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Eastern Region

Job Vacancy Survey

Summer 2004



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The Colorado Job Vacancy Survey

Introduction

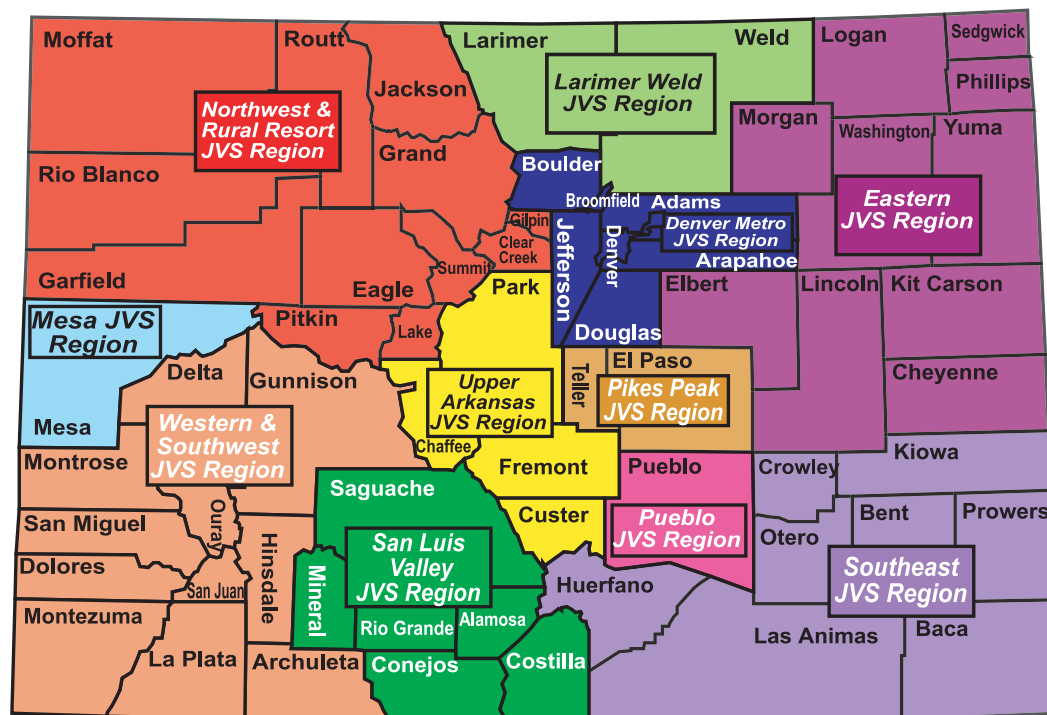
The unemployment rate and the level and growth rate of employment have been used as indicators of labor market conditions for decades. While these indicators provide information about changes in the supply and demand for labor, they reveal nothing about the skills most sought after by employers. As such, 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 Workforce Research and Analysis staff would like to extend sincerest gratitude to all employers who participated. The analysis in this document would not be possible without their help.

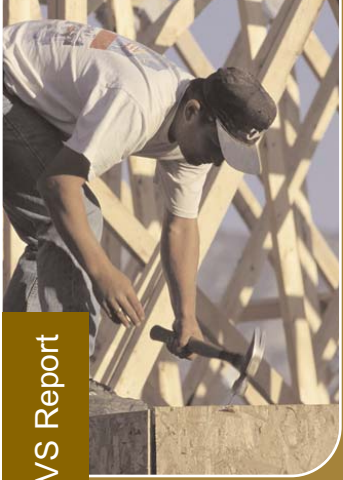
Executive Summary

This Eastern Region Job Vacancy Survey (JVS) was conducted from August 4th through August 15th, 2004. The survey provides a reliable estimate of the total number of job vacancies in the region while also reporting useful information about available positions. A representative sample of the region's employers is contacted over the survey period to gain timely and relevant information about current hiring activity.

A total of 767 employers, representing 54% of the region's total employment responded to the survey. Of these, 140 are Government agencies, 37 are large employers and 590 are small to mid-size entities. The survey has an 89% response rate, while the cooperation rate is 98%. The margin of sampling error for the overall vacancy estimate is plus or minus 2.9% or approximately seven vacancies.

Major Findings of the Survey:

- ◆ An estimated 249 jobs were available for hire during the survey period, coinciding with a 0.8% vacancy rate. At this time last year, 345 vacancies were estimated.Page 8
- ◆ Goods-Producing, one of six JVS Industry sectors, offers 67 estimated vacancies followed by the 56 vacancies estimated for the Trade, Transportation, Utilities & Other Services sector.Page 8
- ◆ Just under 8% of employers responding to the survey reported at least one open position.Page 8
- ◆ The average wage reported for vacancies in this survey is \$12.00 per hour.Page 9
- ◆ Eighty-six percent of the reported openings are permanent, full-time positions.Page 11
- ◆ Fifty percent of the reported job vacancies have an educational requirement of a high school degree/GED or less.Page 12
- ◆ Seventy-two percent of all vacancies require at least general work experience.Page 13
- ◆ Eighty-three percent of the open positions are described as having some level of difficulty to fill.Page 14
- ◆ Ninety-seven percent of the reported vacancies include at least a partial payment of medical insurance premiums.Page 16
- ◆ Production occupations are by far the most frequently reported of the 22 major occupational groups covered in the survey.Page 18

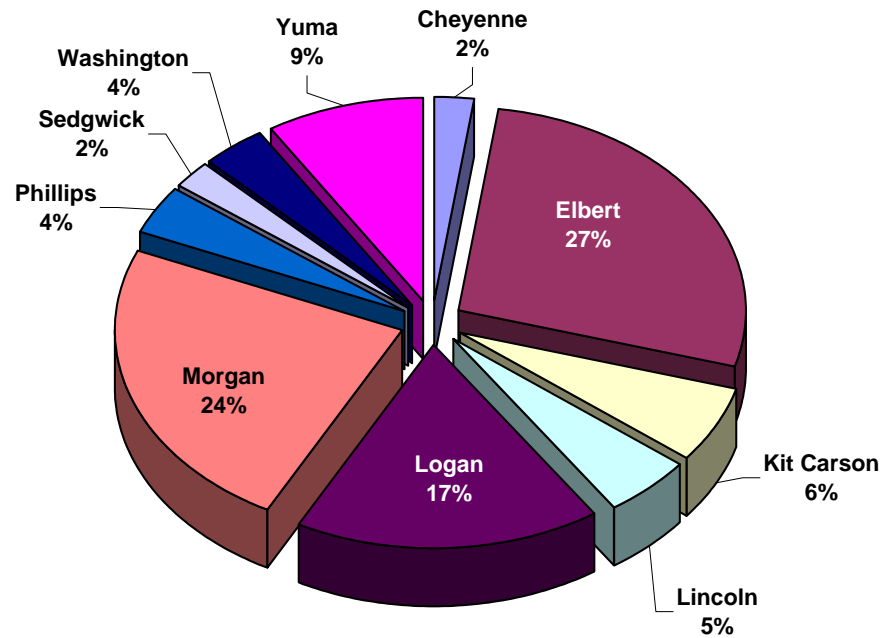


Regional Information

The Eastern Region represents ten counties in northeastern Colorado. These are Cheyenne, Elbert, Kit Carson, Lincoln, Logan, Morgan, Phillips, Sedgwick, Washington and Yuma counties. The region encompasses over 17,000 square miles or 17% of the state's land area. About two and one-half percent of the state's population, more than 111,000 people, resided in this region in 2003¹.

Elbert County hosts 27% of the Eastern Region's employment, while it is home to about 20% of the population. Morgan County is first in terms of population (25%) and is second in regard to employment (24%). Many Morgan County residents commute to the bordering front-range for work. Many Elbert County residents commute to the Colorado Springs area.

Figure 2: Employment by County



Source: CDLE, Local Area Unemployment Statistics, Released September 2004

¹Colorado Department of Local Affairs, Colorado Demography Section, Draft 2003 County Estimates

Regional Information *— continued*

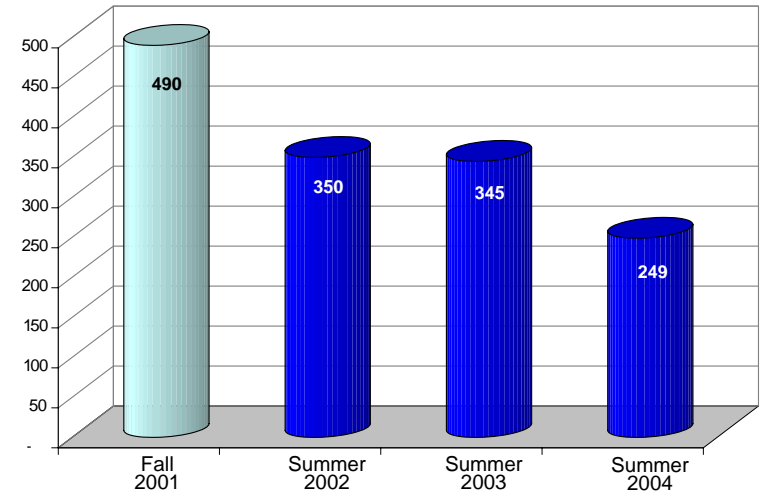
The number of estimated vacancies is down from the 2003 survey and is the lowest since 2001. This is reflective of a region slightly lagging behind a recovering economy. In the Eastern Region, employment, according to Quarterly Census of Employment and Wages (QCEW) data, was growing modestly in the first years of the 2000s. The unemployment rate in the first two years of the century was around 2.5%. Unemployment began climbing in the third quarter of 2001 and peaked at just over 4% in March of 2003. The rate is now about 2.8%, which is approximately 0.3 percentage points higher than the seasonal rate prior to the increase in 2001.

In the three years from March 2001 to March 2004, the Eastern Region has lost approximately 250 jobs, according to QCEW. This does not include most agricultural jobs so the total employment picture is somewhat different. The sectors in which the major movement occurred were as follows:

Manufacturing	-366
Wholesale Trade	-243
Health Care & Social Services	220
Mining	176
Accommodations & Food Services.....	164
Transportation & Warehousing	-132
Construction	130

The increase in the Mining sector was due to increased activity in oil and gas extraction. Declines in non-manufacturing sectors are related to changes in agricultural behavior. Manufacturing declines occurred significantly in truss manufacturing, slaughterhouses, and commercial machinery manufacturing. While some of the manufacturing declines may be permanent, agricultural declines may well be cyclical.

