



Denver Metro Region

Job Vacancy Survey

Fall 2004



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Introduction

The Colorado Job Vacancy Survey

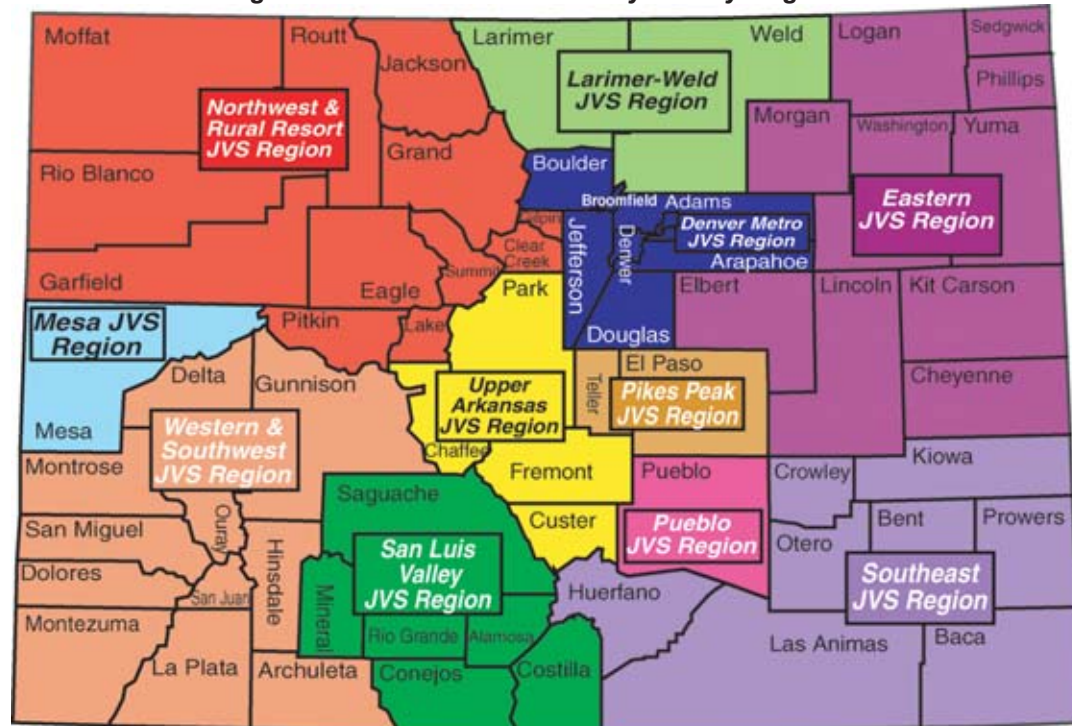
The unemployment rate and the level and growth rate of employment have been used as indicators of labor market conditions for decades. While these indicators provide information about changes in the supply and demand for labor, they reveal nothing about the skills most sought after by employers. As such, individuals preparing themselves for the job market have done so with limited knowledge of what skills are necessary to successfully compete in

the contemporary labor market. Employers have had an equally difficult time determining appropriate compensation levels due to a limited knowledge of what similar firms in their region are currently offering.

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

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

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

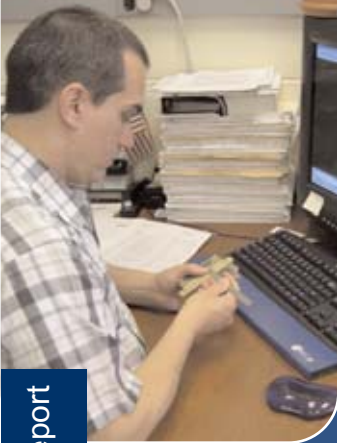
The Fall 2004 Denver Metro Job Vacancy Survey (JVS) was conducted from October 6th through December 3rd, 2004. The goal of the survey is to provide current information on the demand for workers so that employers, job seekers, economic developers, educators, and workforce centers can make more informed 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 5,640 employers, representing 36% of the region's employment, responded to the survey. Of these, 319 are large employers, 326 are Government employers and 4,995 are small to mid-size employers. The survey has an effective response rate of 87% and a cooperation rate of 99%. The margin of sampling error for the overall vacancy estimate is plus or minus 1.9% or about 330 vacancies.

Major Findings of Survey:

- ◆ Vacancies open for immediate hire total 17,200, compared to 16,300 a year ago.Page 8
- ◆ The overall average wage is \$13.15 per hour.Page 8
- ◆ Fourteen percent of the employers responding to this survey report at least one vacancy, compared to 12% last year.Page 8
- ◆ The Retail Trade sector has the most vacancies.Page 8
- ◆ The Manufacturing sector offers the highest average wage.Page 9
- ◆ Denver County has the most vacancies but Arapahoe County offers the highest wages.Page 10
- ◆ Small to mid-size employers account for 51% of the total vacancies.Page 11
- ◆ Of the openings, 78% are full-time positions and 93% are for permanent employment.Page 12
- ◆ Post-secondary education is required for 63% of the openings.Page 13
- ◆ Related or specific experience is required for 77% of all openings.Page 14
- ◆ Compared to Fall 2003, vacancies reported as not difficult to fill decreased from 66% to 55%, while vacancies reported as very difficult to fill increased from 15% to 22%.Page 15



Regional Information

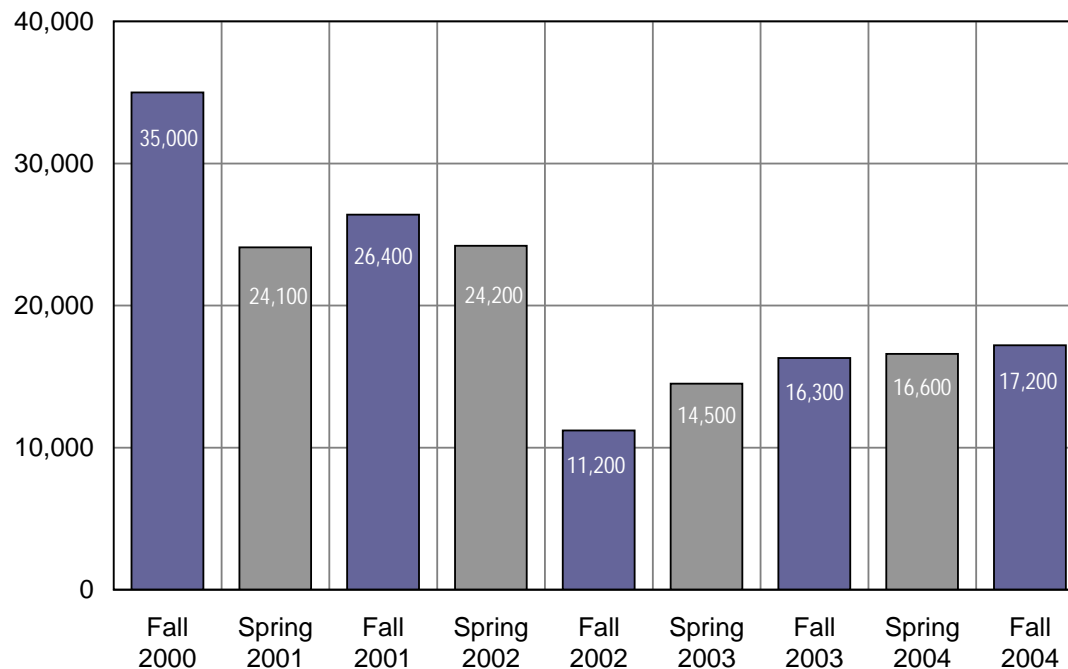
The Denver Metro Region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties. Broomfield County will be surveyed separately from the Boulder Metropolitan Statistical Area (MSA) for the first time in the spring 2005 survey now that a complete census of employers has been compiled.

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 63% 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; and Accommodation & Food Services. Employment is lowest in the Mining and 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 1,405,075 individuals from a labor force of about 1,478,130 in November 2004. Since conducting the Fall 2003 survey, the labor force increased by 37,758, while employment increased by 47,081 jobs. The unemployment rate significantly dropped from 5.7% to 4.9% between the two periods as the number of unemployed decreased by 9,323. Unemployment rates peaked in early 2002 at levels above 6%, which have not been experienced in the region since early 1993. In November, the unemployment rate was highest in Denver County at 5.9%, followed by Adams County at 5.7%, with the lowest rate in the region occurring in Douglas County at 3.6%.

Figure 2: Historical Vacancies—Denver Metro Region



	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
Vacancies	35,000	24,100	26,400	24,200	11,200	14,500	16,300	16,600	17,200
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	1,405,075
Unemployed	30,984	36,157	71,100	75,397	82,790	79,326	82,378	66,754	73,055
Unemployment Rate	2.3%	2.6%	5.0%	5.4%	5.8%	5.5%	5.7%	4.6%	4.9%

Source: CDLE, Local Area Unemployment Statistics, November 2004

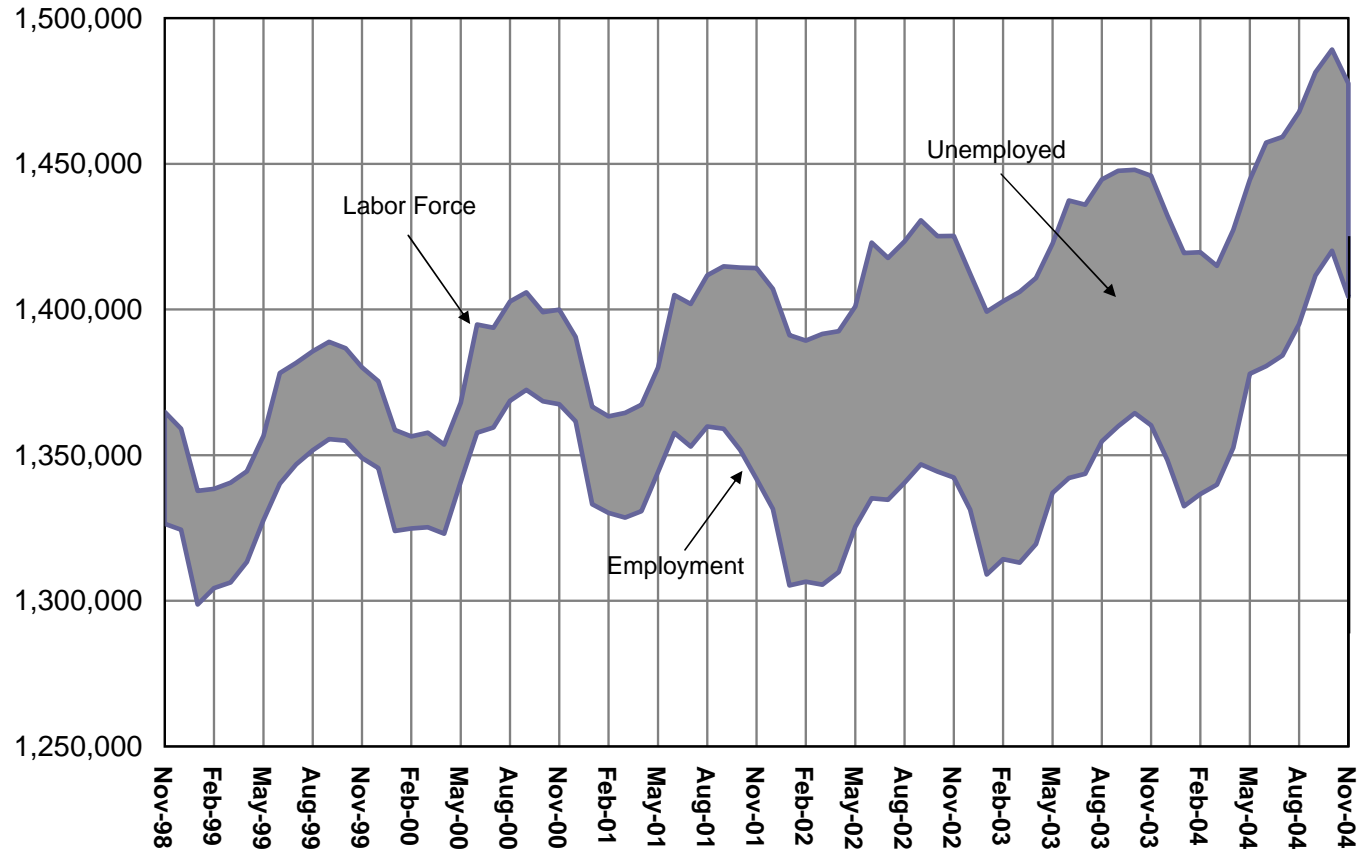
Regional Information —continued

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 0.5% from November, 2000 to November, 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 November is 2.8% 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 of 2.8% or lower. In 2003, both labor force and employment increased by 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 lines; the wider the vertical distance between the two lines, the higher the number of unemployed.

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



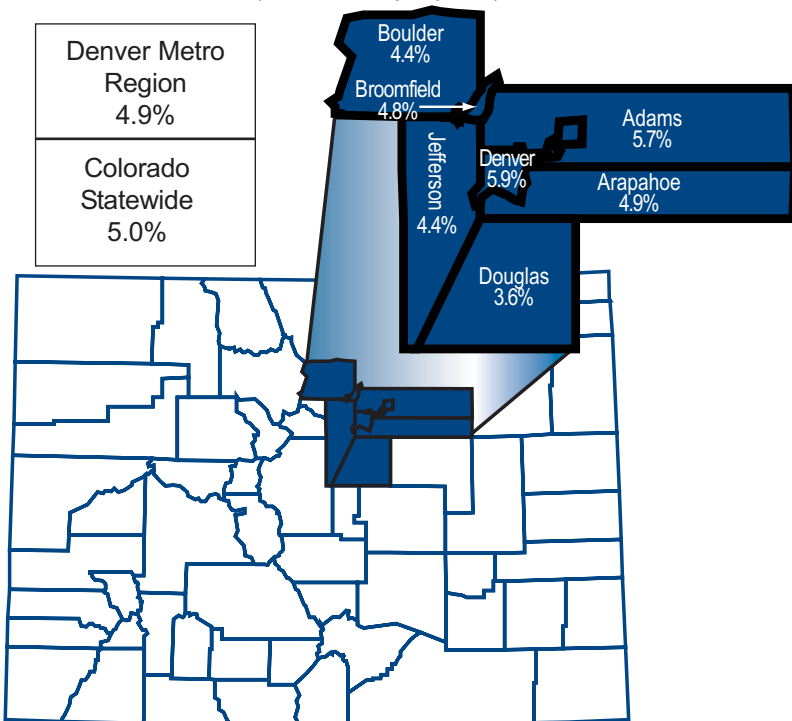
Source: CDLE, Local Area Unemployment Statistics, November 2004

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

Regional Information – continued

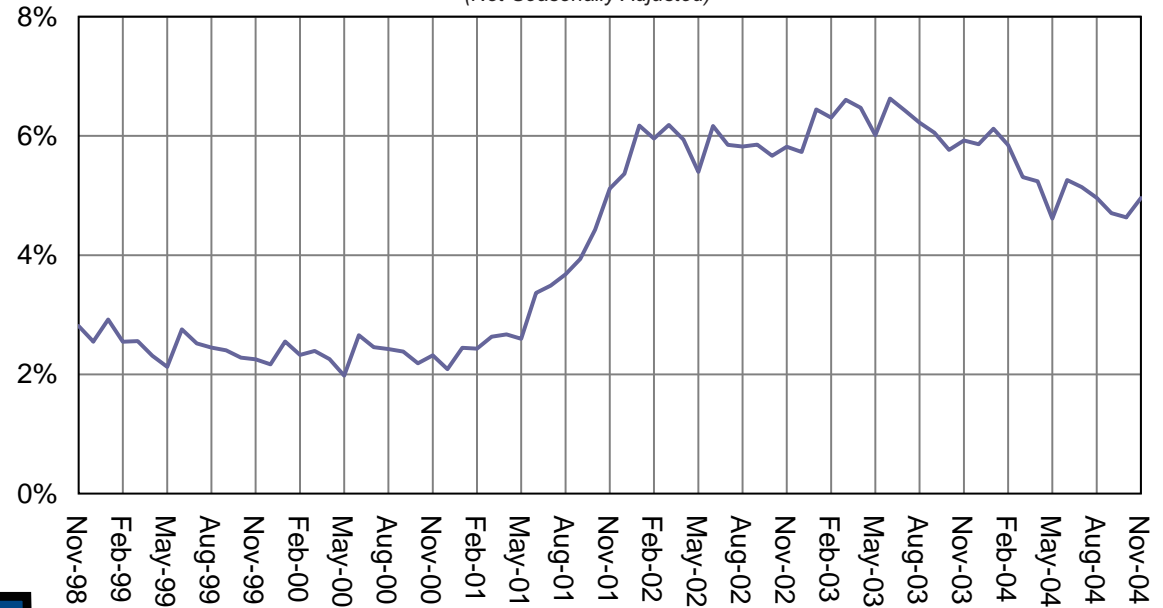
Surveys conducted in spring represent the demand for labor at the time of the year when employment is expanding. Vacancies found in the Fall Survey reflect the demand for labor at a time when employment is at or around its peak, yet employers are still in the process of recruiting.

