071	Network and Computer Systems Administrators	119	\$28.41	\$21.83	\$31.79	\$36.76	\$19.76	\$24.49	\$30.80	\$38.90	\$45.49
15-1021	Computer Programmers	114	\$27.46	\$22.08	\$33.58	\$39.33	\$19.74	\$25.89	\$33.35	\$41.01	\$47.15
35-2014	Cooks, Restaurant	111	\$6.61	\$7.64	\$10.36	\$11.72	\$7.05	\$8.51	\$10.15	\$12.20	\$14.32
11-9041	Engineering Managers	107	\$43.77	\$36.04	\$51.35	\$59.00	\$33.91	\$40.11	\$49.22	\$58.98	†
37-2012	Maids and Housekeeping Cleaners	107	\$9.97	\$7.32	\$9.04	\$9.91	\$6.85	\$7.74	\$8.95	\$10.34	\$11.34
29-2034	Radiologic Technologists and Technicians	105	\$21.75	\$16.36	\$20.34	\$22.34	\$15.07	\$17.66	\$20.32	\$23.17	\$26.45
11-2022	Sales Managers	104	\$18.44	\$22.13	\$43.02	\$53.46	\$20.03	\$25.01	\$36.07	\$54.07	†
49-9042	Maintenance and Repair Workers, General	104	\$13.23	\$10.54	\$16.16	\$18.98	\$9.48	\$12.25	\$15.71	\$19.89	\$24.04
31-1012	Nursing Aides, Orderlies, and Attendants	104	\$11.27	\$9.45	\$11.76	\$12.92	\$8.98	\$9.94	\$11.57	\$13.46	\$15.42
43-4171	Receptionists and Information Clerks	101	\$10.24	\$8.72	\$12.01	\$13.65	\$7.85	\$9.74	\$11.85	\$14.04	\$16.65
11-2021	Marketing Managers	96	\$28.88	\$24.55	\$42.32	\$51.20	\$22.52	\$27.79	\$38.79	\$52.89	\$67.71
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	94	\$19.48	\$15.90	\$22.68	\$26.08	\$14.90	\$17.70	\$21.34	\$26.53	\$33.20
35-3041	Food Servers, Nonrestaurant	94	\$8.83	\$7.65	\$10.07	\$11.28	\$7.36	\$8.26	\$9.91	\$11.85	\$13.44
13-2072	Loan Officers	91	\$22.64	\$16.56	\$34.54	\$43.53	\$15.45	\$18.72	\$27.63	\$40.88	\$66.94
43-6011	Executive Secretaries and Administrative Assistants	91	\$14.90	\$14.27	\$18.78	\$21.03	\$13.25	\$15.29	\$18.18	\$21.63	\$25.88
17-2071	Electrical Engineers	90	\$40.87	\$24.37	\$34.06	\$38.91	\$23.14	\$27.05	\$32.98	\$40.31	\$46.69
39-5012	Hairdressers, Hairstylists, and Cosmetologists	90	\$11.60	\$9.20	\$11.69	\$12.93	\$8.58	\$9.68	\$10.92	\$12.77	\$15.12
43-6013	Medical Secretaries	89	\$14.58	\$11.23	\$15.20	\$17.19	\$10.41	\$12.06	\$14.45	\$16.89	\$23.44
17-2011	Aerospace Engineers	88	†	\$24.98	\$33.88	\$38.32	\$24.02	\$26.85	\$32.92	\$41.10	\$46.83
25-2031	Secondary School Teachers, Except Special and Vocational Education	83	\$23.06	\$33,059	\$47,166	\$54,220	\$30,744	\$35,735	\$46,918	\$58,227	\$67,509
27-2022	Coaches and Scouts	81	\$10.11	\$17,522	\$39,185	\$50,017	\$14,258	\$21,132	\$28,901	\$43,086	\$68,698

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	76	\$6.38	\$6.08	\$7.45	\$8.14	\$5.79	\$6.38	\$7.39	\$8.38	\$9.13
13-1111	Management Analysts	74	\$26.45	\$17.85	\$37.16	\$46.82	\$13.84	\$21.81	\$30.52	\$45.16	\$69.18
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	73	\$12.36	\$10.04	\$14.60	\$16.88	\$9.29	\$11.67	\$14.53	\$17.35	\$20.93
11-9199	Managers, All Other	72	\$33.97	\$25.17	\$40.66	\$48.41	\$22.08	\$29.50	\$39.49	\$50.27	\$59.79
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	72	\$14.34	\$12.32	\$20.92	\$25.21	\$11.41	\$13.78	\$17.45	\$22.12	\$34.12
25-2021	Elementary School Teachers, Except Special Education	71	\$19.89	\$29,769	\$42,308	\$48,577	\$28,637	\$32,505	\$40,514	\$52,447	\$61,930
15-1041	Computer Support Specialists	71	\$27.26	\$15.55	\$24.27	\$28.63	\$14.58	\$17.35	\$21.82	\$28.25	\$40.99
29-2061	Licensed Practical and Licensed Vocational Nurses	70	\$15.67	\$15.26	\$18.38	\$19.94	\$14.59	\$15.97	\$17.98	\$20.55	\$23.08
25-9041	Teacher Assistants	67	\$8.96	\$16,647	\$21,445	\$23,844	\$15,627	\$17,981	\$20,954	\$24,282	\$28,114
43-9061	Office Clerks, General	67	\$10.90	\$8.75	\$12.84	\$14.88	\$8.01	\$9.92	\$12.55	\$15.56	\$18.08
43-3031	Bookkeeping, Accounting, and Auditing Clerks	65	\$13.94	\$11.01	\$15.42	\$17.63	\$10.33	\$12.53	\$15.16	\$17.96	\$21.39
29-2012	Medical and Clinical Laboratory Technicians	64	\$16.85	\$11.63	\$15.70	\$17.74	\$11.10	\$12.78	\$15.41	\$18.40	\$21.25
25-1199	Postsecondary Teachers, All Other	63	\$12.39	\$27,116	\$56,128	\$70,634	\$24,532	\$30,859	\$53,705	\$71,669	\$93,224
29-1126	Respiratory Therapists	63	\$19.82	\$15.07	\$19.00	\$20.96	\$14.23	\$16.52	\$19.17	\$21.61	\$24.29
43-3071	Tellers	59	\$10.59	\$10.10	\$11.57	\$12.31	\$9.49	\$10.14	\$11.22	\$12.87	\$14.25
33-9099	Protective Service Workers, All Other	58	\$6.89	\$8.01	\$12.19	\$14.28	\$7.42	\$8.73	\$11.05	\$12.98	\$19.77
53-7064	Packers and Packagers, Hand	56	\$10.98	\$6.81	\$9.06	\$10.19	\$6.30	\$7.31	\$8.44	\$10.15	\$13.38
29-1123	Physical Therapists	55	\$24.08	\$19.16	\$25.19	\$28.20	\$17.99	\$21.83	\$25.14	\$28.12	\$33.67
* 25-1071	Health Specialties Teachers, Postsecondary	54	\$35.83	†	†	†	†	†	†	†	†
29-2011	Medical and Clinical Laboratory Technologists	54	\$18.26	\$15.99	\$20.78	\$23.17	\$14.95	\$17.29	\$20.80	\$24.30	\$27.14
39-3091	Amusement and Recreation Attendants	53	\$8.24	\$6.33	\$8.18	\$9.10	\$5.95	\$6.86	\$8.01	\$9.08	\$10.58
11-1021	General and Operations Managers	52	\$31.29	\$24.39	\$50.50	\$63.56	\$20.74	\$29.85	\$44.04	\$65.28	†

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	52	\$23.84	\$15.48	\$27.70	\$33.81	\$13.78	\$18.40	\$23.70	\$32.24	\$44.55
31-9099	Healthcare Support Workers, All Other	52	\$12.39	\$10.06	\$13.04	\$14.53	\$9.52	\$10.84	\$12.63	\$14.48	\$17.51
29-1051	Pharmacists	49	\$37.33	\$28.94	\$36.77	\$40.68	\$29.31	\$33.13	\$37.67	\$42.12	\$45.01
17-2141	Mechanical Engineers	49	\$19.23	\$22.49	\$32.22	\$37.08	\$21.81	\$24.98	\$31.11	\$38.81	\$44.64
13-2051	Financial Analysts	49	\$26.96	\$19.21	\$31.12	\$37.08	\$17.81	\$21.31	\$27.33	\$35.19	\$45.70
13-1051	Cost Estimators	47	\$20.02	\$18.48	\$26.50	\$30.51	\$17.42	\$20.38	\$25.81	\$32.11	\$36.52
13-1073	Training and Development Specialists	47	\$19.45	\$15.99	\$24.83	\$29.25	\$15.01	\$17.78	\$23.77	\$31.37	\$37.44
35-3011	Bartenders	47	\$6.11	\$5.97	\$7.57	\$8.37	\$5.61	\$6.05	\$6.78	\$8.33	\$10.88
15-1051	Computer Systems Analysts	45	\$31.54	\$24.48	\$33.63	\$38.21	\$22.16	\$27.78	\$33.88	\$40.30	\$44.60
49-3023	Automotive Service Technicians and Mechanics	45	\$17.15	\$12.46	\$19.89	\$23.61	\$11.71	\$13.93	\$18.44	\$24.03	\$29.93
11-9032	Education Administrators, Elementary and Secondary School	44	\$35.95	\$57,543	\$72,345	\$79,746	\$51,459	\$63,629	\$73,370	\$84,364	\$92,898
29-2055	Surgical Technologists	44	\$17.13	\$11.24	\$15.94	\$18.29	\$10.74	\$12.29	\$15.18	\$19.29	\$22.77
41-2021	Counter and Rental Clerks	43	\$8.29	\$7.05	\$10.38	\$12.05	\$6.45	\$7.68	\$9.25	\$11.08	\$15.97
13-1199	Business Operations Specialists, All Other	41	\$14.18	\$18.08	\$28.23	\$33.30	\$16.35	\$21.03	\$27.20	\$34.46	\$42.29
23-2011	Paralegals and Legal Assistants	41	\$13.13	\$17.26	\$21.69	\$23.90	\$15.72	\$18.28	\$20.56	\$23.88	\$29.24
29-2071	Medical Records and Health Information Technicians	41	\$16.50	\$11.75	\$15.18	\$16.90	\$11.16	\$12.17	\$13.70	\$17.58	\$21.30
25-2022	Middle School Teachers, Except Special and Vocational Education	40	\$26.00	\$31,645	\$44,143	\$50,392	\$30,348	\$34,149	\$43,157	\$53,687	\$62,480
15-1061	Database Administrators	40	\$26.59	\$19.24	\$29.87	\$35.18	\$17.41	\$22.10	\$27.89	\$38.19	\$44.65
31-9092	Medical Assistants	40	\$12.23	\$11.35	\$14.48	\$16.04	\$10.56	\$12.34	\$14.38	\$16.54	\$18.88
33-9032	Security Guards	40	\$11.40	\$9.02	\$12.08	\$13.61	\$8.41	\$9.48	\$10.87	\$13.46	\$18.72
53-3031	Driver/Sales Workers	40	\$6.00	\$6.81	\$12.06	\$14.69	\$6.12	\$7.16	\$10.79	\$15.31	\$20.57
47-2111	Electricians	39	\$22.93	\$16.49	\$22.22	\$25.08	\$14.62	\$19.41	\$23.70	\$26.08	\$27.53

