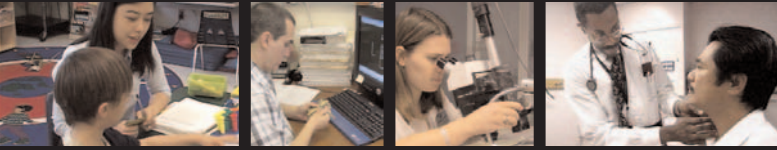


# Colorado

# Upper Arkansas Region

## Job Vacancy Survey

Winter 2005



Sangre de Cristo Mountains, Custer County

Survey Conducted January 3–12, 2005  
Released Spring 2005



*Funding Provided in Part by  
The Colorado Workforce Development Council*

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

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## Contents

<i>Introduction</i> .....	1
<i>Executive Summary</i> .....	2
<i>Regional Information</i> .....	3
<i>Survey Findings</i> .....	8
<i>Occupational Details</i> .....	17
<i>Sector Briefs</i> .....	23
<i>Appendix</i> .....	24
<i>UAR Workforce Centers</i> .....	31

**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.

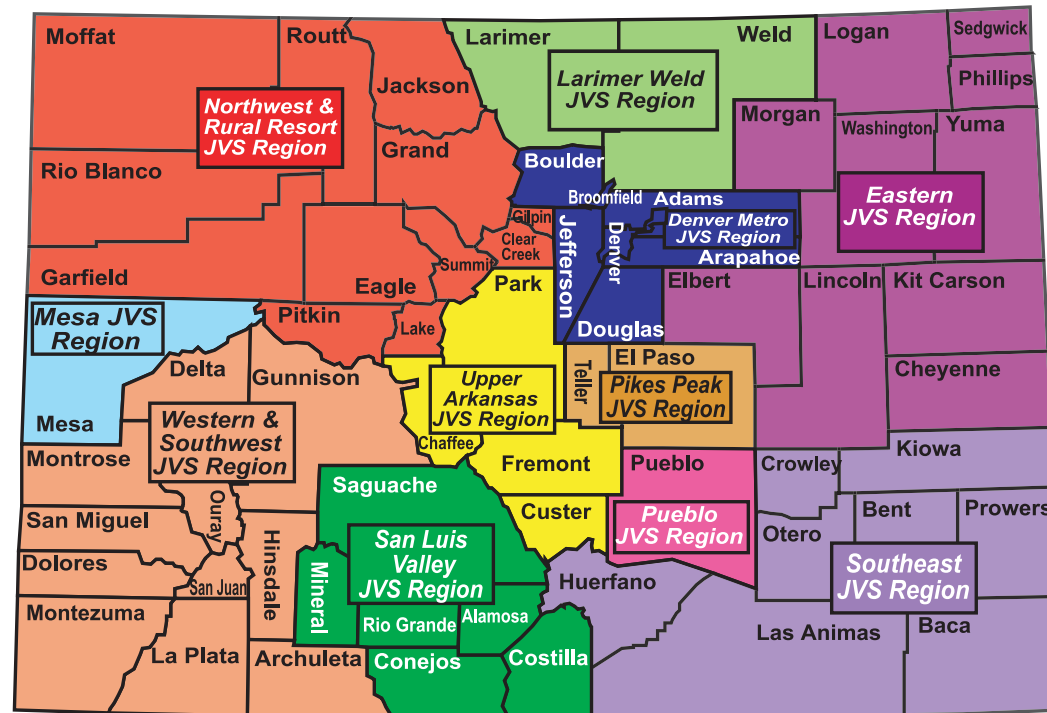
Job seekers and employers, as well as Workforce Centers and economic developers, need more than a measure of demand for workers at a specific point in time. They also need a measure of where in the economy that demand is located and what education and experience levels are most preferred. The Colorado 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 vacancies in the area and publish the report within weeks of the original data collection, providing a timely portrait of the employment situation.

*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.*

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.

**Figure 1: Colorado Job Vacancy Survey Regions**



**The winter 2005 Upper Arkansas Job Vacancy Survey was conducted from January 3rd through 12th, 2005.** The goal of the survey is to provide current information on the demand for workers so that employers, job seekers, economic developers, educators, and work-force centers can make informed decisions in the Upper Arkansas Region.

Over the survey period Government and large employers, as well as randomly selected small to mid-size employers with at least five employees, were contacted in the region. Employers were asked if they were actively hiring at the time of the survey, and a variety of questions about positions they are seeking to fill.

A total of 537 employers representing approximately 51% of the region's total employment responded to the survey. Out of these, 24 were large employers (75 employees or more), 69 were government employers, and 444 were from the small to mid-size category (five to 74 employees). The survey had a response rate of 88% and a 99% cooperation rate. The margin of sampling error for the overall vacancy estimate is plus or minus 5% or about seven vacancies.

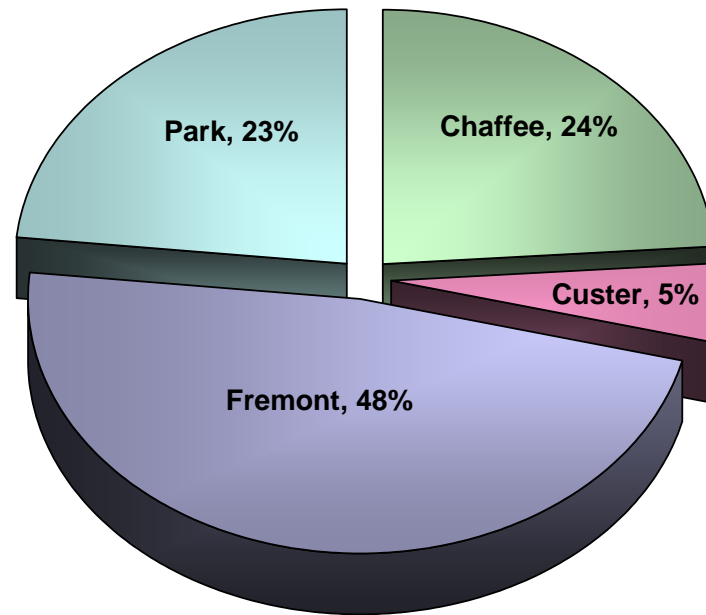
### Major Findings of the Survey:

- ◆ It is estimated that a total of 133 jobs were open for hire in the Upper Arkansas Region during the survey period. ....Page 8
- ◆ Six percent of employers responding to the survey report having at least one vacancy. Two percent report having more than one vacancy. ....Page 8
- ◆ Fifty-two percent of the estimated job openings are in Government and 23% are in Education & Health Services. ....Page 8
- ◆ The overall average wage for all reported vacancies is \$15.50 per hour. ....Page 9
- ◆ Thirty-two percent of the estimated vacancies are offered by small to mid-size employers and 16% by large employers. ....Page 10
- ◆ All vacancies are for permanent positions. ....Page 11
- ◆ Seventy-eight percent of the reported vacancies are for full-time positions compared to 82% a year ago. ....Page 11
- ◆ Twenty-five percent of all vacancies require a minimum of high school completion. ....Page 12
- ◆ Sixty-six percent of all vacancies require post-secondary education. A year ago only 48% of all vacancies required postsecondary education. ....Page 12
- ◆ Fifty-five percent of all vacancies are associated with some level of difficulty to fill. ....Page 14
- ◆ Twenty-eight percent of the reported vacancies are open for hire for less than 30 days, 24% are open from 30 to 59 days, and 30% are open for 60 or more days. ....Page 15

**T**he Upper Arkansas Region includes Chaffee, Custer, Fremont and Park counties. The U.S. Census Bureau's Census updates for 2003 estimates the region's population to be nearly 85,000 people. Fremont County accounts for 56% of the population in the region. Chaffee County has 20% of the population while Park has 19%. Custer accounts for 5% of the population in the area.

Employment and population proportions in the area are comparable, with Fremont County recording nearly half of all employed individuals (*Figure 2*). Park County makes up nearly one-fourth of the area's employment, with many of these individuals commuting to the Metro Denver area.

**Figure 2: Employment by County, December 2004**

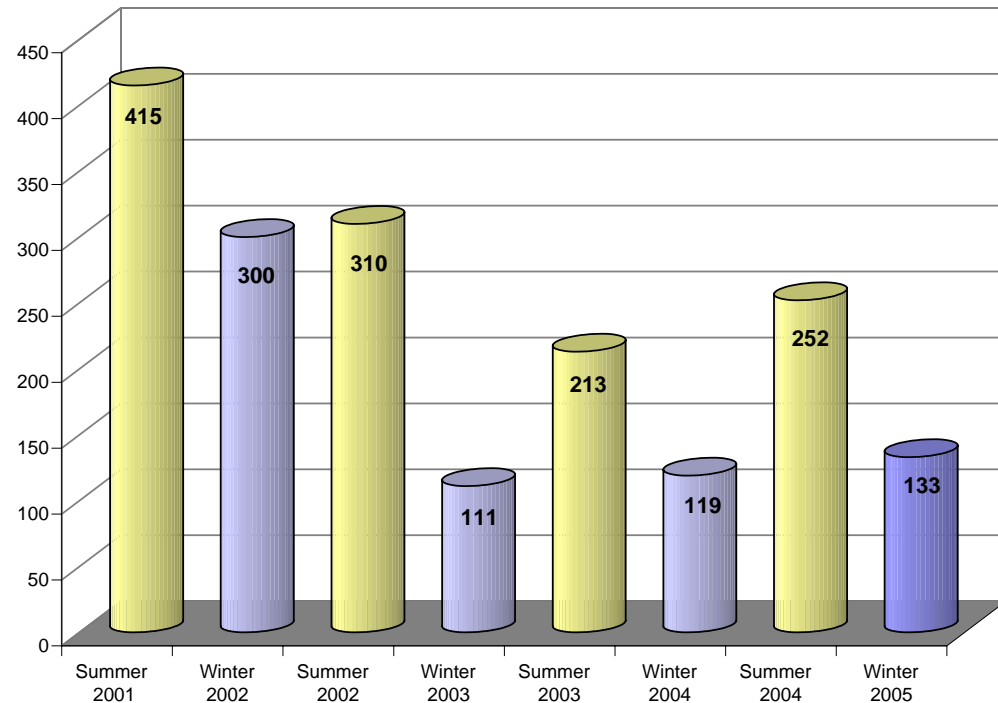


Source: CDLE, Local Area Unemployment Statistics, Released January 2005

In the summer of 2001, the Colorado Department of Labor and Employment began collecting data on job vacancies in the Upper Arkansas Region. On average, the summer season shows more employment opportunities than in the winter due to a strong volume of seasonal businesses. However, job vacancies in general have steadily decreased mostly due to the downturn in economic activity seen not just in the state of Colorado, but in the nation as well (Figure 3). This survey shows a consistent reversal of the past decreasing trend as the economic recovery has brought with it an increase in the number of job openings in the region.