Figure 5: Unemployment Rates for November 2004
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, November 2004

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

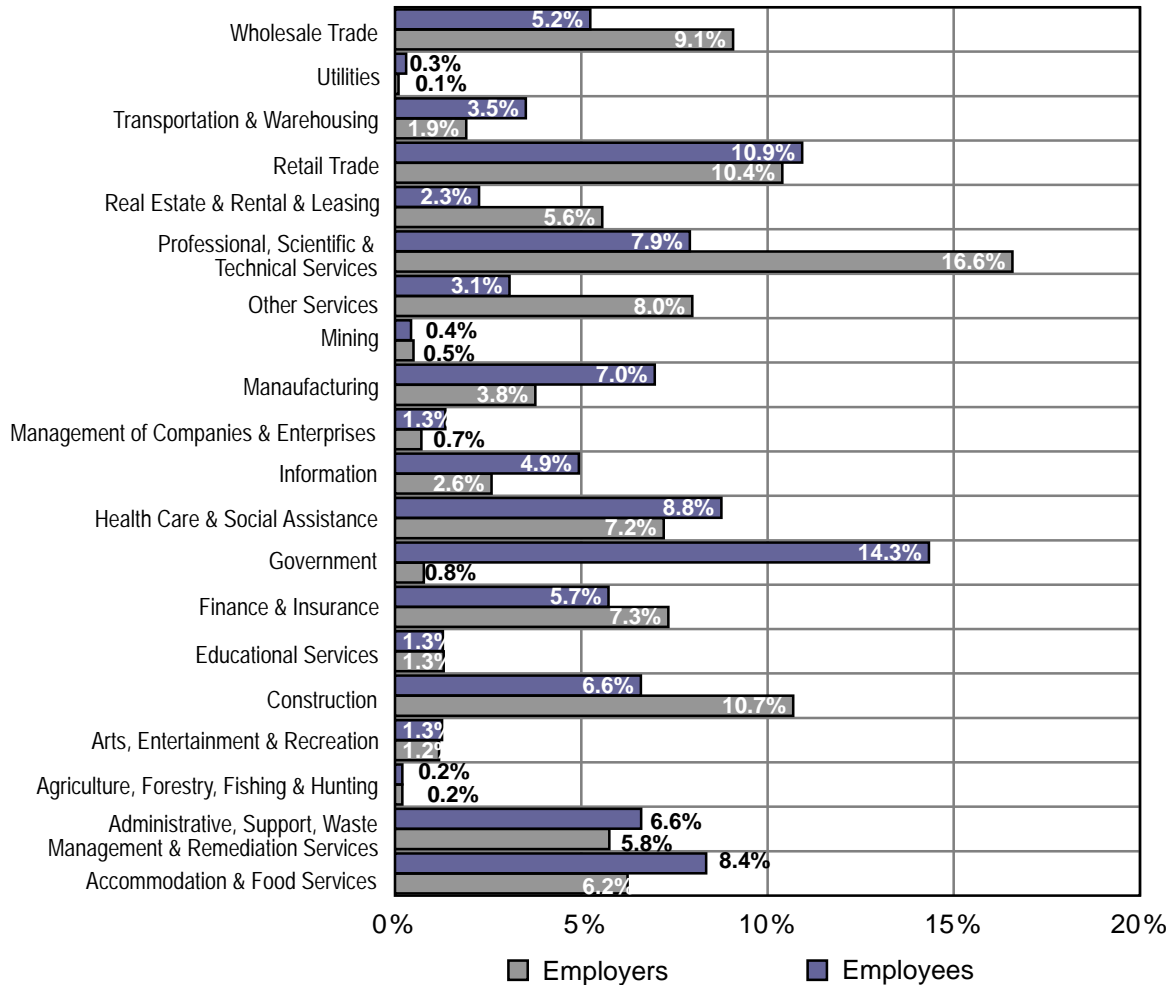


Source: CDLE, Local Area Unemployment Statistics, November 2004

The non-seasonally adjusted unemployment rate in the region was as high as 6.6% in March and June of 2003 but has gradually declined since then. The 4.9% rate estimated for November of this year is one percentage point lower than that of November, 2003. Between November, 2003 and November, 2004, the unemployment rate decreased for all counties in the Denver Metro Region. Rate drops were especially significant in Arapahoe and Jefferson counties. Close to 45,000 workers were added to the region over the year. Of these, 10,400 were in Jefferson, 9,900 in Denver and 9,700 are in Arapahoe counties.

Regional Information – continued

Figure 6: Denver Metro Region Employers and Employees, 4th Quarter, 2003



Source: CDLE, Quarterly Census of Employment and Wages (QCEW, 4th Quarter, 2003)

Since the beginning of 2003, all firms in the Denver Metro Region are grouped into 20 sectors under the North American Industry Classification System (NAICS). This system has replaced the Standard Industrial Classification (SIC) System and better reflects today's economic activity. Advantages to the new system include a greater breakdown of the Services industry under the SIC system 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 14.3% 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

Regional Information — *continued*

sector makes up 10.9% of the region's employment and 10.4% of the region's employers. The Denver Metro Region accounts for 57% of Colorado's employment in this sector.

Health Care & Social Assistance, with 8.8% of the region's employment, is the third largest sector in the region. Recruiting difficulties in this sector during the 1990s appear to have slightly eased as numbers show that 2,700 jobs were added in the sector between the fourth quarter of 2002 and the fourth of 2003 in the Denver Metropolitan region. The Region accounts for 59% of Colorado's employment in this sector.

Sectors such as Finance & Insurance; Information; Educational Services; 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. Employment levels for these sectors are significant with the exception of Management of Companies & Enterprises.

Fifty-eight percent 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 Denver Metro Region has a sizeable Construction sector, which makes up 6.6% 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 1,800 jobs between November, 2003 and November, 2004. Job losses were evenly distributed among all construction sub-sectors.

Utilities; Mining; 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 0.8% of the employers and 0.9% of the region's employees. These sectors are also small at the state level.



Survey Findings

Estimated Vacancies: JVS Sectors and Employer Size

During the survey period, an estimated 17,200 vacancies were open for immediate hire in the Denver Metro Region. The overall average wage for the reported vacancies in this survey is \$13.15 per hour. 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.

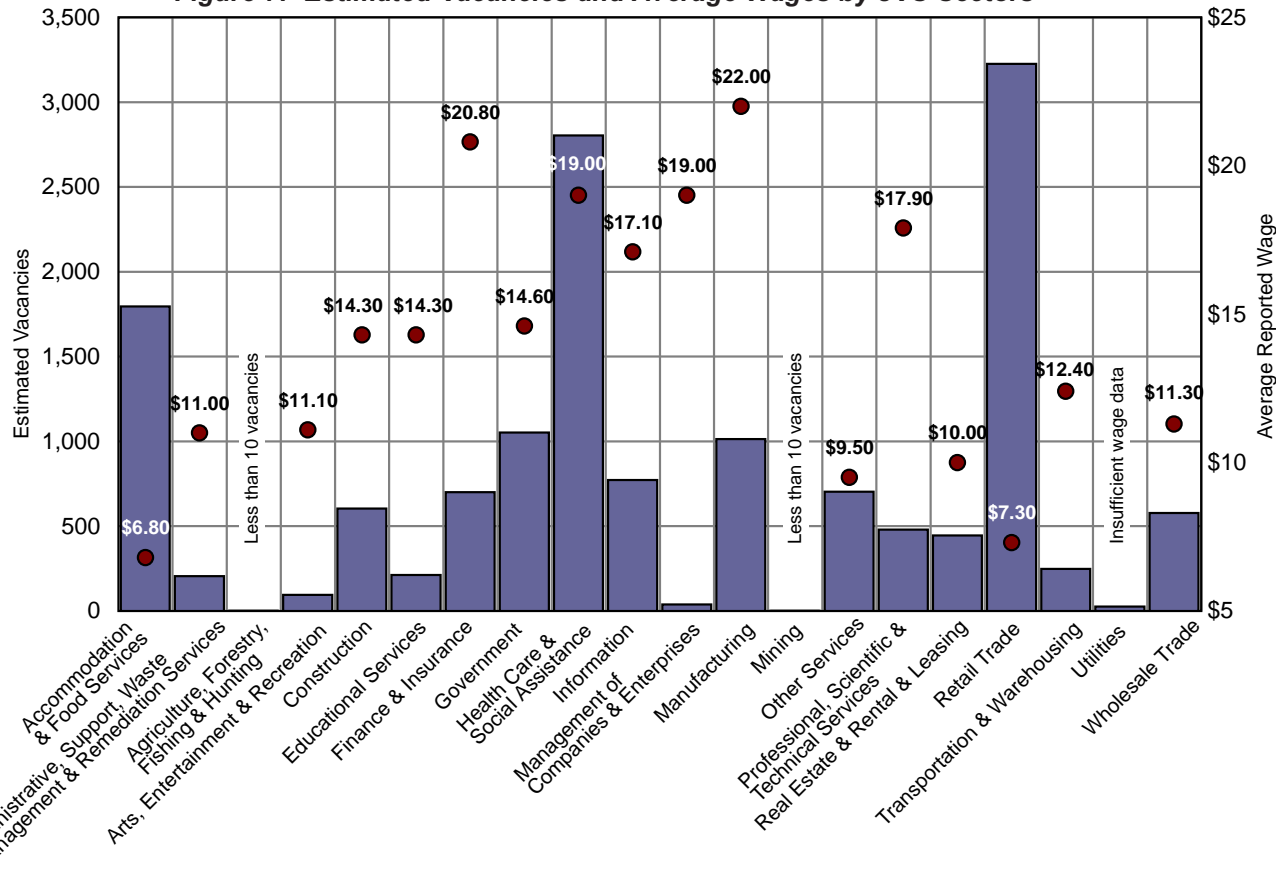
Fourteen percent of the employers responding to the survey reported having at least one vacancy.

The overall vacancy rate found in this survey is 1.4%. 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 Fall 2003 survey was 1.3%.

Results from this survey represent an improvement in the Denver Metro Region economy since the Fall 2003 survey with an increase of 900 vacancies. Hiring activity is highest in the Retail Trade Sector followed by the Health Care & Social Assistance sector. Together, they account for 20% of the regional employment and 40% of the estimated vacancies. Average wages offered in the Retail Trade sector are second to lowest while wages offered in the Health Care & Social Assistance are among the highest. Thirty-four percent of the vacancies reported in the Healthcare & Social Assistance sector are Registered Nurses occupations. Twenty-two percent of Retail Trade vacancies are for Cashiers, 20% are Hand Laborers and Freight, Stock, and Material Movers and another 15% are Hand Packers and Packagers.

Accommodation & Food Services added the most vacancies, 662, between this and last fall's survey. With almost 1,800 vacancies, this sector advanced one rank to third leaving its previously fourth rank to the Government sector with 7% of the vacancies. Wages offered in the Accommodation & Food Services are the lowest in the region given that 61% of the sector's reported vacancies are Food Preparation and Serving Related occupations. With one-third of its reported vacancies being Education, Training, and Library occupations, the Government sector commands a wage in the mid range that is slightly above the overall average wage for the region.

Figure 7: Estimated Vacancies and Average Wages by JVS Sectors



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

The Manufacturing sector, which offers the highest average wage and accounts for 7% of the vacancies in this survey, added 200 vacancies above the level estimated in the fall 2003 survey. Similarly, 240 vacancies were added in the Information sector and 220 in the Construction sector. The bulk of the vacancies reported in the Manufacturing and Information sectors are for high paying Architecture and Engineering; Computer and Mathematical; and Management occupations. The Other Services sector added the second highest number of vacancies, 460, over the one-year period.

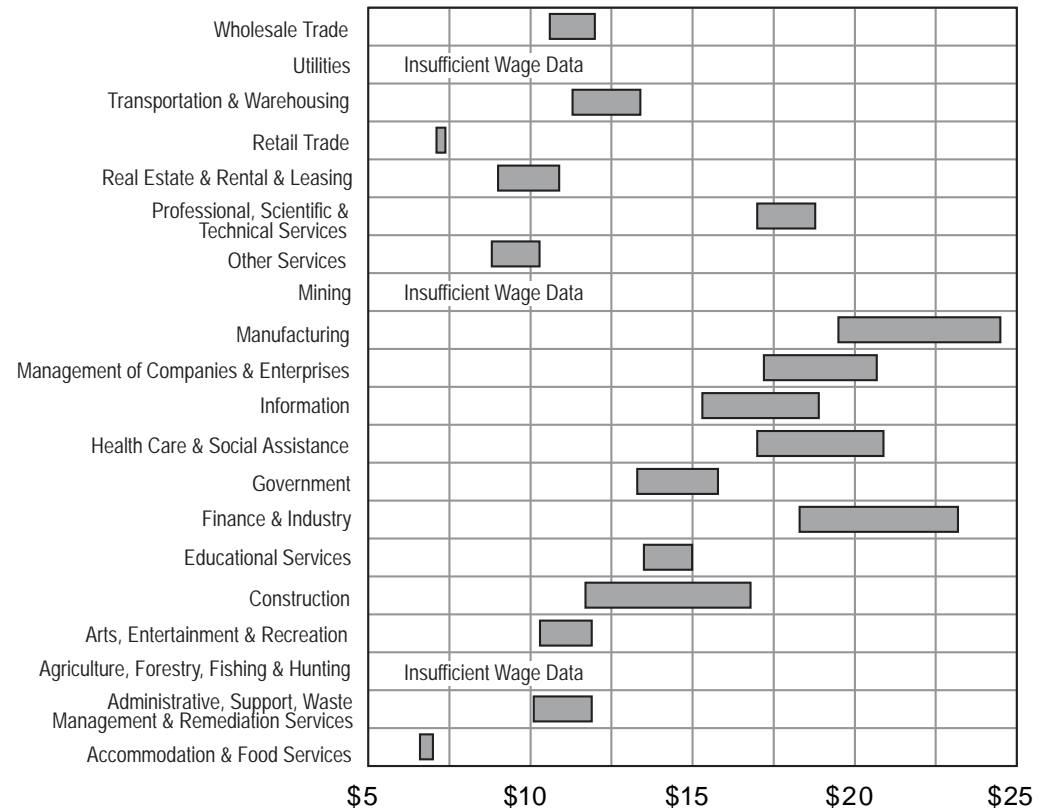
Vacancies estimated in the Finance & Insurance sector are about 30 short from the level estimated last year. This sector currently accounts for 5% of the vacancies but further declines are likely with the possibilities of higher interest rates in the near future. Wages offered in this sector are the second highest in the region.

Hiring activity is low in all remaining sectors. 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 Construction, Manufacturing, and Finance & Insurance sectors offer the widest wage ranges. These industries account for a sizeable number of Construction and Extraction; Business and Financial Operations; Architecture and Engineering; Computer and Mathematical; and Management vacancies that offer some of the highest wages in the region.

Figure 8: Reported Average Wage Ranges by JVS Sectors



The Accommodation & Food Services; Retail Trade; Other Services; and Real Estate, Rental & Leasing; sectors offer the lowest average wages and the narrowest ranges. Occupations for which employers are hiring within these sectors require limited sets of skills and experience to perform the jobs needed.

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. Denver County maintained a leading position in the region’s vacancies. This lead, however, declined to 30% from 41% of the vacancies a year ago resulting from 1,300 fewer vacancies estimated in the county this fall. The 1.5% vacancy rate estimated for Denver County is the highest in the region followed by Boulder at 1.2%. Fourteen percent of the vacancies are now estimated in Boulder County after the addition of 600 vacancies. Large declines are estimated in the Retail sector of Denver County with considerable gains in the Accommodation & Food Services, Real Estate & Rental & Leasing and Construction sectors. Retail and Wholesale Trade added almost 300 vacancies in Boulder with a similar amount of vacancies also added in the Health Care & Social Assistance sector.

An increase of 700 vacancies over the one-year period from the Fall 2003 boosted Jefferson County’s share of vacancies from 12% to 17%. The County with the highest regional employment, 22%, has a vacancy rate 0.8%. Adams County added 570 vacancies improving its vacancy’s share by 3 percentage points to 14%, a rate that matches its regional employment share. Adams County’s vacancy rate, 1.1%, ranks third. The biggest gainers in Jefferson County are Other Services, Manufacturing and Retail Trade while in Adams County, Retail Trade and Manufacturing added the most jobs.

The number of vacancies in Arapahoe County slightly declined over the year. The County has a vacancy rate of 0.95% and its share of vacancies declined from 20% to 18%. Sizeable declines were accounted for by the Retail Trade sector in the county but were countered by sizeable gains in the Other Services and the Information sectors. Douglas County is still small in terms of employment and vacancies. Over 370 more vacancies were added in the county this fall. The majority of the increase in the county’s vacancies is accounted for by Health Care & Social Assistance.

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

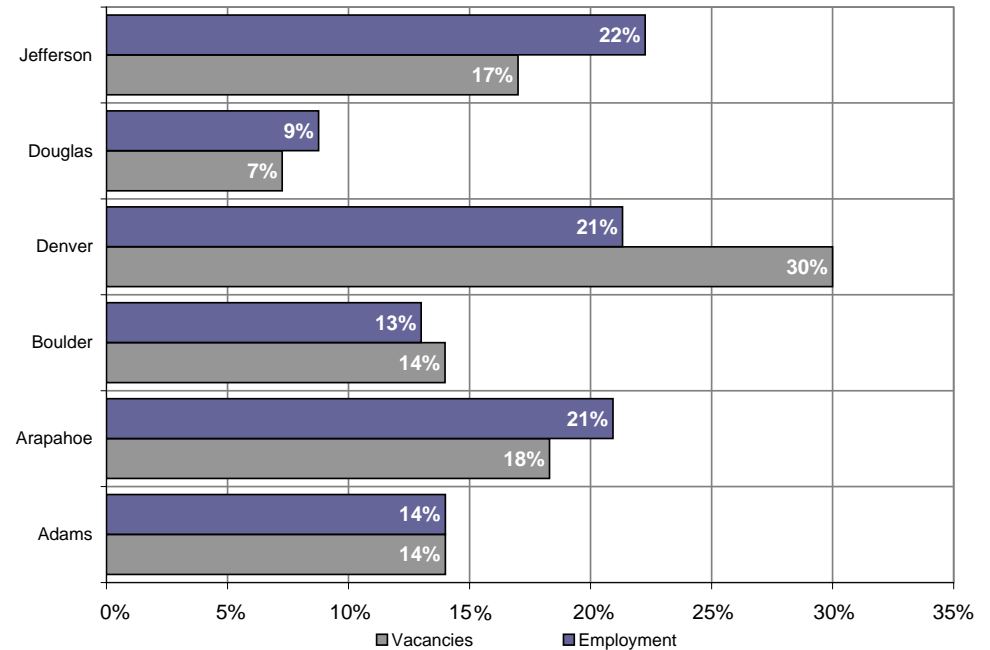
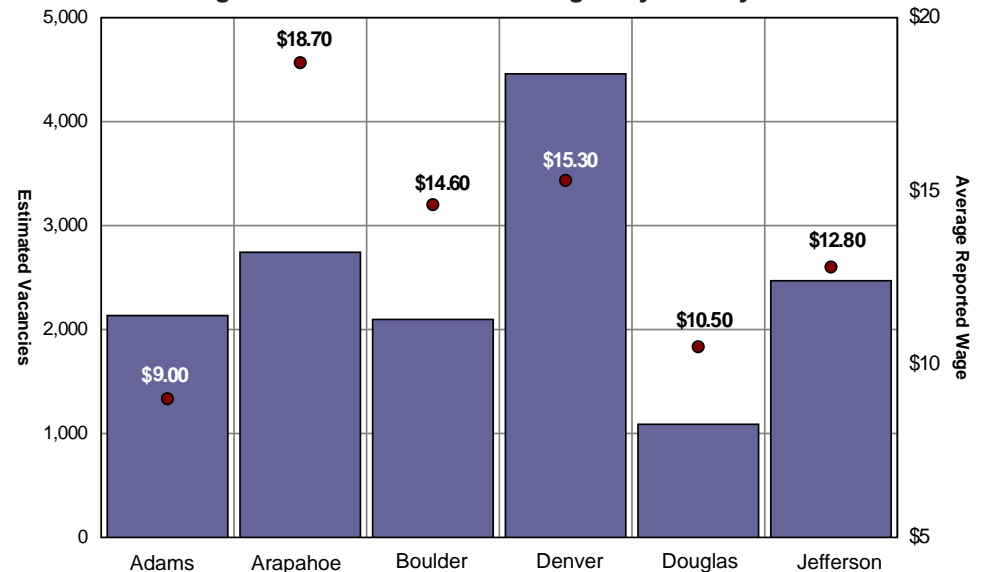


Figure 10: Vacancies and Wages by County



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

Small to mid-size employers account for 66% of the region’s sample frame employment and 51% of the estimated vacancies. The vacancy rate for this category is 1.1%. Retail Trade employers reported the highest single concentration of vacancies (27%) within this size class, followed by Accommodation & Food Services at 18%. Small to mid-size employers accounted for 63% of the vacancies in the Fall 2003 Survey.