Figure 3: Historical Vacancies — Eastern Region

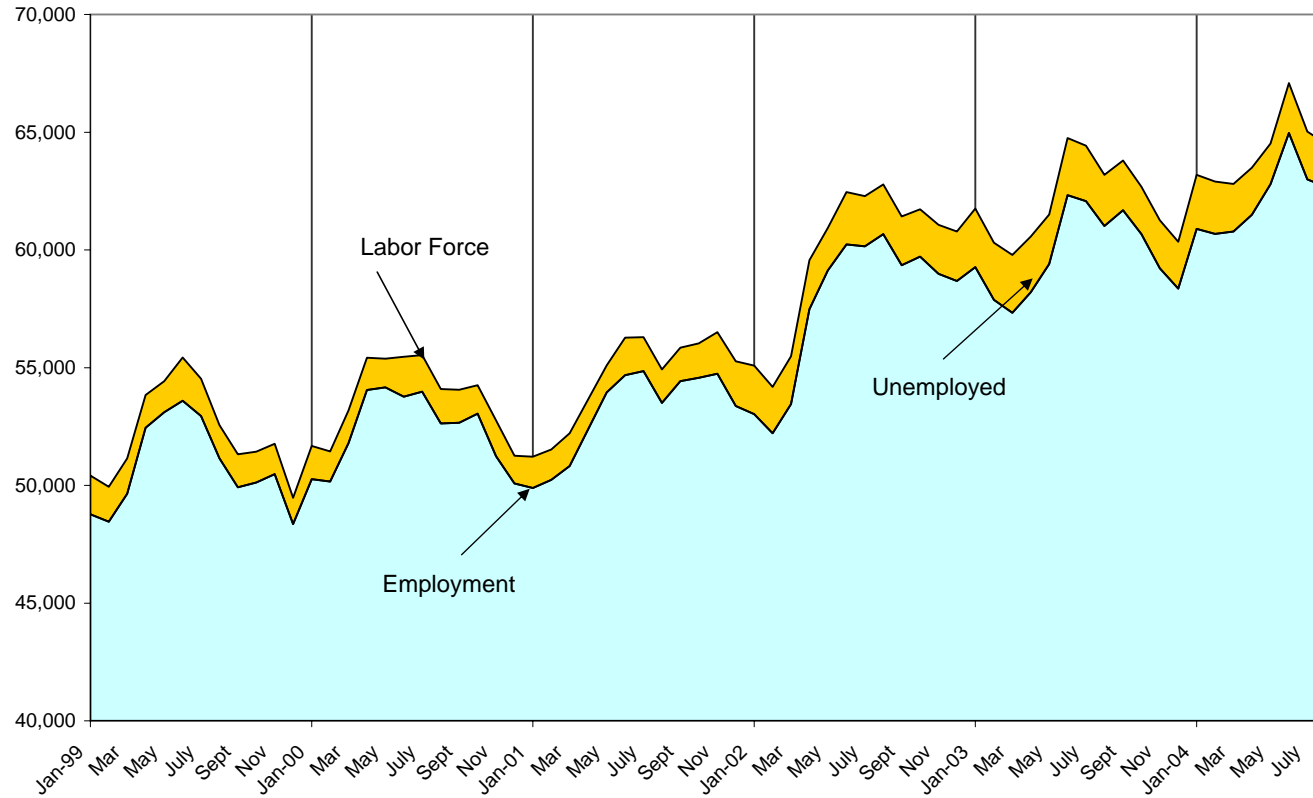


	Fall 2001	Summer 2002	Summer 2003	Summer 2004
Vacancies	490	350	345	249
Employment	54,419	55,878	58,132	62,684
Unemployed	1,407	2,032	2,021	1,838
Unemployment Rate	2.5%	3.5%	3.4%	2.8%

Source: CDLE, Local Area Unemployment Statistics, Released September 2004

Regional Information —continued

Figure 4: Employment and Labor Force Trends for the Eastern Region
(Not Seasonally Adjusted)



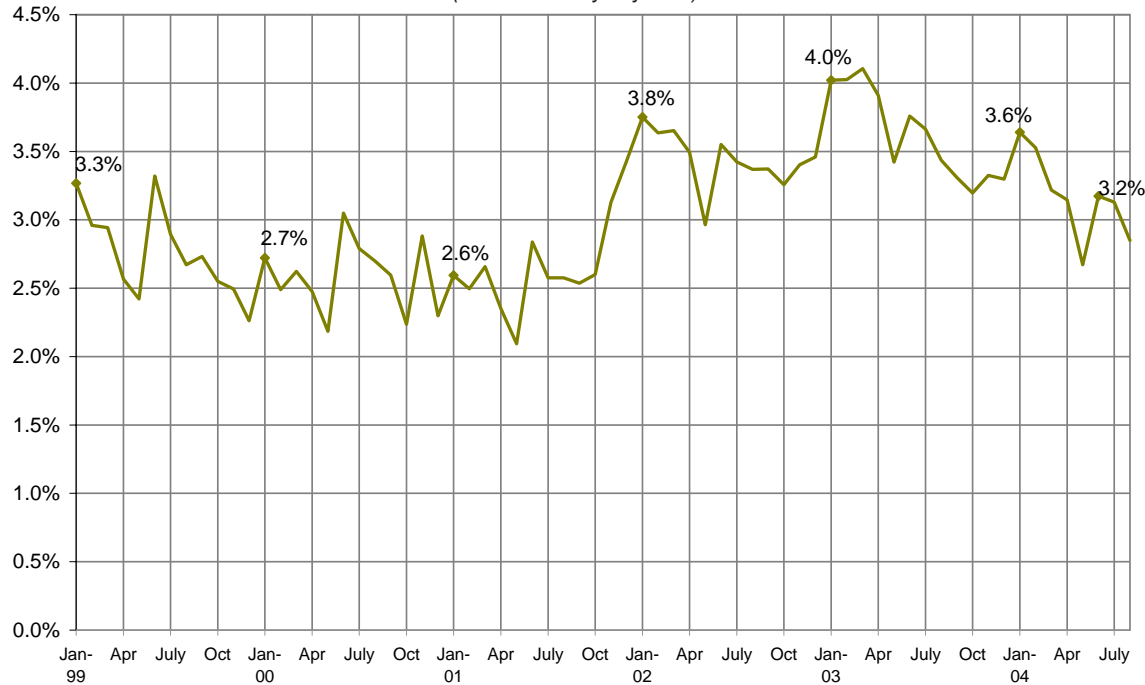
Source: CDLE, Local Area Unemployment Statistics, Released September 2004

Figure 4 illustrates the long-term progression of both the labor force and employment in the region. The shaded area between the labor force and employment lines represents the number of people unemployed. The

upward trend indicates growth—the region’s labor force has grown by more than 18%, around 10,000 people, since July of 1999 at a compound annual growth rate of 3.6% while employment has grown at 3.5%.

Regional Information – continued

Figure 5: Eastern Region Unemployment Rate Trend
(Not Seasonally Adjusted)

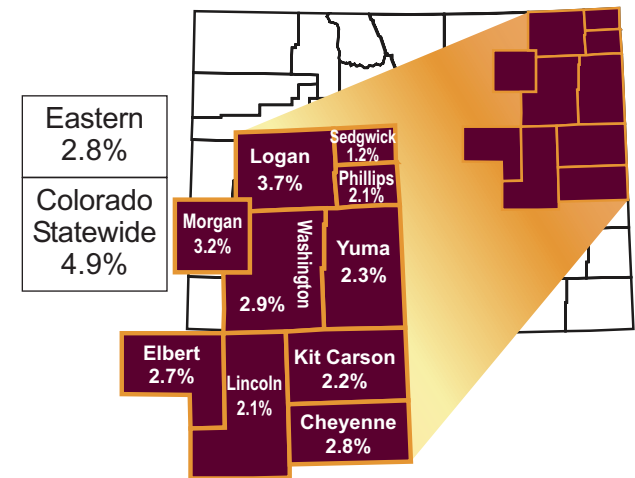


Source: CDLE, Local Area Unemployment Statistics, Released September 2004

Overall the region's unemployment rate is 2.8% for August 2004. This is significantly lower than Colorado's 4.9%. Logan County had the highest unemployment rate at 3.7%, while Sedgwick County's unemployment rate is the lowest at 1.2%.

Figure 5 shows the higher unemployment rates for the region beginning in 2002, this coincides with the loss of jobs nationwide. Even though the number of unemployed has risen, the number of unemployed as a portion of the labor force only reached 4.1%, well below other regions, statewide and national rates.

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



Source: CDLE, Local Area Unemployment Statistics, Released September 2004

Regional Information —continued

Area establishments in the Eastern Region are now grouped into six categories under the North American Industry Classification System (NAICS). NAICS has replaced the Standard Industrial Classification System (SIC) and is also used by both Canada and Mexico. The industry classifications better reflect today's economic activity, especially by breaking down the group of service-based businesses into detailed industries.

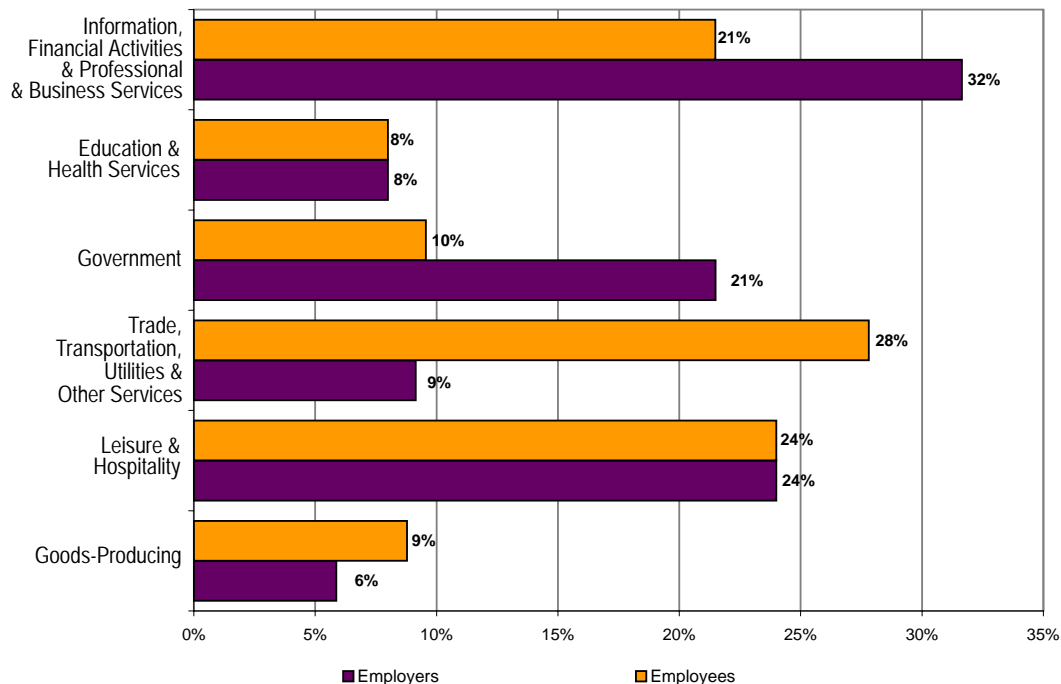
The industry data shown in *Figure 7* are gathered under the Quarterly Census of Employment and Wages (QCEW) program and represent employers required to pay Unemployment Insurance Tax. Although 97%² of the nation's employment is covered under the Unemployment Insurance program, positions typically excluded are agriculture, railroad, elected officials, student workers, certain non-profits, the self-employed, domestic workers and unpaid family workers.