Upper Arkansas Region Job Vacancy Surveys are conducted semi-annually in the winter and summer months. The timing of the survey was developed with the intent of measuring demand for labor at intervals that provide the most useful information. Vacancies found in the winter represent demand for labor at a time of year when employment is at its seasonal low. A study at this time indicates the types of occupations found at the time when demand for workers is at its lowest. When the Job Vacancy Survey is conducted during the summer, results represent demand for labor at a time when employers are nearing peak employment, yet are still in the process of actively recruiting.

**Figure 3: Historical Vacancies – Upper Arkansas Region**



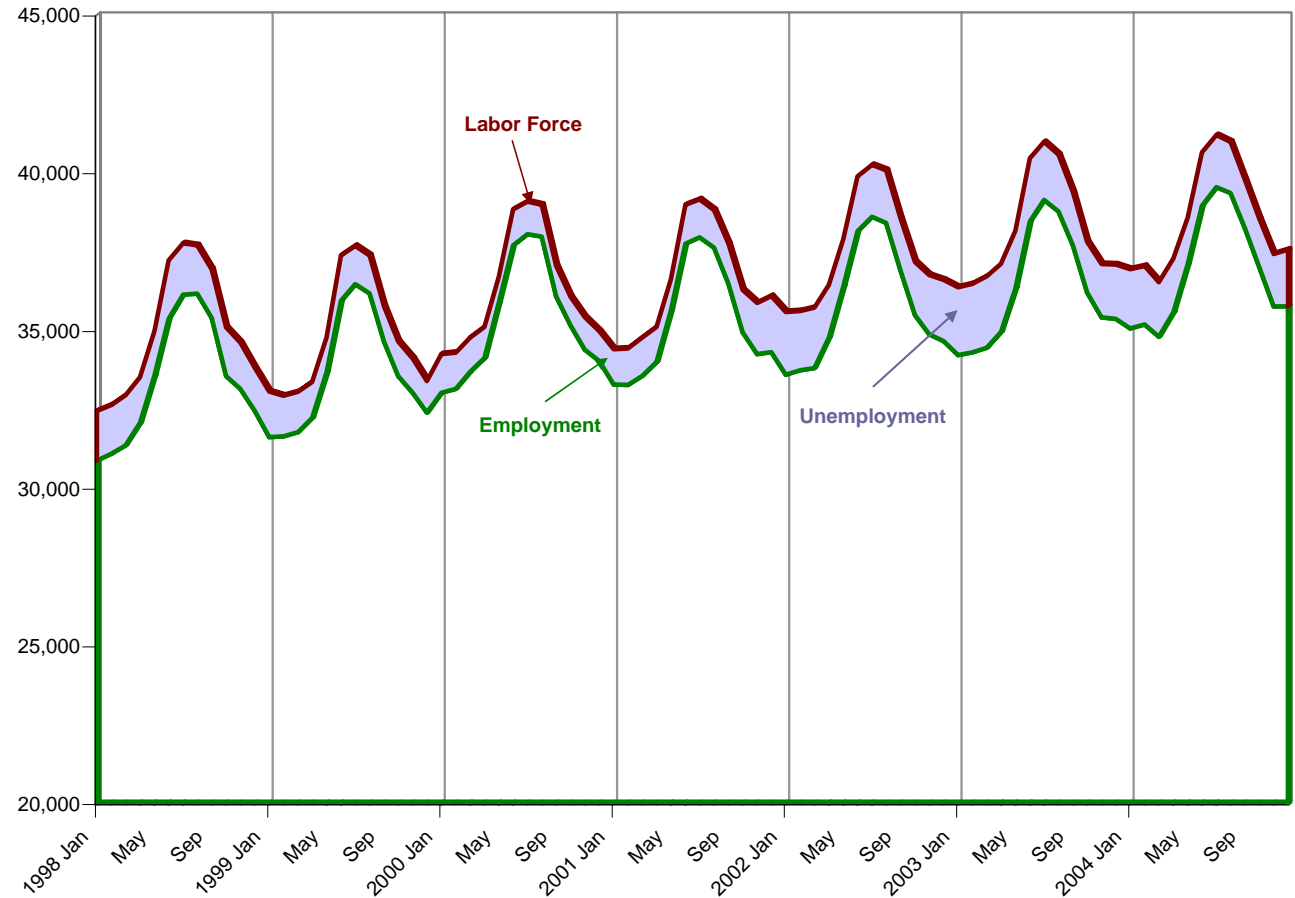
	Summer 2001	Winter 2002	Summer 2002	Winter 2003	Summer 2003	Winter 2004	Summer 2004	Winter 2005
<b>Vacancies</b>	415	300	310	111	213	119	252	133
<b>Employment</b>	37,698	33,631	37,994	33,943	38,774	35,773	38,975	35,759
<b>Unemployed</b>	1,244	1,967	1,734	1,954	1,861	1,625	1,685	1,799
<b>Unemployment Rate</b>	3.2%	5.5%	4.4%	5.4%	4.6%	4.3%	4.1%	4.8%

Source: CDLE, Local Area Unemployment Statistics Released January 2005

Historically, the level of employment in the Upper Arkansas Region peaks in or around the month of July. The labor force, the number of people employed plus those actively looking for work, also peaks at that time (Figure 4). Unemployment levels have increased over the last couple of years, following the state and national trend, although in general the region has experienced declining unemployment through the better part of the decade. The unemployment rate tends to peak in the months of January and June. The remainder of each year's employment and available workers are more closely balanced.

While this trend has been apparent for years, changes in the employment and labor force have been notable over the past two years. Increases in the total number employed occurred at a slower pace since mid-2001, reflecting the softened economy. Yet, rather than slowing, the total labor force kept its pace as individuals remained in or reentered the labor market. Consequently, the actual number of unemployed individuals increased over the last half of 2001 and throughout most of 2002, as seen by the widening gap between the two series. This trend continued into 2003 until May when the number of unemployed individuals finally decreased. The unemployment rate continued on a downward trend until just recently, when it edged up over the winter holiday season.

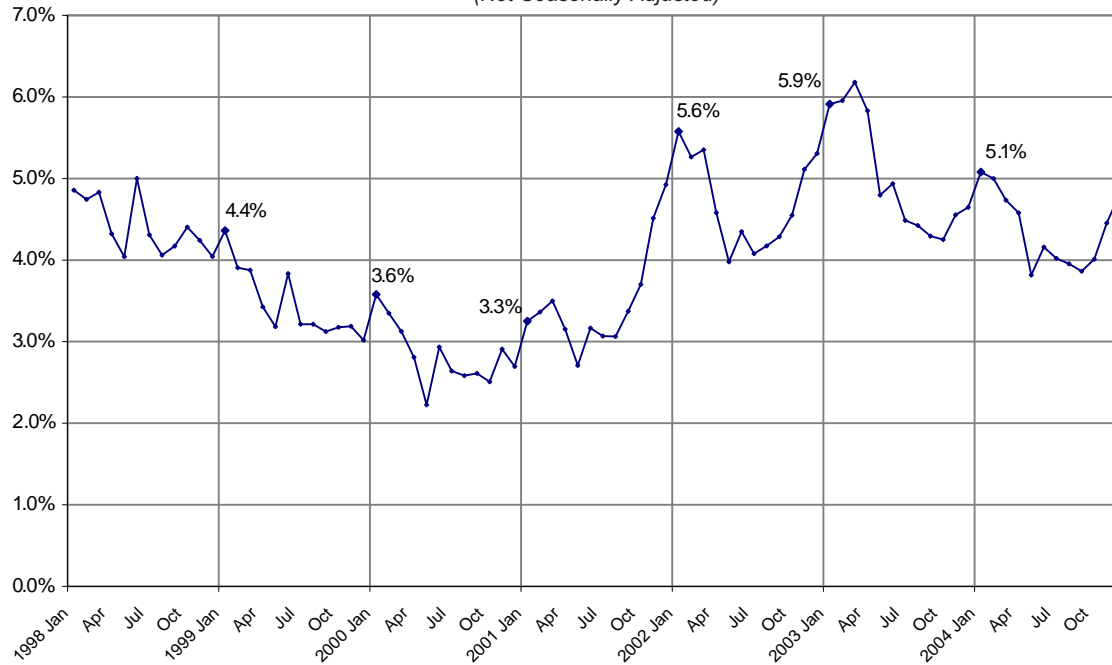
**Figure 4: Employment and Labor Force Trends for the Upper Arkansas Region**  
(Not Seasonally Adjusted)