Large employers account for 20% of the survey sample employment in the Denver Metro Region. Thirty 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 36% of the vacancies within this size class. Large employers have the highest vacancy rate of 2.5%.

Vacancies estimated in the Government sector this time around are slightly lower than the number estimated in the Fall 2003 Survey. Only 6% of the vacancies are estimated with government employers, compared to 7% a year earlier. Government accounts for 14% of the region’s sample frame employment.

While employers with fewer than five employees—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 1.5%. Thirteen percent of the vacancies are open within this size category. This number is almost identical to that estimated in the Fall 2003 survey.

Of any size class, Government employers offer the highest average wage of \$14.60. Thirty-three percent of the Government reported vacancies are classified as Education, Training, and Library occupations. Large employers offer the second highest wage of \$13.50. Although 23% of the vacancies reported by large employers are Healthcare Practitioners and Technical wage information was provided for only 18% of these vacancies. A high concentration of Sales & Related and Transportation & Material Moving among small to mid-size employers dampened the average wage offered by this employer size. These occupational groups offer an average wage of only \$8.50 and \$7.60, respectively.

Figure 11: Estimated Vacancies and Average Wages by Employer Size

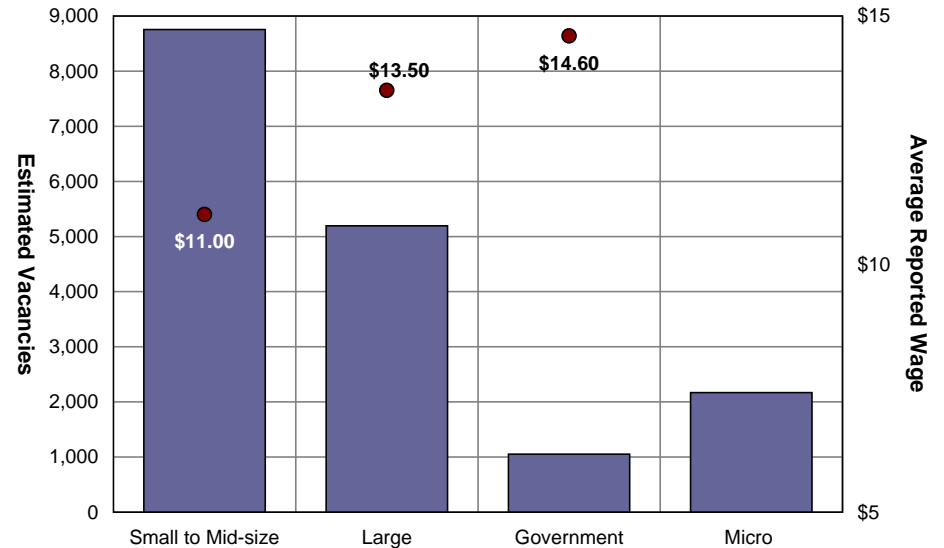
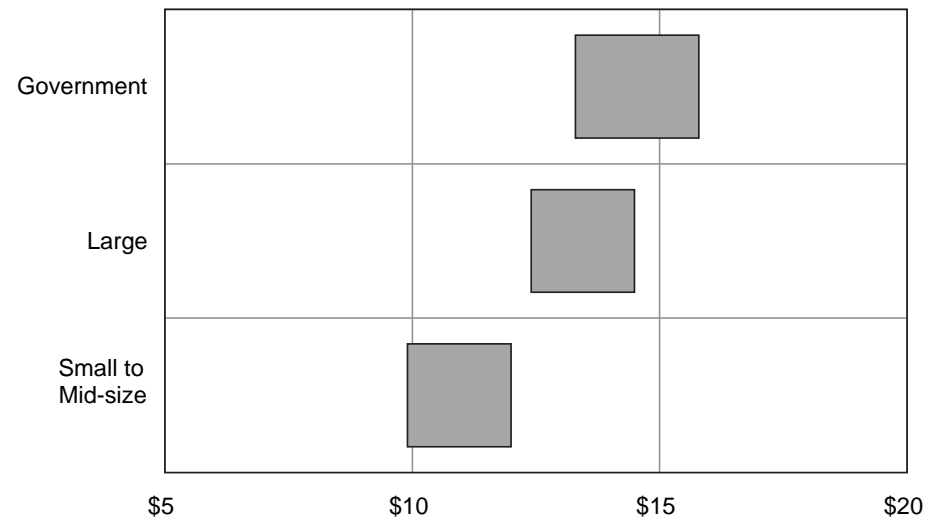


Figure 12: Reported Average Wage Ranges by Employer Size



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.

Ninety-three percent of the vacancies for which employment status is reported are permanent positions. Permanent positions accounted for 90% of the vacancies in the Fall 2003 report. Full-time/Permanent positions offer an average wage of \$15.70 while Part-time/Permanent vacancies offer an average wage of \$16.80. Employers in the Health Care & Social Assistance sector have 20% of the full-time/permanent positions. Government has another 15%.

Part-time/permanent positions account for 16% of the vacancies. Of these, 68% are reported with large employers, and 43% are in the Health Care & Social Assistance sector. These positions offer the highest average wage among others.

Seventy-three percent of the part-time/temporary positions are with large employers in the Health Care & Social Assistance sector. Twenty-eight percent are for Healthcare Practitioners and Technical occupations while another 19% are for Sales and Related occupations. The average wage offered for part-time/temporary positions is the lowest among all employment status categories.

Full-time/temporary positions, on the other hand, account for the smallest proportion of vacancies, 1%. This category of vacancies offer the second lowest average wage of \$12.00. Food Preparation and Serving Related and Education, Training, and Library make up over half of the full-time/temporary vacancies reported.

Figure 13: Vacancies by Employment Status

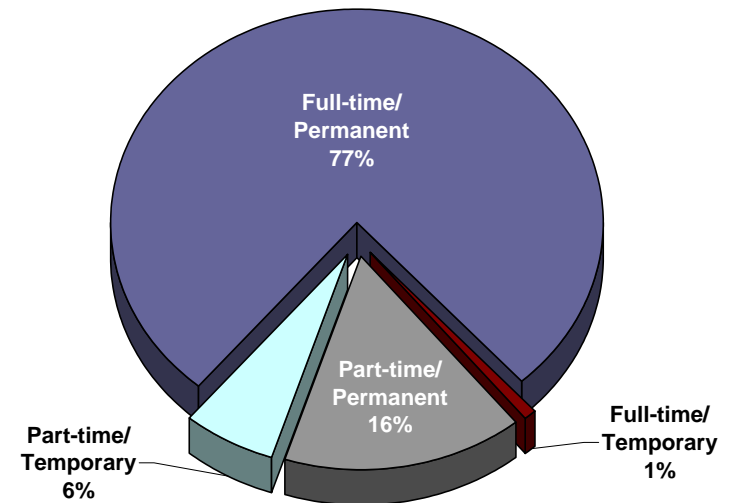
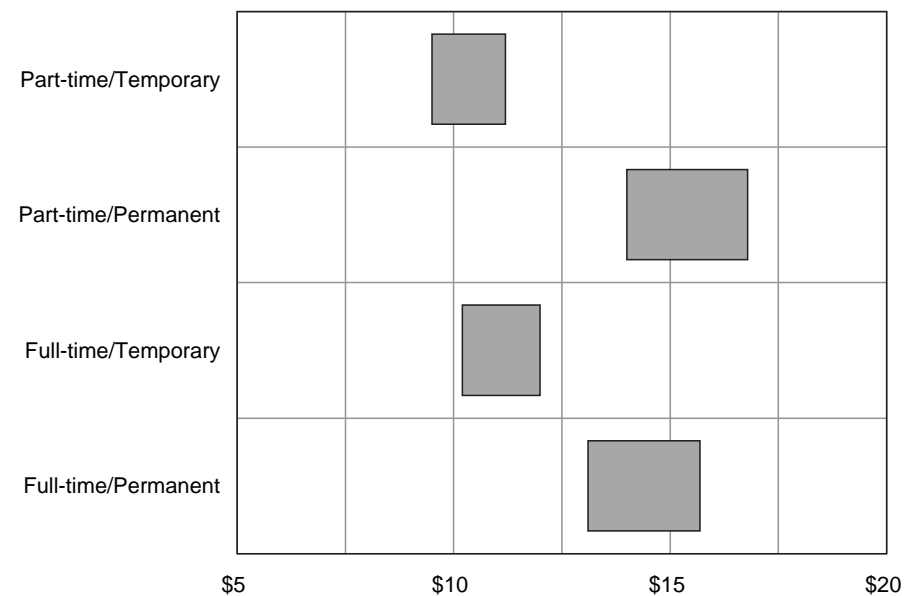


Figure 14: Reported Average Wage Ranges by Employment Status



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.

Thirty-seven percent of the reported vacancies require a high school education or less. Vacancies with these minimal educational requirements are for occupations such as Cashiers, Laborers and Freight, Hand Stock, and Material Movers and Hand Packers and Packagers.

As with the Fall 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 decreased from 5% to 3% between the two surveys. Education, Training, & Library and Management occupations account for 60% of the vacancies requiring an advanced degree.

For vacancies requiring vocational training or certification, 48% are reported in Health Care and Social Assistance and 28% in Government. Thirty-four percent of these openings are for Healthcare Practitioners and Technical occupations.

Generally, the more education required for a position, the higher the wages offered and the wider the gap between the high and low in the wage range. Wages offered in this survey fall in line with this general notion. Sixty-three percent of the vacancies requiring either Bachelor's or Advanced degrees are Management, Computer & Mathematical, or Architecture and Engineering occupations.

Figure 15: Vacancies by Education

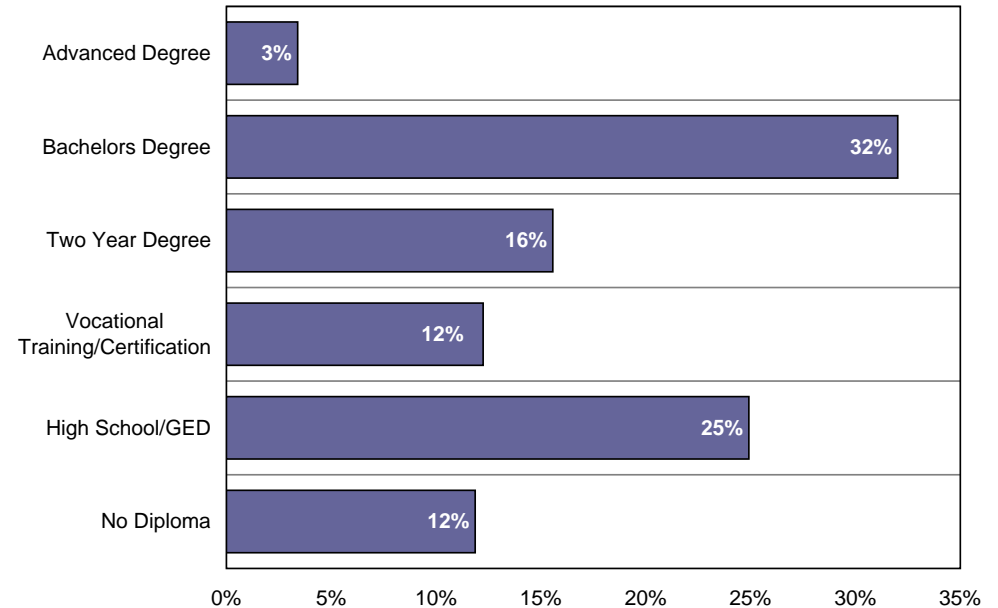
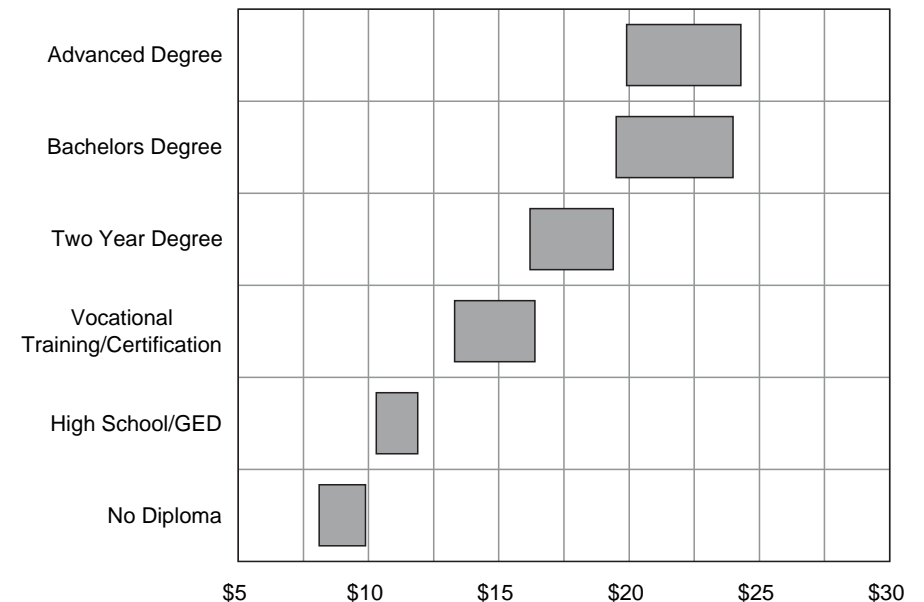


Figure 16: Reported Average Wage Ranges by Education



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

Figure 17: Vacancies by Experience

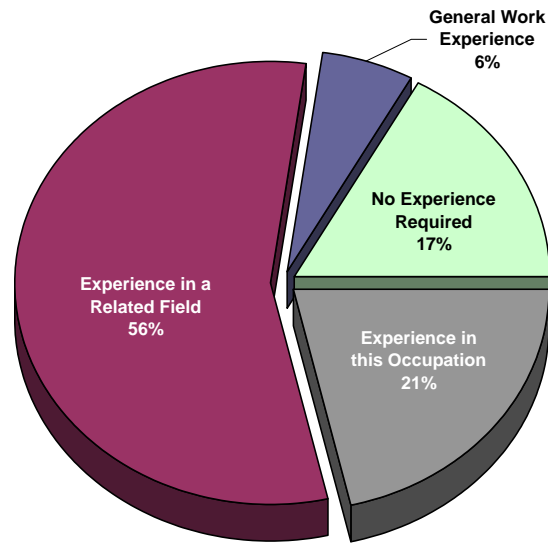
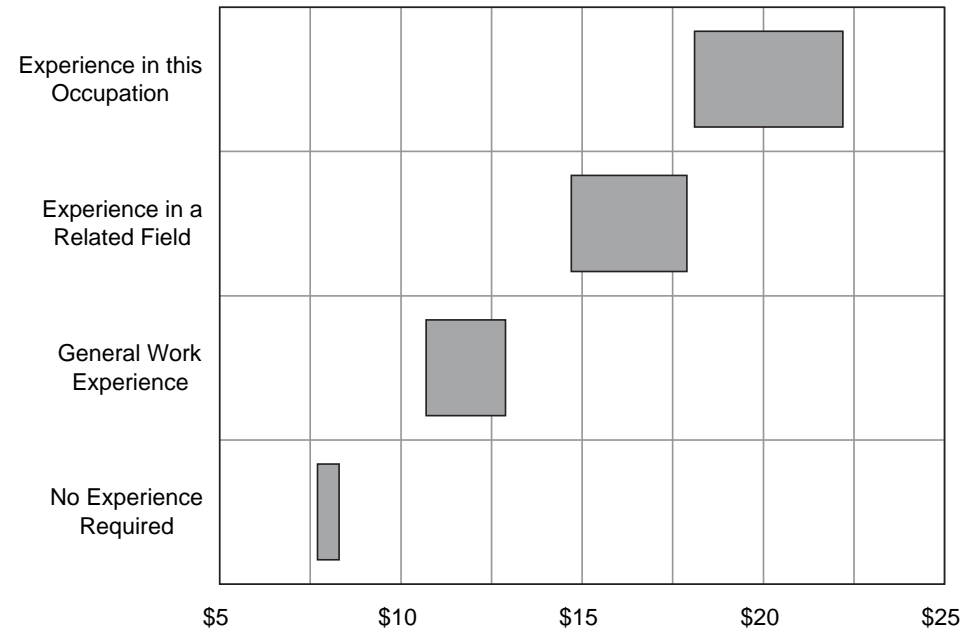


Figure 17 shows the breakdown of vacancies by experience requirements. The percentage of positions requiring specific experience in the occupation significantly decreased from 32% in the Fall 2003 Survey to 21% in this report. Between the two surveys, positions requiring experience in a related field increased from 40% to 56%. 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 requiring experience in the specific occupation, 24% are Healthcare Practitioner & Technical, 20% are Management, and 10% are Computer & Mathematical occupations. Topping the list again, with 20% 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. Fifty-seven percent of the vacancies requiring no previous work experience are in the Retail Trade sector.