The Trade, Transportation, Utilities & Other Services sector is the largest in terms of covered employment³ in the region with 28% of the region's workers employed in this sector. Retail and wholesale trade comprise approximately 60% of this sector's employment. Leisure & Hospitality and Information, Financial Activities & Professional & Business Services follow with 24% and 21% of the region's employment.

Government entities are defined as such based on ownership which may be federal, state or local. In the Eastern Region, 51% of Government entities are local, 24% are state, and 25% are federally managed offices (QCEW 1st Quarter, 2004). In terms of the type of work that these Eastern Region institutions do, Government is primarily represented by Public Administration and Education Services activities. Together, these account for almost 85% of all Government employment. Some healthcare, social assistance and postal service functions also fall under Government.

The Goods-Producing JVS sector shows a small percentage in terms of employment, but note: a great deal of agricultural employment is excluded and food manufacturing represents almost one-fourth of the

Figure 7: Eastern Region Employers and Employees, Third Quarter, 2003



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

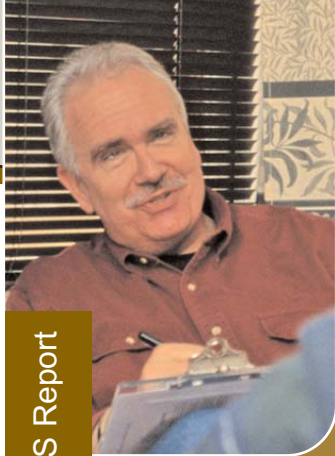
region's Goods-Producing employment. Animal production and specialty trade contractors are also prominent employers in the region.

The Leisure & Hospitality JVS sector is composed of two NAICS sectors. Accommodation & Food Services represent 91% of the JVS sector employment while Arts, Entertainment & Recreation businesses employ slightly more than 300 people.

Ninety-nine percent of the employment in Education & Health Services is with Health Care & Social Assistance organizations while only 1% works in Educational Services. Public schools are part of the Government sector.

²US Department of Labor

³CDLE, QCEW Third Quarter, 2003



Survey Findings

Estimated Vacancies: JVS Sectors and Employer Size

During the survey period, an estimated 249 vacancies were open for immediate hire in the Eastern Region. The overall survey vacancy rate is 0.8% meaning that there are approximately 8 vacancies for every 1,000 positions. This statistic represents the relative demand for labor in terms of current employment and open positions.

This survey, conducted in late summer, is intended to provide a snapshot of the types of vacancies for which Eastern Region employers recruit. More employers, 767, were surveyed this year in order to provide estimates for the six JVS sectors.

Information captured in this survey represents private firms with five or more employees and all Government institutions, defined as the sample frame. Just under 8% of employers responding to the survey reported at least one open position. All survey data refer to this subset of regional employment.

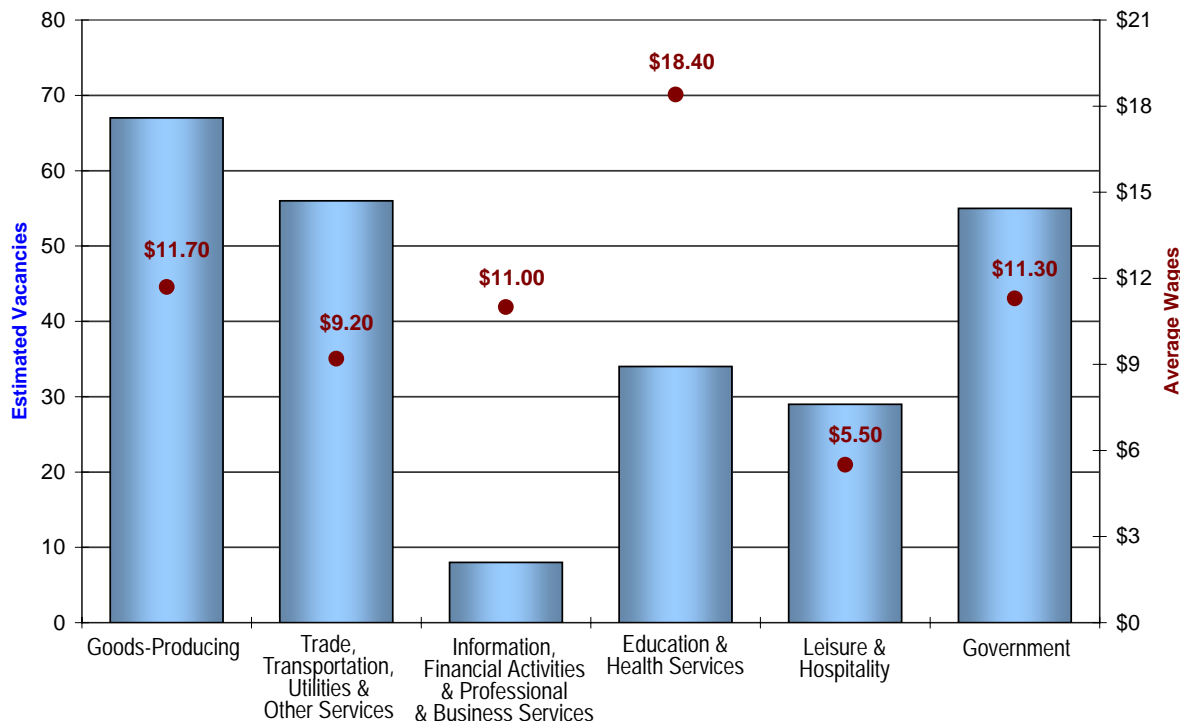
The Goods-Producing JVS Sector offers the highest number of estimated job vacancies. The majority of these vacancies are for occupations such as a variety of butchers and beef boners with other positions relating to the production of beef. All are full-time positions. Trade, Transportation, Utilities & Other Services offer the second highest number of estimated job vacancies. Most of these vacancies are found with Food & Beverage Stores and Gasoline Stations—

components of Retail Trade. There are also vacancies reported by Other Services firms which include Repair & Maintenance; Personal and Laundry Services; and Religious, Grant-making, Civic, Professional, & Similar Organizations.

Within the Government sector, most vacancies can be found in a variety of educational positions (teachers, teacher’s assistants, counselors, custodians, and bus drivers). In addition, government vacancies include engineers, mechanics and administrative positions in the county offices. Government offers the third largest number of estimated vacancies.

Education & Health Services also offer a significant number of estimated job vacancies. This JVS sector is comprised of two NAICS sectors, Educational Services with 7% of the firms and Health Care & Social Assistance, with the remaining 93%.

Figure 8: Estimated Vacancies and Average Wages by JVS Sectors

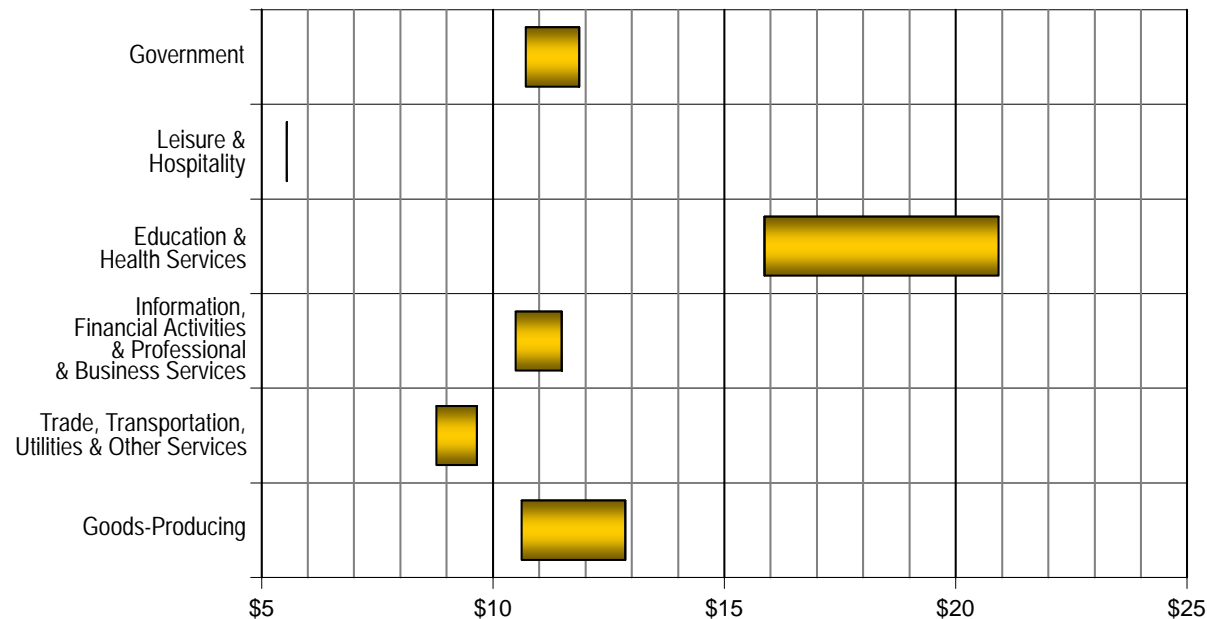


Survey Findings *Estimated Vacancies: JVS Sectors and Employer Size — continued*

Surveyed employers provide a wage range for each reported job vacancy as the salary offered may vary depending on the skill, education and experience of the candidate. An inexperienced candidate may be offered a wage on the low end of the scale whereas a more qualified candidate could be offered a substantially higher wage. The average wage is then calculated based on the mid-point of that range. If only one wage is reported, the minimum, maximum and mid-point are all assumed to be the same. The overall average wage offered for all vacancies in the region is \$12.00 per hour, while the overall average minimum and maximum are \$11.00 and \$13.10, respectively. These wages are reported by employers for vacant positions and are not representative of the wages paid for positions currently occupied.