Source: CDLE, Local Area Unemployment Statistics, January 2005



**Figure 5: Upper Arkansas Region Unemployment Rate Trend**  
(Not Seasonally Adjusted)

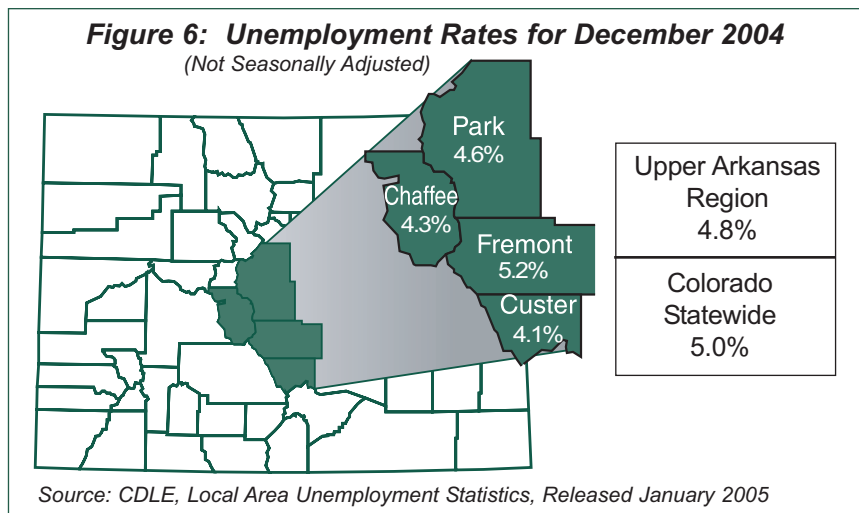


Source: CDLE, Local Area Unemployment Statistics, Released January 2005

After steadily decreasing throughout the late 90s, the region’s unemployment rate followed the state and national trends of persistent increases since mid-2000 (Figure 5). The unemployment rate reached a high of 6.2% in March 2003 after which the local economy showed promising signs of increasing employment.

Figure 6 shows the most current unemployment statistics for the individual counties of the Upper Arkansas Region. Custer, Park and Chaffee counties had unemployment rates significantly lower than Fremont County, which showed an unemployment rate of 5.2%. Park County’s unemployment rate was 4.6%; lower than the region’s average. Situated much closer to the Denver Metro area, Park residents often commute to Denver for employment opportunities. Bailey has proved to be a popular community for relocation out of the Denver Metro area. Chaffee County, “Home of the Fourteeners,” followed with a rate of 4.3%. The cities of Salida and Buena Vista are Chaffee County’s main business districts, with downtown Salida sporting the largest historic district in the state. Salida also features a mild climate considering its elevation. Many commute to Salida from Buena Vista since the cost of housing may be relatively lower just north of the region’s banana belt.

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



Source: CDLE, Local Area Unemployment Statistics, Released January 2005

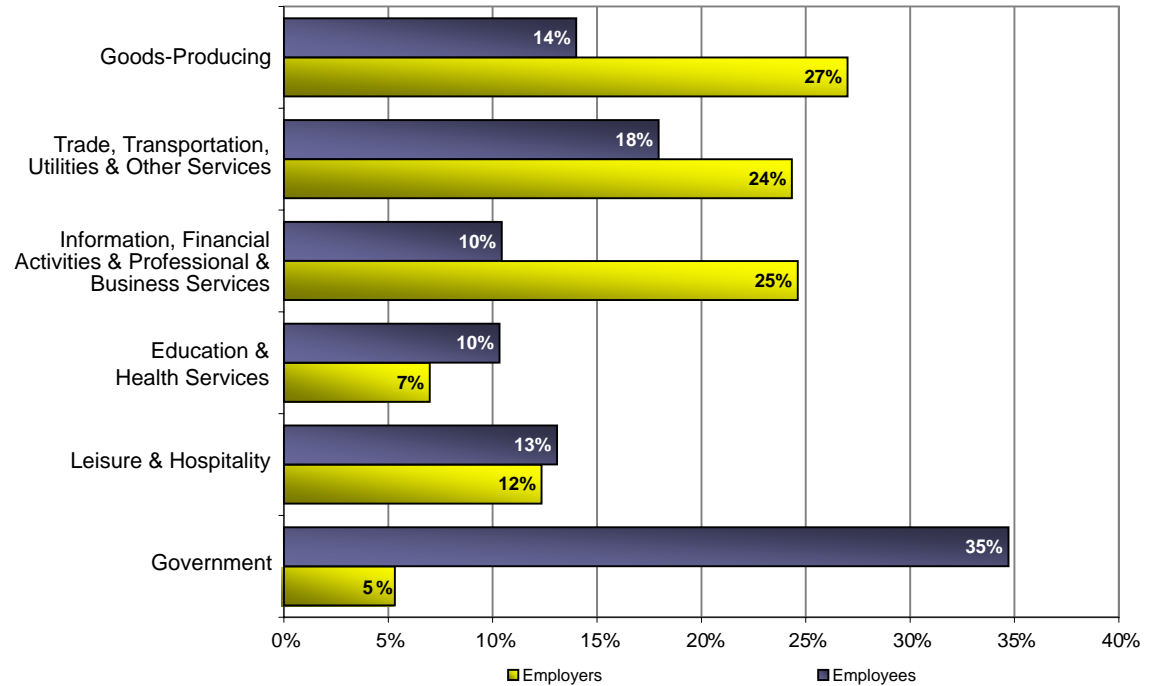
While Fremont County cannot claim title to an abundance of 14,000-foot mountain peaks, it can lay claim to the Royal Gorge Bridge—the world’s highest suspension bridge hovering 1,053 feet over the Arkansas River. Outdoor activities are just as popular here as in neighboring counties. Cañon City is the primary business district with a metropolitan population of over 25,000. Custer County showed the lowest unemployment rate of 4.1%.

Figure 7 shows the employment breakdown for each of the JVS sectors during the first quarter of 2004. This serves as a useful reference for the time period in which the JVS was conducted. Shares of employment by industry in the Upper Arkansas Region have remained fairly constant over prior years, however, classification of industries has recently changed. The 60-year-old Standard Industrial Classification (SIC) system has been replaced with the North American Industry Classification System (NAICS). While some industries have remained in a similar classification category, others have largely changed. This is mostly due to the classification of establishments into detailed categories based on the production process they use. This reclassification has considerably changed the locations of many businesses in the classification structure.

NAICS recognizes hundreds of new businesses in the economy, especially those in the rapidly growing service sector. These are businesses that are indicative of the “new economy” such as Information, Financial Activities, & Professional & Business Services. Education & Health Services are also separate from other service industries allowing greater level of detail than previously available.

The Government sector remains similar to past years—a small percentage of area employers with a large percentage (over one-third) of the area’s employees. Among the top employers in this sector are the large correctional and health facilities. Goods-Producing companies are among the top three JVS sectors in regard to both the number of employees as well as employers. There is also a significant share of employers among the now separate service categories like Information, Financial Activities, & Professional & Business Services. Trade, Transportation, Utilities, & Other Services has nearly one-fourth of the area’s employers.

**Figure 7: Upper Arkansas Region Employers and Employees, 1st Quarter, 2004**



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



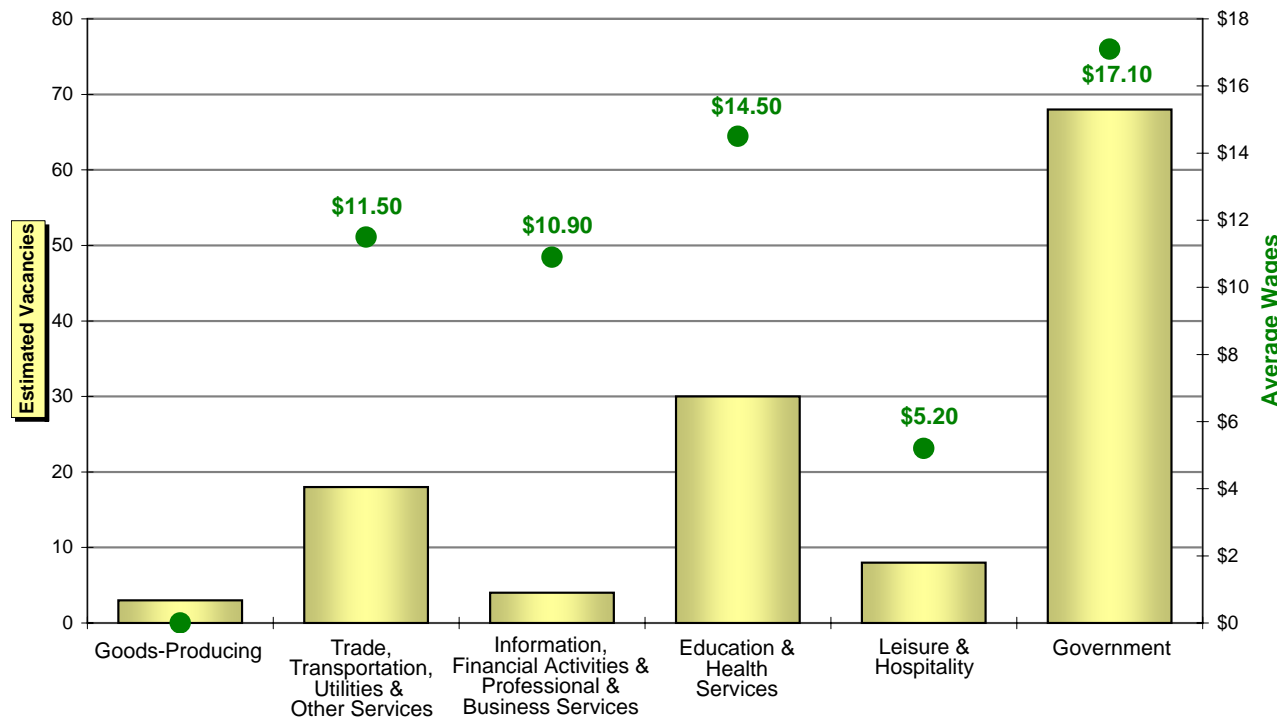
To complement the new NAICS structure, surveying has been expanded to collect data sufficient for reporting more details than prior reports. While results for the Goods-Producing JVS sector (Natural Resources & Mining, Construction, Manufacturing) remain combined, results for the previously Service-Producing industries are broken down into further detail (Figure 8).