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 Fall 2003 Survey.

The percentage of vacancies reported as not difficult to fill had a significant drop from 66% to 55% between the two surveys. Over one-third of the vacancies reported as not difficult to fill are Sales & Related and Office & Administrative Support, while 13% are Transportation and Material Moving occupations. The proportion of positions reported as somewhat difficult to fill slightly increased to 23%, compared to 19% in the Fall 2003 Survey.

Most noticeable is the increase in the percentage of positions perceived by employers as very difficult to fill. This percentage increased from 15% to 22% between the two surveys. Sixty-one percent of the vacancies reported as very difficult to fill are Transportation and Material Moving and another 21% are Sales and Related 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 refutes this general notion as employers are experiencing the highest level of difficulty in filling positions with the least education and experience requirements.

Figure 19: Vacancies by Difficulty to Fill

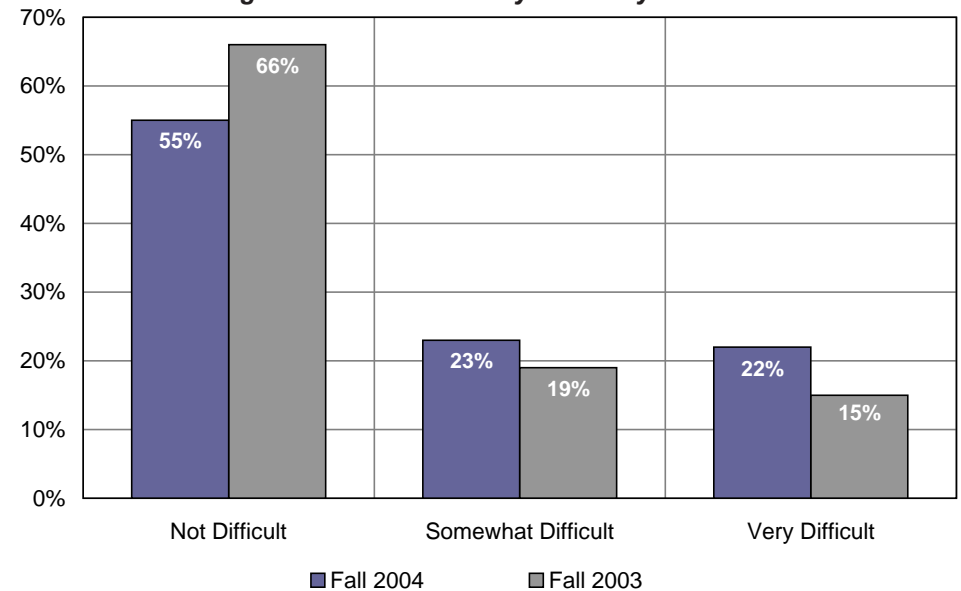
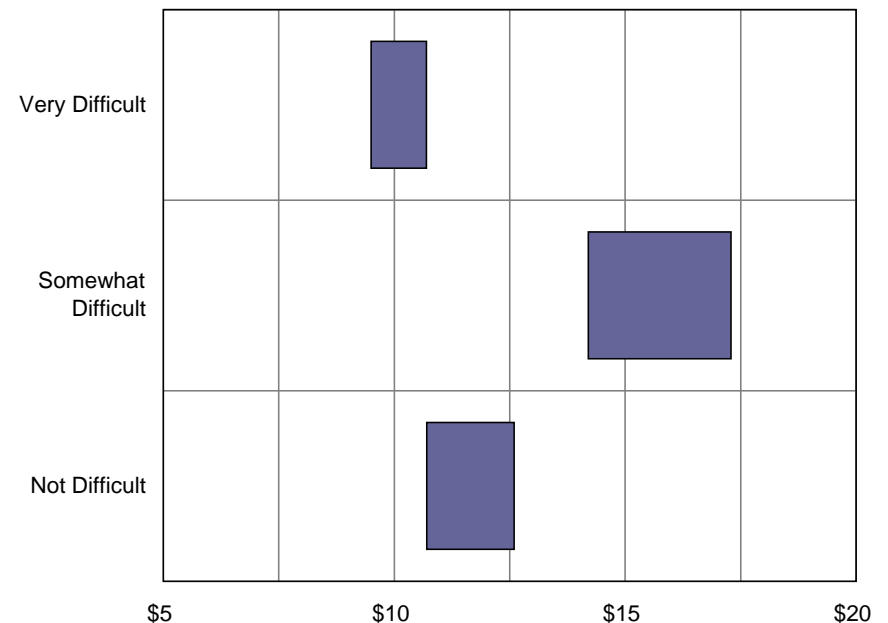
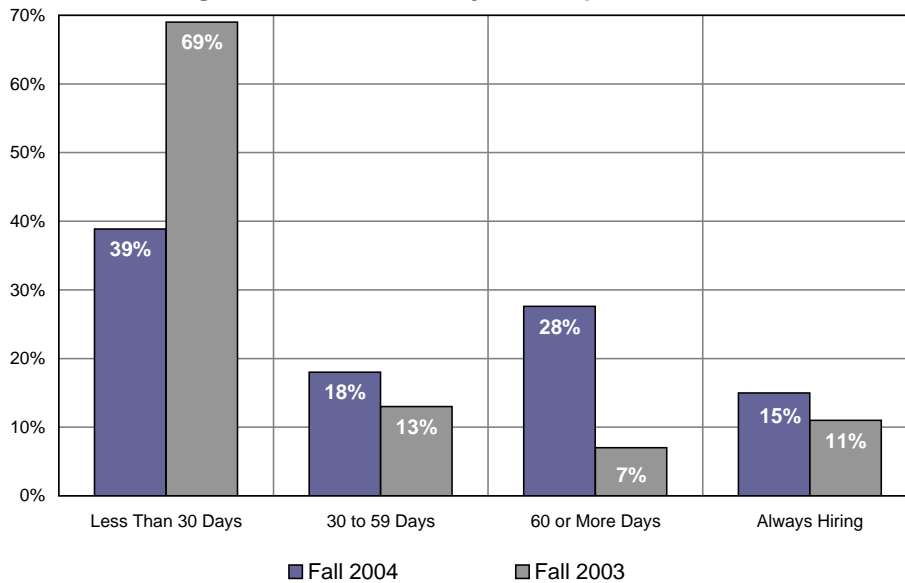


Figure 20: Reported Average Wage Ranges by Difficulty to Fill



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

Figure 21: Vacancies by Time Open for Hire

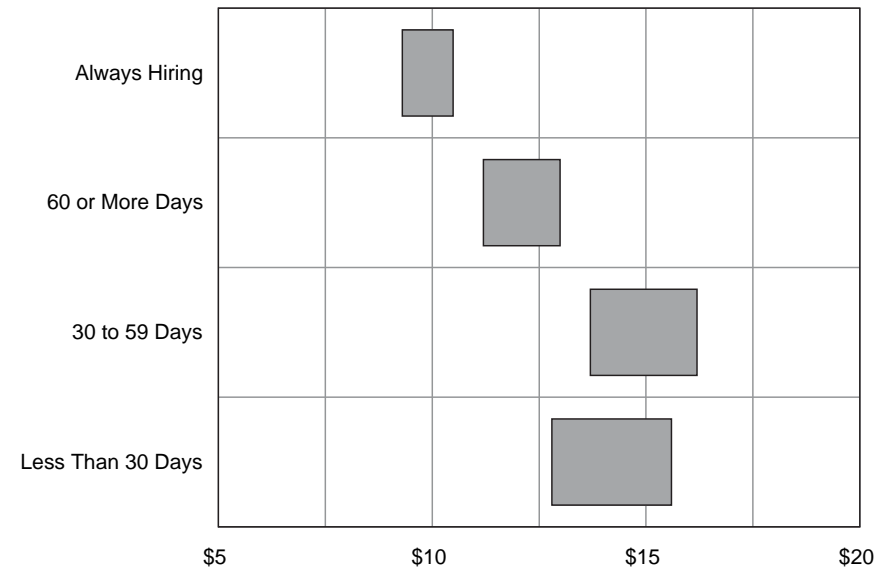


Vacant positions remain open for longer periods in this survey compared to the Fall 2003 Survey. The percentage of vacancies open for less than 30 days significantly decreased from 69% to 39% while it increases for all other time periods. The most significant increase is among positions open for 60 or more days as the proportion of these vacancies increased from 7% to 28% between the two fall surveys. Thirty-six percent of these vacancies are Transportation and Material Moving occupations while Healthcare Practitioners and Technical occupations make up another 25%. Positions open between 30 and 59 days increased from 13% to 18% between the two surveys. Average wage offered for this category of vacancies is the highest as half of them are either Healthcare Practitioners and Technical, Education, Training, or Library and Management occupations, the highest paid occupations in this survey.

Vacancies for which employers are always hiring now make up 15% of all vacancies compared to 11% last fall. Sixty percent of these vacancies are Sales and Related and Food Preparation and Serving Related occupations. Not surprisingly, positions always open for hiring are the least paid in this survey.

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-five percent of the positions open for less than 30 days are reported as not difficult to fill. Similarly, 63% of the positions

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



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. Ninety 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 positions open for 60 days or more. Fifty-five percent of the positions open between 30 and 59 days are reported as somewhat difficult to fill. Eighty-four percent of the positions reported by employers as very difficult to fill have been open for more than 60 days. Moreover, 90% 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. Seventy-one percent of positions always open for hire are reported as not difficult to fill. Average wages offered for positions always open for hire are the lowest in this survey. Over 75% of these vacancies are Sales & Related, Food Preparation and Serving Related and Transportation & Material Moving occupations.

Additional
Compensation

Survey Findings

Medical Insurance

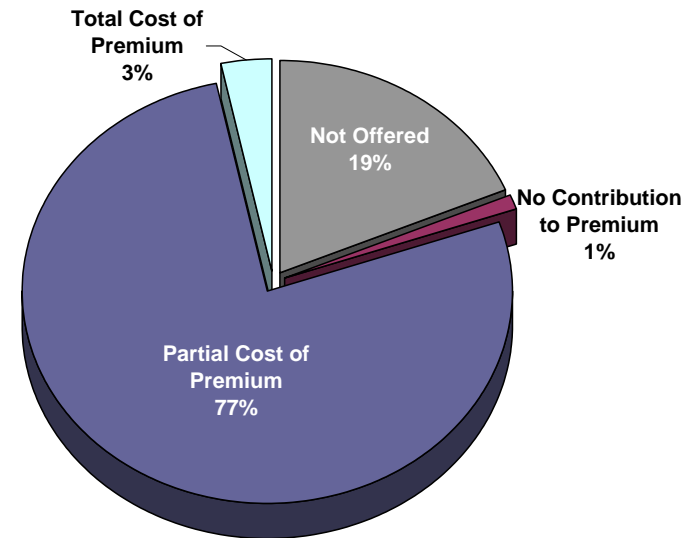
Employers frequently offer compensation related benefits to recruit qualified candidates. Some of these perks are paid time off, transportation or parking vouchers, and subsidized child-care. One of the most important benefits offered to employees is a group medical insurance plan, which the employer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

Medical benefits are offered for 81% of the vacancies reported in this survey, compared to 79% in the Fall 2003 report. Almost half of the vacancies offered with no medical insurance coverage are for Sales and Related, Transportation and Material Moving and Food Preparation and Serving Related occupations. Of the vacancies offered with medical insurance benefits, 15% are Healthcare Practitioners and Technical, 13% are Management, and 11% are Transportation and Material Moving occupations. Almost all vacancies in Architecture & Engineering, Business & Financial Operations, Computer & Mathematical, and Management occupations are offered with medical insurance benefits.

Sign-On Bonus

Employers offer sign-on bonus information for 64% of the reported vacancies. A sign-on bonus is offered for fewer than 10 of the vacancies.

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*. Thirteen out of the 22 major occupational groups offer an average wage above the overall average of \$13.15 reported for all vacancies

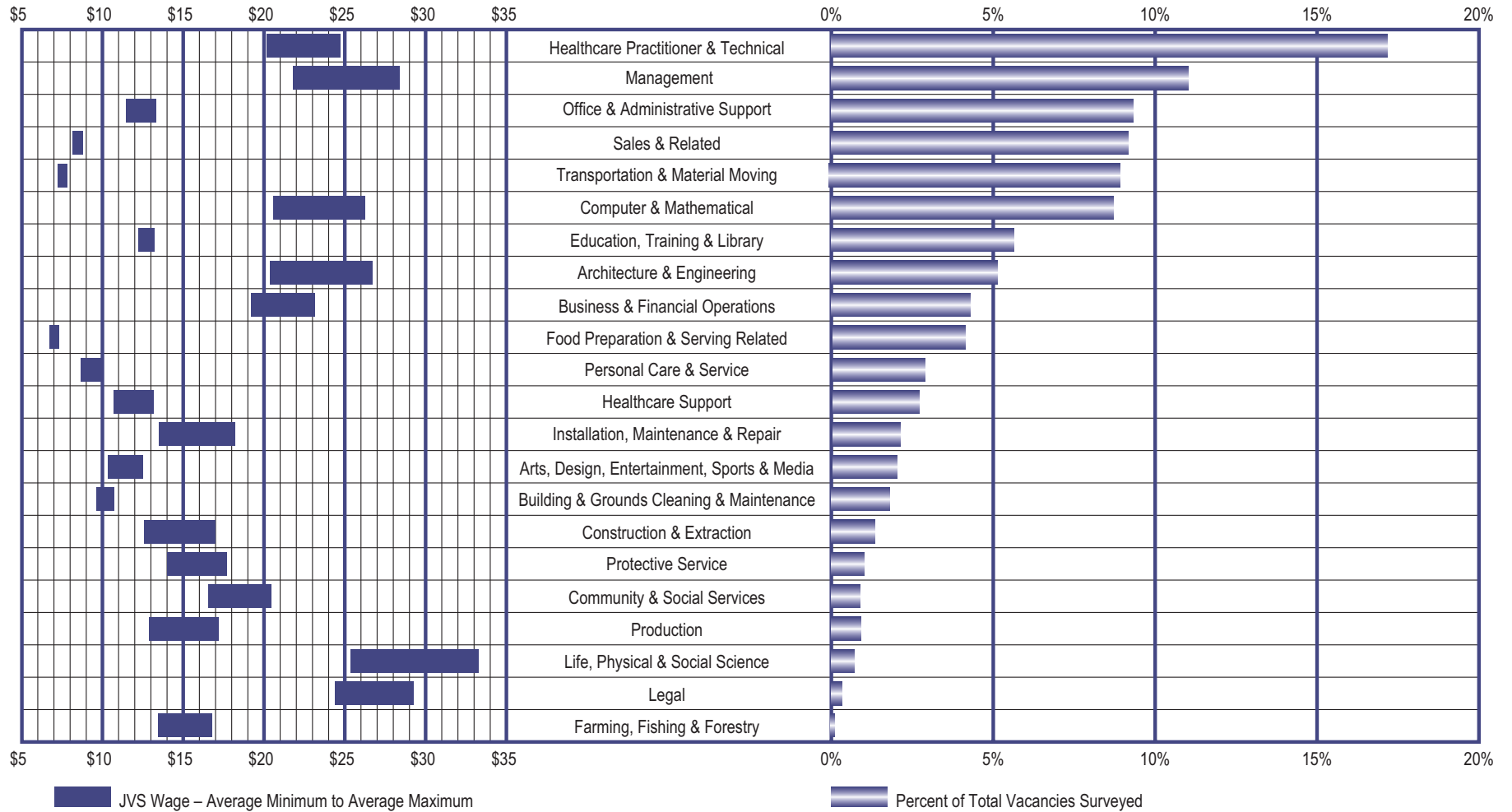
in this report. These thirteen major occupational groups account for 53% of the reported vacancies. Occupational groups offering average wages at or below the overall average wage account for the remaining 47% of the vacancies.

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.

Both the Healthcare Practitioners & Technical and Management occupational groups account for a large percentage of the vacancies, while offering relatively high wages. Healthcare Practitioners & Technical occupations account for 17% of all vacancies reported in the region and offer an average wage of \$22.50 while Management occupations account for 11% and offer a wage of \$25.10. Life, Physical & Social Science and Legal occupations offer the highest average wages in this survey, yet, they are among the least for which employers are hiring.

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 assigned to vacancies reported in this survey. As a census of large employers and Government agencies is conducted, the list contains titles for nearly all of the vacancies available at the time of the survey for those employers. Nearly 14% of small to mid-size employers were contacted for the random sample, and likewise the occupations associated with these vacancies are listed.

Vacancies estimated 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 these groups is not estimated; it is an actual count of the vacancies. However, in addition to the number found, vacancies are estimated for occupations reported by small to mid-size private firms. The additional estimated occupational vacancies are calculated per the current mix of occupations found in the region, but restricted to the occupation titles reported in the survey.

Average JVS Wage

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

Average OES Wage

Occupational Employment Statistics (OES) wage data are provided for each occupation. OES data are based on a national survey of employers and refer to filled positions, not vacancies. The data provided here are reported for the 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.