In this survey wages were reported for 74% of reported vacancies. Education & Health Services employers had the highest average wage rates due to the nature of health care positions. Production jobs, in the Goods-producing JVS sector, reported the highest number of wages: they provided wage information with 100% of the vacancies they offer and represent 48% of all wage information. Thus, the overall average wage of \$12.00 per hour is skewed toward the wages reported for this sector. Education & Health Services also has the broadest average wage range.

Figure 9: Reported Average Wage Ranges by JVS Sectors



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

In designing the JVS survey to ensure a representative sample, employers are categorized by size and large employers tend to have more vacancies per firm. In this 2004 survey, 37% of the vacancies are found within large employers (those with 75 or more employees), 22% in Government and 41% are in small to mid-size firms. Eight percent of employers responding to the survey reported having at least one vacancy.

Employer size categories are composed of specific industries and occupations that are the real determinants of the wages offered for each category. Job opportunities with large firms offer the highest average wage and represent the widest wage range. As noted, the bulk of these vacancies are with Health Services operations.

The wages offered for Government and Small to Mid-Size employers are in a smaller wage range of \$7 - \$12. Leisure & Hospitality businesses make up the lower end of the wage continuum for the small to mid-size firms, while Education & Health Services are on the high end.

Figure 10: Estimated Vacancies and Average Wages by Employer Size

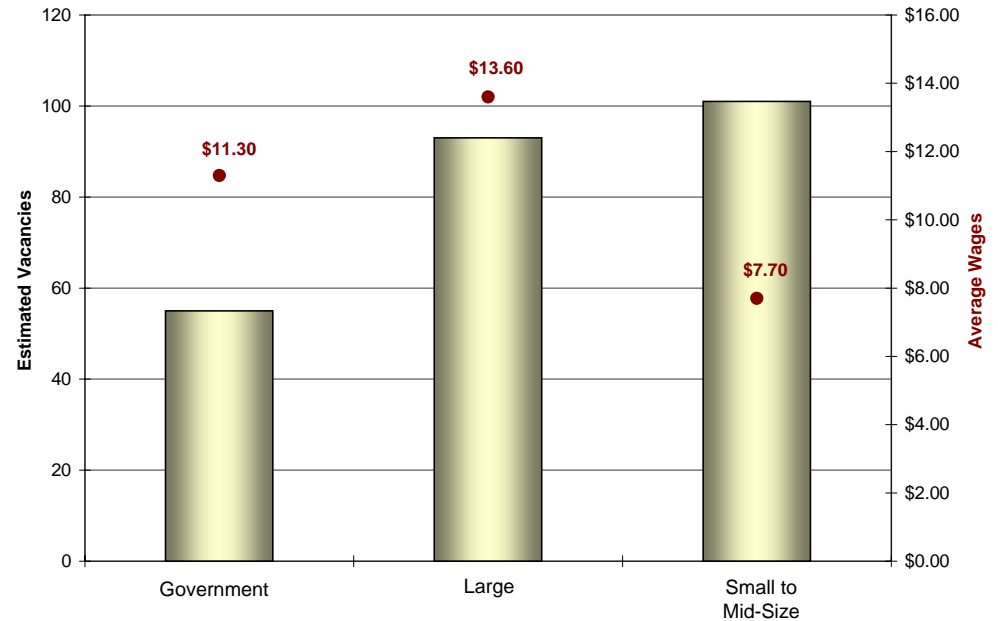
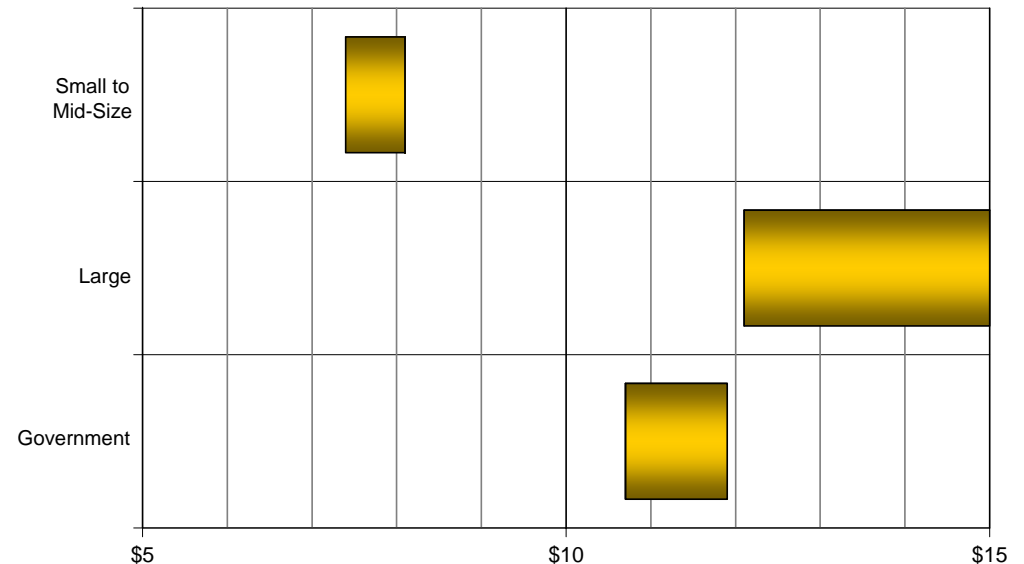


Figure 11: Reported Average Wage Ranges by Employer Size



Survey Findings

The remainder of this report provides actual descriptive statistics of the vacancies reported in and unique to this survey. This is supplemental data that can be used to understand characteristics of those job vacancies and occupations reported.

The majority (86%) of open positions are full-time/permanent. While there are very few temporary positions offered, last year's survey had no temporary opportunities. Thirteen percent of the vacancies are part-time/permanent positions in food service, assistant teaching, and various clerks and mechanics. The full-time/permanent vacancies are found among all occupations in this survey.

Both full-time and part-time permanent positions are available in all six JVS sectors. Full-time wages are traditionally higher than those reported for part-time positions. The correlation between the vacancy characteristics of job status and educational requirement is high for this survey. Thirty-four percent of the full-time/permanent vacancies require higher education, while only 9% of the part-time permanent openings require postsecondary education. The skills and knowledge gained through formal education generally command higher wages in the labor market. Thus, educational requirement has a significant influence on the wage offered by employment status.

Figure 12: Vacancies by Employment Status

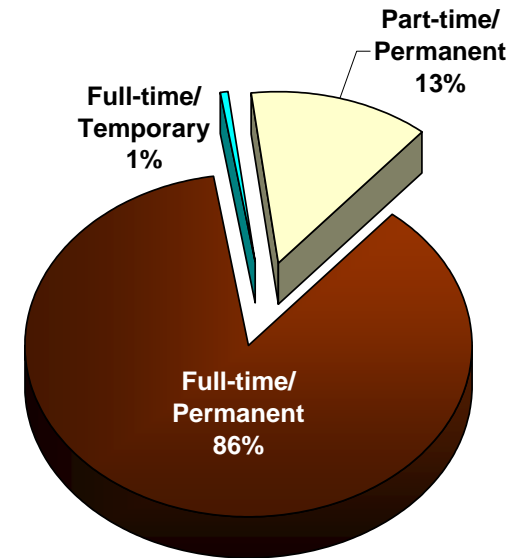
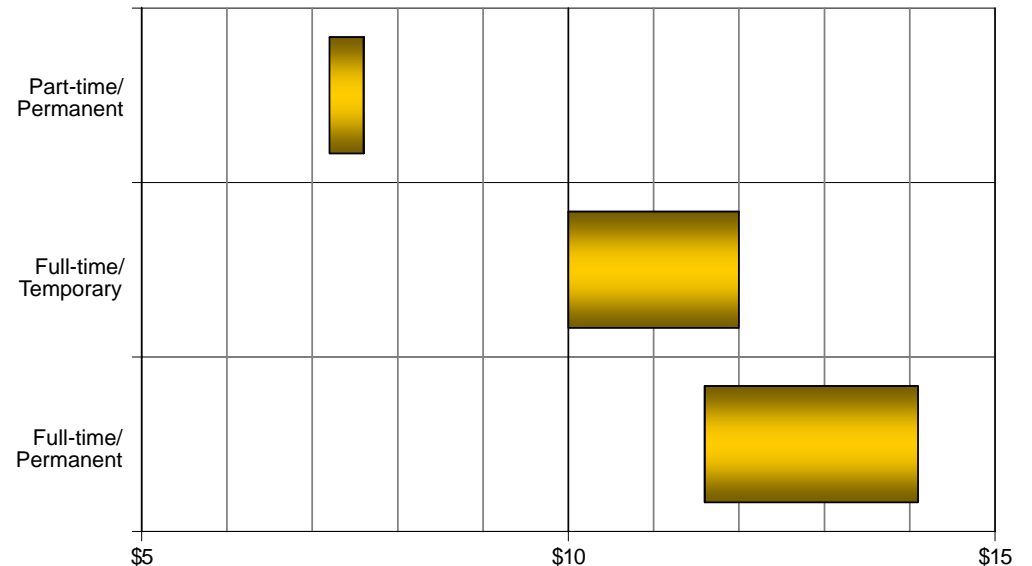


Figure 13: Reported Average Wage Ranges by Employment Status



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

Assessing labor demand in terms of education and experience requirements provides valuable labor market information. A comparison of the education and experience levels sought by employers with those of the current labor force and especially the unemployed can reveal workforce-training needs. At least 60% of reported job vacancies have information on the education and experience requirements of surveyed employers.

Fifty percent of the vacancies reported in this survey require a high school diploma or less. These education requirements are primarily reflective of the employment demands of the Leisure & Hospitality sector (wait staff and various clerks) followed by Trade, Transportation, Utilities & Other Services (mechanics, technicians and machine operators). The occupations most often reported for candidates with a high school degree or less are Food Preparation & Serving Related (wait staff) and Office & Administrative Support (bank tellers).