During the survey period, an estimated 133 vacancies were open for immediate hire in the Upper Arkansas Region. Six percent of employers responding to the survey reported having at least one vacancy and two percent report having more than one vacancy. A year ago 119 vacancies were estimated, only a slight improvement from the winter 2003 report. This year's increase in total estimated vacancies shows further assurance of an improving economy.

For this survey there are fewer than 15 positions open in each of the following JVS sectors: Goods-Producing; Information, Financial Activities & Professional & Business Services; and Leisure & Hospitality. Vacancies in Trade, Transportation, Utilities & Other Services include cashiers and managers as well as automotive service technicians, mechanics for busses and trucks, and other diesel engine specialists.

Among the vacancies in the Education & Health Services JVS sector, almost 85% are in Health Services as respiratory and cardiovascular technicians, registered and licensed practical nurses, occupational therapists and certified nursing assistants. Receptionists and a variety of janitorial positions make up most of the remaining vacancies in this JVS sector.

**Figure 8: Estimated Vacancies and Average Wages by JVS Sectors**

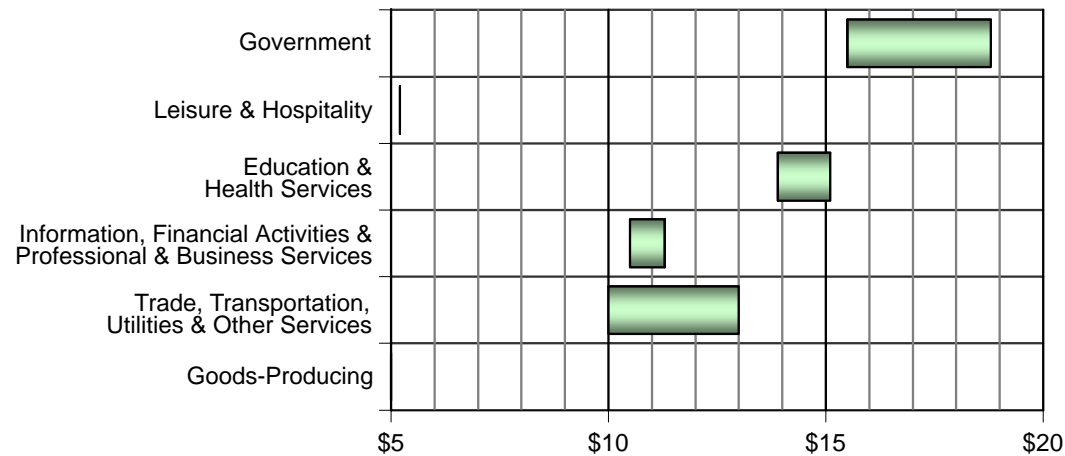


The highest number of vacancies is found in the Government sector within a variety of occupational categories including positions as medical and health services managers, educational administrators, correctional officers, clerks, cooks, bus drivers, electricians, highway maintenance workers, and middle and secondary school teachers. In addition, vacancies for physicians and surgeons, registered nurses and a variety of other health care professionals are reported in the Government sector as these medical positions are needed in places such as the state correctional facilities as well as county organizations.

Wages reported for this study represent those offered by employers for current vacancies over the survey period. The overall average wage for the winter report is \$15.50 per hour. The highest average wage is found in the Government sector due to a number of vacancies for managers, registered nurses and physicians. Since wages offered vary according to the individual applicant's qualifications, employers were asked to provide the range of wages offered for the vacancies (*Figure 9*). Wage ranges are more variable for occupations in the Trade, Transportation, Utilities & Other Services and Government

JVS sectors. This is likely due to the number and types of vacancies found within each of these JVS sectors. In Government, vacancies range from lower-skilled occupations, such as cooks and office clerks that require only high school completion, to very high-skilled ones such as physicians and surgeons requiring advanced degrees. Vacancies within the Government sector are found among many occupations and are variably full and part-time, helping to explain the higher average wage and wide wage range offered.

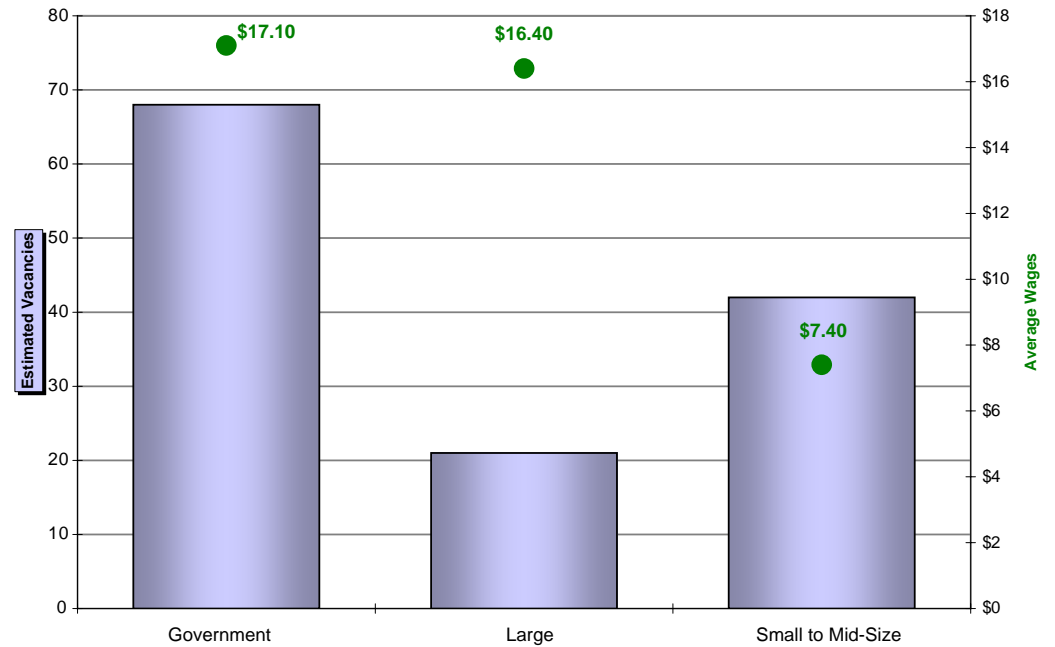
**Figure 9: Reported Average Wage Ranges by JVS Sectors**



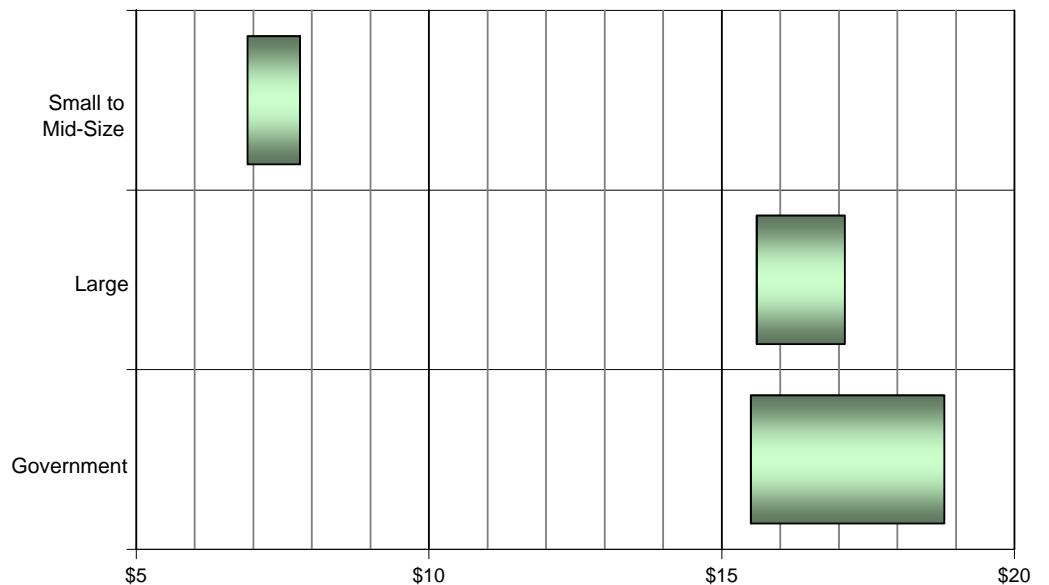
Small to mid-size firms account for 32% of total vacancies this winter (*Figure 10*) in the Upper Arkansas Region. Large companies make up 16%. The highest concentration of vacancies within the large company category is found in health care. Vacancies here are mostly for registered nurses, licensed practical nurses, certified nursing assistants and other medical technicians. The second highest concentration of vacancies is in Government for teachers, bus drivers and librarians, followed by vacancies in the correctional facilities. Current vacancies in the small to mid-size firms can be found in retail (wait staff, cooks, cashiers), as well as in the office environment (secretaries, administrative assistants, receptionists). There are also a number of vacancies in transportation that includes mechanics and delivery services. Many of the positions in these firms require some level of post secondary education.

According to the survey, government institutions offer the highest average wage (\$17.10 per hour), followed closely by large firms (\$16.40). Vacancies for the health care related occupations typically offer higher wages when requiring postsecondary education. Most of these positions require a minimum of Vocational Training/Certification. *Figure 11* shows that vacancies in small to mid-size firms are offered at the lowest wages. The wage range for these vacancies is also limited. Overall, vacancies for this winter report represent job openings for positions that do not fluctuate with seasonal activity, but rather, are in demand throughout the year.