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
13-2041	Credit Analysts	39	\$12.88	\$14.08	\$22.67	\$26.97	\$12.86	\$15.63	\$21.91	\$27.53	\$32.85
51-6011	Laundry and Dry-Cleaning Workers	38	\$9.25	\$8.51	\$12.83	\$14.99	\$7.83	\$9.11	\$10.94	\$18.02	\$20.11
17-2051	Civil Engineers	37	\$25.11	\$21.88	\$31.13	\$35.75	\$20.09	\$23.53	\$28.69	\$37.03	\$45.69
35-2012	Cooks, Institution and Cafeteria	37	\$9.84	\$8.80	\$11.47	\$12.81	\$8.09	\$9.42	\$11.07	\$13.31	\$15.84
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	37	\$10.33	\$7.46	\$9.79	\$10.96	\$7.11	\$7.80	\$8.95	\$11.14	\$14.19
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	36	\$34.33	\$17.91	\$31.78	\$38.71	\$16.64	\$20.48	\$27.37	\$39.54	\$54.46
43-4131	Loan Interviewers and Clerks	36	\$12.50	\$13.08	\$16.99	\$18.95	\$12.16	\$14.05	\$16.73	\$19.86	\$22.32
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	36	\$4.94	\$6.16	\$7.75	\$8.55	\$5.85	\$6.42	\$7.26	\$8.55	\$10.30
* 41-3099	Sales Representatives, Services, All Other	35	\$11.07	†	†	†	†	†	†	†	†
19-2041	Environmental Scientists and Specialists, Including Health	35	\$11.32	\$18.21	\$30.28	\$36.32	\$15.80	\$21.46	\$29.79	\$38.80	\$45.93
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	35	\$15.44	\$12.37	\$17.48	\$20.04	\$10.95	\$14.06	\$16.97	\$21.36	\$24.97
35-9099	Food Preparation and Serving Related Workers, All Other	35	\$8.12	\$7.78	\$9.55	\$10.44	\$7.44	\$8.31	\$9.47	\$10.59	\$12.13
15-1099	Computer Specialists, All Other	34	\$20.90	\$20.33	\$32.02	\$37.86	\$17.77	\$24.00	\$31.24	\$39.65	\$48.14
11-2011	Advertising and Promotions Managers	34	\$34.33	\$19.99	\$33.37	\$40.06	\$17.78	\$22.88	\$30.59	\$41.98	\$52.88
39-1021	First-Line Supervisors/Managers of Personal Service Workers	34	\$9.93	\$9.94	\$15.67	\$18.54	\$8.76	\$11.16	\$13.93	\$19.00	\$26.07
43-3011	Bill and Account Collectors	34	\$13.69	\$10.55	\$14.51	\$16.48	\$9.73	\$11.67	\$13.81	\$16.61	\$20.61
47-2061	Construction Laborers	34	\$11.79	\$8.79	\$12.74	\$14.72	\$8.01	\$9.92	\$12.26	\$15.54	\$18.43
25-2011	Preschool Teachers, Except Special Education	34	\$10.70	\$9.55	\$11.23	\$12.07	\$8.99	\$9.54	\$10.42	\$11.79	\$14.37
17-2061	Computer Hardware Engineers	33	†	\$28.98	\$41.17	\$47.26	\$26.87	\$32.60	\$40.53	\$49.21	\$56.18
11-3011	Administrative Services Managers	33	\$20.79	\$20.00	\$33.53	\$40.29	\$18.53	\$22.82	\$31.37	\$41.34	\$52.91

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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 (2003)							
				Average Wages			Percentile Distribution				
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 41-3031	Securities, Commodities, and Financial Services Sales Agents	33	\$11.15	\$15.00	\$36.00	\$47.00	\$14.00	\$17.00	\$22.00	\$40.00	†
43-5081	Stock Clerks and Order Fillers	33	\$10.94	\$8.16	\$11.76	\$13.56	\$7.60	\$8.84	\$11.06	\$14.43	\$16.96
51-4121	Welders, Cutters, Solderers, and Brazers	32	\$13.17	\$11.67	\$16.38	\$18.73	\$11.18	\$12.92	\$16.15	\$19.84	\$22.38
47-2073	Operating Engineers and Other Construction Equipment Operators	31	\$16.76	\$14.70	\$18.69	\$20.69	\$14.15	\$15.80	\$18.66	\$21.48	\$24.28
* 11-3049	Human Resources Managers, All Other	30	\$13.53	†	†	†	†	†	†	†	†
47-4051	Highway Maintenance Workers	30	\$13.76	\$13.99	\$17.26	\$18.89	\$13.01	\$14.85	\$17.35	\$19.96	\$21.58
* 11-3042	Training and Development Managers	29	\$26.97	†	†	†	†	†	†	†	†
23-1011	Lawyers	29	\$31.51	\$25.85	\$47.32	\$58.06	\$23.17	\$30.41	\$42.52	\$56.97	†
29-1122	Occupational Therapists	29	\$22.83	\$18.96	\$24.70	\$27.57	\$18.22	\$20.51	\$24.23	\$27.41	\$33.18
43-9021	Data Entry Keyers	29	\$10.21	\$9.34	\$12.13	\$13.53	\$8.70	\$9.97	\$11.74	\$13.92	\$16.58
43-4081	Hotel, Motel, and Resort Desk Clerks	29	\$9.17	\$8.63	\$9.88	\$10.51	\$7.97	\$9.20	\$10.09	\$10.95	\$11.51
39-9011	Child Care Workers	28	\$8.82	\$7.05	\$9.17	\$10.23	\$6.60	\$7.62	\$8.99	\$10.40	\$12.15
43-9041	Insurance Claims and Policy Processing Clerks	27	\$20.75	\$11.57	\$15.10	\$16.87	\$10.65	\$12.67	\$15.18	\$17.30	\$20.00
41-9022	Real Estate Sales Agents	27	\$13.22	\$11.89	\$21.25	\$25.93	\$11.21	\$12.05	\$13.43	\$21.71	\$36.75
* 17-3029	Engineering Technicians, Except Drafters, All Other	26	\$13.72	†	†	†	†	†	†	†	†
11-3061	Purchasing Managers	26	\$31.01	\$23.23	\$38.01	\$45.40	\$20.05	\$27.38	\$35.40	\$46.90	\$57.22
11-9021	Construction Managers	26	\$23.71	\$24.19	\$38.96	\$46.34	\$21.61	\$27.81	\$35.01	\$44.02	\$57.56
15-1081	Network Systems and Data Communications Analysts	26	\$26.95	\$23.00	\$32.10	\$36.65	\$21.73	\$25.92	\$32.09	\$38.39	\$43.13
25-4021	Librarians	26	\$14.09	\$17.62	\$23.78	\$26.85	\$16.28	\$19.20	\$23.35	\$28.58	\$32.76
43-5071	Shipping, Receiving, and Traffic Clerks	26	\$10.91	\$8.91	\$12.92	\$14.93	\$8.15	\$9.91	\$12.58	\$15.33	\$18.26
19-3021	Market Research Analysts	25	\$24.04	\$18.54	\$31.73	\$38.33	\$16.75	\$20.97	\$29.55	\$40.04	\$50.26
47-2152	Plumbers, Pipefitters, and Steamfitters	25	\$20.92	\$13.89	\$21.80	\$25.75	\$12.10	\$16.23	\$21.75	\$26.48	\$29.65
13-1022	Wholesale and Retail Buyers, Except Farm Products	25	†	\$12.50	\$19.32	\$22.73	\$11.11	\$14.24	\$17.61	\$22.54	\$30.13