The Education & Health Services JVS sector offers the greatest number of opportunities for physicians and mental health professionals with advanced degrees. Logically, Healthcare Practitioner & Technical and Healthcare Support occupations are in highest demand; however, there are also Management roles open to candidates in these educational groups. Engineers, teachers, registered nurses and other medical technicians with bachelor's degrees make up 15% of all vacancies. Other medical opportunities such as licensed practical nurses, certified nursing assistants, and physical therapists requiring two years of education or vocational training/certification make up 21% of all vacancies.

Wages offered tend to be correlated with educational attainment—higher levels of education command higher wages. Due to the nature of some of the highly specialized registered nursing positions and the lack of wage information for physicians with advanced degrees vacancies requiring a bachelor's degree show the highest wages. The range between the average high and low wages offered to candidates with a bachelor's degree is broadest. This is likely due to the different experience requirements for these Healthcare Practitioner & Technical occupations.

Figure 14: Vacancies by Education

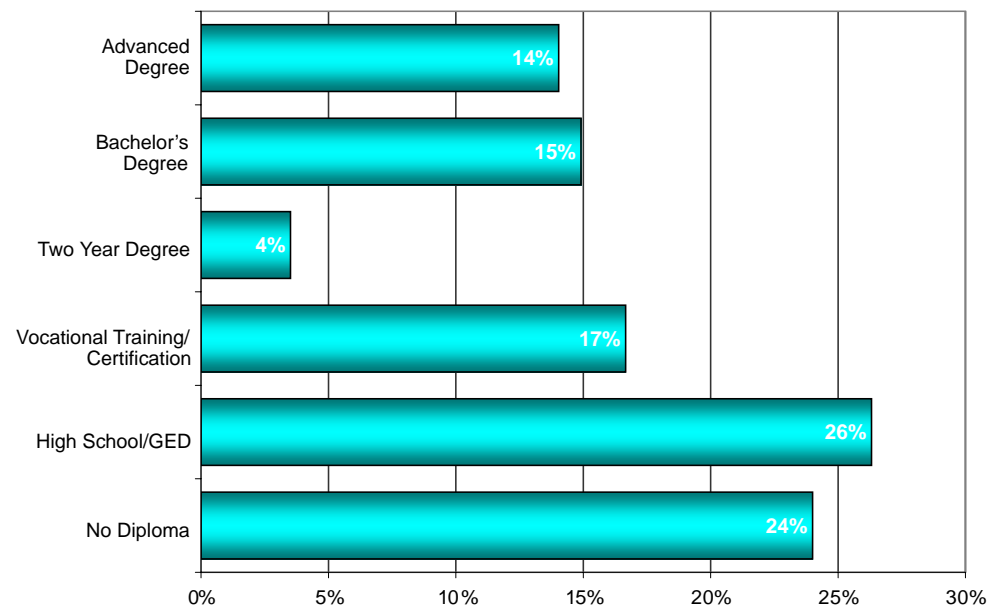
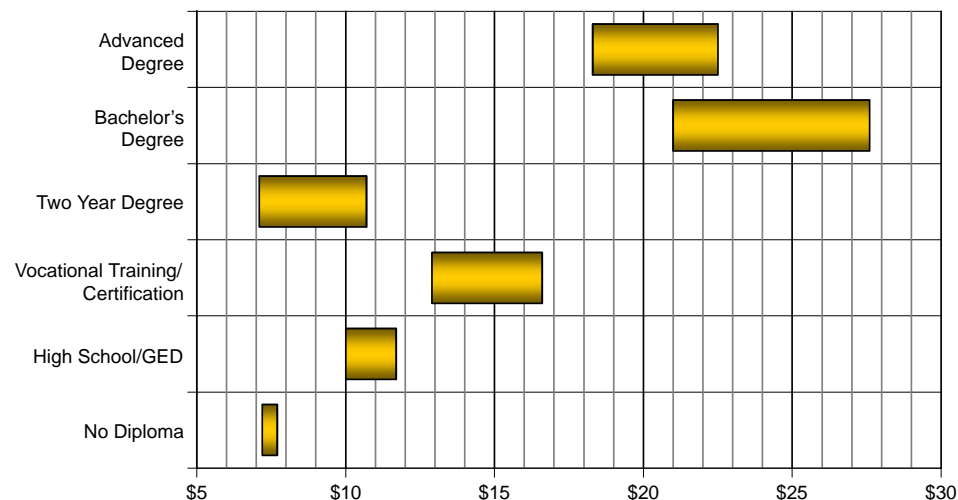


Figure 15: Reported Average Wage Ranges by Education



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

Experience is another labor force qualifier for which the JVS gathers data. The experience levels demanded by employers can be used by job seekers to guide their career advancement.

Figure 16 shows the percentage distribution of vacancies by experience required.

“Experience in this Occupation” describes the largest portion (37%) of reported vacancies. Physicians, engineers and managerial occupations account for most of the job vacancies requiring this level of experience. These occupations are on the high end of the wage range, offering nearly \$19 per hour on average.

Twenty-six percent of the vacancies require experience in a related field. Again, Healthcare Practitioner & Technical occupations are the most prevalent in terms of the number of vacancies reported. Other frequently reported occupations include veterinarians, transportation maintenance workers, and auto mechanics.

Figure 16: Vacancies by Experience

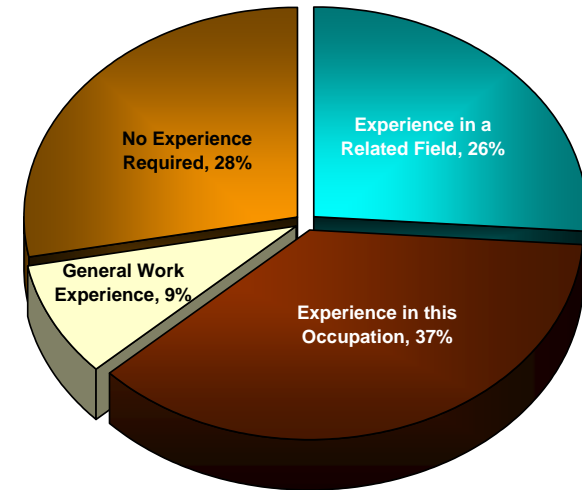
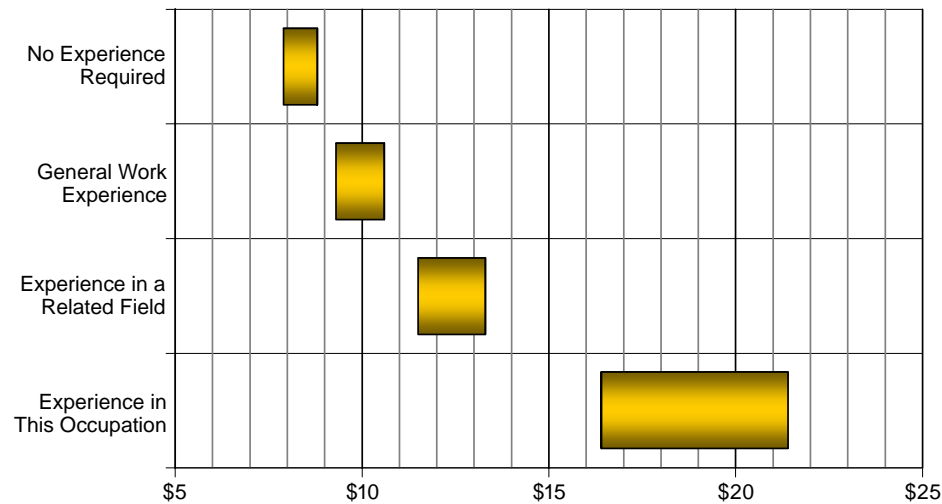


Figure 17: Reported Average Wage Ranges by Experience



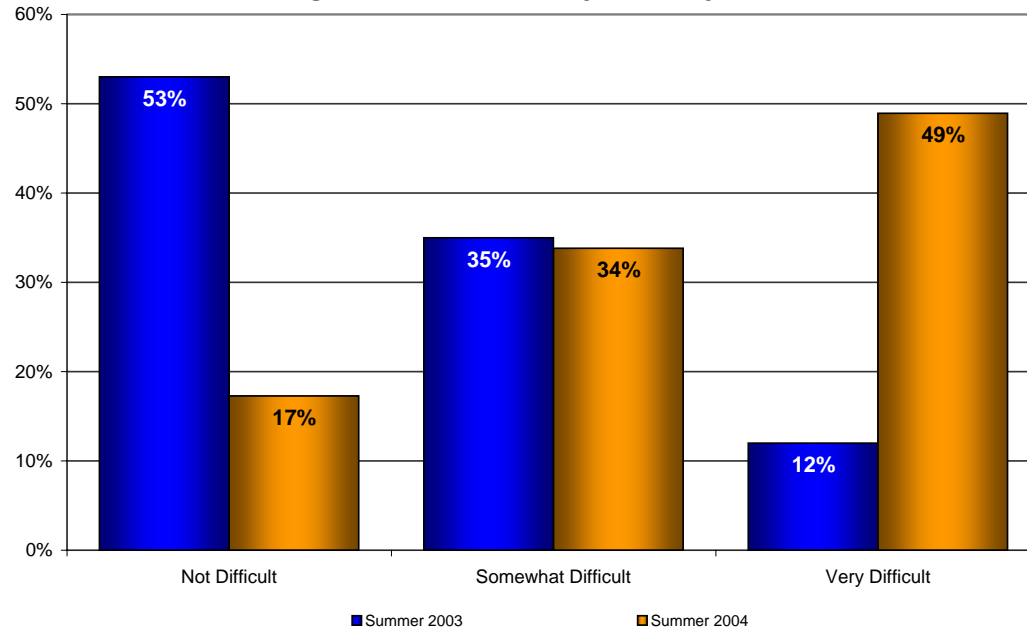
Vacancies: Difficulty to Fill and Time Open for Hire

Survey Findings

Employers' ability to find and hire qualified candidates is an important indicator of the supply side of the labor force. The level of difficulty an employer experiences when filling a vacancy can vary depending on the nature of the individual vacancy as well as the prevailing labor market conditions. The proportion of job vacancies that employers describe as very difficult to fill has significantly increased from last year. Although higher

unemployment translates into more people looking for work and more candidates vying for open positions, the nature of the vacancies for this report includes many high skilled positions requiring moderate to extensive levels of education and experience. While the local economy may be coming out of a recessionary period, the characteristics that define some positions as difficult to fill are related to structural unemployment.