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
41-2011	Cashiers	1013	\$7.60	\$7.12	\$9.68	\$10.97	\$6.59	\$7.60	\$8.85	\$10.88	\$15.12
41-2031	Retail Salespersons	974	\$7.50	\$7.23	\$11.95	\$14.31	\$6.68	\$7.90	\$9.68	\$13.17	\$19.35
29-1111	Registered Nurses	822	\$25.30	\$19.91	\$25.68	\$28.57	\$18.70	\$22.03	\$25.42	\$28.90	\$34.26
35-3031	Waiters and Waitresses	540	\$5.20	\$6.09	\$7.68	\$8.47	\$5.70	\$6.13	\$6.85	\$9.20	\$11.05
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	419	\$6.70	\$6.69	\$8.19	\$8.94	\$6.21	\$7.12	\$8.01	\$9.03	\$10.59
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	355	\$6.50	\$8.54	\$11.28	\$12.65	\$7.75	\$9.35	\$10.88	\$13.03	\$15.71
53-7064	Packers and Packagers, Hand	287	\$6.00	\$6.81	\$9.06	\$10.19	\$6.30	\$7.31	\$8.44	\$10.15	\$13.38
15-1032	Computer Software Engineers, Systems Software	223	\$23.30	\$27.43	\$38.11	\$43.45	\$25.06	\$30.63	\$37.65	\$45.38	\$53.69
43-4051	Customer Service Representatives	205	\$11.00	\$10.33	\$14.60	\$16.74	\$9.55	\$11.35	\$13.79	\$17.09	\$20.89
31-1012	Nursing Aides, Orderlies, and Attendants	191	\$11.40	\$9.45	\$11.76	\$12.92	\$8.98	\$9.94	\$11.57	\$13.46	\$15.42
53-3032	Truck Drivers, Heavy and Tractor-Trailer	189	\$15.20	\$13.83	\$17.50	\$19.34	\$12.86	\$14.93	\$16.97	\$20.29	\$22.99
39-5012	Hairdressers, Hairstylists, and Cosmetologists	175	\$7.70	\$9.20	\$11.69	\$12.93	\$8.58	\$9.68	\$10.92	\$12.77	\$15.12
35-2014	Cooks, Restaurant	175	\$7.90	\$7.64	\$10.36	\$11.72	\$7.05	\$8.51	\$10.15	\$12.20	\$14.32
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	168	\$9.60	\$7.46	\$9.79	\$10.96	\$7.11	\$7.80	\$8.95	\$11.14	\$14.19
43-4171	Receptionists and Information Clerks	160	\$9.60	\$8.72	\$12.01	\$13.65	\$7.85	\$9.74	\$11.85	\$14.04	\$16.65
37-2012	Maids and Housekeeping Cleaners	155	\$8.50	\$7.32	\$9.04	\$9.91	\$6.85	\$7.74	\$8.95	\$10.34	\$11.34
53-3033	Truck Drivers, Light or Delivery Services	151	\$11.00	\$8.80	\$13.86	\$16.39	\$7.78	\$10.21	\$13.26	\$16.91	\$21.14
41-2021	Counter and Rental Clerks	142	\$6.60	\$7.05	\$10.38	\$12.05	\$6.45	\$7.68	\$9.25	\$11.08	\$15.97
13-2011	Accountants and Auditors	137	\$21.70	\$18.04	\$29.40	\$35.09	\$16.81	\$20.04	\$25.03	\$33.06	\$44.50
11-9111	Medical and Health Services Managers	130	\$28.00	\$23.96	\$36.81	\$43.24	\$21.82	\$27.10	\$34.27	\$43.58	\$54.01
43-3071	Tellers	126	\$10.20	\$10.10	\$11.57	\$12.31	\$9.49	\$10.14	\$11.22	\$12.87	\$14.25
‡ 25-9041	Teacher Assistants	122	\$10.50	\$16,647	\$21,445	\$23,844	\$15,627	\$17,981	\$20,954	\$24,282	\$28,114

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
11-3031	Financial Managers	119	\$27.40	\$27.03	\$44.05	\$52.56	\$24.69	\$30.49	\$39.71	\$51.81	\$69.99
53-3031	Driver/Sales Workers	117	\$6.80	\$6.81	\$12.06	\$14.69	\$6.12	\$7.16	\$10.79	\$15.31	\$20.57
11-9041	Engineering Managers	113	†	\$36.04	\$51.35	\$59.00	\$33.91	\$40.11	\$49.22	\$58.98	†
43-6011	Executive Secretaries and Administrative Assistants	112	\$13.20	\$14.27	\$18.78	\$21.03	\$13.25	\$15.29	\$18.18	\$21.63	\$25.88
29-2061	Licensed Practical and Licensed Vocational Nurses	107	\$15.90	\$15.26	\$18.38	\$19.94	\$14.59	\$15.97	\$17.98	\$20.55	\$23.08
39-9011	Child Care Workers	107	\$16.30	\$7.05	\$9.17	\$10.23	\$6.60	\$7.62	\$8.99	\$10.40	\$12.15
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	104	\$14.80	\$12.32	\$20.92	\$25.21	\$11.41	\$13.78	\$17.45	\$22.12	\$34.12
43-6013	Medical Secretaries	103	\$14.80	\$11.23	\$15.20	\$17.19	\$10.41	\$12.06	\$14.45	\$16.89	\$23.44
41-9041	Telemarketers	101	\$11.00	\$7.14	\$11.10	\$13.07	\$6.57	\$7.96	\$9.90	\$13.61	\$17.31
15-1031	Computer Software Engineers, Applications	100	\$28.50	\$23.72	\$38.51	\$45.91	\$20.87	\$27.37	\$36.53	\$43.99	\$56.19
15-1041	Computer Support Specialists	98	\$18.50	\$15.55	\$24.27	\$28.63	\$14.58	\$17.35	\$21.82	\$28.25	\$40.99
29-2034	Radiologic Technologists and Technicians	97	\$23.50	\$16.36	\$20.34	\$22.34	\$15.07	\$17.66	\$20.32	\$23.17	\$26.45
49-3023	Automotive Service Technicians and Mechanics	96	\$20.60	\$12.46	\$19.89	\$23.61	\$11.71	\$13.93	\$18.44	\$24.03	\$29.93
25-2011	Preschool Teachers, Except Special Education	88	\$10.60	\$9.55	\$11.23	\$12.07	\$8.99	\$9.54	\$10.42	\$11.79	\$14.37
53-7061	Cleaners of Vehicles and Equipment	87	\$7.90	\$7.80	\$11.01	\$12.61	\$7.12	\$8.69	\$10.42	\$13.10	\$16.19
43-9061	Office Clerks, General	83	\$10.50	\$8.75	\$12.84	\$14.88	\$8.01	\$9.92	\$12.55	\$15.56	\$18.08
47-2061	Construction Laborers	78	\$8.10	\$8.79	\$12.74	\$14.72	\$8.01	\$9.92	\$12.26	\$15.54	\$18.43
* 27-3091	Interpreters and Translators	76	\$10.40	\$10.78	\$16.56	\$19.44	\$9.49	\$12.10	\$15.24	\$20.97	\$25.48
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	76	\$6.80	\$6.08	\$7.45	\$8.14	\$5.79	\$6.38	\$7.39	\$8.38	\$9.13
43-6014	Secretaries, Except Legal, Medical, and Executive	75	\$10.80	\$11.12	\$14.90	\$16.79	\$10.24	\$12.20	\$14.67	\$17.29	\$20.53
17-2199	Engineers, All Other	73	\$33.40	\$23.61	\$37.85	\$44.97	\$20.96	\$28.57	\$37.91	\$46.63	\$55.39

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
11-9199	Managers, All Other	72	\$22.90	\$25.17	\$40.66	\$48.41	\$22.08	\$29.50	\$39.49	\$50.27	\$59.79
11-2022	Sales Managers	72	\$29.20	\$22.13	\$43.02	\$53.46	\$20.03	\$25.01	\$36.07	\$54.07	†
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	71	\$18.30	\$12.37	\$17.48	\$20.04	\$10.95	\$14.06	\$16.97	\$21.36	\$24.97
11-3021	Computer and Information Systems Managers	70	\$29.50	\$32.09	\$48.88	\$57.28	\$28.32	\$37.50	\$46.91	\$57.96	†
15-1071	Network and Computer Systems Administrators	68	\$26.30	\$21.83	\$31.79	\$36.76	\$19.76	\$24.49	\$30.80	\$38.90	\$45.49
37-3011	Landscaping and Groundskeeping Workers	67	\$11.20	\$8.13	\$11.04	\$12.49	\$7.56	\$8.76	\$10.21	\$12.67	\$16.30
11-2021	Marketing Managers	66	\$29.70	\$24.55	\$42.32	\$51.20	\$22.52	\$27.79	\$38.79	\$52.89	\$67.71
11-1021	General and Operations Managers	63	\$23.40	\$24.39	\$50.50	\$63.56	\$20.74	\$29.85	\$44.04	\$65.28	†
29-2011	Medical and Clinical Laboratory Technologists	63	\$21.20	\$15.99	\$20.78	\$23.17	\$14.95	\$17.29	\$20.80	\$24.30	\$27.14
17-2011	Aerospace Engineers	62	†	\$24.98	\$33.88	\$38.32	\$24.02	\$26.85	\$32.92	\$41.10	\$46.83
35-9021	Dishwashers	62	\$7.80	\$6.80	\$8.03	\$8.65	\$6.22	\$7.24	\$8.03	\$8.88	\$10.15
35-2011	Cooks, Fast Food	60	†	\$6.41	\$8.59	\$9.68	\$6.03	\$6.92	\$8.61	\$10.16	\$11.25
17-2071	Electrical Engineers	58	\$28.40	\$24.37	\$34.06	\$38.91	\$23.14	\$27.05	\$32.98	\$40.31	\$46.69
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	58	\$10.40	\$10.04	\$14.60	\$16.88	\$9.29	\$11.67	\$14.53	\$17.35	\$20.93
41-2022	Parts Salespersons	58	\$12.20	\$10.92	\$16.32	\$19.02	\$10.02	\$11.77	\$14.43	\$19.32	\$27.07
31-9092	Medical Assistants	57	\$13.30	\$11.35	\$14.48	\$16.04	\$10.56	\$12.34	\$14.38	\$16.54	\$18.88
41-9022	Real Estate Sales Agents	57	\$10.00	\$11.89	\$21.25	\$25.93	\$11.21	\$12.05	\$13.43	\$21.71	\$36.75
47-2073	Operating Engineers and Other Construction Equipment Operators	56	\$15.90	\$14.70	\$18.69	\$20.69	\$14.15	\$15.80	\$18.66	\$21.48	\$24.28
43-3031	Bookkeeping, Accounting, and Auditing Clerks	55	\$14.60	\$11.01	\$15.42	\$17.63	\$10.33	\$12.53	\$15.16	\$17.96	\$21.39
49-9042	Maintenance and Repair Workers, General	54	\$14.80	\$10.54	\$16.16	\$18.98	\$9.48	\$12.25	\$15.71	\$19.89	\$24.04
11-3011	Administrative Services Managers	52	\$21.10	\$20.00	\$33.53	\$40.29	\$18.53	\$22.82	\$31.37	\$41.34	\$52.91
47-2152	Plumbers, Pipefitters, and Steamfitters	51	\$19.30	\$13.89	\$21.80	\$25.75	\$12.10	\$16.23	\$21.75	\$26.48	\$29.65

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details —continued

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

SOC Code	SOC Occupational Title	Vacancies Estimated	Average JVS Wage	Occupational Employment Statistics Wage Data (2003)							
				Average Wages			Percentile Distribution				
				Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
15-1021	Computer Programmers	50	\$27.30	\$22.08	\$33.58	\$39.33	\$19.74	\$25.89	\$33.35	\$41.01	\$47.15
29-1051	Pharmacists	49	\$39.40	\$28.94	\$36.77	\$40.68	\$29.31	\$33.13	\$37.67	\$42.12	\$45.01
15-1081	Network Systems and Data Communications Analysts	49	†	\$23.00	\$32.10	\$36.65	\$21.73	\$25.92	\$32.09	\$38.39	\$43.13
13-2072	Loan Officers	49	\$25.80	\$16.56	\$34.54	\$43.53	\$15.45	\$18.72	\$27.63	\$40.88	\$66.94
47-2181	Roofers	49	\$12.30	\$12.20	\$15.14	\$16.60	\$11.67	\$13.30	\$15.24	\$16.94	\$18.92
43-9021	Data Entry Keyers	49	\$10.10	\$9.34	\$12.13	\$13.53	\$8.70	\$9.97	\$11.74	\$13.92	\$16.58
35-3041	Food Servers, Nonrestaurant	49	\$13.70	\$7.65	\$10.07	\$11.28	\$7.36	\$8.26	\$9.91	\$11.85	\$13.44
35-2012	Cooks, Institution and Cafeteria	47	\$8.80	\$8.80	\$11.47	\$12.81	\$8.09	\$9.42	\$11.07	\$13.31	\$15.84
29-2055	Surgical Technologists	46	\$16.60	\$11.24	\$15.94	\$18.29	\$10.74	\$12.29	\$15.18	\$19.29	\$22.77
49-3093	Tire Repairers and Changers	44	\$9.40	\$8.74	\$10.23	\$10.97	\$7.97	\$9.19	\$10.16	\$11.12	\$12.70
29-1126	Respiratory Therapists	43	\$15.20	\$15.07	\$19.00	\$20.96	\$14.23	\$16.52	\$19.17	\$21.61	\$24.29
43-4081	Hotel, Motel, and Resort Desk Clerks	43	\$10.30	\$8.63	\$9.88	\$10.51	\$7.97	\$9.20	\$10.09	\$10.95	\$11.51
‡ 25-1199	Postsecondary Teachers, All Other	42	\$27.00	\$27,116	\$56,128	\$70,634	\$24,532	\$30,859	\$53,705	\$71,669	\$93,224
53-3022	Bus Drivers, School	42	\$9.20	\$11.11	\$13.96	\$15.38	\$10.46	\$12.08	\$14.19	\$16.05	\$17.36
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	42	\$8.00	\$6.16	\$7.75	\$8.55	\$5.85	\$6.42	\$7.26	\$8.55	\$10.30
39-3031	Ushers, Lobby Attendants, and Ticket Takers	42	\$6.20	\$6.02	\$7.30	\$7.94	\$5.70	\$6.23	\$7.18	\$8.34	\$9.32
29-1123	Physical Therapists	41	\$19.90	\$19.16	\$25.19	\$28.20	\$17.99	\$21.83	\$25.14	\$28.12	\$33.67
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	41	\$20.60	\$15.90	\$22.68	\$26.08	\$14.90	\$17.70	\$21.34	\$26.53	\$33.20
53-3021	Bus Drivers, Transit and Intercity	41	\$12.10	\$10.95	\$14.44	\$16.18	\$10.14	\$11.62	\$13.95	\$17.40	\$20.12
31-9099	Healthcare Support Workers, All Other	41	\$12.50	\$10.06	\$13.04	\$14.53	\$9.52	\$10.84	\$12.63	\$14.48	\$17.51
39-9032	Recreation Workers	41	\$10.30	\$7.74	\$11.68	\$13.64	\$7.29	\$8.55	\$10.60	\$13.68	\$18.00
15-1051	Computer Systems Analysts	40	\$22.50	\$24.48	\$33.63	\$38.21	\$22.16	\$27.78	\$33.88	\$40.30	\$44.60

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	40	\$22.30	\$15.48	\$27.70	\$33.81	\$13.78	\$18.40	\$23.70	\$32.24	\$44.55
47-2031	Carpenters	40	\$14.40	\$9.33	\$16.05	\$19.41	\$6.79	\$11.50	\$16.39	\$20.16	\$23.49
29-2012	Medical and Clinical Laboratory Technicians	40	\$15.50	\$11.63	\$15.70	\$17.74	\$11.10	\$12.78	\$15.41	\$18.40	\$21.25
35-2021	Food Preparation Workers	40	\$7.00	\$7.14	\$9.42	\$10.55	\$6.68	\$7.60	\$8.81	\$11.20	\$13.25
17-2051	Civil Engineers	38	\$17.50	\$21.88	\$31.13	\$35.75	\$20.09	\$23.53	\$28.69	\$37.03	\$45.69
47-2111	Electricians	37	\$21.40	\$16.49	\$22.22	\$25.08	\$14.62	\$19.41	\$23.70	\$26.08	\$27.53
29-2052	Pharmacy Technicians	37	\$13.60	\$11.25	\$13.90	\$15.22	\$10.32	\$12.03	\$13.88	\$16.04	\$17.50
31-1011	Home Health Aides	37	\$9.60	\$8.95	\$11.37	\$12.58	\$8.34	\$9.34	\$10.51	\$13.00	\$16.53
‡ 25-2021	Elementary School Teachers, Except Special Education	36	\$14.60	\$29,769	\$42,308	\$48,577	\$28,637	\$32,505	\$40,514	\$52,447	\$61,930
‡ 27-2022	Coaches and Scouts	35	\$10.30	\$17,522	\$39,185	\$50,017	\$14,258	\$21,132	\$28,901	\$43,086	\$68,698
‡ 25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	35	\$11.40	\$35,125	\$48,613	\$55,358	\$32,201	\$38,335	\$49,138	\$58,833	\$67,515
15-1061	Database Administrators	35	\$25.60	\$19.24	\$29.87	\$35.18	\$17.41	\$22.10	\$27.89	\$38.19	\$44.65
43-5081	Stock Clerks and Order Fillers	35	\$9.10	\$8.16	\$11.76	\$13.56	\$7.60	\$8.84	\$11.06	\$14.43	\$16.96
41-3099	Sales Representatives, Services, All Other	33	\$14.10	†	†	†	†	†	†	†	†
13-2051	Financial Analysts	32	\$20.10	\$19.21	\$31.12	\$37.08	\$17.81	\$21.31	\$27.33	\$35.19	\$45.70
* 41-3031	Securities, Commodities, and Financial Services Sales Agents	32	\$13.20	\$15.28	\$29.18	\$36.12	\$12.28	\$18.43	\$22.08	\$29.75	\$44.15
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	32	\$16.10	\$14.87	\$20.42	\$23.19	\$13.85	\$16.62	\$19.58	\$23.34	\$27.84
25-3099	Teachers and Instructors, All Other	31	\$13.50	†	†	†	†	†	†	†	†
39-5092	Manicurists and Pedicurists	31	\$19.50	\$6.97	\$9.92	\$11.40	\$6.54	\$7.32	\$8.47	\$10.09	\$18.59