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 13-1079	Human Resources, Training, and Labor Relations Specialists, All Other	24	\$18.80	†	†	†	†	†	†	†	†
17-2072	Electronics Engineers, Except Computer	24	\$26.44	\$25.02	\$34.84	\$39.76	\$23.34	\$27.61	\$33.05	\$40.73	\$50.38
29-1127	Speech-Language Pathologists	24	\$25.40	\$19.07	\$25.30	\$28.42	\$17.90	\$21.05	\$25.39	\$29.63	\$33.46
13-2031	Budget Analysts	23	\$31.56	\$19.88	\$28.04	\$32.12	\$18.36	\$22.01	\$26.81	\$33.19	\$39.48
29-2032	Diagnostic Medical Sonographers	23	\$27.94	\$15.90	\$26.58	\$31.91	\$12.56	\$18.81	\$26.16	\$36.42	\$41.72
49-3021	Automotive Body and Related Repairers	23	†	\$16.57	\$25.93	\$30.62	\$13.94	\$19.80	\$25.55	\$32.35	\$38.77
47-2031	Carpenters	23	\$12.00	\$9.33	\$16.05	\$19.41	\$6.79	\$11.50	\$16.39	\$20.16	\$23.49
29-2052	Pharmacy Technicians	23	\$13.34	\$11.25	\$13.90	\$15.22	\$10.32	\$12.03	\$13.88	\$16.04	\$17.50
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	23	\$7.37	\$6.34	\$8.11	\$8.99	\$5.99	\$6.84	\$7.92	\$9.17	\$10.55
* 29-9099	Healthcare Practitioners and Technical Workers, All Other	22	\$9.75	†	†	†	†	†	†	†	†
11-3051	Industrial Production Managers	22	\$62.98	\$24.86	\$39.42	\$46.70	\$22.02	\$28.74	\$36.17	\$46.47	\$62.38
17-2081	Environmental Engineers	22	†	\$21.80	\$32.11	\$37.27	\$19.89	\$24.49	\$32.09	\$39.34	\$43.61
11-9033	Education Administrators, Postsecondary	22	\$34.79	\$21.30	\$34.40	\$40.95	\$18.68	\$24.00	\$29.33	\$40.63	\$56.32
13-2099	Financial Specialists, All Other	22	\$16.26	\$16.61	\$27.30	\$32.65	\$14.69	\$18.99	\$24.48	\$32.22	\$42.45
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	22	\$16.15	\$14.87	\$20.42	\$23.19	\$13.85	\$16.62	\$19.58	\$23.34	\$27.84
41-3011	Advertising Sales Agents	22	†	\$12.19	\$26.04	\$32.97	\$11.37	\$13.85	\$19.03	\$32.61	\$52.23
53-3021	Bus Drivers, Transit and Intercity	22	\$10.88	\$10.95	\$14.44	\$16.18	\$10.14	\$11.62	\$13.95	\$17.40	\$20.12
53-7051	Industrial Truck and Tractor Operators	22	\$12.64	\$10.87	\$14.03	\$15.61	\$10.07	\$11.60	\$13.72	\$16.30	\$18.24
31-9093	Medical Equipment Preparers	22	\$10.82	\$9.59	\$12.31	\$13.67	\$9.12	\$10.47	\$12.14	\$13.69	\$16.45
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	21	\$13.50	\$12.73	\$20.24	\$23.99	\$10.30	\$15.22	\$19.16	\$24.31	\$31.65
53-7061	Cleaners of Vehicles and Equipment	21	\$7.83	\$7.80	\$11.01	\$12.61	\$7.12	\$8.69	\$10.42	\$13.10	\$16.19

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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 (2003)							
				Average Wages			Percentile Distribution				
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
17-1021	Cartographers and Photogrammetrists	20	†	\$19.57	\$27.68	\$31.74	\$17.74	\$22.16	\$28.27	\$32.81	\$38.39
11-9051	Food Service Managers	20	†	\$15.92	\$24.80	\$29.24	\$15.07	\$17.66	\$21.55	\$31.30	\$41.50
17-3023	Electrical and Electronic Engineering Technicians	20	\$8.15	\$12.02	\$20.44	\$24.65	\$10.47	\$13.72	\$20.21	\$26.06	\$31.52
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	20	\$17.37	\$9.60	\$15.96	\$19.14	\$8.77	\$10.86	\$14.61	\$20.08	\$26.40
11-3071	Transportation, Storage, and Distribution Managers	19	\$34.83	\$21.53	\$32.27	\$37.64	\$18.65	\$25.02	\$30.87	\$38.97	\$47.95
29-2031	Cardiovascular Technologists and Technicians	19	†	\$13.09	\$19.03	\$22.00	\$11.93	\$14.40	\$18.68	\$22.81	\$27.87
51-4041	Machinists	19	\$13.25	\$12.22	\$17.45	\$20.06	\$11.09	\$13.81	\$17.41	\$20.87	\$24.82
51-3011	Bakers	19	\$11.35	\$8.94	\$12.61	\$14.44	\$8.37	\$9.92	\$12.33	\$15.48	\$17.24
* 35-2019	Cooks, All Other	18	\$10.36	†	†	†	†	†	†	†	†
17-3021	Aerospace Engineering and Operations Technicians	18	†	\$20.07	\$26.52	\$29.75	\$18.31	\$22.55	\$26.31	\$30.97	\$35.96
13-1031	Claims Adjusters, Examiners, and Investigators	18	\$20.43	\$16.73	\$27.19	\$32.42	\$15.37	\$18.82	\$23.73	\$29.37	\$40.63
35-1011	Chefs and Head Cooks	18	\$14.00	\$11.08	\$17.62	\$20.89	\$9.90	\$12.58	\$17.74	\$20.58	\$24.77
41-9041	Telemarketers	18	\$9.85	\$7.14	\$11.10	\$13.07	\$6.57	\$7.96	\$9.90	\$13.61	\$17.31
* 13-1081	Logisticians	17	†	†	†	†	†	†	†	†	†
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	17	\$17.36	\$17.78	\$26.61	\$31.02	\$16.26	\$20.07	\$25.49	\$31.59	\$36.95
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	17	\$15.25	\$14.62	\$18.20	\$19.99	\$13.60	\$15.78	\$18.31	\$20.80	\$22.62
29-2056	Veterinary Technologists and Technicians	17	\$12.63	\$9.87	\$12.17	\$13.31	\$9.33	\$10.11	\$11.73	\$13.69	\$16.35
39-3031	Ushers, Lobby Attendants, and Ticket Takers	17	\$6.00	\$6.02	\$7.30	\$7.94	\$5.70	\$6.23	\$7.18	\$8.34	\$9.32
11-3040	Human Resources Managers	16	\$37.01	\$23.05	\$37.12	\$44.15	\$20.86	\$26.11	\$34.62	\$45.51	\$56.98
27-1024	Graphic Designers	16	†	\$14.18	\$18.93	\$21.31	\$13.56	\$15.40	\$17.73	\$21.81	\$26.56
29-2054	Respiratory Therapy Technicians	16	†	\$7.85	\$13.90	\$16.93	\$6.82	\$8.92	\$14.60	\$17.25	\$20.75
43-4071	File Clerks	16	\$9.29	\$8.87	\$11.56	\$12.90	\$8.18	\$9.52	\$11.09	\$13.28	\$16.07
25-1011	Business Teachers, Postsecondary	15	\$16.67	\$36,458	\$72,420	\$90,401	\$31,887	\$43,007	\$67,498	\$97,185	#####

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

Table 1: Occupations with 10 or More Estimated Vacancies — Page 9

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	15	\$14.30	\$35,125	\$48,613	\$55,358	\$32,201	\$38,335	\$49,138	\$58,833	\$67,515
13-2081	Tax Examiners, Collectors, and Revenue Agents	15	\$22.57	\$18.59	\$27.62	\$32.13	\$16.96	\$20.73	\$25.99	\$34.84	\$41.76
13-1071	Employment, Recruitment, and Placement Specialists	15	\$16.19	\$14.38	\$23.90	\$28.66	\$13.26	\$16.31	\$21.17	\$28.52	\$35.81
41-9099	Sales and Related Workers, All Other	15	†	\$11.44	\$22.88	\$28.60	\$9.37	\$14.01	\$19.93	\$27.97	\$39.56
53-3022	Bus Drivers, School	15	\$11.50	\$11.11	\$13.96	\$15.38	\$10.46	\$12.08	\$14.19	\$16.05	\$17.36
51-2099	Assemblers and Fabricators, All Other	15	†	\$8.12	\$10.65	\$11.92	\$7.57	\$8.80	\$10.06	\$11.73	\$14.49
39-2021	Nonfarm Animal Caretakers	15	\$8.58	\$7.27	\$9.79	\$11.05	\$6.71	\$7.74	\$9.04	\$10.83	\$14.19
* 47-4099	Construction and Related Workers, All Other	14	†	†	†	†	†	†	†	†	†
* 29-2099	Health Technologists and Technicians, All Other	14	\$13.18	†	†	†	†	†	†	†	†
25-2043	Special Education Teachers, Secondary School	14	\$23.69	\$34,397	\$49,193	\$56,591	\$31,351	\$38,386	\$50,261	\$60,674	\$68,321
41-9031	Sales Engineers	14	\$22.86	\$23.28	\$36.31	\$42.83	\$21.07	\$26.90	\$33.54	\$42.98	\$54.56
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	14	\$22.58	\$16.36	\$24.93	\$29.21	\$14.50	\$18.68	\$24.00	\$28.75	\$34.90
13-1072	Compensation, Benefits, and Job Analysis Specialists	14	†	\$16.18	\$24.39	\$28.50	\$15.20	\$17.55	\$22.87	\$29.56	\$36.11
17-3013	Mechanical Drafters	14	†	\$14.65	\$20.57	\$23.52	\$13.98	\$15.50	\$18.35	\$23.75	\$32.66
* 41-2012	Gaming Change Persons and Booth Cashiers	14	\$8.50	\$9.00	\$12.00	\$13.00	\$9.00	\$10.00	\$12.00	\$13.00	\$15.00
39-6011	Baggage Porters and Bellhops	14	†	\$6.74	\$12.39	\$15.21	\$6.14	\$7.35	\$8.76	\$19.65	\$22.29
33-3051	Police and Sheriffs Patrol Officers	13	\$18.87	\$20.35	\$25.64	\$28.28	\$18.85	\$22.04	\$25.94	\$29.76	\$33.11
21-1011	Substance Abuse and Behavioral Disorder Counselors	13	\$13.35	\$10.09	\$13.92	\$15.84	\$9.55	\$10.77	\$12.95	\$16.43	\$20.29
53-3041	Taxi Drivers and Chauffeurs	13	\$10.81	\$7.23	\$9.53	\$10.68	\$6.78	\$7.82	\$9.44	\$10.84	\$12.42
* 11-9039	Education Administrators, All Other	12	\$37.55	†	†	†	†	†	†	†	†
51-9122	Painters, Transportation Equipment	12	\$16.00	\$17.97	\$26.45	\$30.69	\$10.84	\$23.23	\$26.09	\$34.75	\$40.21
27-3042	Technical Writers	12	†	\$18.76	\$27.03	\$31.17	\$17.24	\$21.35	\$25.96	\$31.92	\$38.12
21-1021	Child, Family, and School Social Workers	12	\$17.79	\$13.93	\$20.19	\$23.31	\$12.93	\$15.85	\$19.88	\$24.48	\$28.89