Figure 18: Vacancies by Difficulty to Fill



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

The length of time that a vacancy remains open is a good indicator of the degree of difficulty an employer is having in filling that position. Factors include: the availability of qualified candidates, competition among employers for similar candidates, and the willingness of candidates to accept job duties in light of wages and benefits offered.

Just over half of job vacancies have been open for less than 30 days. This proportion decreased slightly compared to last year's survey.

Nearly half of the positions open for 30 to 59 days, or 60 days or more, are Healthcare Practitioner & Technical occupations. Often positions that are open longer have a limited pool of qualified candidates.

Average wages for positions that employers have open for less than 30 days are in the \$11.00 - \$14.00 per hour range. Occupations include those in health care, veterinary services, teachers, clerks, transportation workers, and food service related.

The highest average wages offered are for vacancies that are more difficult to fill and have been open for 30 to 59 days or 60 or more days. Again, most of these vacancies are highly specialized and require post-secondary education as well as previous experience.

Figure 19: Vacancies by Time Open for Hire

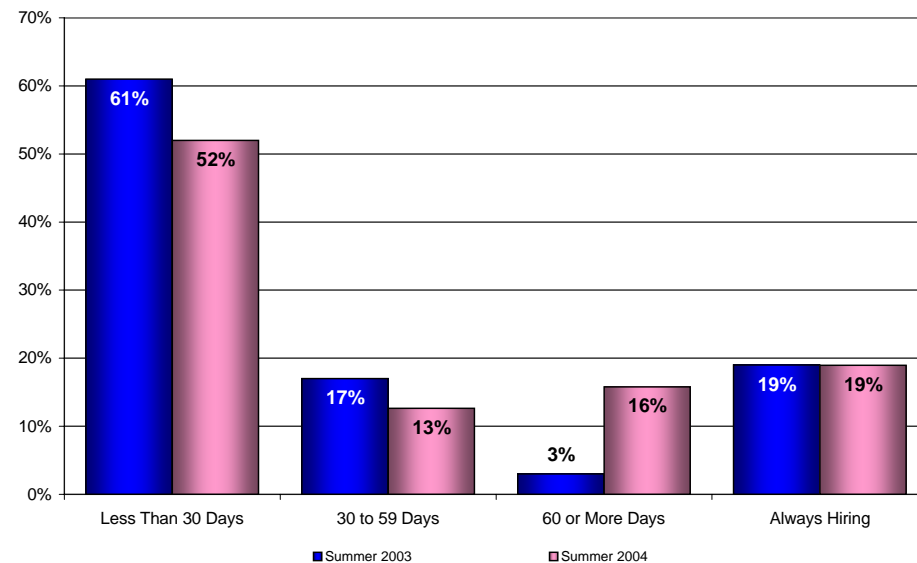
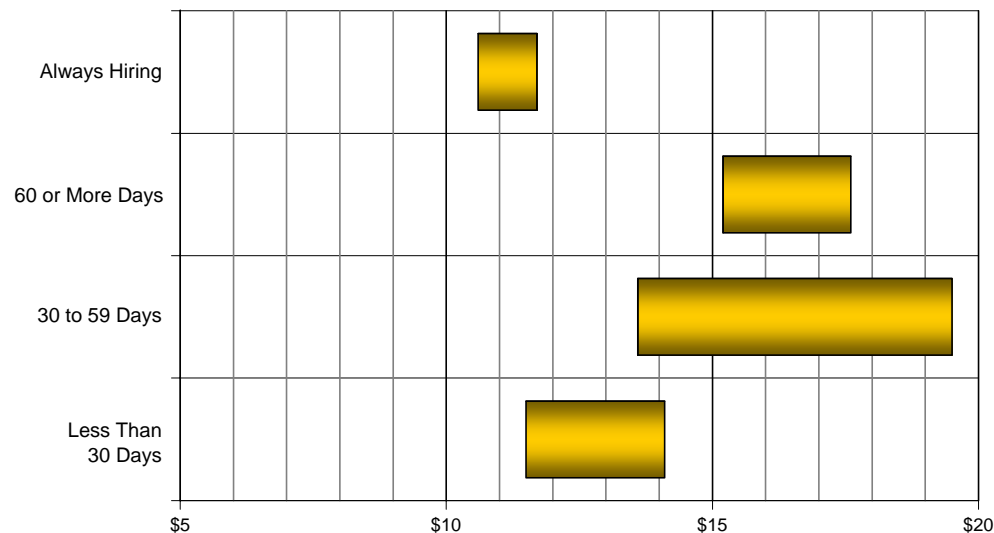


Figure 20: Reported Average Wage Ranges by Time Open for Hire



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. An important benefit offered to employees is a group medical insurance plan—the employer may pay all, part, or none of the monthly insurance premium for employees.

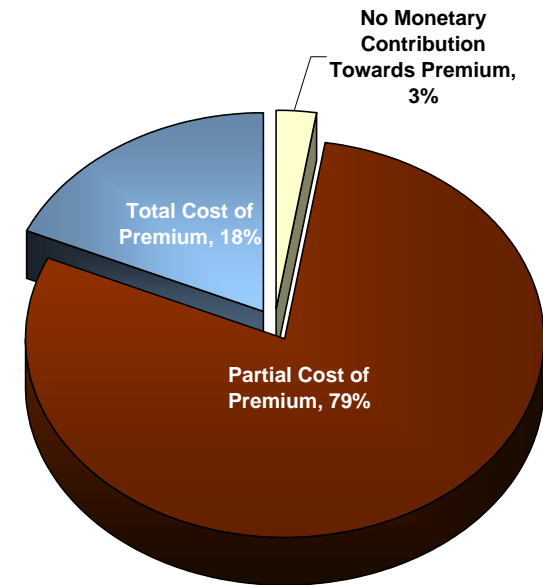
In this survey, 67% of all vacancies include information regarding health insurance. Of these vacancies, all are offered with access to health insurance benefits. With most of the vacancies (97%) the employers are offering to pay at least part of the health insurance premium. The total cost of the premium is paid for 18% of the vacancies.

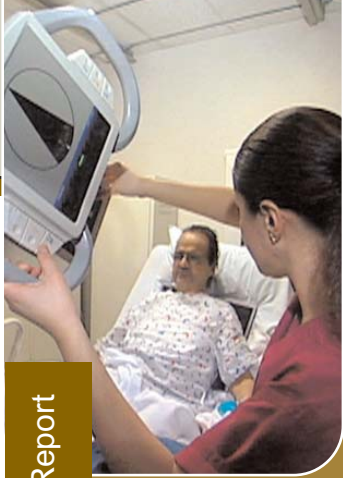
The vacancies associated with no monetary contribution towards the premium are all part-time positions. Job vacancies that are offered with the total cost of the premium covered by the employer are mostly in large companies in the Education and Health Services sector as well as engineers and teachers in the Government sector.

Sign-On Bonus

In a labor market characterized by relatively high rates of unemployment and limited job vacancies, few employers offer sign-on bonuses. No vacancies are offered with bonuses in this survey.

Figure 21: 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 categories such as industry and size provides a useful overview of the job market, but when it comes down to filling a particular opening, the more detailed the information the better. Reporting vacancies at the occupation level is the most detailed information the survey can provide without breaking confidentiality with those employers who participate in the survey.

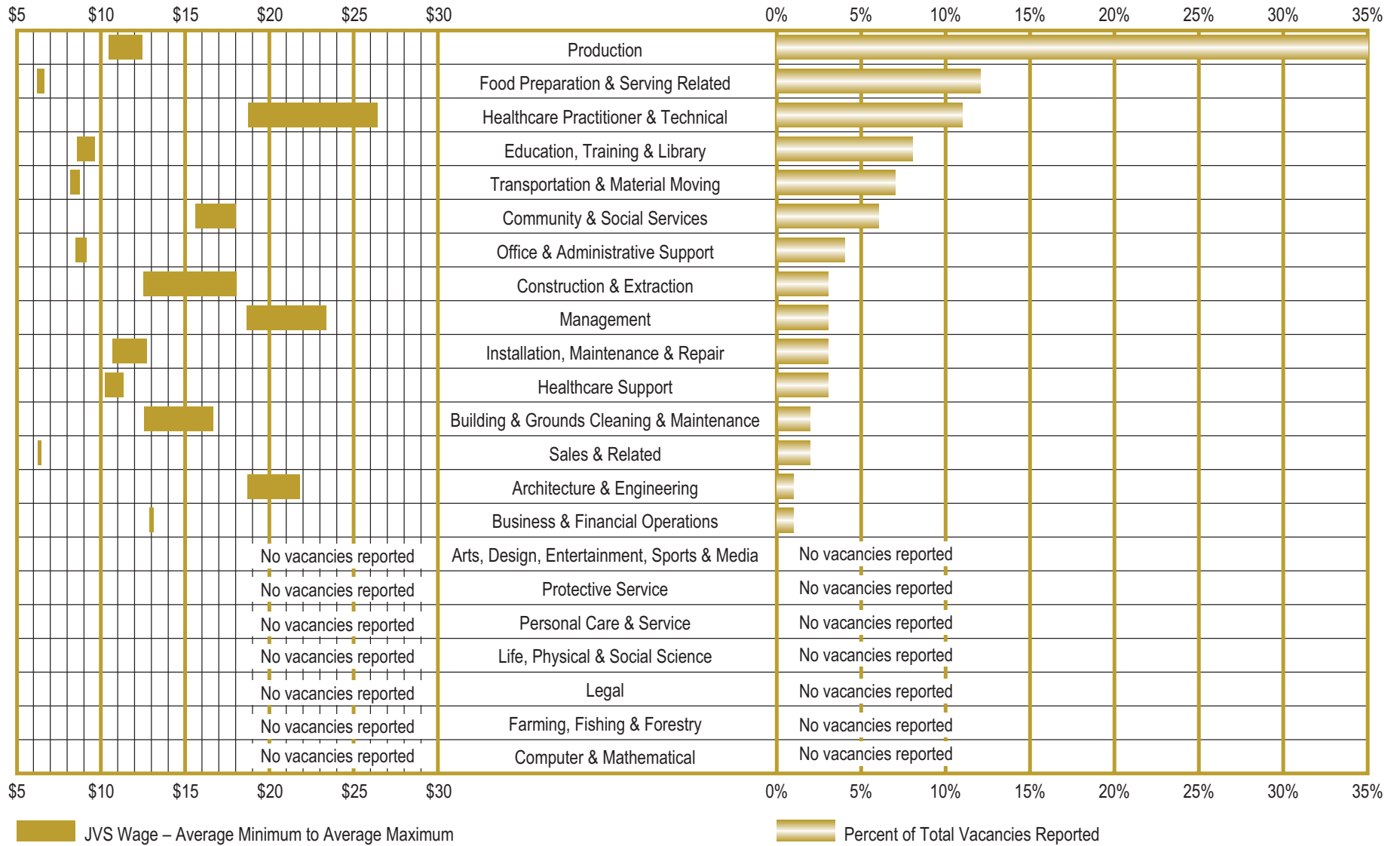
In order to help make comparisons between this survey and other sources of employment statistics, all jobs reported are assigned a Standard

Occupational Classification (SOC) code from the *2000 Standard Occupational Classification Manual*. The SOC system includes 821 detailed occupation titles grouped into 23 major occupational groups; the JVS excludes “Military Specific Occupations” leaving 22 major groups with 801 detailed titles. Vacancies reported in this survey were coded into 15 of the major occupational groups. No vacancies were found for seven occupational groups.