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details —continued

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

				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
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	30	†	\$6.34	\$8.11	\$8.99	\$5.99	\$6.84	\$7.92	\$9.17	\$10.55
11-9021	Construction Managers	29	\$27.00	\$24.19	\$38.96	\$46.34	\$21.61	\$27.81	\$35.01	\$44.02	\$57.56
17-2141	Mechanical Engineers	29	\$28.50	\$22.49	\$32.22	\$37.08	\$21.81	\$24.98	\$31.11	\$38.81	\$44.64
27-1024	Graphic Designers	29	\$11.00	\$14.18	\$18.93	\$21.31	\$13.56	\$15.40	\$17.73	\$21.81	\$26.56
35-3011	Bartenders	29	\$8.30	\$5.97	\$7.57	\$8.37	\$5.61	\$6.05	\$6.78	\$8.33	\$10.88
‡ 25-2022	Middle School Teachers, Except Special and Vocational Education	28	\$12.00	\$31,645	\$44,143	\$50,392	\$30,348	\$34,149	\$43,157	\$53,687	\$62,480
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	28	\$79.50	\$9.94	\$14.54	\$16.83	\$9.39	\$10.73	\$13.28	\$17.27	\$22.53
43-3011	Bill and Account Collectors	27	\$10.90	\$10.55	\$14.51	\$16.48	\$9.73	\$11.67	\$13.81	\$16.61	\$20.61
53-7051	Industrial Truck and Tractor Operators	27	\$17.00	\$10.87	\$14.03	\$15.61	\$10.07	\$11.60	\$13.72	\$16.30	\$18.24
49-9099	Installation, Maintenance, and Repair Workers, All Other	26	\$11.40	\$9.21	\$14.66	\$17.38	\$8.47	\$9.92	\$13.03	\$18.93	\$23.35
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	25	\$18.60	\$17.91	\$31.78	\$38.71	\$16.64	\$20.48	\$27.37	\$39.54	\$54.46
51-4121	Welders, Cutters, Solderers, and Brazers	25	\$15.20	\$11.67	\$16.38	\$18.73	\$11.18	\$12.92	\$16.15	\$19.84	\$22.38
33-9032	Security Guards	25	\$9.60	\$9.02	\$12.08	\$13.61	\$8.41	\$9.48	\$10.87	\$13.46	\$18.72
‡ 25-2042	Special Education Teachers, Middle School	24	\$11.60	\$34,029	\$46,082	\$52,108	\$31,475	\$36,572	\$45,997	\$55,266	\$63,904
11-3040	Human Resources Managers	24	\$26.90	\$23.05	\$37.12	\$44.15	\$20.86	\$26.11	\$34.62	\$45.51	\$56.98
17-2072	Electronics Engineers, Except Computer	24	\$24.20	\$25.02	\$34.84	\$39.76	\$23.34	\$27.61	\$33.05	\$40.73	\$50.38
29-2071	Medical Records and Health Information Technicians	24	\$18.90	\$11.75	\$15.18	\$16.90	\$11.16	\$12.17	\$13.70	\$17.58	\$21.30
49-2098	Security and Fire Alarm Systems Installers	23	\$10.80	\$15.49	\$19.62	\$21.69	\$14.71	\$15.98	\$18.59	\$21.50	\$28.25
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	22	\$8.70	†	†	†	†	†	†	†	†

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
‡ 25-2031	Secondary School Teachers, Except Special and Vocational Education	22	\$17.90	\$33,059	\$47,166	\$54,220	\$30,744	\$35,735	\$46,918	\$58,227	\$67,509
13-1199	Business Operations Specialists, All Other	22	\$23.00	\$18.08	\$28.23	\$33.30	\$16.35	\$21.03	\$27.20	\$34.46	\$42.29
47-3019	Helpers, Construction Trades, All Other	22	†	\$10.18	\$14.47	\$16.61	\$9.80	\$11.12	\$15.17	\$17.32	\$19.15
43-9041	Insurance Claims and Policy Processing Clerks	21	\$16.10	\$11.57	\$15.10	\$16.87	\$10.65	\$12.67	\$15.18	\$17.30	\$20.00
23-1011	Lawyers	20	\$30.70	\$25.85	\$47.32	\$58.06	\$23.17	\$30.41	\$42.52	\$56.97	†
17-2061	Computer Hardware Engineers	20	\$33.70	\$28.98	\$41.17	\$47.26	\$26.87	\$32.60	\$40.53	\$49.21	\$56.18
27-3042	Technical Writers	20	†	\$18.76	\$27.03	\$31.17	\$17.24	\$21.35	\$25.96	\$31.92	\$38.12
29-1122	Occupational Therapists	20	\$22.30	\$18.96	\$24.70	\$27.57	\$18.22	\$20.51	\$24.23	\$27.41	\$33.18
47-4051	Highway Maintenance Workers	20	\$17.40	\$13.99	\$17.26	\$18.89	\$13.01	\$14.85	\$17.35	\$19.96	\$21.58
* 39-1012	Slot Key Persons	20	\$11.20	\$10.54	\$12.81	\$13.94	\$9.95	\$11.09	\$12.36	\$13.98	\$16.69
31-9093	Medical Equipment Preparers	20	\$11.40	\$9.59	\$12.31	\$13.67	\$9.12	\$10.47	\$12.14	\$13.69	\$16.45
29-2056	Veterinary Technologists and Technicians	20	\$12.00	\$9.87	\$12.17	\$13.31	\$9.33	\$10.11	\$11.73	\$13.69	\$16.35
21-1012	Educational, Vocational, and School Counselors	19	\$17.10	\$15.56	\$24.02	\$28.26	\$14.52	\$17.32	\$24.06	\$30.32	\$34.14
23-2011	Paralegals and Legal Assistants	19	\$15.40	\$17.26	\$21.69	\$23.90	\$15.72	\$18.28	\$20.56	\$23.88	\$29.24
31-9091	Dental Assistants	19	\$13.00	\$13.28	\$17.85	\$20.13	\$11.94	\$14.96	\$17.94	\$20.91	\$24.70
39-9031	Fitness Trainers and Aerobics Instructors	19	\$14.30	\$9.20	\$16.26	\$19.79	\$8.18	\$10.50	\$15.65	\$20.42	\$25.89
43-5071	Shipping, Receiving, and Traffic Clerks	19	\$9.00	\$8.91	\$12.92	\$14.93	\$8.15	\$9.91	\$12.58	\$15.33	\$18.26
11-3042	Training and Development Managers	18	\$16.60	†	†	†	†	†	†	†	†
49-3021	Automotive Body and Related Repairers	18	\$18.00	\$16.57	\$25.93	\$30.62	\$13.94	\$19.80	\$25.55	\$32.35	\$38.77
43-6012	Legal Secretaries	18	†	\$15.43	\$18.20	\$19.59	\$14.62	\$15.60	\$17.19	\$20.76	\$24.54
43-4131	Loan Interviewers and Clerks	18	\$12.00	\$13.08	\$16.99	\$18.95	\$12.16	\$14.05	\$16.73	\$19.86	\$22.32
43-4071	File Clerks	18	\$11.60	\$8.87	\$11.56	\$12.90	\$8.18	\$9.52	\$11.09	\$13.28	\$16.07
13-1073	Training and Development Specialists	17	\$18.80	\$15.99	\$24.83	\$29.25	\$15.01	\$17.78	\$23.77	\$31.37	\$37.44

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details —continued

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

				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
13-1071	Employment, Recruitment, and Placement Specialists	17	\$16.80	\$14.38	\$23.90	\$28.66	\$13.26	\$16.31	\$21.17	\$28.52	\$35.81
13-2071	Loan Counselors	17	†	\$14.97	\$19.64	\$21.97	\$13.95	\$16.09	\$18.55	\$21.64	\$26.66
13-1111	Management Analysts	16	\$25.80	\$17.85	\$37.16	\$46.82	\$13.84	\$21.81	\$30.52	\$45.16	\$69.18
11-9033	Education Administrators, Postsecondary	16	\$21.90	\$21.30	\$34.40	\$40.95	\$18.68	\$24.00	\$29.33	\$40.63	\$56.32
29-2032	Diagnostic Medical Sonographers	16	\$25.70	\$15.90	\$26.58	\$31.91	\$12.56	\$18.81	\$26.16	\$36.42	\$41.72
29-1127	Speech-Language Pathologists	16	\$19.70	\$19.07	\$25.30	\$28.42	\$17.90	\$21.05	\$25.39	\$29.63	\$33.46
13-2099	Financial Specialists, All Other	16	\$26.40	\$16.61	\$27.30	\$32.65	\$14.69	\$18.99	\$24.48	\$32.22	\$42.45
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	16	\$17.30	\$15.94	\$23.43	\$27.17	\$14.53	\$17.82	\$22.33	\$27.81	\$34.77
41-3011	Advertising Sales Agents	16	\$28.40	\$12.19	\$26.04	\$32.97	\$11.37	\$13.85	\$19.03	\$32.61	\$52.23
21-1014	Mental Health Counselors	16	\$22.90	\$11.61	\$16.09	\$18.34	\$10.94	\$12.26	\$14.29	\$17.15	\$21.45
27-1019	Artists and Related Workers, All Other	15	\$8.80	†	†	†	†	†	†	†	†
‡ 27-2023	Umpires, Referees, and Other Sports Officials	15	\$13.80	\$17,022	\$25,211	\$29,306	\$15,414	\$19,148	\$24,756	\$29,576	\$35,926
19-3021	Market Research Analysts	15	\$33.70	\$18.54	\$31.73	\$38.33	\$16.75	\$20.97	\$29.55	\$40.04	\$50.26
41-3021	Insurance Sales Agents	15	\$15.60	\$19.09	\$34.62	\$42.39	\$16.99	\$21.55	\$27.52	\$41.82	\$63.52
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	15	\$20.70	\$18.79	\$28.18	\$32.87	\$17.14	\$21.37	\$26.59	\$32.97	\$40.06
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	15	\$21.50	\$17.78	\$26.61	\$31.02	\$16.26	\$20.07	\$25.49	\$31.59	\$36.95
17-3023	Electrical and Electronic Engineering Technicians	15	†	\$12.02	\$20.44	\$24.65	\$10.47	\$13.72	\$20.21	\$26.06	\$31.52
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
21-1021	Child, Family, and School Social Workers	15	\$12.60	\$13.93	\$20.19	\$23.31	\$12.93	\$15.85	\$19.88	\$24.48	\$28.89
29-2031	Cardiovascular Technologists and Technicians	15	†	\$13.09	\$19.03	\$22.00	\$11.93	\$14.40	\$18.68	\$22.81	\$27.87
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	15	\$12.80	\$14.62	\$18.20	\$19.99	\$13.60	\$15.78	\$18.31	\$20.80	\$22.62

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
*‡25-1071	Health Specialties Teachers, Postsecondary	14	†	\$29,000	\$67,733	\$87,100	\$22,266	\$36,473	\$53,938	\$87,020	\$126,555
17-1021	Cartographers and Photogrammetrists	14	\$13.20	\$19.57	\$27.68	\$31.74	\$17.74	\$22.16	\$28.27	\$32.81	\$38.39
13-1051	Cost Estimators	14	†	\$18.48	\$26.50	\$30.51	\$17.42	\$20.38	\$25.81	\$32.11	\$36.52
21-1022	Medical and Public Health Social Workers	14	\$19.20	\$16.27	\$20.73	\$22.97	\$15.02	\$17.76	\$20.37	\$24.09	\$27.69
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	14	\$15.60	\$12.68	\$16.79	\$18.84	\$11.88	\$14.06	\$16.34	\$19.38	\$22.22
51-9199	Production Workers, All Other	14	\$11.00	\$7.32	\$11.14	\$13.05	\$6.76	\$8.12	\$10.13	\$13.08	\$17.52
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	13	†	\$12.73	\$20.24	\$23.99	\$10.30	\$15.22	\$19.16	\$24.31	\$31.65
49-2011	Computer, Automated Teller, and Office Machine Repairers	13	†	\$13.08	\$18.45	\$21.13	\$11.24	\$14.73	\$17.38	\$21.89	\$27.70
21-2021	Directors, Religious Activities and Education	13	†	\$9.62	\$15.21	\$18.01	\$6.49	\$10.68	\$16.12	\$17.79	\$22.56
43-9071	Office Machine Operators, Except Computer	13	\$9.00	\$9.21	\$12.06	\$13.48	\$8.47	\$9.70	\$11.39	\$14.10	\$17.08
51-2099	Assemblers and Fabricators, All Other	13	†	\$8.12	\$10.65	\$11.92	\$7.57	\$8.80	\$10.06	\$11.73	\$14.49
39-9021	Personal and Home Care Aides	13	\$9.80	\$7.31	\$8.86	\$9.63	\$6.91	\$7.77	\$8.91	\$10.01	\$10.74
17-3021	Aerospace Engineering and Operations Technicians	12	†	\$20.07	\$26.52	\$29.75	\$18.31	\$22.55	\$26.31	\$30.97	\$35.96
21-1011	Substance Abuse and Behavioral Disorder Counselors	12	\$14.50	\$10.09	\$13.92	\$15.84	\$9.55	\$10.77	\$12.95	\$16.43	\$20.29
43-2011	Switchboard Operators, Including Answering Service	12	\$10.20	\$9.05	\$11.71	\$13.04	\$8.51	\$9.89	\$11.65	\$13.49	\$15.30
51-6011	Laundry and Dry-Cleaning Workers	12	†	\$8.51	\$12.83	\$14.99	\$7.83	\$9.11	\$10.94	\$18.02	\$20.11
53-3041	Taxi Drivers and Chauffeurs	12	\$9.70	\$7.23	\$9.53	\$10.68	\$6.78	\$7.82	\$9.44	\$10.84	\$12.42
53-6021	Parking Lot Attendants	12	\$9.00	\$6.23	\$7.83	\$8.62	\$5.84	\$6.31	\$7.06	\$8.80	\$11.08
11-1011	Chief Executives	12	†	\$49.33	\$81.58	\$97.71	\$44.39	\$58.86	†	†	†

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
‡ 25-1124	Foreign Language and Literature Teachers, Postsecondary	11	†	\$31,551	\$48,454	\$56,906	\$30,259	\$34,841	\$44,247	\$58,336	\$78,970
47-2131	Insulation Workers, Floor, Ceiling, and Wall	11	\$12.00	†	†	†	†	†	†	†	†
11-3061	Purchasing Managers	11	†	\$23.23	\$38.01	\$45.40	\$20.05	\$27.38	\$35.40	\$46.90	\$57.22
15-1099	Computer Specialists, All Other	11	\$32.50	\$20.33	\$32.02	\$37.86	\$17.77	\$24.00	\$31.24	\$39.65	\$48.14
11-2011	Advertising and Promotions Managers	11	\$20.00	\$19.99	\$33.37	\$40.06	\$17.78	\$22.88	\$30.59	\$41.98	\$52.88
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	11	\$20.00	\$20.03	\$23.38	\$25.06	\$18.51	\$21.75	\$23.89	\$26.02	\$27.40
43-5061	Production, Planning, and Expediting Clerks	11	†	\$13.52	\$18.73	\$21.34	\$12.24	\$15.31	\$18.66	\$21.76	\$25.66
49-9011	Mechanical Door Repairers	11	†	\$12.52	\$17.78	\$20.41	\$11.60	\$13.78	\$18.06	\$20.81	\$24.77
43-4041	Credit Authorizers, Checkers, and Clerks	11	†	\$11.25	\$13.78	\$15.05	\$10.47	\$11.83	\$13.10	\$14.91	\$18.39
* 49-3041	Farm Equipment Mechanics	11	†	\$8.73	\$12.47	\$14.35	\$7.99	\$9.31	\$11.53	\$14.90	\$18.37
47-4099	Construction and Related Workers, All Other	10	\$10.00	†	†	†	†	†	†	†	†
35-2019	Cooks, All Other	10	\$13.50	†	†	†	†	†	†	†	†
11-9039	Education Administrators, All Other	10	\$25.60	†	†	†	†	†	†	†	†
29-2099	Health Technologists and Technicians, All Other	10	\$11.60	†	†	†	†	†	†	†	†
‡ 25-2012	Kindergarten Teachers, Except Special Education	10	†	\$27,929	\$41,585	\$48,413	\$26,646	\$32,213	\$40,946	\$52,002	\$59,942
21-2099	Religious Workers, All Other	10	†	†	†	†	†	†	†	†	†
13-2053	Insurance Underwriters	10	†	\$18.31	\$30.15	\$36.07	\$16.42	\$20.97	\$28.52	\$37.10	\$45.62
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	10	\$28.50	\$18.89	\$26.15	\$29.78	\$17.20	\$21.28	\$25.44	\$30.67	\$36.27
17-1022	Surveyors	10	†	\$15.64	\$21.99	\$25.17	\$14.43	\$17.23	\$21.32	\$26.12	\$31.69
27-4021	Photographers	10	†	\$9.72	\$19.14	\$23.84	\$9.09	\$11.01	\$17.96	\$24.28	\$28.46
51-4041	Machinists	10	\$16.40	\$12.22	\$17.45	\$20.06	\$11.09	\$13.81	\$17.41	\$20.87	\$24.82

* OES wages reported for Colorado statewide
 † insufficient wage data available
 ‡ annual wage data

Occupational Details *—continued*

Table 1: Occupations with 10 or More Estimated Vacancies — Page 11

				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
43-3051	Payroll and Timekeeping Clerks	10	\$19.10	\$13.37	\$16.80	\$18.51	\$12.42	\$14.49	\$16.57	\$19.23	\$21.96
51-3011	Bakers	10	\$9.00	\$8.94	\$12.61	\$14.44	\$8.37	\$9.92	\$12.33	\$15.48	\$17.24
27-1023	Floral Designers	10	\$9.00	\$9.46	\$12.14	\$13.48	\$8.91	\$9.64	\$10.83	\$13.82	\$18.38
39-5094	Skin Care Specialists	10	†	\$6.68	\$13.93	\$17.55	\$6.14	\$7.40	\$10.83	\$17.32	\$30.30
53-6031	Service Station Attendants	10	\$8.00	\$7.32	\$10.40	\$11.93	\$7.08	\$8.05	\$9.88	\$12.45	\$15.12