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

				Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
31-9091	Dental Assistants	12	\$13.27	\$13.28	\$17.85	\$20.13	\$11.94	\$14.96	\$17.94	\$20.91	\$24.70
49-2011	Computer, Automated Teller, and Office Machine Repairers	12	†	\$13.08	\$18.45	\$21.13	\$11.24	\$14.73	\$17.38	\$21.89	\$27.70
* 51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	11	†	†	†	†	†	†	†	†	†
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	11	\$21.50	\$18.89	\$26.15	\$29.78	\$17.20	\$21.28	\$25.44	\$30.67	\$36.27
29-2033	Nuclear Medicine Technologists	11	\$31.29	\$20.97	\$24.35	\$26.03	\$19.45	\$22.59	\$24.97	\$27.18	\$28.76
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	11	\$21.03	\$15.94	\$23.43	\$27.17	\$14.53	\$17.82	\$22.33	\$27.81	\$34.77
11-9141	Property, Real Estate, and Community Association Managers	11	\$13.94	\$13.39	\$26.66	\$33.30	\$12.31	\$15.11	\$21.42	\$32.52	\$44.59
47-2221	Structural Iron and Steel Workers	11	†	\$16.21	\$20.40	\$22.49	\$13.86	\$18.59	\$20.83	\$23.03	\$26.22
17-3011	Architectural and Civil Drafters	11	†	\$14.49	\$18.89	\$21.10	\$13.69	\$15.49	\$18.09	\$21.65	\$25.94
43-6012	Legal Secretaries	11	\$15.39	\$15.43	\$18.20	\$19.59	\$14.62	\$15.60	\$17.19	\$20.76	\$24.54
49-9099	Installation, Maintenance, and Repair Workers, All Other	11	†	\$9.21	\$14.66	\$17.38	\$8.47	\$9.92	\$13.03	\$18.93	\$23.35
37-2021	Pest Control Workers	11	\$10.93	\$7.59	\$14.80	\$18.41	\$7.34	\$8.11	\$12.60	\$20.52	\$26.26
25-1072	Nursing Instructors and Teachers, Postsecondary	10	\$30.85	\$36,584	\$54,151	\$62,934	\$33,235	\$41,332	\$51,223	\$62,658	\$78,562
11-2031	Public Relations Managers	10	\$26.02	\$20.83	\$37.87	\$46.39	\$18.47	\$24.52	\$33.32	\$47.50	\$68.07
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	10	\$16.87	\$18.79	\$28.18	\$32.87	\$17.14	\$21.37	\$26.59	\$32.97	\$40.06
21-1012	Educational, Vocational, and School Counselors	10	\$17.50	\$15.56	\$24.02	\$28.26	\$14.52	\$17.32	\$24.06	\$30.32	\$34.14
13-2052	Personal Financial Advisors	10	†	\$15.28	\$24.25	\$28.74	\$13.85	\$16.92	\$19.85	\$26.19	\$38.83
45-4011	Forest and Conservation Workers	10	\$10.50	\$11.69	\$14.56	\$15.99	\$11.44	\$12.60	\$14.18	\$16.83	\$19.79
41-3041	Travel Agents	10	\$10.00	\$9.63	\$13.78	\$15.86	\$9.25	\$10.72	\$14.01	\$16.37	\$17.91
53-7063	Machine Feeders and Offbearers	10	\$13.09	\$9.52	\$12.05	\$13.32	\$8.93	\$10.01	\$11.53	\$14.01	\$16.37

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

Table 2: Occupations with Fewer than 10 Estimated Vacancies

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors	\$10.60	\$16.33	\$19.19	\$9.78	\$11.47	\$15.25	\$20.09	\$24.69
25-1061	Anthropology and Archeology Teachers, Postsecondary	\$41,390	\$61,718	\$71,881	\$37,079	\$46,128	\$57,772	\$75,618	\$91,869
17-1011	Architects, Except Landscape and Naval	\$18.94	\$29.19	\$34.32	\$17.71	\$21.23	\$27.21	\$35.62	\$42.40
* 25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	\$37,340	\$58,970	\$69,780	\$34,390	\$43,020	\$53,330	\$71,250	\$92,980
27-1011	Art Directors	\$19.94	\$31.24	\$36.89	\$18.69	\$22.00	\$27.19	\$34.95	\$48.70
25-1121	Art, Drama, and Music Teachers, Postsecondary	\$34,897	\$51,919	\$60,429	\$33,997	\$40,895	\$50,244	\$60,970	\$78,527
* 27-1019	Artists and Related Workers, All Other	†	†	†	†	†	†	†	†
* 25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	†	†	†	†	†	†	†	†
29-1121	Audiologists	\$18.62	\$22.55	\$24.51	\$17.69	\$19.38	\$22.16	\$26.01	\$28.59
* 49-3022	Automotive Glass Installers and Repairers	\$8.00	\$13.00	\$16.00	\$8.00	\$8.00	\$15.00	\$17.00	\$19.00
* 49-2091	Avionics Technicians	\$15.00	\$20.00	\$22.00	\$14.00	\$17.00	\$20.00	\$22.00	\$25.00
49-3091	Bicycle Repairers	\$8.32	\$13.54	\$16.15	\$7.65	\$9.17	\$14.71	\$16.55	\$17.72
43-3021	Billing and Posting Clerks and Machine Operators	\$9.77	\$13.62	\$15.54	\$7.05	\$11.73	\$13.82	\$16.16	\$18.05
* 19-1021	Biochemists and Biophysicists	†	†	†	†	†	†	†	†
25-1042	Biological Science Teachers, Postsecondary	\$34,045	\$65,965	\$81,925	\$31,495	\$39,797	\$57,163	\$82,200	\$114,755
* 19-1029	Biological Scientists, All Other	†	†	†	†	†	†	†	†
19-4021	Biological Technicians	\$11.69	\$17.25	\$20.03	\$11.19	\$12.72	\$16.39	\$21.02	\$25.68
* 27-3021	Broadcast News Analysts	†	†	†	†	†	†	†	†
27-4012	Broadcast Technicians	\$8.23	\$15.79	\$19.57	\$7.45	\$9.34	\$15.26	\$20.00	\$27.24
43-4011	Brokerage Clerks	\$12.70	\$18.47	\$21.35	\$11.93	\$14.26	\$17.12	\$21.80	\$28.39
51-7011	Cabinetmakers and Bench Carpenters	\$9.89	\$14.25	\$16.43	\$9.40	\$10.85	\$14.05	\$17.49	\$20.21
17-2041	Chemical Engineers	\$23.60	\$34.75	\$40.33	\$21.06	\$26.91	\$34.79	\$42.81	\$51.02
51-9011	Chemical Equipment Operators and Tenders	\$11.53	\$15.41	\$17.35	\$11.35	\$12.80	\$15.33	\$18.34	\$21.01
19-2031	Chemists	\$17.92	\$30.84	\$37.29	\$16.16	\$20.54	\$29.10	\$39.89	\$49.63
11-1011	Chief Executives	\$49.33	\$81.58	\$97.71	\$44.39	\$58.86	†	†	†
27-2032	Choreographers	\$8.13	\$14.83	\$18.18	\$6.60	\$8.97	\$15.90	\$18.34	\$21.89