The wages associated with these occupations reflect the degree of skill and experience required for the job. Healthcare Practitioner & Technical, Management, and Architecture & Engineering vacancies which offer the highest wages in this survey typically require higher levels of education and experience.

Occupational Details *—continued*

Figure 22: Vacancies and Reported Average Wage Ranges by Major Occupational Groups



Occupational Details *—continued*

Occupational Estimates

Tables 1 and 2 contain a detailed list of all the SOC job titles that were assigned to vacancies reported in this survey. Because a census of large employers and Government agencies is conducted, the list contains titles for nearly all of the vacancies available at the time of the survey for those employers. Forty-five percent of all small to mid-size employers were contacted for the random sample, so the list also includes occupations reported by those employers. Given the large size of the random sample collected, the list of occupations should be fairly comprehensive; however it is not exhaustive. Most likely, if a different random sample had been drawn there would be some differences in the job titles reported, but there would also be many of the same.

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

Estimated Vacancies

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

group level. Estimated vacancies by major occupational group are then proportionally distributed among the specific detailed occupations reported in the survey.

Vacancies Found

The number of vacancies by occupation reported in the survey.

Average JVS Wage Offered

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

Average (OES) Wage Paid

Occupational Employment Statistics (OES) wage data are provided for each occupation. OES data are based on a national survey of employers and refer to filled positions, not vacancies. The data provided here are reported for the Eastern Region when available and statewide otherwise. Data are collected for the three-year rolling OES panels, concluding in May 2003. 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 to 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 Four or More Estimated Vacancies

					Occupational Employment Statistics Wage Data (2003)								
SOC Code	SOC Occupational Title	Vacancies Estimated	Vacancies Found	Average JVS Wage	Average Wages			Percentile Distribution					
					Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th	
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	25	25	\$11.30	†	†	†	†	†	†	†	†	†
51-3023	Slaughterers and Meat Packers	25	25	\$11.30	†	†	†	†	†	†	†	†	†
41-2011	Cashiers	13	4	\$6.30	\$6.14	\$7.07	\$7.54	\$5.73	\$6.17	\$6.89	\$7.93	\$8.78	
53-3032	Truck Drivers, Heavy and Tractor-Trailer	13	6	\$9.20	\$10.86	\$14.38	\$16.14	\$10.10	\$11.47	\$13.35	\$16.56	\$20.38	
25-9041	Teacher Assistants	9	9	\$7.90	\$12,293	\$16,454	\$18,534	\$11,869	\$13,334	\$16,074	\$18,997	\$22,154	
35-3031	Waiters and Waitresses	8	5	\$5.20	\$6.16	\$6.85	\$7.19	\$5.69	\$6.04	\$6.61	\$7.22	\$8.62	
43-3071	Tellers	6	1	†	\$7.61	\$8.98	\$9.67	\$7.23	\$7.78	\$8.67	\$10.21	\$11.47	
43-4081	Hotel, Motel, and Resort Desk Clerks	6	1	†	\$6.15	\$7.44	\$8.08	\$5.91	\$6.68	\$7.59	\$8.33	\$8.77	
43-4171	Receptionists and Information Clerks	6	1	†	\$6.20	\$8.89	\$10.23	\$5.88	\$6.70	\$8.21	\$10.32	\$13.48	
51-9199	Production Workers, All Other	6	4	\$10.80	\$12.29	\$17.17	\$19.61	\$11.76	\$13.40	\$16.11	\$18.41	\$26.21	
29-1131	Veterinarians	5	2	†	\$16.14	\$22.58	\$25.79	\$15.48	\$17.07	\$23.62	\$26.69	\$28.99	
* 21-1014	Mental Health Counselors	5	5	\$18.70	\$11.24	\$16.19	\$18.66	\$10.34	\$12.10	\$14.38	\$17.76	\$23.71	
29-1111	Registered Nurses	5	5	\$26.50	\$18.26	\$20.60	\$21.76	\$17.48	\$18.62	\$20.39	\$22.15	\$25.76	
35-2014	Cooks, Restaurant	5	3	†	\$6.32	\$8.07	\$8.94	\$6.00	\$6.84	\$7.90	\$8.87	\$10.62	
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	5	3	†	\$6.36	\$7.50	\$8.07	\$5.88	\$6.85	\$7.55	\$8.23	\$9.03	
31-1011	Home Health Aides	4	2	†	\$7.67	\$8.86	\$9.45	\$7.34	\$7.88	\$8.81	\$9.98	\$10.91	
* 29-1069	Physicians and Surgeons, All Other	4	4	†	\$35.47	\$65.42	†	\$27.56	\$45.29	\$57.54	†	†	
* 51-3092	Food Batchmakers	4	4	\$12.00	\$6.75	\$10.56	\$12.46	\$6.20	\$7.34	\$9.68	\$14.08	\$16.56	

† Insufficient wage data available

* OES wages reported for Colorado statewide

Occupational Details *—continued*

Table 2: Occupations with Fewer than Four 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
13-2011	Accountants and Auditors	\$16.99	\$25.00	\$29.00	\$15.58	\$18.87	\$22.15	\$27.79	\$37.76
11-3011	Administrative Services Managers	\$16.58	\$28.14	\$33.91	\$15.40	\$18.34	\$26.51	\$36.03	\$44.40
49-3023	Automotive Service Technicians and Mechanics	\$7.57	\$11.87	\$14.02	\$6.35	\$8.99	\$11.42	\$15.08	\$17.98
35-3011	Bartenders	\$6.05	\$7.35	\$8.00	\$5.69	\$6.17	\$6.93	\$8.42	\$10.04
43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$8.86	\$11.76	\$13.21	\$8.13	\$9.52	\$10.80	\$13.30	\$16.84
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	\$11.72	\$15.13	\$16.84	\$11.17	\$12.52	\$15.00	\$17.53	\$20.11
53-3022	Bus Drivers, School	\$7.19	\$9.96	\$11.34	\$6.66	\$7.97	\$9.79	\$11.54	\$13.95
* 51-7011	Cabinetmakers and Bench Carpenters	\$9.74	\$14.10	\$16.28	\$9.25	\$10.94	\$13.77	\$17.12	\$20.19
21-1021	Child, Family, and School Social Workers	\$7.44	\$11.94	\$14.19	\$7.11	\$7.90	\$11.54	\$15.81	\$17.83
* 17-3022	Civil Engineering Technicians	\$12.86	\$18.65	\$21.54	\$11.75	\$14.20	\$18.61	\$22.48	\$26.38
17-2051	Civil Engineers	\$28.27	\$34.72	\$37.94	\$27.68	\$29.92	\$33.70	\$40.38	\$46.96
* 21-2011	Clergy	\$7.95	\$17.91	\$22.88	\$6.33	\$9.95	\$16.44	\$20.47	\$26.08
35-2012	Cooks, Institution and Cafeteria	\$7.32	\$8.88	\$9.66	\$6.87	\$7.71	\$8.84	\$10.12	\$10.98
* 35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$6.10	\$7.81	\$8.67	\$5.82	\$6.48	\$7.59	\$8.89	\$10.39
43-4031	Court, Municipal, and License Clerks	\$11.92	\$14.40	\$15.65	\$11.30	\$12.36	\$13.77	\$16.59	\$19.71
* 29-2032	Diagnostic Medical Sonographers	\$17.25	\$26.80	\$31.58	\$13.19	\$21.63	\$25.69	\$32.45	\$41.12
* 35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	\$6.09	\$7.29	\$7.89	\$5.73	\$6.21	\$7.01	\$8.20	\$9.14
35-9021	Dishwashers	\$6.03	\$7.22	\$7.82	\$5.71	\$6.26	\$7.36	\$8.26	\$8.80
53-3031	Driver/Sales Workers	\$6.09	\$10.62	\$12.88	\$5.82	\$6.50	\$10.54	\$13.41	\$17.64
21-1012	Educational, Vocational, and School Counselors	\$13.89	\$17.52	\$19.33	\$12.74	\$14.68	\$17.13	\$20.28	\$22.58
25-2021	Elementary School Teachers, Except Special Education	\$26,996	\$32,803	\$35,706	\$25,163	\$28,752	\$32,467	\$36,227	\$42,365
* 29-1062	Family and General Practitioners	\$39.50	\$63.46	†	\$36.50	\$44.68	\$56.47	†	†