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
‡ 25-1042	Biological Science Teachers, Postsecondary	\$34,045	\$65,965	\$81,925	\$31,495	\$39,797	\$57,163	\$82,200	\$114,755
11-3049	Human Resources Managers, All Other	†	†	†	†	†	†	†	†
‡ 25-1022	Mathematical Science Teachers, Postsecondary	\$31,974	\$52,127	\$62,204	\$30,851	\$35,372	\$43,679	\$63,513	\$87,487
27-3022	Reporters and Correspondents	†	†	†	†	†	†	†	†
29-2021	Dental Hygienists	\$22.17	\$33.63	\$39.35	\$11.33	\$31.44	\$37.71	\$41.48	\$43.73
41-9031	Sales Engineers	\$23.28	\$36.31	\$42.83	\$21.07	\$26.90	\$33.54	\$42.98	\$54.56
19-1042	Medical Scientists, Except Epidemiologists	\$16.34	\$31.14	\$38.54	\$14.72	\$17.55	\$28.60	\$39.69	\$51.10
33-3051	Police and Sheriff's Patrol Officers	\$20.35	\$25.64	\$28.28	\$18.85	\$22.04	\$25.94	\$29.76	\$33.11
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle	\$16.36	\$24.93	\$29.21	\$14.50	\$18.68	\$24.00	\$28.75	\$34.90
43-5032	Dispatchers, Except Police, Fire, and Ambulance	\$10.80	\$15.80	\$18.30	\$9.92	\$12.13	\$15.48	\$18.98	\$22.47
41-3041	Travel Agents	\$9.63	\$13.78	\$15.86	\$9.25	\$10.72	\$14.01	\$16.37	\$17.91
43-4121	Library Assistants, Clerical	\$7.83	\$10.46	\$11.77	\$7.31	\$8.48	\$10.40	\$12.37	\$13.70
* 41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	\$6.17	\$6.92	\$7.29	\$5.66	\$5.94	\$6.41	\$6.88	\$7.21
11-3041	Compensation and Benefits Managers	†	†	†	†	†	†	†	†
43-4199	Information and Record Clerks, All Other	†	†	†	†	†	†	†	†
27-3011	Radio and Television Announcers	†	†	†	†	†	†	†	†
15-1011	Computer and Information Scientists, Research	\$27.79	\$43.27	\$51.00	\$24.73	\$32.45	\$41.05	\$52.74	\$67.07
11-3051	Industrial Production Managers	\$24.86	\$39.42	\$46.70	\$22.02	\$28.74	\$36.17	\$46.47	\$62.38
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
17-2031	Biomedical Engineers	\$24.01	\$29.93	\$32.88	\$23.05	\$26.14	\$30.43	\$33.99	\$36.66
13-2041	Credit Analysts	\$14.08	\$22.67	\$26.97	\$12.86	\$15.63	\$21.91	\$27.53	\$32.85

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
33-3012	Correctional Officers and Jailers	\$15.45	\$20.51	\$23.05	\$14.21	\$17.16	\$20.76	\$24.45	\$26.76
27-3043	Writers and Authors	\$13.62	\$21.65	\$25.67	\$12.98	\$15.28	\$20.31	\$26.29	\$34.18
53-7032	Excavating and Loading Machine and Dragline Operators	\$15.40	\$18.24	\$19.66	\$14.74	\$16.04	\$18.32	\$20.67	\$22.07
17-3011	Architectural and Civil Drafters	\$14.49	\$18.89	\$21.10	\$13.69	\$15.49	\$18.09	\$21.65	\$25.94
43-5031	Police, Fire, and Ambulance Dispatchers	\$14.15	\$17.83	\$19.67	\$13.34	\$15.23	\$17.73	\$20.46	\$22.94
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
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
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.60	\$15.96	\$19.14	\$8.77	\$10.86	\$14.61	\$20.08	\$26.40
53-3099	Motor Vehicle Operators, All Other	\$7.41	\$13.41	\$16.40	\$6.33	\$8.72	\$13.79	\$18.40	\$20.36
31-9011	Massage Therapists	\$11.05	\$18.44	\$22.14	\$10.41	\$12.00	\$13.75	\$25.67	\$31.85
21-1015	Rehabilitation Counselors	\$10.03	\$15.05	\$17.56	\$8.85	\$11.23	\$13.35	\$17.08	\$24.84
33-9099	Protective Service Workers, All Other	\$8.01	\$12.19	\$14.28	\$7.42	\$8.73	\$11.05	\$12.98	\$19.77
39-6012	Concierges	\$8.06	\$11.24	\$12.84	\$7.42	\$8.85	\$10.65	\$13.85	\$16.28
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
25-1194	Vocational Education Teachers, Postsecondary	\$15.06	\$24.64	\$29.43	\$14.19	\$16.65	\$23.88	\$31.72	\$39.82
13-1031	Claims Adjusters, Examiners, and Investigators	\$16.73	\$27.19	\$32.42	\$15.37	\$18.82	\$23.73	\$29.37	\$40.63
11-9051	Food Service Managers	\$15.92	\$24.80	\$29.24	\$15.07	\$17.66	\$21.55	\$31.30	\$41.50
11-9141	Property, Real Estate, and Community Association Managers	\$13.39	\$26.66	\$33.30	\$12.31	\$15.11	\$21.42	\$32.52	\$44.59
27-3099	Media and Communication Workers, All Other	\$14.11	\$22.13	\$26.14	\$13.18	\$15.76	\$21.13	\$27.32	\$33.75
49-9041	Industrial Machinery Mechanics	\$14.34	\$19.95	\$22.75	\$13.33	\$16.22	\$19.80	\$23.53	\$27.46
13-1022	Wholesale and Retail Buyers, Except Farm Products	\$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

‡ annual wage data

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
31-2021	Physical Therapist Assistants	\$12.92	\$16.60	\$18.43	\$12.02	\$14.22	\$16.50	\$19.52	\$21.71
39-1021	First-Line Supervisors/Managers of Personal Service Workers	\$9.94	\$15.67	\$18.54	\$8.76	\$11.16	\$13.93	\$19.00	\$26.07
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
53-7081	Refuse and Recyclable Material Collectors	\$10.29	\$12.40	\$13.45	\$9.65	\$10.33	\$11.42	\$13.67	\$17.87
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
39-6011	Baggage Porters and Bellhops	\$6.74	\$12.39	\$15.21	\$6.14	\$7.35	\$8.76	\$19.65	\$22.29
‡ 25-1011	Business Teachers, Postsecondary	\$36,458	\$72,420	\$90,401	\$31,887	\$43,007	\$67,498	\$97,185	\$117,812
25-1032	Engineering Teachers, Postsecondary	†	†	†	†	†	†	†	†
25-1191	Graduate Teaching Assistants	†	†	†	†	†	†	†	†
‡ 25-2032	Vocational Education Teachers, Secondary School	\$36,160	\$49,164	\$55,666	\$33,403	\$40,043	\$49,037	\$56,714	\$67,621
17-2112	Industrial Engineers	\$22.93	\$33.59	\$38.92	\$21.59	\$26.11	\$32.95	\$40.92	\$48.70
17-2081	Environmental Engineers	\$21.80	\$32.11	\$37.27	\$19.89	\$24.49	\$32.09	\$39.34	\$43.61
15-2031	Operations Research Analysts	\$20.46	\$28.44	\$32.43	\$18.65	\$22.57	\$27.36	\$34.41	\$41.09
17-1011	Architects, Except Landscape and Naval	\$18.94	\$29.19	\$34.32	\$17.71	\$21.23	\$27.21	\$35.62	\$42.40
29-2033	Nuclear Medicine Technologists	\$20.97	\$24.35	\$26.03	\$19.45	\$22.59	\$24.97	\$27.18	\$28.76
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
25-4021	Librarians	\$17.62	\$23.78	\$26.85	\$16.28	\$19.20	\$23.35	\$28.58	\$32.76
29-1131	Veterinarians	\$15.54	\$25.08	\$29.84	\$12.77	\$18.25	\$22.11	\$27.10	\$38.48
13-1121	Meeting and Convention Planners	\$14.73	\$19.96	\$22.58	\$14.03	\$15.69	\$19.00	\$23.29	\$28.22
35-1011	Chefs and Head Cooks	\$11.08	\$17.62	\$20.89	\$9.90	\$12.58	\$17.74	\$20.58	\$24.77
51-5023	Printing Machine Operators	\$13.16	\$17.75	\$20.04	\$11.79	\$14.80	\$17.13	\$21.10	\$25.88
21-2011	Clergy	\$8.69	\$16.24	\$20.01	\$6.46	\$11.06	\$16.59	\$19.98	\$23.45

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
* 21-1013	Marriage and Family Therapists	\$15.22	\$16.88	\$17.72	\$14.27	\$15.12	\$16.50	\$18.80	\$21.31
43-4031	Court, Municipal, and License Clerks	\$12.99	\$16.55	\$18.33	\$12.23	\$13.87	\$16.22	\$19.23	\$21.60
31-9094	Medical Transcriptionists	\$12.93	\$16.43	\$18.17	\$12.18	\$14.10	\$15.94	\$18.12	\$22.41
47-2081	Drywall and Ceiling Tile Installers	\$9.45	\$15.08	\$17.90	\$7.87	\$11.43	\$15.51	\$18.07	\$22.01
29-2041	Emergency Medical Technicians and Paramedics	\$10.51	\$15.57	\$18.10	\$9.82	\$11.32	\$14.96	\$18.95	\$22.66
43-4141	New Accounts Clerks	\$11.10	\$12.74	\$13.57	\$10.27	\$11.60	\$12.76	\$13.98	\$15.79
53-6099	Transportation Workers, All Other	\$8.74	\$14.27	\$17.03	\$8.05	\$9.70	\$11.31	\$16.85	\$26.31
* 31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$6.25	\$7.49	\$8.11	\$5.91	\$6.49	\$7.28	\$8.38	\$9.80
‡ 11-9032	Education Administrators, Elementary and Secondary School	\$57,543	\$72,345	\$79,746	\$51,459	\$63,629	\$73,370	\$84,364	\$92,898
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	†	†	†	†	†	†	†	†
‡ 27-2012	Producers and Directors	\$32,808	\$59,119	\$72,275	\$26,242	\$40,954	\$51,792	\$66,516	\$101,312
19-2041	Environmental Scientists and Specialists, Including Health	\$18.21	\$30.28	\$36.32	\$15.80	\$21.46	\$29.79	\$38.80	\$45.93
13-2031	Budget Analysts	\$19.88	\$28.04	\$32.12	\$18.36	\$22.01	\$26.81	\$33.19	\$39.48
25-9031	Instructional Coordinators	\$14.80	\$27.20	\$33.40	\$13.14	\$17.05	\$25.32	\$33.09	\$51.34
* 49-2091	Avionics Technicians	\$14.52	\$20.49	\$23.48	\$12.56	\$16.70	\$22.22	\$24.72	\$26.24
27-3041	Editors	\$13.22	\$21.89	\$26.23	\$12.17	\$14.47	\$20.60	\$27.92	\$34.09
29-1031	Dietitians and Nutritionists	\$12.82	\$19.26	\$22.48	\$10.95	\$14.77	\$19.34	\$23.90	\$27.14
51-2041	Structural Metal Fabricators and Fitters	\$13.77	\$17.63	\$19.57	\$12.32	\$14.92	\$16.92	\$20.13	\$25.67
43-9011	Computer Operators	\$11.96	\$16.56	\$18.85	\$11.09	\$13.29	\$16.13	\$19.83	\$22.76
29-2081	Opticians, Dispensing	\$12.46	\$16.40	\$18.36	\$11.38	\$13.66	\$16.02	\$18.86	\$21.00
25-3021	Self-Enrichment Education Teachers	\$8.29	\$15.84	\$19.61	\$7.27	\$9.52	\$14.09	\$18.87	\$27.53
27-4011	Audio and Video Equipment Technicians	\$9.98	\$15.39	\$18.09	\$8.67	\$11.32	\$14.05	\$17.69	\$25.22

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
51-7011	Cabinetmakers and Bench Carpenters	\$9.89	\$14.25	\$16.43	\$9.40	\$10.85	\$14.05	\$17.49	\$20.21
51-2022	Electrical and Electronic Equipment Assemblers	\$8.90	\$11.98	\$13.52	\$8.38	\$9.64	\$11.56	\$13.85	\$16.75
51-6031	Sewing Machine Operators	\$7.72	\$10.49	\$11.88	\$7.30	\$8.47	\$10.13	\$12.34	\$13.97
‡ 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
27-2041	Music Directors and Composers	†	†	†	†	†	†	†	†
‡ 25-1126	Philosophy and Religion Teachers, Postsecondary	\$23,470	\$47,839	\$60,023	\$20,218	\$26,924	\$44,367	\$65,050	\$83,173
17-2171	Petroleum Engineers	\$26.34	\$43.27	\$51.73	\$24.21	\$29.27	\$45.55	\$55.00	\$64.42
19-2042	Geoscientists, Except Hydrologists and Geographers	\$23.76	\$39.04	\$46.68	\$19.90	\$28.77	\$39.05	\$50.04	\$59.08
13-2061	Financial Examiners	\$23.84	\$35.97	\$42.04	\$22.19	\$27.33	\$34.15	\$41.60	\$51.40
11-2031	Public Relations Managers	\$20.83	\$37.87	\$46.39	\$18.47	\$24.52	\$33.32	\$47.50	\$68.07
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
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	\$20.33	\$34.42	\$41.46	\$18.00	\$23.24	\$32.86	\$42.94	\$50.18
19-2031	Chemists	\$17.92	\$30.84	\$37.29	\$16.16	\$20.54	\$29.10	\$39.89	\$49.63
19-3031	Clinical, Counseling, and School Psychologists	\$16.56	\$27.02	\$32.25	\$14.90	\$18.90	\$27.01	\$32.43	\$36.59
29-1124	Radiation Therapists	\$21.34	\$26.24	\$28.69	\$19.45	\$23.28	\$26.29	\$29.77	\$34.22
17-1012	Landscape Architects	\$14.55	\$24.83	\$29.97	\$12.44	\$18.02	\$24.43	\$31.57	\$39.57
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
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
47-2071	Paving, Surfacing, and Tamping Equipment Operators	\$12.98	\$16.46	\$18.21	\$11.98	\$14.16	\$16.52	\$19.20	\$21.35
43-4061	Eligibility Interviewers, Government Programs	\$12.84	\$16.02	\$17.60	\$12.24	\$13.55	\$15.57	\$18.16	\$21.18

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details —continued

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
29-2054	Respiratory Therapy Technicians	\$7.85	\$13.90	\$16.93	\$6.82	\$8.92	\$14.60	\$17.25	\$20.75
49-9043	Maintenance Workers, Machinery	\$7.03	\$13.99	\$17.48	\$6.28	\$7.53	\$14.37	\$19.06	\$21.85
25-4031	Library Technicians	\$10.23	\$13.42	\$15.02	\$9.55	\$11.05	\$12.93	\$15.73	\$18.61
47-2151	Pipelayers	\$9.91	\$13.29	\$14.98	\$9.39	\$10.51	\$12.51	\$15.42	\$19.25
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
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	†	†	†	†	†	†	†	†
27-3021	Broadcast News Analysts	†	†	†	†	†	†	†	†
‡ 25-1123	English Language and Literature Teachers, Postsecondary	\$29,432	\$44,843	\$52,549	\$26,961	\$32,210	\$39,202	\$53,717	\$70,121
13-1079	Human Resources, Training, and Labor Relations Specialists, All Other	†	†	†	†	†	†	†	†
43-9199	Office and Administrative Support Workers, All Other	†	†	†	†	†	†	†	†
19-2032	Materials Scientists	\$29.08	\$42.96	\$49.91	\$26.78	\$32.26	\$43.52	\$53.36	\$58.46
17-2041	Chemical Engineers	\$23.60	\$34.75	\$40.33	\$21.06	\$26.91	\$34.79	\$42.81	\$51.02
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
11-3071	Transportation, Storage, and Distribution Managers	\$21.53	\$32.27	\$37.64	\$18.65	\$25.02	\$30.87	\$38.97	\$47.95
49-9062	Medical Equipment Repairers	\$20.83	\$25.38	\$27.66	\$17.90	\$23.59	\$26.09	\$28.60	\$32.47
33-9021	Private Detectives and Investigators	\$9.86	\$19.72	\$24.64	\$8.72	\$11.11	\$22.46	\$26.74	\$31.23
29-1121	Audiologists	\$18.62	\$22.55	\$24.51	\$17.69	\$19.38	\$22.16	\$26.01	\$28.59
11-9151	Social and Community Service Managers	\$15.55	\$23.68	\$27.74	\$14.85	\$16.99	\$21.19	\$27.36	\$35.72
43-9111	Statistical Assistants	\$14.65	\$18.60	\$20.58	\$14.07	\$15.87	\$19.13	\$21.59	\$23.16
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

‡ annual wage data

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
49-9052	Telecommunications Line Installers and Repairers	\$11.22	\$15.93	\$18.29	\$10.28	\$12.39	\$15.33	\$18.15	\$22.33
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	\$11.28	\$14.74	\$16.47	\$10.12	\$12.80	\$15.18	\$16.93	\$18.33
33-9091	Crossing Guards	\$9.86	\$13.66	\$15.57	\$9.44	\$10.58	\$14.34	\$16.20	\$17.96
29-2053	Psychiatric Technicians	\$9.92	\$13.89	\$15.88	\$8.92	\$11.09	\$14.08	\$16.53	\$19.58
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
13-2082	Tax Preparers	\$8.56	\$15.47	\$18.92	\$8.04	\$9.07	\$11.75	\$19.93	\$26.89
53-7199	Material Moving Workers, All Other	\$9.43	\$12.85	\$14.56	\$9.05	\$9.82	\$11.19	\$15.95	\$19.22
39-5011	Barbers	\$10.09	\$11.48	\$12.18	\$9.45	\$10.10	\$11.15	\$12.90	\$14.13
* 39-6021	Tour Guides and Escorts	\$8.06	\$9.82	\$10.70	\$7.61	\$8.54	\$9.62	\$10.61	\$12.13
*‡53-2011	Airline Pilots, Copilots, and Flight Engineers	\$52,488	\$63,209	\$68,569	\$49,434	\$52,614	\$57,791	\$73,477	\$89,651
19-1011	Animal Scientists	†	†	†	†	†	†	†	†
‡ 25-1121	Art, Drama, and Music Teachers, Postsecondary	\$34,897	\$51,919	\$60,429	\$33,997	\$40,895	\$50,244	\$60,970	\$78,527
‡ 29-9091	Athletic Trainers	\$23,830	\$53,333	\$68,084	\$19,780	\$28,592	\$37,207	\$63,183	\$127,000
37-2019	Building Cleaning Workers, All Other	†	†	†	†	†	†	†	†
53-7061	Cleaners of Vehicles and Equipment	†	†	†	†	†	†	†	†
21-1099	Community and Social Service Specialists, All Other	†	†	†	†	†	†	†	†
17-3019	Drafters, All Other	†	†	†	†	†	†	†	†
‡ 25-1063	Economics Teachers, Postsecondary	\$41,333	\$65,370	\$77,389	\$35,384	\$47,806	\$59,402	\$77,872	\$101,272
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	†	†	†	†	†	†	†	†
‡ 25-1125	History Teachers, Postsecondary	\$37,627	\$57,893	\$68,027	\$35,249	\$41,737	\$52,780	\$67,950	\$89,220
15-2021	Mathematicians	†	†	†	†	†	†	†	†