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
17-3022	Civil Engineering Technicians	\$12.97	\$18.94	\$21.93	\$11.91	\$14.31	\$19.03	\$22.92	\$26.48
21-2011	Clergy	\$8.69	\$16.24	\$20.01	\$6.46	\$11.06	\$16.59	\$19.98	\$23.45
19-3031	Clinical, Counseling, and School Psychologists	\$16.56	\$27.02	\$32.25	\$14.90	\$18.90	\$27.01	\$32.43	\$36.59
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	\$10.89	\$14.28	\$15.97	\$9.94	\$11.78	\$13.35	\$15.87	\$19.97
53-2012	Commercial Pilots	\$25,698	\$48,907	\$60,511	\$24,223	\$27,004	\$40,091	\$65,297	\$90,970
43-2099	Communications Equipment Operators, All Other	\$10.49	\$17.73	\$21.34	\$9.46	\$11.68	\$17.65	\$23.10	\$27.71
* 11-3041	Compensation and Benefits Managers	†	†	†	†	†	†	†	†
15-1011	Computer and Information Scientists, Research	\$27.79	\$43.27	\$51.00	\$24.73	\$32.45	\$41.05	\$52.74	\$67.07
43-9011	Computer Operators	\$11.96	\$16.56	\$18.85	\$11.09	\$13.29	\$16.13	\$19.83	\$22.76
25-1021	Computer Science Teachers, Postsecondary	\$31,514	\$53,037	\$63,799	\$30,778	\$34,910	\$46,424	\$62,338	\$90,074
47-4011	Construction and Building Inspectors	\$14.12	\$20.96	\$24.39	\$12.92	\$15.72	\$20.80	\$26.00	\$29.98
33-3012	Correctional Officers and Jailers	\$15.45	\$20.51	\$23.05	\$14.21	\$17.16	\$20.76	\$24.45	\$26.76
* 21-1019	Counselors, All Other	†	†	†	†	†	†	†	†
43-5021	Couriers and Messengers	\$7.26	\$10.53	\$12.17	\$6.69	\$8.09	\$10.34	\$12.78	\$14.77
23-2091	Court Reporters	\$16.74	\$26.01	\$30.65	\$15.29	\$17.93	\$22.26	\$30.41	\$47.91
43-4031	Court, Municipal, and License Clerks	\$12.99	\$16.55	\$18.33	\$12.23	\$13.87	\$16.22	\$19.23	\$21.60
53-7021	Crane and Tower Operators	\$17.60	\$22.49	\$24.94	\$15.59	\$19.73	\$23.76	\$26.60	\$28.34
43-4041	Credit Authorizers, Checkers, and Clerks	\$11.25	\$13.78	\$15.05	\$10.47	\$11.83	\$13.10	\$14.91	\$18.39
* 25-4012	Curators	†	†	†	†	†	†	†	†
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	\$10.23	\$14.81	\$17.10	\$9.32	\$11.61	\$15.31	\$17.39	\$20.47
27-2031	Dancers	\$5.81	\$9.07	\$10.70	\$5.59	\$6.23	\$9.26	\$10.55	\$12.56
41-9011	Demonstrators and Product Promoters	\$7.51	\$10.83	\$12.49	\$7.10	\$7.63	\$8.50	\$11.65	\$17.86
29-2021	Dental Hygienists	\$22.17	\$33.63	\$39.35	\$11.33	\$31.44	\$37.71	\$41.48	\$43.73
* 29-1021	Dentists, General	†	†	†	†	†	†	†	†
* 27-1029	Designers, All Other	†	†	†	†	†	†	†	†
43-9031	Desktop Publishers	\$15.98	\$18.55	\$19.83	\$13.96	\$17.68	\$19.20	\$20.70	\$21.60

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
33-3021	Detectives and Criminal Investigators	\$25.39	\$30.32	\$32.78	\$23.22	\$27.85	\$30.76	\$33.75	\$38.55
29-1031	Dietitians and Nutritionists	\$12.82	\$19.26	\$22.48	\$10.95	\$14.77	\$19.34	\$23.90	\$27.14
35-9021	Dishwashers	\$6.80	\$8.03	\$8.65	\$6.22	\$7.24	\$8.03	\$8.88	\$10.15
* 41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	†	†	†	†	†	†	†	†
* 17-3019	Drafters, All Other	†	†	†	†	†	†	†	†
27-3041	Editors	\$13.22	\$21.89	\$26.23	\$12.17	\$14.47	\$20.60	\$27.92	\$34.09
11-9031	Education Administrators, Preschool and Child Care Center/Program	\$12.88	\$18.12	\$20.74	\$11.28	\$14.61	\$16.96	\$20.59	\$27.04
25-1081	Education Teachers, Postsecondary	\$31,499	\$51,199	\$61,049	\$29,232	\$36,178	\$48,206	\$62,696	\$82,310
* 25-9099	Education, Training, and Library Workers, All Other	†	†	†	†	†	†	†	†
49-2092	Electric Motor, Power Tool, and Related Repairers	\$11.17	\$16.79	\$19.60	\$9.89	\$12.93	\$16.73	\$20.55	\$24.73
51-2022	Electrical and Electronic Equipment Assemblers	\$8.90	\$11.98	\$13.52	\$8.38	\$9.64	\$11.56	\$13.85	\$16.75
17-3012	Electrical and Electronics Drafters	\$14.87	\$21.66	\$25.05	\$14.03	\$16.65	\$20.51	\$25.42	\$32.51
* 49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	\$14.00	\$18.00	\$20.00	\$13.00	\$16.00	\$19.00	\$21.00	\$22.00
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	\$15.65	\$22.18	\$25.44	\$13.89	\$17.97	\$22.99	\$26.40	\$30.20
49-9051	Electrical Power-Line Installers and Repairers	\$19.51	\$23.94	\$26.16	\$16.81	\$23.06	\$25.30	\$27.42	\$28.91
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	\$10.66	\$15.66	\$18.16	\$9.78	\$11.60	\$15.26	\$18.86	\$23.27
43-4061	Eligibility Interviewers, Government Programs	\$12.84	\$16.02	\$17.60	\$12.24	\$13.55	\$15.57	\$18.16	\$21.18
13-1061	Emergency Management Specialists	\$21.69	\$32.86	\$38.44	\$18.66	\$26.44	\$34.86	\$41.34	\$45.60
29-2041	Emergency Medical Technicians and Paramedics	\$10.51	\$15.57	\$18.10	\$9.82	\$11.32	\$14.96	\$18.95	\$22.66
* 25-1032	Engineering Teachers, Postsecondary	\$44,870	\$76,890	\$92,900	\$40,410	\$53,350	\$71,670	\$93,330	\$117,280
25-1123	English Language and Literature Teachers, Postsecondary	\$29,432	\$44,843	\$52,549	\$26,961	\$32,210	\$39,202	\$53,717	\$70,121
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	\$22,057	\$44,334	\$55,473	\$15,330	\$29,434	\$36,384	\$59,625	\$88,991
19-4091	Environmental Science and Protection Technicians, Including Health	\$13.01	\$19.72	\$23.08	\$11.92	\$14.00	\$17.19	\$25.19	\$31.45
* 49-3041	Farm Equipment Mechanics	\$10.00	\$15.00	\$17.00	\$9.00	\$11.00	\$14.00	\$17.00	\$21.00

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
11-9011	Farm, Ranch, and Other Agricultural Managers	\$18.77	\$23.96	\$26.56	\$17.32	\$19.77	\$22.63	\$28.03	\$33.39
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	\$6.70	\$10.60	\$12.54	\$6.05	\$7.38	\$8.69	\$13.80	\$19.00
45-2093	Farmworkers, Farm and Ranch Animals	\$7.20	\$8.96	\$9.84	\$6.92	\$7.52	\$8.70	\$10.06	\$10.87
47-4031	Fence Erectors	\$9.21	\$13.39	\$15.47	\$8.89	\$10.40	\$13.00	\$16.03	\$18.16
13-2061	Financial Examiners	\$23.84	\$35.97	\$42.04	\$22.19	\$27.33	\$34.15	\$41.60	\$51.40
33-2011	Fire Fighters	\$17.53	\$23.61	\$26.65	\$16.19	\$19.76	\$23.84	\$28.09	\$31.99
33-1021	First-Line Supervisors/Managers of Fire Fighting and Prevention Workers	\$26.97	\$32.32	\$35.00	\$24.40	\$28.93	\$32.01	\$35.90	\$41.66
53-1021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	\$13.89	\$19.74	\$22.67	\$12.81	\$15.73	\$19.20	\$22.92	\$28.17
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	\$9.94	\$14.54	\$16.83	\$9.39	\$10.73	\$13.28	\$17.27	\$22.53
41-1012	First-Line Supervisors/Managers of Non-Retail Sales Workers	\$20.60	\$34.23	\$41.04	\$18.19	\$24.14	\$32.52	\$41.89	\$52.52
33-1012	First-Line Supervisors/Managers of Police and Detectives	\$29.42	\$35.02	\$37.82	\$28.03	\$30.56	\$34.23	\$39.88	\$44.68
33-1099	First-Line Supervisors/Managers, Protective Service Workers, All Other	\$14.38	\$23.63	\$28.26	\$13.77	\$15.34	\$19.84	\$31.37	\$40.47
* 33-3031	Fish and Game Wardens	\$19.00	\$23.00	\$25.00	\$16.00	\$21.00	\$24.00	\$26.00	\$27.00
35-2021	Food Preparation Workers	\$7.14	\$9.42	\$10.55	\$6.68	\$7.60	\$8.81	\$11.20	\$13.25
25-1124	Foreign Language and Literature Teachers, Postsecondary	\$31,551	\$48,454	\$56,906	\$30,259	\$34,841	\$44,247	\$58,336	\$78,970
* 33-2022	Forest Fire Inspectors and Prevention Specialists	†	†	†	†	†	†	†	†
* 33-2022	Forest Fire Inspectors and Prevention Specialists	†	†	†	†	†	†	†	†
25-1064	Geography Teachers, Postsecondary	\$41,622	\$59,139	\$67,898	\$39,399	\$44,835	\$55,113	\$73,707	\$89,615
19-4041	Geological and Petroleum Technicians	\$13.59	\$21.14	\$24.92	\$11.77	\$16.33	\$20.48	\$26.68	\$32.37
19-2042	Geoscientists, Except Hydrologists and Geographers	\$23.76	\$39.04	\$46.68	\$19.90	\$28.77	\$39.05	\$50.04	\$59.08
* 25-1191	Graduate Teaching Assistants	†	†	†	†	†	†	†	†
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	\$22.61	\$33.44	\$38.86	\$21.34	\$25.41	\$33.25	\$41.37	\$47.47
21-1091	Health Educators	\$9.56	\$17.87	\$22.03	\$9.17	\$10.31	\$14.38	\$24.80	\$32.08
* 29-9099	Healthcare Practitioners and Technical Workers, All Other	†	†	†	†	†	†	†	†