**Figure 10: Estimated Vacancies and Average Wages by Employer Size**



**Figure 11: Reported Average Wage Ranges by Employer Size**



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

For this winter survey, 78% of the reported vacancies are for full-time permanent positions (Figure 12), while 22% are reported to be part-time permanent. Last year at this time 77% of the reported vacancies were full-time permanent. All Upper Arkansas Region Job Vacancy Surveys, summer and winter, have consistently shown a high percentage of permanent positions. Most surveys show at least a small percentage of temporary positions. However, with this survey, firms did not report either full-time temporary or part-time temporary vacancies. For job seekers who prefer to work less than full-time, opportunities do exist. Full-time vacancies include occupations in all JVS sectors. Eighty-five percent of all part-time vacancies are in the government sector for middle and secondary school teachers and bus drivers.

In general, full-time positions pay more than part-time and temporary positions. While past reports had deviated from this, the current report shows that wages offered are in line with predictable trends. In this survey, wages offered for full-time positions is the major factor in setting the overall average of \$15.50 per hour.

Figure 12: Vacancies by Employment Status

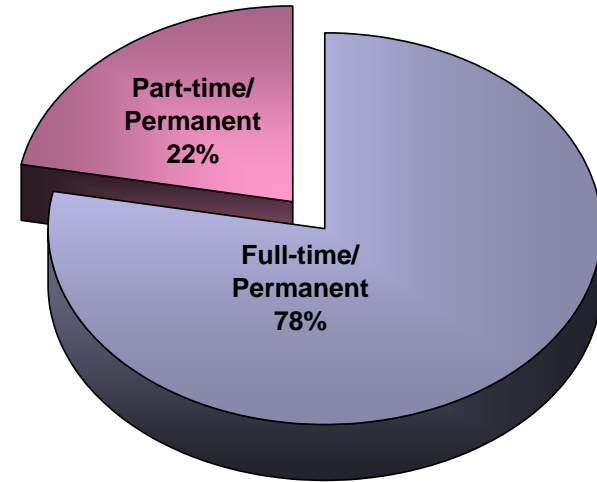
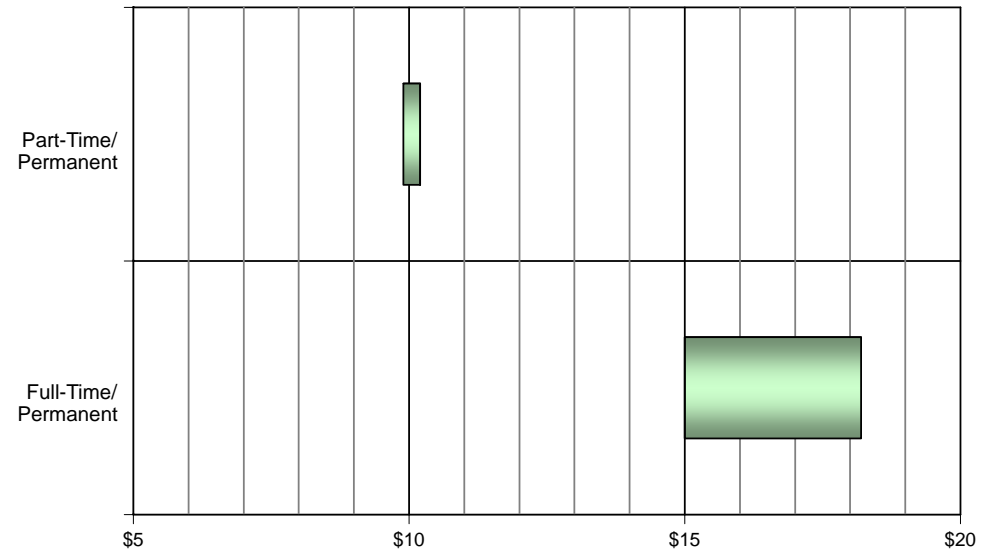


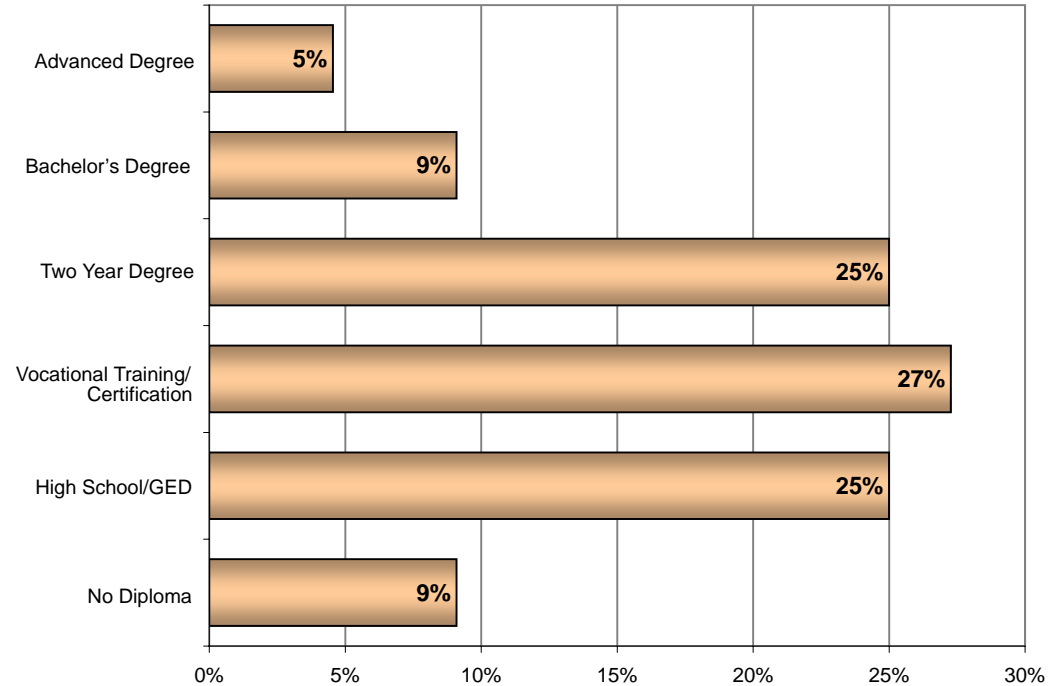
Figure 13: Reported Average Wage Ranges by Employment Status



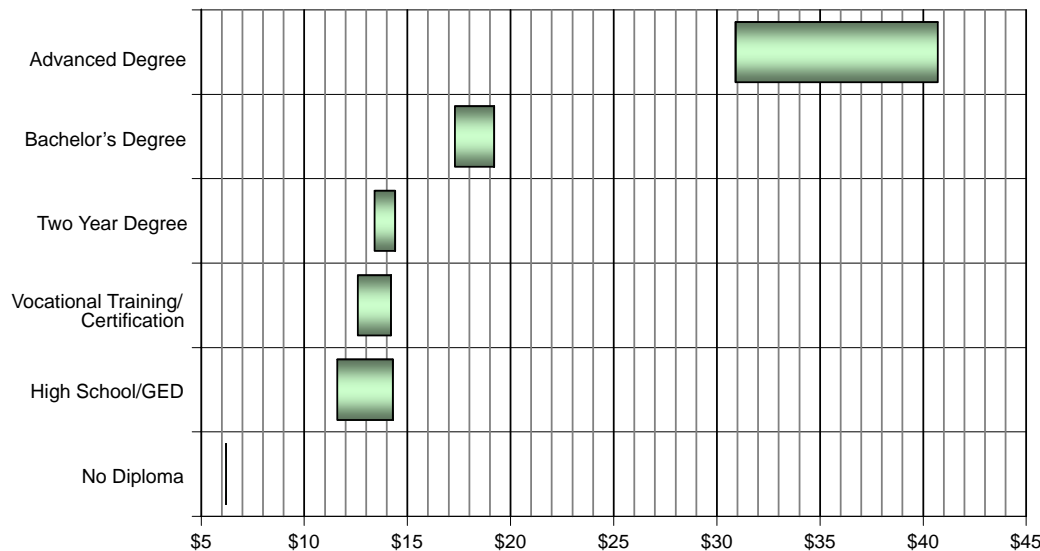
Employers were asked what level of education is required of an applicant in order to be considered for a particular vacancy. Sixty-six percent of the positions reported by employers in the Upper Arkansas Region require education beyond high school (*Figure 14*). While 25% of all vacancies require a high school degree or GED equivalency, 9% do not require high school completion. Last year at this time, employers reported that 48% of the open positions required the applicant to be educated beyond the high school level.

Fourteen percent of all vacancies require a bachelor's degree or higher. Except for a small percentage of engineers and managers, these vacancies are in the medical arena for physicians, surgeons, registered nurses and other health care professionals. Most of the area's vacancies are for occupations requiring either Vocational Training/Certification (27% of all vacancies) or a similar Two Year Degree (25% of all vacancies) which includes teachers, registered and licensed practical nurses, therapists, and medical technicians as well as highway maintenance workers, mechanics and child care workers.

**Figure 14: Vacancies by Education**



**Figure 15: Reported Average Wage Ranges by Education**

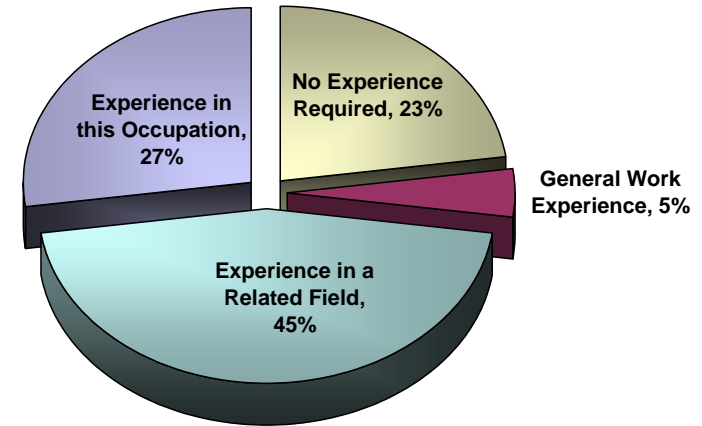


On average, employers add a premium to pay scales when requiring higher levels of education (*Figure 15*). Results from this survey follow the trend with the highest reported wages found within the Bachelor's and Advanced Degree categories.