† Insufficient wage data

* OES wages reported for Colorado statewide

Occupational Details *—continued*

Table 2: Occupations with Fewer than Four 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
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	\$10.46	\$15.13	\$17.46	\$9.58	\$11.46	\$13.71	\$19.27	\$22.02
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	\$10.34	\$15.45	\$18.01	\$9.61	\$11.50	\$13.94	\$19.54	\$24.21
* 51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	\$7.82	\$11.36	\$13.13	\$7.47	\$8.31	\$10.36	\$15.10	\$16.78
* 11-9051	Food Service Managers	\$14.63	\$24.31	\$29.16	\$13.57	\$16.54	\$20.53	\$28.27	\$40.58
* 47-3019	Helpers, Construction Trades, All Other	\$9.14	\$13.23	\$15.28	\$8.37	\$9.94	\$12.54	\$16.42	\$19.00
47-4051	Highway Maintenance Workers	\$11.48	\$15.70	\$17.81	\$10.72	\$12.60	\$16.17	\$19.26	\$20.81
29-1063	Internists, General	†	†	†	†	†	†	†	†
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$6.67	\$8.70	\$9.71	\$6.17	\$7.16	\$8.43	\$10.13	\$11.72
37-3011	Landscaping and Groundskeeping Workers	\$7.92	\$11.48	\$13.27	\$7.50	\$8.56	\$10.93	\$13.87	\$16.77
* 43-4121	Library Assistants, Clerical	\$7.42	\$10.16	\$11.53	\$7.12	\$8.12	\$9.99	\$12.04	\$13.57
29-2061	Licensed Practical and Licensed Vocational Nurses	\$12.33	\$14.65	\$15.81	\$11.70	\$12.69	\$14.40	\$16.40	\$17.91
49-9042	Maintenance and Repair Workers, General	\$9.11	\$12.81	\$14.66	\$7.90	\$10.63	\$12.67	\$14.43	\$17.79
* 11-2021	Marketing Managers	\$23.64	\$41.49	\$50.41	\$21.80	\$27.11	\$38.36	\$52.26	\$66.74
21-1013	Marriage and Family Therapists	†	†	†	†	†	†	†	†
11-9111	Medical and Health Services Managers	\$17.84	\$24.86	\$28.37	\$16.24	\$19.66	\$25.08	\$29.13	\$34.77
* 49-9062	Medical Equipment Repairers	\$18.95	\$24.71	\$27.59	\$16.35	\$22.58	\$25.77	\$28.45	\$32.26
25-2022	Middle School Teachers, Except Special and Vocational Education	\$26,182	\$32,451	\$35,585	\$24,898	\$27,699	\$31,713	\$35,634	\$42,226
31-1012	Nursing Aides, Orderlies, and Attendants	\$7.50	\$9.55	\$10.58	\$7.18	\$7.96	\$9.31	\$11.01	\$12.82
43-9061	Office Clerks, General	\$7.02	\$9.52	\$10.77	\$6.45	\$7.61	\$9.25	\$11.14	\$13.22
47-2073	Operating Engineers and Other Construction Equipment Operators	\$11.68	\$14.78	\$16.33	\$10.72	\$12.24	\$13.95	\$17.46	\$20.82

† Insufficient wage data

* OES wages reported for Colorado statewide

Occupational Details *—continued*

Table 2: Occupations with Fewer than Four 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
53-7064	Packers and Packagers, Hand	\$6.17	\$7.94	\$8.83	\$5.85	\$6.40	\$7.51	\$9.63	\$10.95
* 31-2021	Physical Therapist Assistants	\$11.47	\$15.58	\$17.64	\$9.10	\$13.50	\$15.83	\$17.98	\$20.95
29-1123	Physical Therapists	\$21.16	\$25.26	\$27.31	\$19.69	\$22.98	\$24.96	\$26.94	\$28.25
25-2011	Preschool Teachers, Except Special Education	\$9.52	\$12.52	\$14.01	\$8.19	\$11.07	\$12.49	\$14.10	\$16.57
53-7081	Refuse and Recyclable Material Collectors	\$6.99	\$11.61	\$13.91	\$6.32	\$7.85	\$12.59	\$14.79	\$16.34
25-2031	Secondary School Teachers, Except Special and Vocational Education	\$26,608	\$33,688	\$37,228	\$25,049	\$28,234	\$32,446	\$37,319	\$44,169
* 51-6031	Sewing Machine Operators	\$7.51	\$10.25	\$11.62	\$7.09	\$8.23	\$9.86	\$11.96	\$13.88
29-1127	Speech-Language Pathologists	\$14.00	\$17.00	\$18.49	\$12.36	\$14.92	\$16.20	\$17.48	\$25.33
49-3093	Tire Repairers and Changers	\$8.09	\$9.42	\$10.08	\$7.50	\$7.92	\$8.62	\$9.83	\$11.07
53-3033	Truck Drivers, Light or Delivery Services	\$9.84	\$15.84	\$18.84	\$8.41	\$11.71	\$14.53	\$19.60	\$26.55
51-8031	Water and Liquid Waste Treatment Plant and System Operators	\$12.27	\$16.23	\$18.21	\$11.78	\$13.25	\$15.61	\$18.06	\$23.34
51-4121	Welders, Cutters, Solderers, and Brazers	\$10.06	\$13.00	\$14.47	\$9.45	\$11.08	\$12.85	\$14.81	\$17.04

† Insufficient wage data available

* OES wages reported for Colorado statewide



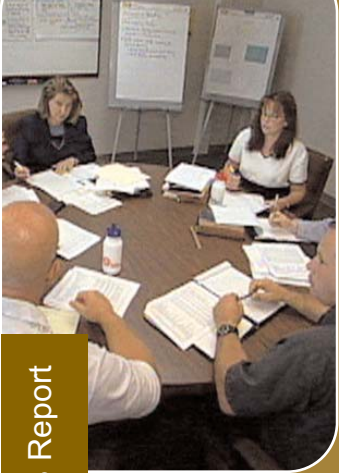
Sector Briefs

Education & Health Services firms represent 8% of the region's employers and 9% of the Eastern workforce. Fourteen percent of the area's vacancies are in this Job Vacancy Survey (JVS) sector.

Since the Colorado Department of Labor & Employment began tracking employment information using the North American Industry Classification System (NAICS) in 2001, more detailed information is available. In the Eastern Region, all (100%) of the vacancies in this JVS sector are in Healthcare & Social Assistance. All teaching vacancies are categorized in the Government sector while Educational Services refer mostly to private educational facilities.

All of the Education & Healthcare Services firms are classified as large employers (75 or more employees) with only one vacancy reported in a small to mid-size firm.

Half of the vacancies are for highly specialized positions such as physicians and medical directors—all of which require advanced degrees and experience in the occupation. An additional 27% of the vacancies are for registered nurses and various technicians that require two-year or bachelor's degrees and related experience. The remaining vacancies are for entry-level positions requiring some postsecondary education and little or no experience.



Appendix

How to Use This Report

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

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

The answers to these and similar questions are important in the decision-making processes of employers, employees, job seekers, trainers, and planning officials. While Labor Market Information (LMI) provides data on the local labor force supply, the Job Vacancy Survey complements this by providing information about the demand for labor and offers a more complete picture of local labor markets.

Employers

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

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

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

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

Job Seekers

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

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

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

Workforce Centers

The Job Vacancy Survey is designed to aid Colorado's Workforce Centers and other job placement organizations. As Workforce Centers serve job seekers and employers, the report acts as a handy reference for information on current vacancies, position requirements, wages and benefits offered, seasonal employment trends, and dominant regional industries. Workforce Center representatives can increase placement success by directing job seekers toward high demand occupations and industries. The Workforce Research and Analysis survey unit cooperates with regional Workforce Centers to list reported vacancies given the approval of the reporting businesses.

While this report is a picture of the area's current employment needs and historical seasonal patterns, other Labor Market Information products provide projections of occupational growth and anticipated openings. These can be accessed at www.coworkforce.com/lmi/oeo/oeo.htm. Projections highlight growing as well as declining occupations. Public officials, educational institutions, and Government agencies can use this survey information to effectively apply resources to education, training, and job placement programs. Investments in the workforce can be directed toward occupations or industries that continuously contribute to the local economy or to those where there is a constant need for workers.

Economic Developers

Economic development professionals can use the Job Vacancy Survey to track the labor situation in key industries and evaluate the area's labor needs. The survey results help determine where 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 *—continued*

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 40% of the region's employment is found with large and government employers that make up only 4% 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 Eastern Region survey was conducted from August 4th through August 15th. For the purpose of this report, all large and government employers and small to mid-size private employers with five or more employees are referred to as the sample frame. Firms with fewer than five employees make up a very large portion of all employers in the region, but a small proportion of the total employment. Employment in the sample frame accounts for 54% 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 75 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 35% of the employment in the sample frame, while private industry employers make up the remaining 65%. Large firms account for 46% of private industry employment in the sample frame. Firms employing from five to 74 individuals are considered small to mid-size employers, and account for the remaining 54% of private industry employment.

The margin of sampling error for the overall vacancy estimate is plus or minus 2.9%, meaning that in 95 out of 100 surveys the number of vacancies in the region would be between 242 and 256. 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 89%. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is 98%, and measures the success in obtaining data once an employer is contacted.

JVS Sectors

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

In the Eastern Region, the 20 NAICS sectors have been combined into six JVS sectors. These groupings are based on the NAICS sectors, but are somewhat unique to the Job Vacancy Survey. The new groupings allow the Job Vacancy Survey to study local Colorado labor markets in a more relevant and meaningful way.

For more information on the North American Industry Classification System see page 28.

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

Occupational Coding

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

Data Editing

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

Wage Conversion

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

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

North American Industry Classification System (NAICS)

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

History of Process

The Office of Management and Budget established the Economic Classification Policy Committee in 1992 to pursue a fresh slate examination of economic classifications for statistical 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.

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

Relevant—NAICS recognizes hundreds of new businesses in the economy with 20 broad industry sectors, up from SIC’s 10. Some new industry categories include an Information sector and a Health Care & Social Assistance sector formerly lumped into Services under SIC.

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

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

Things to Consider

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

New Industries Reflected in NAICS

- ◆ NAICS heralds the creation of a new Information sector that pulls businesses from communications, publishing, motion picture and sound recording and online services to recognize an information-based economy.
- ◆ Formerly, under SIC, corporate headquarters were not distinguished from the

industry category of the product or service they produced. Now corporate headquarters are recognized in the new Management sector.

◆ Manufacturing is restructured to account for high-tech industries.

◆ An increase in the amount of detail overall accompanies the shift to NAICS including a further breakdown of SIC’s Services sector into nine new sectors.

◆ Eating and drinking places move out of Retail Trade into a new category called Accommodation & Food Services.

◆ The difference between Retail and Wholesale is now based on how each store conducts business. For example, many computer stores are reclassified from Wholesale to Retail.

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

Glossary

Appendix

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

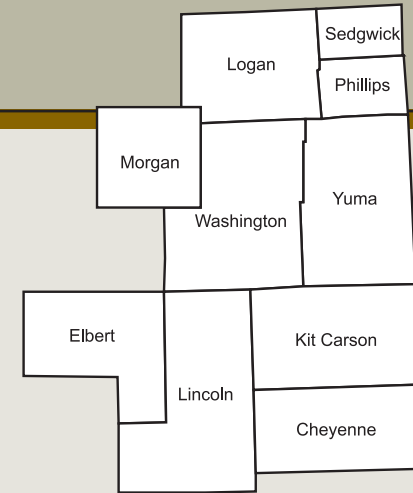
Persons 16 years of age and over who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the four-week period ending with the reference week. Persons who were waiting to be recalled to a job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



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