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	\$8.65	\$11.11	\$12.34	\$8.02	\$9.09	\$10.95	\$13.01	\$14.37
25-1125	History Teachers, Postsecondary	\$37,627	\$57,893	\$68,027	\$35,249	\$41,737	\$52,780	\$67,950	\$89,220
* 25-1192	Home Economics Teachers, Postsecondary	\$26,860	\$40,920	\$47,940	\$24,060	\$31,940	\$39,360	\$47,510	\$59,170
31-1011	Home Health Aides	\$8.95	\$11.37	\$12.58	\$8.34	\$9.34	\$10.51	\$13.00	\$16.53
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	\$12.68	\$16.79	\$18.84	\$11.88	\$14.06	\$16.34	\$19.38	\$22.22
19-2043	Hydrologists	\$23.89	\$34.83	\$40.30	\$22.20	\$26.92	\$33.75	\$41.81	\$52.07
17-2112	Industrial Engineers	\$22.93	\$33.59	\$38.92	\$21.59	\$26.11	\$32.95	\$40.92	\$48.70
* 43-4199	Information and Record Clerks, All Other	†	†	†	†	†	†	†	†
25-9031	Instructional Coordinators	\$14.80	\$27.20	\$33.40	\$13.14	\$17.05	\$25.32	\$33.09	\$51.34
13-1032	Insurance Appraisers, Auto Damage	\$19.23	\$24.27	\$26.79	\$17.94	\$21.32	\$24.59	\$27.37	\$30.06
41-3021	Insurance Sales Agents	\$19.09	\$34.62	\$42.39	\$16.99	\$21.55	\$27.52	\$41.82	\$63.52
13-2053	Insurance Underwriters	\$18.31	\$30.15	\$36.07	\$16.42	\$20.97	\$28.52	\$37.10	\$45.62
27-1025	Interior Designers	\$17.14	\$31.74	\$39.04	\$15.76	\$19.89	\$30.75	\$34.55	\$36.82
* 27-3091	Interpreters and Translators	\$13.00	\$21.00	\$25.00	\$12.00	\$15.00	\$21.00	\$27.00	\$31.00
43-4111	Interviewers, Except Eligibility and Loan	\$8.08	\$11.98	\$13.93	\$7.59	\$8.87	\$11.38	\$14.55	\$17.30
51-9071	Jewelers and Precious Stone and Metal Workers	\$11.77	\$14.55	\$15.95	\$11.14	\$11.77	\$12.75	\$14.02	\$21.48
25-2012	Kindergarten Teachers, Except Special Education	\$27,929	\$41,585	\$48,413	\$26,646	\$32,213	\$40,946	\$52,002	\$59,942
17-1012	Landscape Architects	\$14.55	\$24.83	\$29.97	\$12.44	\$18.02	\$24.43	\$31.57	\$39.57
23-2092	Law Clerks	\$13.81	\$18.44	\$20.75	\$12.63	\$15.33	\$18.29	\$20.66	\$23.77
* 25-1112	Law Teachers, Postsecondary	†	†	†	†	†	†	†	†
* 23-2099	Legal Support Workers, All Other	†	†	†	†	†	†	†	†
43-4121	Library Assistants, Clerical	\$7.83	\$10.46	\$11.77	\$7.31	\$8.48	\$10.40	\$12.37	\$13.70
25-4031	Library Technicians	\$10.23	\$13.42	\$15.02	\$9.55	\$11.05	\$12.93	\$15.73	\$18.61
19-1099	Life Scientists, All Other	\$17.27	\$27.61	\$32.78	\$15.32	\$20.25	\$27.07	\$34.55	\$41.57
19-4099	Life, Physical, and Social Science Technicians, All Other	\$10.48	\$17.00	\$20.26	\$9.24	\$12.19	\$15.69	\$20.19	\$26.60
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	\$6.55	\$9.75	\$11.35	\$6.04	\$7.21	\$9.32	\$10.95	\$13.24

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details —continued

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

SOC Code		SOC Occupational Title		Occupational Employment Statistics Wage Data (2003)					
				Average Wages			Percentile Distribution		
				Entry-Level	Overall	Experienced	10th	25th	50th
49-9094	Locksmiths and Safe Repairers	\$11.59	\$16.57	\$19.06	\$11.04	\$12.55	\$16.23	\$20.00	\$23.40
11-9081	Lodging Managers	\$19.23	\$26.37	\$29.93	\$18.11	\$20.45	\$23.68	\$29.12	\$37.33
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	\$9.02	\$11.69	\$13.03	\$8.30	\$9.62	\$11.41	\$13.49	\$15.72
49-9043	Maintenance Workers, Machinery	\$7.03	\$13.99	\$17.48	\$6.28	\$7.53	\$14.37	\$19.06	\$21.85
* 21-1013	Marriage and Family Therapists	†	†	†	†	†	†	†	†
31-9011	Massage Therapists	\$11.05	\$18.44	\$22.14	\$10.41	\$12.00	\$13.75	\$25.67	\$31.85
17-2131	Materials Engineers	\$23.30	\$35.68	\$41.88	\$21.00	\$27.41	\$35.04	\$43.25	\$52.75
25-1022	Mathematical Science Teachers, Postsecondary	\$31,974	\$52,127	\$62,204	\$30,851	\$35,372	\$43,679	\$63,513	\$87,487
* 15-2091	Mathematical Technicians	†	†	†	†	†	†	†	†
* 15-2021	Mathematicians	\$30.00	\$39.00	\$43.00	\$22.00	\$36.00	\$41.00	\$45.00	\$51.00
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	\$9.75	\$13.58	\$15.49	\$9.31	\$10.11	\$11.44	\$18.44	\$20.80
17-3027	Mechanical Engineering Technicians	\$15.43	\$21.50	\$24.53	\$12.93	\$18.28	\$21.81	\$25.32	\$28.01
27-3099	Media and Communication Workers, All Other	\$14.11	\$22.13	\$26.14	\$13.18	\$15.76	\$21.13	\$27.32	\$33.75
21-1022	Medical and Public Health Social Workers	\$16.27	\$20.73	\$22.97	\$15.02	\$17.76	\$20.37	\$24.09	\$27.69
51-9082	Medical Appliance Technicians	\$12.26	\$14.58	\$15.73	\$11.73	\$12.64	\$14.16	\$16.49	\$18.09
19-1042	Medical Scientists, Except Epidemiologists	\$16.34	\$31.14	\$38.54	\$14.72	\$17.55	\$28.60	\$39.69	\$51.10
31-9094	Medical Transcriptionists	\$12.93	\$16.43	\$18.17	\$12.18	\$14.10	\$15.94	\$18.12	\$22.41
13-1121	Meeting and Convention Planners	\$14.73	\$19.96	\$22.58	\$14.03	\$15.69	\$19.00	\$23.29	\$28.22
21-1023	Mental Health and Substance Abuse Social Workers	\$12.10	\$18.15	\$21.17	\$11.79	\$13.27	\$16.14	\$20.98	\$26.72
21-1014	Mental Health Counselors	\$11.61	\$16.09	\$18.34	\$10.94	\$12.26	\$14.29	\$17.15	\$21.45
19-1022	Microbiologists	\$23.25	\$31.49	\$35.61	\$21.79	\$26.41	\$31.63	\$35.06	\$38.86
11-9121	Natural Sciences Managers	\$31.74	\$45.95	\$53.06	\$29.07	\$35.86	\$45.33	\$53.97	\$64.14
43-4141	New Accounts Clerks	\$11.10	\$12.74	\$13.57	\$10.27	\$11.60	\$12.76	\$13.98	\$15.79
* 29-9011	Occupational Health and Safety Specialists	†	†	†	†	†	†	†	†
31-2011	Occupational Therapist Assistants	\$13.07	\$15.93	\$17.37	\$12.34	\$13.89	\$15.92	\$17.90	\$20.42
29-2081	Opticians, Dispensing	\$12.46	\$16.40	\$18.36	\$11.38	\$13.66	\$16.02	\$18.86	\$21.00