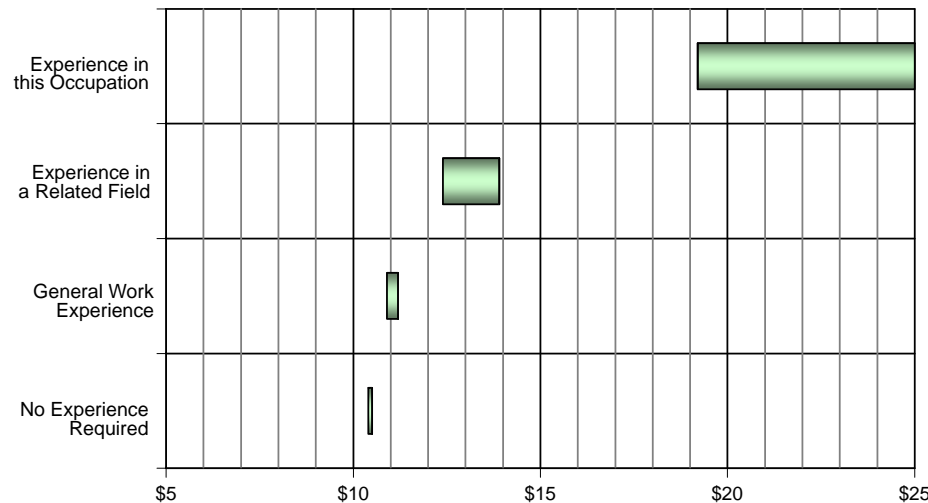
Employers require the applicant to have experience in a related field or in the occupation for 72% of all vacancies. However, 23% of all vacancies do not require experience at all. Many vacancies requiring experience are for more skilled positions such as physicians, registered nurses, teachers, cooks, wait staff, and highway maintenance workers. Most of these vacancies are full-time positions and over half are open for more than 30 days. Last year at this time, 61% of all vacancies required experience in a related field or within the occupation while 33% did not require prior work experience.

As with increasing levels of education, employers are willing to pay higher wages for added experience. Vacancies requiring experience in a related field, the category most sought after by employers, are offered with an average minimum wage of \$12.40 per hour to start. Employers add a premium of almost \$7.00 per hour when requiring experience in the occupation. For this survey, higher wages are offered to those highly specialized in the health services sector as well as managers fulfilling both education and experience requirements.

**Figure 16: Vacancies by Experience**



**Figure 17: Reported Average Wage Ranges by Experience**





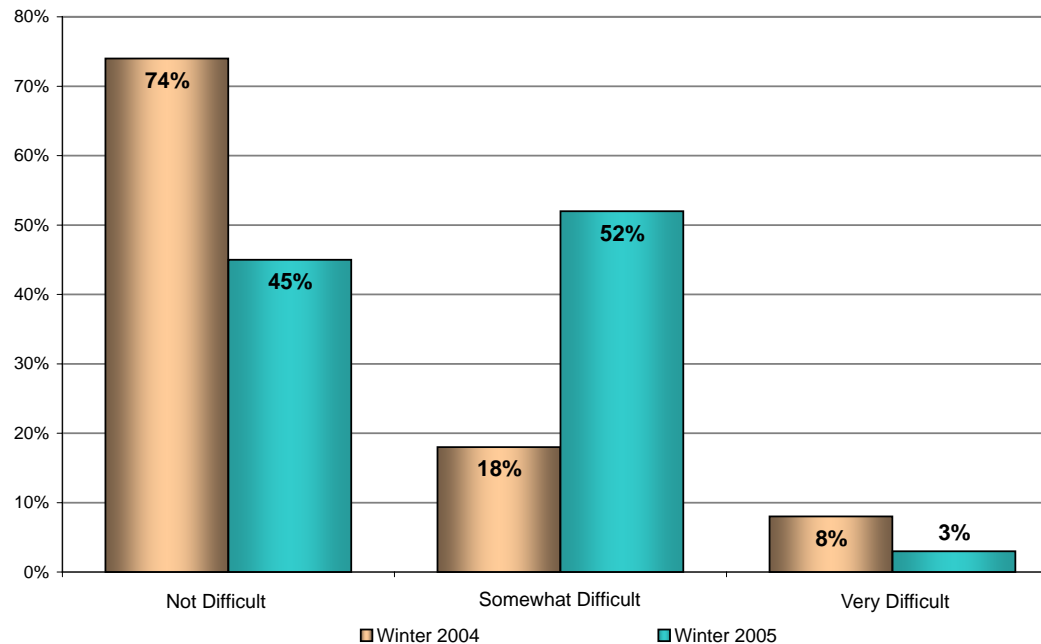
**To measure the level of difficulty in filling vacancies, employers' perception of difficulty, as well as data on how long each position had been open at the time of the survey, were gathered.**

Logically, with more individuals available for work, employers should find it a little easier to fill vacancies. Forty-five percent of all vacancies are reported to be not difficult to fill (*Figure 18*). Furthermore, employers report that 52% of all vacancies are somewhat difficult to fill and an additional 3% are very difficult to fill—a total of 55% associated with any level of hiring difficulty. This contrasts last winter's report where only 26% of all vacancies were considered as being associated with at least some level of difficulty. Many of the vacancies are in the health care services sectors and are generally difficult to fill due to the time required for potential applicants to complete the

necessary educational program. The increase in hiring difficulty could also be influenced by other factors. The improving economy and the ability to hire can create immediate vacancies in occupations that require education and training that applicants do not have at the time.

While it could be that the job seeker's skills do not match those required for the desired position, the vacancy duration could also be related to lower-than-expected wages or require a longer commute to work. The inconsistency in the perceptions of difficulty to fill adds to the challenge of interpreting hiring difficulty. While some employers may consider a vacancy to be difficult to fill when it has been open for 30 to 60 days, others may consider a similar vacancy not difficult to fill given the same time frame.

**Figure 18: Vacancies by Difficulty to Fill**

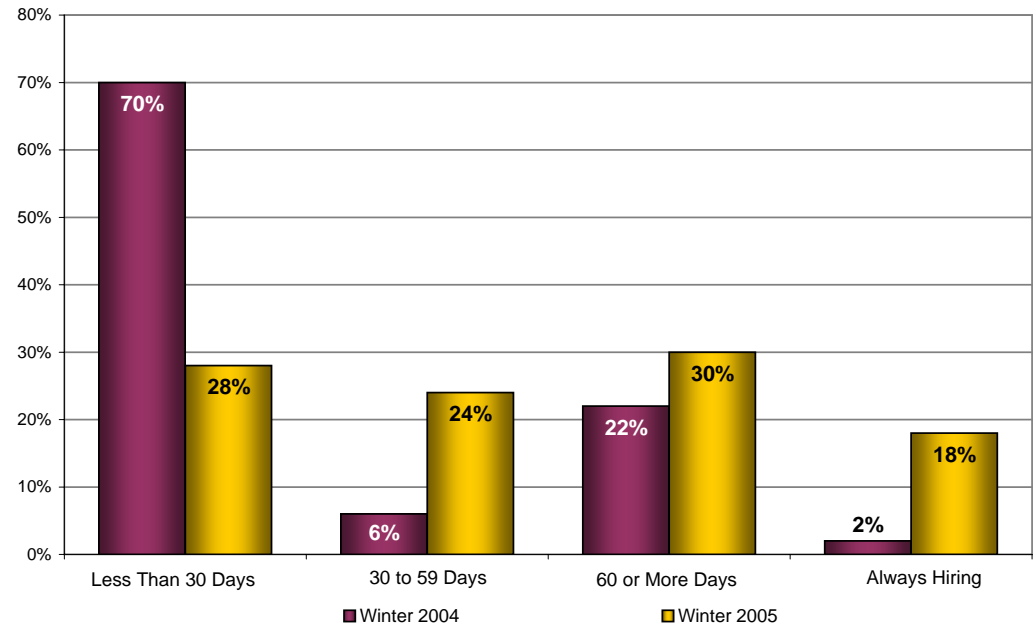


Knowing how long a position has been open helps better understand the response to the question about how difficult it is to fill a vacancy. However, in this survey, the duration of time that the vacancy has remained open is close to proportional in all categories. Twenty-eight percent of all vacancies are open less than 30 days compared to last year at this time when 70% were open for the same amount of time. Again, this could be due to the number of employers actually reporting on this aspect of the vacancy. Another 24% are open 30 to 59 days, and 30% of the vacancies are reported as open for 60 days or more. These vacancies are also found within more than one of these categories. For example, some registered nurse vacancies are open for less than 30 days, while others are always open for hire.