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
‡ 25-1072	Nursing Instructors and Teachers, Postsecondary	\$36,584	\$54,151	\$62,934	\$33,235	\$41,332	\$51,223	\$62,658	\$78,562
‡ 25-1065	Political Science Teachers, Postsecondary	\$41,356	\$63,750	\$74,947	\$36,730	\$46,909	\$58,161	\$75,592	\$96,220
19-1013	Soil and Plan Scientists	†	†	†	†	†	†	†	†
11-9121	Natural Sciences Managers	\$31.74	\$45.95	\$53.06	\$29.07	\$35.86	\$45.33	\$53.97	\$64.14
19-2099	Physical Scientists, All Other	\$22.47	\$34.75	\$40.89	\$19.36	\$27.15	\$35.18	\$42.44	\$51.42
13-1061	Emergency Management Specialists	\$21.69	\$32.86	\$38.44	\$18.66	\$26.44	\$34.86	\$41.34	\$45.60
19-1022	Microbiologists	\$23.25	\$31.49	\$35.61	\$21.79	\$26.41	\$31.63	\$35.06	\$38.86
* 41-9021	Real Estate Brokers	\$27.12	\$29.62	\$30.87	\$25.52	\$28.44	\$30.65	\$32.85	\$34.17
19-3091	Anthropologists and Archeologists	\$14.01	\$26.49	\$32.73	\$11.06	\$16.72	\$28.91	\$34.24	\$40.76
29-1199	Health Diagnosing and Treating Practitioners, All Other	\$17.71	\$47.48	\$62.37	\$15.93	\$20.43	\$28.26	†	†
49-9051	Electrical Power-Line Installers and Repairers	\$19.51	\$23.94	\$26.16	\$16.81	\$23.06	\$25.30	\$27.42	\$28.91
11-9081	Lodging Managers	\$19.23	\$26.37	\$29.93	\$18.11	\$20.45	\$23.68	\$29.12	\$37.33
13-2021	Appraisers and Assessors of Real Estate	\$17.25	\$28.87	\$34.67	\$17.06	\$18.75	\$21.77	\$33.10	\$58.16
47-2021	Brickmasons and Blockmasons	\$12.05	\$20.78	\$25.14	\$10.20	\$14.11	\$21.60	\$27.00	\$31.52
47-4011	Construction and Building Inspectors	\$14.12	\$20.96	\$24.39	\$12.92	\$15.72	\$20.80	\$26.00	\$29.98
49-9031	Home Appliance Repairers	\$11.69	\$19.05	\$22.73	\$9.33	\$14.55	\$19.41	\$24.82	\$27.69
43-9031	Desktop Publishers	\$15.98	\$18.55	\$19.83	\$13.96	\$17.68	\$19.20	\$20.70	\$21.60
47-2043	Floor Sanders and Finishers	\$14.29	\$19.01	\$21.37	\$12.91	\$15.87	\$19.13	\$21.57	\$23.03
17-3022	Civil Engineering Technicians	\$12.97	\$18.94	\$21.93	\$11.91	\$14.31	\$19.03	\$22.92	\$26.48
43-2099	Communications Equipment Operators, All Other	\$10.49	\$17.73	\$21.34	\$9.46	\$11.68	\$17.65	\$23.10	\$27.71
27-4099	Media and Communication Equipment Workers, All Other	\$11.30	\$21.06	\$25.94	\$10.56	\$12.57	\$16.44	\$27.12	\$36.15
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
43-3061	Procurement Clerks	\$11.43	\$15.89	\$18.11	\$10.43	\$12.82	\$15.69	\$18.84	\$21.32

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
47-3013	Helpers--Electricians	\$9.79	\$15.04	\$17.66	\$9.09	\$11.61	\$15.43	\$19.00	\$21.44
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
43-9022	Word Processors and Typists	\$11.69	\$15.33	\$17.15	\$10.83	\$12.85	\$15.18	\$17.70	\$20.66
53-7063	Machine Feeders and Offbearers	\$9.52	\$12.05	\$13.32	\$8.93	\$10.01	\$11.53	\$14.01	\$16.37
31-1013	Psychiatric Aides	\$9.19	\$11.36	\$12.44	\$8.38	\$9.77	\$11.34	\$13.02	\$14.31
51-5011	Bindery Workers	\$7.30	\$12.24	\$14.70	\$6.59	\$8.27	\$10.94	\$16.14	\$19.96
31-9095	Pharmacy Aides	\$9.25	\$11.15	\$12.10	\$8.77	\$9.69	\$10.89	\$12.83	\$14.22
41-9011	Demonstrators and Product Promoters	\$7.51	\$10.83	\$12.49	\$7.10	\$7.63	\$8.50	\$11.65	\$17.86
51-2099	Assemblers and Fabricators, All Other	†	†	†	†	†	†	†	†
13-1199	Business Operations Specialists, All Other	†	†	†	†	†	†	†	†
43-5011	Cargo and Freight Agents	†	†	†	†	†	†	†	†
‡ 25-1052	Chemistry Teachers, Postsecondary	\$37,167	\$59,558	\$70,754	\$34,792	\$42,153	\$54,125	\$71,424	\$92,546
53-2012	Commercial Pilots	†	†	†	†	†	†	†	†
‡ 25-1021	Computer Science Teachers, Postsecondary	\$31,514	\$53,037	\$63,799	\$30,778	\$34,910	\$46,424	\$62,338	\$90,074
‡ 25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	\$43,778	\$98,958	\$126,547	\$39,504	\$47,421	\$97,867	\$130,535	†
‡ 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	†	†	†	†	†	†	†	†
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	†	†	†	†	†	†	†	†
17-3029	Engineering Technicians, Except Drafters, All Other	†	†	†	†	†	†	†	†
13-2051	Financial Analysts	†	†	†	†	†	†	†	†
33-2021	Fire Inspectors and Investigators	†	†	†	†	†	†	†	†
19-1012	Food Scientists and Technologists	†	†	†	†	†	†	†	†
23-2099	Legal Support Workers, All Other	†	†	†	†	†	†	†	†

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details *—continued*

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

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
25-1082	Library Science Teachers, Postsecondary	†	†	†	†	†	†	†	†
45-4029	Logging Workers, All Other	†	†	†	†	†	†	†	†
11-9199	Managers, All Other	†	†	†	†	†	†	†	†
53-7199	Material Moving Workers, All Other	†	†	†	†	†	†	†	†
51-4051	Metal-Refining Furnace Operators and Tenders	†	†	†	†	†	†	†	†
29-1051	Pharmacists	†	†	†	†	†	†	†	†
‡ 25-1054	Physics Teachers, Postsecondary	\$43,293	\$70,994	\$84,845	\$39,787	\$49,291	\$66,129	\$88,786	\$111,626
19-3094	Political Scientists	†	†	†	†	†	†	†	†
‡ 25-1066	Psychology Teachers, Postsecondary	\$34,603	\$63,649	\$78,172	\$31,608	\$37,134	\$59,934	\$76,483	\$106,407
27-3012	Public Address System and Other Announcers	†	†	†	†	†	†	†	†
49-9045	Refractory Materials Repairers, Except Brickmasons	†	†	†	†	†	†	†	†
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
29-1129	Therapists, All Other	†	†	†	†	†	†	†	†
23-1023	Judges, Magistrate Judges, and Magistrates	\$34.22	\$42.35	\$46.42	\$33.51	\$37.16	\$41.52	\$49.66	\$56.98
17-2131	Materials Engineers	\$23.30	\$35.68	\$41.88	\$21.00	\$27.41	\$35.04	\$43.25	\$52.75
17-2161	Nuclear Engineers	\$29.99	\$36.20	\$39.30	\$28.71	\$31.04	\$34.93	\$41.33	\$46.72
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
15-2011	Actuaries	\$21.95	\$36.38	\$43.59	\$19.88	\$25.34	\$34.22	\$44.51	\$56.76
27-1025	Interior Designers	\$17.14	\$31.74	\$39.04	\$15.76	\$19.89	\$30.75	\$34.55	\$36.82
33-1011	First-Line Supervisors/Managers of Correctional Officers	\$24.14	\$28.56	\$30.76	\$22.93	\$26.45	\$29.66	\$32.29	\$33.86
19-1099	Life Scientists, All Other	\$17.27	\$27.61	\$32.78	\$15.32	\$20.25	\$27.07	\$34.55	\$41.57
15-2041	Statisticians	\$19.76	\$27.99	\$32.10	\$18.76	\$21.62	\$26.82	\$33.01	\$39.48
19-3099	Social Scientists and Related Workers, All Other	\$16.84	\$26.49	\$31.31	\$15.13	\$19.62	\$25.69	\$32.81	\$40.47
27-4032	Film and Video Editors	\$15.13	\$27.56	\$33.77	\$12.86	\$17.91	\$25.49	\$37.21	\$47.07

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

Occupational Details *—continued*

Table 2: Occupations with Fewer than 10 Estimated Vacancies — Page 11

		Occupational Employment Statistics Wage Data (2003)							
		Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
21-1092	Probation Officers and Correctional Treatment Specialists	\$17.34	\$24.67	\$28.34	\$15.94	\$19.54	\$25.04	\$30.31	\$33.53
33-2011	Fire Fighters	\$17.53	\$23.61	\$26.65	\$16.19	\$19.76	\$23.84	\$28.09	\$31.99
45-1011	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers	\$11.66	\$21.79	\$26.85	\$10.16	\$13.54	\$23.61	\$28.53	\$33.85
47-2022	Stonemasons	\$12.82	\$20.32	\$24.06	\$12.15	\$13.65	\$23.39	\$26.53	\$28.44
13-1072	Compensation, Benefits, and Job Analysis Specialists	\$16.18	\$24.39	\$28.50	\$15.20	\$17.55	\$22.87	\$29.56	\$36.11
17-3026	Industrial Engineering Technicians	\$15.55	\$24.03	\$28.27	\$13.61	\$17.52	\$21.28	\$29.59	\$38.51
13-2052	Personal Financial Advisors	\$15.28	\$24.25	\$28.74	\$13.85	\$16.92	\$19.85	\$26.19	\$38.83
43-4011	Brokerage Clerks	\$12.70	\$18.47	\$21.35	\$11.93	\$14.26	\$17.12	\$21.80	\$28.39
33-9011	Animal Control Workers	\$12.09	\$16.04	\$18.02	\$11.85	\$13.96	\$16.48	\$19.19	\$20.88
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	\$11.78	\$18.27	\$21.52	\$11.18	\$12.40	\$16.31	\$24.30	\$29.31
27-1027	Set and Exhibit Designers	\$11.77	\$15.87	\$17.92	\$10.57	\$13.36	\$14.87	\$16.49	\$27.64
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$10.81	\$15.21	\$17.41	\$10.08	\$11.62	\$14.79	\$17.68	\$21.76
21-1091	Health Educators	\$9.56	\$17.87	\$22.03	\$9.17	\$10.31	\$14.38	\$24.80	\$32.08
43-4151	Order Clerks	\$9.61	\$14.09	\$16.34	\$8.76	\$10.75	\$13.33	\$17.25	\$20.75
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	\$10.17	\$12.96	\$14.36	\$8.29	\$11.89	\$13.22	\$14.57	\$17.11
51-2023	Electromechanical Equipment Assemblers	\$9.90	\$13.04	\$14.61	\$9.51	\$10.61	\$12.57	\$15.11	\$17.41
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	\$9.19	\$12.18	\$13.68	\$8.47	\$9.83	\$11.82	\$13.92	\$16.70
43-4111	Interviewers, Except Eligibility and Loan	\$8.08	\$11.98	\$13.93	\$7.59	\$8.87	\$11.38	\$14.55	\$17.30
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	\$8.75	\$13.09	\$15.26	\$7.97	\$9.36	\$11.35	\$15.95	\$21.80
31-2022	Physical Therapist Aides	\$7.97	\$10.95	\$12.44	\$7.53	\$8.54	\$11.20	\$12.98	\$14.32

* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data



Accommodation & Food Services

Sector Briefs

The Accommodation & Food Services sector accounts for less than 6.2% of Denver Metro's employers, 8.4% of the region's workers, and 12% of the vacancies estimated in this survey. This section of the report details information specifically provided by employers in the Accommodation & Food Services sector.

Employment in the Accommodation & Food Services sector in the Denver Metro region peaked in 2001 at almost 109,000 workers. National events such as the September 11th terrorist attacks and the national economic recession in addition to local events such as the state's drought and the ensuing wild fires and disappointing ski seasons had their toll on this sector in the following two years. After declining by 1.1% between 2001 and 2002 and by 0.7% between 2002 and 2003, employment in the sector finally showed some signs of improvements in 2004. The increased activity of Frontier Airlines at Denver International Airport, the completion of the Colorado Convention Center, in addition to the construction projects of major hotels and business and tourism infrastructure currently undertaken in the Metro region is expected to add further improvements in the Accommodation & Food Services sector in the coming years.

The number of vacancies estimated in this survey for the Accommodation & Food Services sector is over 660 vacancies above the level estimated in the Fall 2003 Survey, an increase of 58%. This increase is the highest among all sectors between the two survey periods. Yet, the average wage paid for vacancies in this sector remains to be the lowest.

Low wages offered for vacancies in Accommodation & Food Services sector are due to the types of occupations for which employers are hiring. Sixty-one percent of the sector vacancies are for Food Preparation and Serving Related occupations paying an average of \$7.00 per hour. Transportation and Material Moving and Sales and Related occupations make up another 13% of the sector's vacancies with an average wage of \$7.60 and \$8.50, respectively. High paying occupations such as Management, Construction and Extraction and Business and Financial Operations occupations make up only 4% of the sector's vacancies.

Permanent openings account for 87% of the vacancies reported within the sector, while temporary positions account for 13% of the openings. Such a high concentration of permanent vacancies may reflect employers' desire for higher retention of workers once hired in an industry where 50% of the vacancies are always open for hiring. The perception that 80% of the sector's vacancies as not difficult to fill may be a further confirmation that employers have to contend with retention rather than hiring issues.

Ninety-seven percent of the reported vacancies within the sector require a High School/GED diploma or less. A Bachelor's Degree is required only for 2% of the vacancies while the remaining 1% is for candidates with Vocational Training/Certification. Employers in this sector, however, are less lax in their experience requirements with 40% percent of the vacancies requiring experience in a related field or experience in the specific occupation.



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.

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

Methodology

The Job Vacancy Survey (JVS) conducted by the Colorado Department of Labor and Employment involves the collection, processing, and dissemination of

regional job vacancies and their characteristics. The survey design allows for estimation of a job vacancy rate and the total job vacancies within a region by industry and size of firm. Additional data related to these vacancies is informative of the occupations for which they are reported, but is not indicative of overall vacancy characteristics in the regional universe.

The number of vacancies—used to calculate the job vacancy rate—is an important measure of the unmet demand for labor. With this statistic, it is possible to paint a more complete picture of the regional labor market than by looking solely at the unemployment rate, a measure of the excess supply of labor.

Survey Design

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

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

Stratifications containing small and medium sized private employers are randomly sampled. In order to report vacancy characteristics such as education and experience requirements demanded, the survey must contact more employers than would be necessary if the survey only estimated the total number of vacancies. For this reason all of the large employers and government agencies are contacted in the region. These employers provide the most cost effective means of obtaining large amounts of vacancy information. Approximately 34% of the employment in the region is found in large and government employers that make up only 2% of the total number of firms. Conducting a census of these entities allows us to cover a large portion of the region's employment while contacting relatively few entities.

Appendix: Methodology —continued

Survey Sample

The Denver Metropolitan Region survey was conducted from October 6th through December 3rd, 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 22% 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 78% of private industry employment.

The margin of error for the overall vacancy estimate is plus or minus 1.93% or about 330 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 16,870 and 17,530 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 87%. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is 99% 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 47.

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

²ECPC is chaired by the Bureau of Economic Analysis, U.S. Department of Commerce, with representatives from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor

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

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.

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

- ◆ 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.

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 (WFC) in the Denver Metro JVS Region

Adams County One Stop Career Center

12200 Pecos St.
Westminster, CO 80234
Phone: 303-453-8600
Fax: 303-453-8655

Arapahoe/Douglas WORKS!

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

Aurora WFC

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

Bear Valley WFC

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

Brighton WFC

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

Broomfield WFC

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

Denver International Airport WFC

Please call for office hours.
8500 Pena Blvd.
6th Level, Main Terminal, West
Denver, CO 80249
Phone: 303-342-2520
Fax: 303-342-2522

Denver Office of Economic Development, Division of Workforce Development

1391 N. Speer Blvd., #500
Denver, CO 80204

Job Seekers:

Phone: 720-865-5619
Fax: 720-865-5685

Employer Services Job Unit:

Phone: 720-913-1648
Fax: 720-913-1652

Denver Youth WFC

1391 N. Speer Blvd., #710
Denver, CO 80204-2554
Phone: 720-865-5700
Fax: 720-865-5681

Douglas County WFC

(Tues. by appt.)
101 Third St.
Castle Rock, CO 80104
Phone: 303-688-4825
Fax: 303-688-0292

Front Range Community College WFC

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

Littleton WFC

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

Lone Tree WFC

Park Meadows Center
9350 Heritage Hills Circle
Lone Tree, CO 80124
Phone: 303-784-7868
Fax: 303-799-0223

Longmont WFC

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

Quigg Newton WFC

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

Stapleton Plaza WFC

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

Thornton WFC

550 Thornton Pkwy, #200.
Thornton, CO 80229
Phone: 303-452-2304
Fax: 303-452-7072

Lakewood WFC

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

Westside WFC

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

Boulder County WFC

2905 Center Green Ct., Suite B
Boulder, CO 80301
Phone: 303-301-2900
Fax: 303-939-0054



For a listing of all Colorado Workforce Centers:

www.coworkforce.com/emp/wfcs.asp