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
51-9111	Packaging and Filling Machine Operators and Tenders	\$8.10	\$11.62	\$13.39	\$7.31	\$9.13	\$11.08	\$14.36	\$16.85
53-6021	Parking Lot Attendants	\$6.23	\$7.83	\$8.62	\$5.84	\$6.31	\$7.06	\$8.80	\$11.08
41-2022	Parts Salespersons	\$10.92	\$16.32	\$19.02	\$10.02	\$11.77	\$14.43	\$19.32	\$27.07
43-3051	Payroll and Timekeeping Clerks	\$13.37	\$16.80	\$18.51	\$12.42	\$14.49	\$16.57	\$19.23	\$21.96
39-9099	Personal Care and Service Workers, All Other	\$7.47	\$10.70	\$12.31	\$6.94	\$8.29	\$10.54	\$12.65	\$15.13
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	\$10.17	\$14.30	\$16.36	\$9.49	\$11.19	\$14.09	\$17.05	\$19.74
17-2171	Petroleum Engineers	\$26.34	\$43.27	\$51.73	\$24.21	\$29.27	\$45.55	\$55.00	\$64.42
31-9095	Pharmacy Aides	\$9.25	\$11.15	\$12.10	\$8.77	\$9.69	\$10.89	\$12.83	\$14.22
25-1126	Philosophy and Religion Teachers, Postsecondary	\$23,470	\$47,839	\$60,023	\$20,218	\$26,924	\$44,367	\$65,050	\$83,173
31-2021	Physical Therapist Assistants	\$12.92	\$16.60	\$18.43	\$12.02	\$14.22	\$16.50	\$19.52	\$21.71
29-1071	Physician Assistants	\$22.49	\$29.90	\$33.60	\$19.85	\$26.51	\$30.72	\$34.35	\$39.70
29-1069	Physicians and Surgeons, All Other	\$36.37	\$66.32	\$81.30	\$31.87	\$44.53	\$57.09	†	†
25-1054	Physics Teachers, Postsecondary	\$43,293	\$70,994	\$84,845	\$39,787	\$49,291	\$66,129	\$88,786	\$111,626
47-2151	Pipelayers	\$9.91	\$13.29	\$14.98	\$9.39	\$10.51	\$12.51	\$15.42	\$19.25
43-5031	Police, Fire, and Ambulance Dispatchers	\$14.15	\$17.83	\$19.67	\$13.34	\$15.23	\$17.73	\$20.46	\$22.94
25-1065	Political Science Teachers, Postsecondary	\$41,356	\$63,750	\$74,947	\$36,730	\$46,909	\$58,161	\$75,592	\$96,220
49-9069	Precision Instrument and Equipment Repairers, All Other	\$15.34	\$19.86	\$22.13	\$14.42	\$16.98	\$20.31	\$22.83	\$25.70
51-5023	Printing Machine Operators	\$13.16	\$17.75	\$20.04	\$11.79	\$14.80	\$17.13	\$21.10	\$25.88
33-9021	Private Detectives and Investigators	\$10.62	\$19.48	\$23.91	\$9.46	\$12.12	\$22.17	\$26.09	\$29.80
43-3061	Procurement Clerks	\$11.43	\$15.89	\$18.11	\$10.43	\$12.82	\$15.69	\$18.84	\$21.32
27-2012	Producers and Directors	\$32,808	\$59,119	\$72,275	\$26,242	\$40,954	\$51,792	\$66,516	\$101,312
51-9199	Production Workers, All Other	\$7.32	\$11.14	\$13.05	\$6.76	\$8.12	\$10.13	\$13.08	\$17.52
31-1013	Psychiatric Aides	\$9.19	\$11.36	\$12.44	\$8.38	\$9.77	\$11.34	\$13.02	\$14.31
29-2053	Psychiatric Technicians	\$9.92	\$13.89	\$15.88	\$8.92	\$11.09	\$14.08	\$16.53	\$19.58
29-1066	Psychiatrists	\$50.61	\$75.13	\$87.39	\$43.08	\$60.75	\$69.92	†	†
25-1066	Psychology Teachers, Postsecondary	\$34,603	\$63,649	\$78,172	\$31,608	\$37,134	\$59,934	\$76,483	\$106,407

* OES wages reported for Colorado statewide

† insufficient wage data available

Occupational Details *—continued*

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

SOC Code		SOC Occupational Title		Occupational Employment Statistics Wage Data (2003)					
				Average Wages			Percentile Distribution		
				Entry-Level	Overall	Experienced	10th	25th	50th
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$17.40	\$26.00	\$30.30	\$15.88	\$19.31	\$23.93	\$30.55	\$36.87
29-1124	Radiation Therapists	\$21.34	\$26.24	\$28.69	\$19.45	\$23.28	\$26.29	\$29.77	\$34.22
* 25-1193	Recreation and Fitness Studies Teachers, Postsecondary	\$29,330	\$42,250	\$48,710	\$26,430	\$35,270	\$41,870	\$49,440	\$58,740
53-7081	Refuse and Recyclable Material Collectors	\$10.29	\$12.40	\$13.45	\$9.65	\$10.33	\$11.42	\$13.67	\$17.87
21-1015	Rehabilitation Counselors	\$10.03	\$15.05	\$17.56	\$8.85	\$11.23	\$13.35	\$17.08	\$24.84
* 21-2099	Religious Workers, All Other	†	†	†	†	†	†	†	†
* 27-3022	Reporters and Correspondents	†	†	†	†	†	†	†	†
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	\$9.78	\$13.47	\$15.32	\$9.32	\$10.42	\$12.29	\$16.89	\$20.34
47-2181	Roofers	\$12.20	\$15.14	\$16.60	\$11.67	\$13.30	\$15.24	\$16.94	\$18.92
49-2098	Security and Fire Alarm Systems Installers	\$15.49	\$19.62	\$21.69	\$14.71	\$15.98	\$18.59	\$21.50	\$28.25
25-3021	Self-Enrichment Education Teachers	\$8.29	\$15.84	\$19.61	\$7.27	\$9.52	\$14.09	\$18.87	\$27.53
39-5094	Skin Care Specialists	\$6.68	\$13.93	\$17.55	\$6.14	\$7.40	\$10.83	\$17.32	\$30.30
11-9151	Social and Community Service Managers	\$15.55	\$23.68	\$27.74	\$14.85	\$16.99	\$21.19	\$27.36	\$35.72
21-1093	Social and Human Service Assistants	\$9.29	\$13.09	\$14.98	\$8.80	\$10.48	\$12.55	\$15.31	\$18.83
* 25-1069	Social Sciences Teachers, Postsecondary, All Other	†	†	†	†	†	†	†	†
* 25-1113	Social Work Teachers, Postsecondary	\$31,890	\$57,910	\$70,920	\$25,410	\$40,370	\$55,570	\$78,340	\$93,850
* 21-1029	Social Workers, All Other	†	†	†	†	†	†	†	†
25-1067	Sociology Teachers, Postsecondary	\$38,368	\$61,216	\$72,640	\$35,139	\$42,763	\$56,407	\$74,602	\$92,084
25-2042	Special Education Teachers, Middle School	\$34,029	\$46,082	\$52,108	\$31,475	\$36,572	\$45,997	\$55,266	\$63,904
51-8021	Stationary Engineers and Boiler Operators	\$14.95	\$21.47	\$24.73	\$13.54	\$17.00	\$21.72	\$26.05	\$28.81
43-9111	Statistical Assistants	\$14.65	\$18.60	\$20.58	\$14.07	\$15.87	\$19.13	\$21.59	\$23.16
15-2041	Statisticians	\$19.76	\$27.99	\$32.10	\$18.76	\$21.62	\$26.82	\$33.01	\$39.48
47-2022	Stonemasons	\$12.82	\$20.32	\$24.06	\$12.15	\$13.65	\$23.39	\$26.53	\$28.44
51-2041	Structural Metal Fabricators and Fitters	\$13.77	\$17.63	\$19.57	\$12.32	\$14.92	\$16.92	\$20.13	\$25.67
* 19-3022	Survey Researchers	†	†	†	†	†	†	†	†
17-3031	Surveying and Mapping Technicians	\$13.65	\$18.90	\$21.52	\$12.52	\$15.35	\$18.98	\$21.61	\$25.96

* OES wages reported for Colorado statewide

† insufficient wage data available

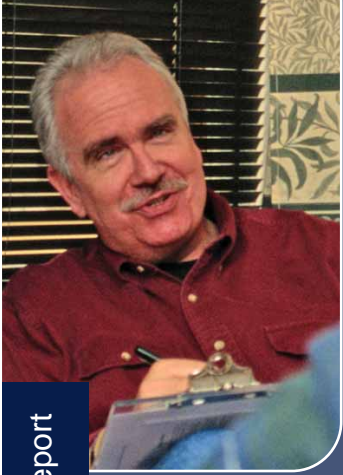
Occupational Details *—continued*

Table 2: Occupations with Fewer than 10 Estimated Vacancies — Page 9

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
17-1022	Surveyors	\$15.64	\$21.99	\$25.17	\$14.43	\$17.23	\$21.32	\$26.12	\$31.69
43-2011	Switchboard Operators, Including Answering Service	\$9.05	\$11.71	\$13.04	\$8.51	\$9.89	\$11.65	\$13.49	\$15.30
13-2082	Tax Preparers	\$8.56	\$15.47	\$18.92	\$8.04	\$9.07	\$11.75	\$19.93	\$26.89
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	\$20.03	\$23.38	\$25.06	\$18.51	\$21.75	\$23.89	\$26.02	\$27.40
* 29-1129	Therapists, All Other	†	†	†	†	†	†	†	†
47-2044	Tile and Marble Setters	\$12.73	\$17.41	\$19.74	\$12.12	\$14.48	\$16.29	\$18.00	\$23.37
* 39-6021	Tour Guides and Escorts	\$7.00	\$11.00	\$13.00	\$7.00	\$8.00	\$10.00	\$13.00	\$16.00
53-6041	Traffic Technicians	\$12.85	\$17.71	\$20.13	\$11.75	\$14.21	\$18.04	\$20.99	\$24.10
53-6099	Transportation Workers, All Other	\$8.74	\$14.27	\$17.03	\$8.05	\$9.70	\$11.31	\$16.85	\$26.31
51-6093	Upholsterers	\$10.07	\$12.93	\$14.36	\$9.58	\$10.41	\$11.75	\$14.14	\$18.47
19-3051	Urban and Regional Planners	\$16.22	\$24.55	\$28.71	\$15.31	\$17.24	\$24.12	\$30.78	\$35.50
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$7.42	\$11.44	\$13.44	\$6.88	\$8.08	\$9.80	\$11.70	\$14.70
* 31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$6.00	\$11.00	\$14.00	\$6.00	\$7.00	\$8.00	\$10.00	\$27.00
29-2056	Veterinary Technologists and Technicians	\$9.76	\$11.93	\$13.02	\$9.23	\$10.01	\$11.41	\$13.11	\$15.04
25-1194	Vocational Education Teachers, Postsecondary	\$15.06	\$24.64	\$29.43	\$14.19	\$16.65	\$23.88	\$31.72	\$39.82
25-2032	Vocational Education Teachers, Secondary School	\$36,160	\$49,164	\$55,666	\$33,403	\$40,043	\$49,037	\$56,714	\$67,621
51-8031	Water and Liquid Waste Treatment Plant and System Operators	\$18.38	\$22.72	\$24.90	\$17.25	\$20.56	\$23.49	\$25.82	\$27.21
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	\$12.46	\$15.85	\$17.55	\$11.93	\$13.09	\$15.21	\$18.97	\$21.40
43-9022	Word Processors and Typists	\$11.69	\$15.33	\$17.15	\$10.83	\$12.85	\$15.18	\$17.70	\$20.66
27-3043	Writers and Authors	\$13.62	\$21.65	\$25.67	\$12.98	\$15.28	\$20.31	\$26.29	\$34.18
19-1023	Zoologists and Wildlife Biologists	\$18.24	\$24.93	\$28.27	\$14.75	\$22.43	\$25.30	\$28.13	\$33.82

* OES wages reported for Colorado statewide

† insufficient wage data available



Government

Sector Briefs

The Government sector accounts for less than 1% of Denver Metro's employers, however, it employs almost 15% of the region's workers, and accounts for 19% of the vacancies estimated in this survey. This section of the report details information specifically provided by employers in the Government sector.