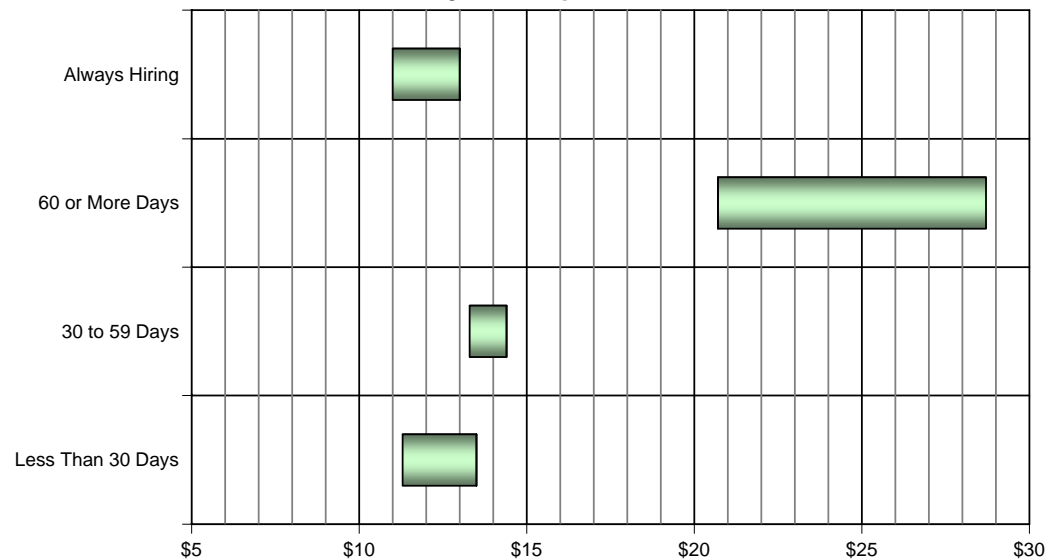
Vacancies considered not difficult to fill are offered with average wages lower than the overall average of \$15.50 per hour. Positions perceived to be somewhat difficult to fill add a premium that raises the average wage offered to just less than the region's overall average. Average wages offered are highest for vacancies considered very difficult to fill. This is due, in part, to the additional education and experience requirements for these positions.

Traditionally, higher wages are offered as the time a vacancy takes to fill increases. However, this survey shows that while high wages are offered for vacancies open 60 or more days, all other categories' reported wages are all just slightly lower than the overall average. In fact, all reported wages for vacancies other than those open for 60 or more days are approximately in the \$12 to \$14 range. The high wages offered to vacancies open for extended periods of time are usually due to the more stringent education and experience requirements in addition to the necessity in filling the position.

**Figure 19: Vacancies by Time Open for Hire**



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



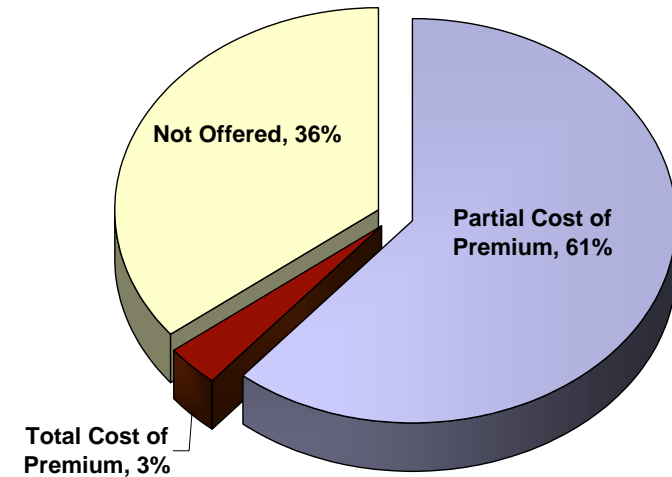
## Medical Insurance

Sixty-four percent of all vacancies include some form of medical insurance. Employers reporting the remaining 36% of the vacancies do not offer medical insurance. Vacancies for which employers pay the total cost of the premium are in both government and health care as bus drivers and emergency medical technicians. Vacancies offered with a partial cost of the premium paid are found in all occupational groups and within all JVS sectors. The average wage range offered for vacancies where the employer pays partial cost of the premium is \$15.60 to \$19.00 per hour, higher than the region's overall average for this survey. Wages offered to vacancies where the employer pays partial cost of the premium are lower than the region's overall average. Vacancies that do not include a medical insurance plan consist of those that require a range of education levels and are both full and part-time positions. Regardless of the education requirements, many do not require prior experience and are considered good entry-level positions in their respective industries.

## Sign-On Bonus

For this survey, no vacancies are offered with a sign-on bonus. This type of compensation is usually offered during a tight labor market when employers are using a variety of methods to attract potential applicants.

**Figure 21: Employers' Contribution to Medical Insurance**



**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 vacancy market, but when it comes down to filling a particular opening, the more detailed the information the better. Reporting vacancies at the individual occupation level is the most detailed information the survey can provide without breaking confidentiality with those employers who participated in the survey.

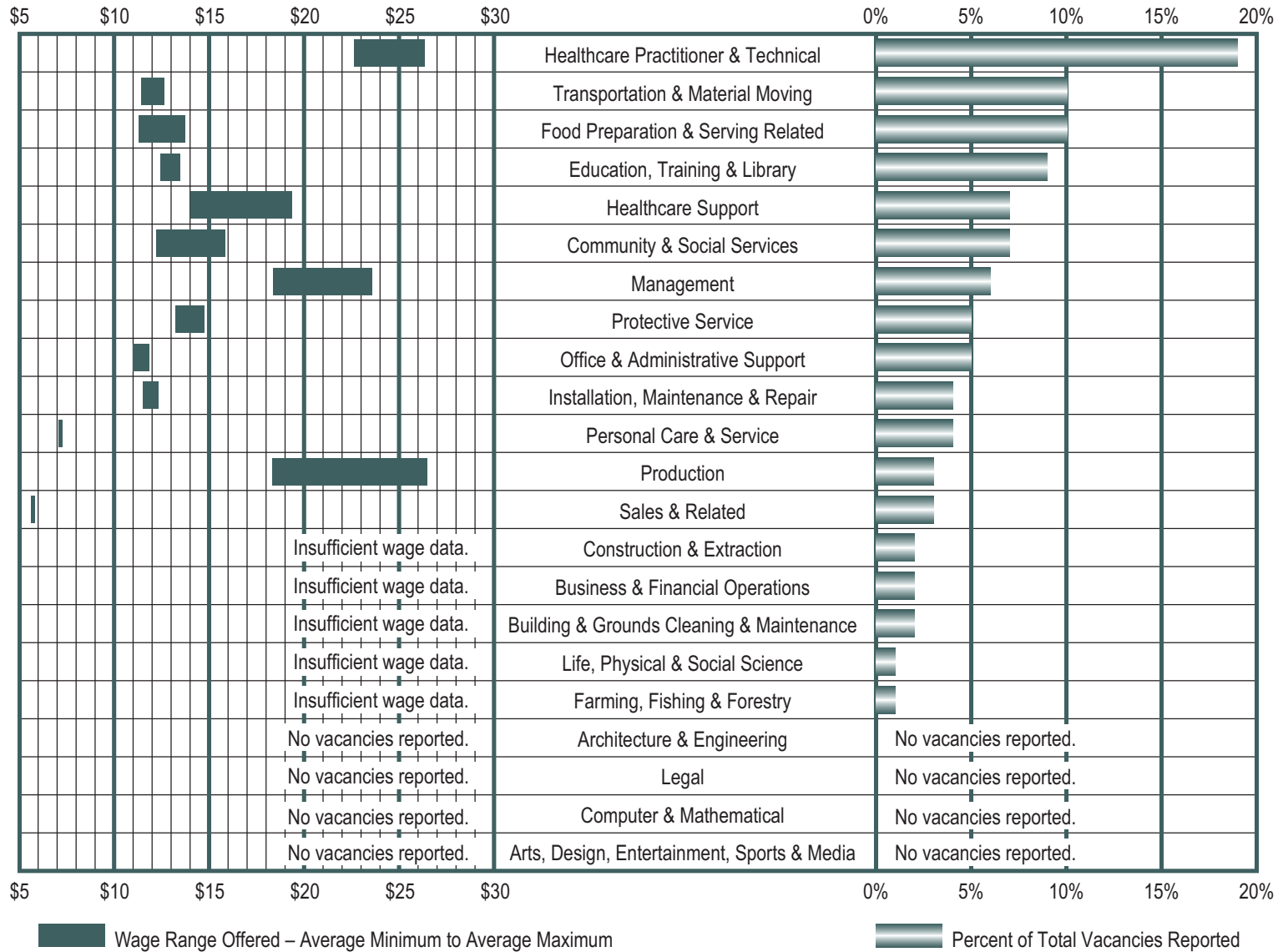
In order to help make comparisons between the results of this survey and other sources of employment statistics easier, all jobs reported are assigned an occupation code based on the *2000 Standard Occupational Classification (SOC) Manual* published by the Executive Office of the President, Office of Management & Budget. The SOC system contains 821 detailed occupation titles that fall into 23 major occupation groups.

Vacancies found in this survey were coded into 18 of the 23 major occupation groups. For the past five surveys, the occupational group reporting the highest number of vacancies has been Healthcare Practitioners & Technical. This survey period shows the same trend with the second highest proportion

of vacancies tied, with 10% each in the Transportation & Material Moving and Food Preparation & Serving Related occupational groups. Education, Training & Library and Healthcare Support remain among the top five occupational groups most in demand. The occupations least in demand are found in Farming, Fishing & Forestry and Life, Physical & Social Science. Proportions of vacancies found in popular occupational groups such as Construction & Extraction or Office & Administrative Support increase/decrease depending upon circumstances at the time of the survey. Currently, there are no reported vacancies in the following occupational groups: Architecture & Engineering; Legal; Computer & Mathematical; and Arts, Design, Entertainment, Sports & Media.

Survey results show that major occupational groups with the most vacancies are not necessarily the groups offered the highest wages. This indicates that vacancy characteristics other than the level of unfulfilled employer demand must influence wages. The occupational groups offering the highest wages in this survey—Healthcare Practitioner & Technical; Management; and Production—typically require high levels of education and experience. Healthcare Practitioners & Technical occupations consistently offer higher wages throughout all surveys conducted in the Upper Arkansas Region.