The number of vacancies estimated in this survey for the Government sector is over 1,500 above the level found in the Spring 2003 Survey, an increase of 130%. Moreover, vacancies estimated for this sector are 13% higher than the vacancies estimated for the same sector in the Spring 2002 Survey. Current and forecasted improvements in State budget compared to previous years created an additional need for workers in this sector.

Wages offered for vacancies in Government are in the mid range and fall short of the \$15.50 overall average in this survey. A mix of low paying and moderately paying occupations flattened the average wage paid in the sector. Building & Grounds Cleaning & Maintenance occupations, offer an average wage of \$8.10 and account for 21% of the vacancies in this sector. Another 18% of the sector's vacancies are for Education, Training, & Library occupations, offering an average wage of \$14.90. Other industries that also offer ample opportunities are in Personal Care & Service, Protective Service, and

Arts, Design, Entertainment, Sports, & Media occupations. Opportunities in highly paying occupational groups are available but limited: Management occupations make up 5%, while Healthcare Practitioners & Technical occupations account for another 4% of the Government sector vacancies.

Full-time/permanent openings account for 58% of the vacancies reported within the sector, while temporary positions account for 40% of the positions. Such a high concentration of temporary positions may offer an explanation as to why 68% of the sector's vacancies are offered with no medical insurance benefits.

Sixty percent of the reported vacancies within the sector require a High School/GED diploma or less, while 13% require a Bachelor's Degree, and 6% require Advanced Degrees. Almost two-thirds of the sector's vacancies requiring a bachelor's or advanced degree are in Management and Education, Training, & Library occupations.

Experience requirements are at the high end within this sector, with 51% percent of the vacancies requiring experience in a related field and 17% requiring experience in the specific occupation. Government employers are having less difficulty filling positions than the other employers in the region. Sixty-three percent of the vacancies are reported as not difficult to fill, 35% as somewhat difficult to fill, and only 2% as very difficult to fill. Forty-seven percent of the vacancies are open for a period of less than 30 days.



How to Use This Report

Appendix

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

- ◆ How many job openings are there?
- ◆ What industries are hiring?
- ◆ What skills are employers seeking?
- ◆ Are employers having difficulty filling positions?

The answers to these and similar questions are important in the decision-making processes of employers, employees, job seekers, trainers, and planning officials. While Labor Market Information (LMI) provides data on

the local labor force supply, the Job Vacancy Survey complements this by providing information about the demand for labor and offers a more complete picture of local labor markets.

Employers

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

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

Compensation and Benefits Planning—The Job Vacancy Survey provides wages offered for surveyed job openings. Tables in this report also detail current wages by occupation from Occupational Employment Statistics data. Together these pieces of information can be used to develop wage guidelines for compensation practices.

New Site Selection—Employers considering relocating or expanding to the area can study the survey and determine how easily the company's employment needs will be met by reviewing current vacancies. Companies need a sufficient, qualified labor pool to operate. High labor demand within a particular JVS sector segment along with indications of difficulty filling these positions should caution a firm requiring a similar labor profile.

Job Seekers

The Job Vacancy Survey provides job seekers with a broad view of which industries are hiring, which occupations are in demand along with currently offered

salaries and benefits, and what education and experience levels are required. This report is a roadmap that can be used to determine where the best paying jobs are given an individual's skills and level of education.

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

Appendix

Caveats

The Job Vacancy Survey uses sampling methods to estimate over-all job vacancies for regions. As such, readers should be mindful of sampling issues.

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

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

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

Occupational demand is subject to seasonal changes and is affected by business cycles. For example, the reader would want to be aware that a decrease in vacancies for construction workers from April to November could represent seasonal variations, not necessarily a long-term decrease in the demand for such workers. When several years of survey data have been collected, patterns that more accurately reflect changing labor market conditions may be identified. Regional surveys are timed to make these comparisons possible.

The occupational detail provided is supplemental data believed to be of interest to the reader. The survey design does not allow for application of this detail to the region as a whole, but it can be used to understand characteristics of those job vacancies reported. These vacancy characteristics are not estimated and therefore do contain significant bias. Approximately 85% of the non-estimated information comes from large employers and government agencies, but they represent approximately 34% 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 for. In each size and industry stratification a ratio of vacancies to employment is calculated based on the sampled firms. That ratio is then applied to the total number of employees in that stratification to obtain the estimated number of vacancies in that stratification. The total number of vacancies for a region is the sum of each stratification's estimated vacancies.

Stratifications containing small and medium sized private employers are randomly sampled. In order to report vacancy characteristics such as education and experience requirements demanded, the survey must contact more employers than would be necessary if the survey only estimated the total number of vacancies. For this reason all of the large employers and government agencies are contacted in the region. These employers provide the most cost effective means of obtaining large amounts of vacancy information. Approximately 34% of the employment in the region is found in large and government employers that make up only 1% of the total number of firms. Conducting a census of these entities allows us to cover a large portion of the region's employment while contacting relatively few entities.

Appendix: Methodology —continued

Survey Sample

The Denver Metro Region survey was conducted from April 1st through June 1st, 2004. For the purpose of this report, private and government employers with five or more employees are referred to as the sample frame. Firms with fewer than five employees make up a very large portion of all employers in the region, but provide only a small proportion of the total employment. Employment in the sample frame accounts for 88% 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 JVS industry sectors.

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

Government makes up 14% of the employment in the sample frame, while private industry employers make up the remaining 86%. Large firms account for 20% 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 66% of private industry employment.

The margin of error for the overall vacancy estimate is plus or minus 1.75% or about 290 vacancies at a 0.95 certainly level. In other words, in 95 out of 100 samples, the actual number of vacancies in the region will be between 16,310 and 16,890 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 84.8%. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is 99.4% and measures the success in obtaining data once an employer is contacted.

JVS Sectors

The new North American Industry Classification System increases the number of major groups to 20 from the Standard Industrial Classification System. The new coding system better reflects today's service based economy and allows comparison of industries in the United States, Mexico and Canada. 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 44.

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

Appendix: Methodology —continued

North American Industry Classification System

Data Collection

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

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

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

Occupational Coding

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

Data Editing

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

Wage Conversion

Standard conversions are used to translate salaries into hourly wages: 2,080 hours for annual, 173.3 hours for monthly.

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

North American Industry Classification System (NAICS)

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

History of Process

The Office of Management and Budget established the Economic Classification Policy Committee in 1992 to pursue a fresh slate examination of economic classifications for statistical purposes¹. Since 1939 the U.S. has been using the Standard Industrial Classification (SIC) system. While SIC had undergone periodic revisions, the last one in 1987, rapid changes in the U.S. and world economies brought SIC under increased scrutiny. In response to the need for a classification system that better reflected the dynamic nature of economies, OMB established the Economic Classification Policy Committee². Government agencies from the United States, Mexico and Canada³ were tasked with the development of a system that accounted for rapid changes in the U.S. and world economies.

Industrial Classification vs. Occupational Classification

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

Benefits

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

Relevant— NAICS recognizes hundreds of new businesses in the economy with 20

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

²EPC 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

Appendix: NAICS —continued

broad industry sectors, up from SIC’s 10. Some new industry categories include an Information sector and a Health Care & Social Assistance sector formerly lumped into Services under SIC.

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

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

Things to Consider

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

New Industries Reflected in NAICS

- ◆ NAICS heralds the creation of a new Information sector that pulls businesses from communications, publishing, motion picture and sound recording and online services to recognize an information-based economy.
- ◆ Formerly, under SIC, corporate headquarters were not distinguished from the industry category of the product or service they produced. Now corporate headquarters are recognized in the new Management sector.

- ◆ Manufacturing is restructured to account for high-tech industries.
- ◆ An increase in the amount of detail overall accompanies the shift to NAICS including a further breakdown of SIC’s Services sector into seven new sectors.
- ◆ Eating and drinking places move out of Retail Trade into a new category called Accommodation & Food Services.
- ◆ The difference between Retail and Wholesale is now based on how each store conducts business. For example, many computer stores are reclassified from Wholesale to Retail.

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

Appendix

Glossary

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

Average Maximum Wage

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

Average Minimum Wage

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

Computer Assisted Telephone Interviewing (CATI)

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

Cooperation Rate

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

Educational Attainment

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

Effective Response Rate

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

Employed Persons (Employment)

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

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

other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs.

Employer

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

Full-time Employee

Employees who usually work 35 hours per week or more.

Goods Producing Industries (NAICS)

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

Industry

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

Job Seeker

A person actively looking for employment or researching career options.

Job Vacancy

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

Job Vacancy Rate

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

Labor Force

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

Medical Insurance

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

Medical Insurance Premium

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

North American Industry Classification System (NAICS)

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

Appendix: Glossary —continued

Not Seasonally Adjusted

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

Occupation

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

Part-time Employee

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

Percentile Wage Estimate

Shows what percentage of workers in an occupation earn less than a given wage and what percentage earn more. For example, a 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 JVS 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

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