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



## 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. Approximately one-third of small to mid-size employers were contacted for the random sample, and likewise the occupations associated with these vacancies are listed.

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 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 occupational titles reported in the survey.

### Vacancies Found

The number of vacancies by occupation found 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 Central Colorado when available and statewide otherwise. Central Colorado includes the counties: Gilpin, Clear Creek, Park, Chaffee, Teller, Fremont, and Custer. Wage data was collected in 2002 and aged to 2003 using the Employment Cost Index (ECI). Complete descriptions of the OES survey and the ECI are available on the Internet at: <http://www.bls.gov/>.

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



Table 1: Occupations with Four or More Estimated Vacancies

					Occupational Employment Statistics Wage Data (2003)							
					Average Wages			Percentile Distribution				
SOC Code	SOC Occupational Title	Vacancies Estimated	Vacancies Found	Average JVS Wage	Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
29-1111	Registered Nurses	10	10	\$19.40	\$17.05	\$22.30	\$24.92	\$15.49	\$18.68	\$22.22	\$25.87	\$29.07
41-2011	Cashiers	8	3	\$5.70	\$6.13	\$8.08	\$9.05	\$5.87	\$6.57	\$7.68	\$8.77	\$11.09
53-3022	Bus Drivers, School	7	7	\$11.70	\$7.93	\$11.89	\$13.87	\$6.33	\$9.87	\$12.21	\$14.49	\$16.68
43-6014	Secretaries, Except Legal, Medical, and Executive	5	2	\$11.50	\$7.49	\$11.51	\$13.53	\$6.91	\$8.37	\$10.90	\$13.77	\$18.07
43-4171	Receptionists and Information Clerks	4	1	†	\$6.90	\$9.53	\$10.84	\$6.33	\$7.50	\$9.23	\$11.80	\$13.29
35-3031	Waiters and Waitresses	4	2	\$5.20	\$6.06	\$6.36	\$6.52	\$5.53	\$5.81	\$6.26	\$6.72	\$7.02
35-2012	Cooks, Institution and Cafeteria	4	3	\$10.20	\$6.77	\$9.25	\$10.49	\$6.18	\$7.39	\$9.26	\$10.83	\$12.65
31-1012	Nursing Aides, Orderlies, and Attendants	4	4	\$16.70	\$6.99	\$9.33	\$10.51	\$6.41	\$7.71	\$9.42	\$10.87	\$12.63
‡ 25-2022	Middle School Teachers, Except Special and Vocational Education	4	4	\$11.80	\$26,867	\$35,932	\$40,465	\$25,414	\$28,412	\$34,311	\$43,392	\$50,821
* 39-9021	Personal and Home Care Aides	4	3	†	\$7.14	\$8.50	\$9.18	\$6.66	\$7.49	\$8.42	\$9.58	\$10.61

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

continued

## Occupational Employment Statistics Wage Data (2003)

Table 2: Occupations with Fewer than Four Estimated Vacancies

SOC Code	SOC Occupational Title	Average Wages			Percentile Distribution				
		Entry-Level	Overall	Experienced	10th	25th	50th	75th	90th
* 11-3011	Administrative Services Managers	\$18.69	\$32.10	\$38.81	\$16.87	\$21.70	\$29.44	\$39.27	\$50.67
49-3023	Automotive Service Technicians and Mechanics	\$7.77	\$14.32	\$17.60	\$6.61	\$9.00	\$11.85	\$19.22	\$25.89
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	\$13.24	\$17.47	\$19.58	\$12.27	\$13.97	\$16.28	\$19.57	\$26.55
* 29-2031	Cardiovascular Technologists and Technicians	\$11.92	\$17.93	\$20.93	\$10.70	\$13.42	\$17.36	\$21.69	\$27.05
39-9011	Child Care Workers	\$6.05	\$7.39	\$8.05	\$5.60	\$6.00	\$6.67	\$8.57	\$10.84
33-3012	Correctional Officers and Jailers	\$14.31	\$18.94	\$21.25	\$13.36	\$16.01	\$19.16	\$22.25	\$25.29
35-9021	Dishwashers	\$6.05	\$6.85	\$7.25	\$5.63	\$6.07	\$6.80	\$7.82	\$8.45
‡ 11-9032	Education Administrators, Elementary and Secondary School	\$49,055	\$57,402	\$61,576	\$45,268	\$51,023	\$56,849	\$62,704	\$73,750
* 49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	\$15.97	\$22.25	\$25.39	\$14.38	\$18.23	\$22.82	\$26.40	\$30.36
* 13-1061	Emergency Management Specialists	\$19.44	\$31.28	\$37.19	\$17.25	\$22.39	\$32.59	\$40.16	\$45.14
29-2041	Emergency Medical Technicians and Paramedics	\$9.60	\$13.89	\$16.04	\$7.72	\$11.68	\$13.43	\$16.88	\$20.65
43-6011	Executive Secretaries and Administrative Assistants	\$11.34	\$17.16	\$20.07	\$10.22	\$12.75	\$17.11	\$20.79	\$24.59
29-1062	Family and General Practitioners	\$36.42	\$41.61	\$44.20	\$34.41	\$36.99	\$40.54	\$44.09	\$56.01
45-2093	Farmworkers, Farm and Ranch Animals	\$5.89	\$7.41	\$8.17	\$5.63	\$6.20	\$7.33	\$8.34	\$9.65
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	\$15.47	\$22.25	\$25.64	\$14.13	\$17.31	\$20.89	\$25.37	\$31.37
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	\$7.62	\$11.04	\$12.75	\$7.18	\$8.40	\$10.23	\$13.95	\$16.67
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	\$7.37	\$9.41	\$10.44	\$7.06	\$7.70	\$8.77	\$10.70	\$12.01
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	\$13.91	\$19.83	\$22.79	\$12.62	\$15.75	\$20.59	\$24.56	\$26.60
* 47-4051	Highway Maintenance Workers	\$12.49	\$16.49	\$18.50	\$11.64	\$13.82	\$17.08	\$19.60	\$21.17
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$6.49	\$9.45	\$10.94	\$6.05	\$6.98	\$9.00	\$11.30	\$13.70
51-6011	Laundry and Dry-Cleaning Workers	\$6.09	\$9.47	\$11.17	\$5.81	\$6.48	\$8.30	\$12.50	\$15.46

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

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
* 25-4021	Librarians	\$15.36	\$21.90	\$25.17	\$14.30	\$17.25	\$21.32	\$26.68	\$31.75
29-2061	Licensed Practical and Licensed Vocational Nurses	\$11.60	\$14.02	\$15.23	\$11.15	\$12.16	\$13.86	\$16.07	\$17.39
11-9199	Managers, All Other	\$21.45	\$33.79	\$39.95	\$17.36	\$25.36	\$31.37	\$38.28	\$42.95
11-9111	Medical and Health Services Managers	\$20.67	\$28.88	\$32.98	\$17.39	\$23.50	\$27.27	\$34.23	\$42.49
21-1014	Mental Health Counselors	\$13.93	\$17.36	\$19.08	\$12.96	\$15.06	\$16.92	\$20.31	\$22.97
* 53-3099	Motor Vehicle Operators, All Other	\$7.22	\$12.61	\$15.30	\$6.46	\$8.21	\$11.61	\$17.07	\$19.85
* 31-2011	Occupational Therapist Assistants	\$13.10	\$16.03	\$17.49	\$12.26	\$13.95	\$16.04	\$18.09	\$20.55
43-9061	Office Clerks, General	\$6.20	\$9.89	\$11.73	\$5.92	\$6.71	\$9.07	\$11.90	\$15.71
* 31-2021	Physical Therapist Assistants	\$11.47	\$15.58	\$17.64	\$9.10	\$13.50	\$15.83	\$17.98	\$20.95
* 29-1069	Physicians and Surgeons, All Other	\$35.47	\$65.42	†	\$27.56	\$45.29	\$57.54	†	†
* 33-9099	Protective Service Workers, All Other	\$7.10	\$11.33	\$13.45	\$6.58	\$7.89	\$10.49	\$12.72	\$18.17
* 29-2054	Respiratory Therapy Technicians	\$9.72	\$15.02	\$17.66	\$8.20	\$11.64	\$15.48	\$18.14	\$21.28
‡ 25-2031	Secondary School Teachers, Except Special and Vocational Education	\$28,483	\$36,486	\$40,487	\$26,079	\$30,203	\$35,294	\$43,300	\$49,709
11-9151	Social and Community Service Managers	\$11.98	\$23.88	\$29.82	\$10.81	\$13.50	\$27.70	\$33.32	\$35.97
21-1093	Social and Human Service Assistants	\$9.79	\$12.36	\$13.65	\$9.26	\$10.10	\$11.67	\$14.42	\$16.82
* 21-1011	Substance Abuse and Behavioral Disorder Counselors	\$9.95	\$13.73	\$15.62	\$9.41	\$10.87	\$13.01	\$16.18	\$19.70
53-3033	Truck Drivers, Light or Delivery Services	\$9.28	\$15.98	\$19.33	\$9.03	\$10.09	\$12.79	\$24.33	\$26.79

\* OES wages reported for Colorado statewide

† insufficient wage data available

‡ annual wage data

**G**overnment agencies employ 35% of the Upper Arkansas workforce, a larger share than any other JVS sector. The Trade, Transportation, Utilities & Other Services JVS sector employs the second largest share of the region's workers (18% of the region's workforce), only half of the number employed in the Government sector. For this winter survey, Government also ranks first in the number of vacancies, with 52% of the area's open positions at this time.

Since the Colorado Department of Labor & Employment began keeping track of employment information using the North American Industrial Classification System in 2001, state, local and federal Government has continually employed a large portion of the region's employment. In the first quarter of 2004 there were about 4,900 government employees working in Fremont County, with an additional 1,500 in Chaffee. Forty-nine percent of all government employees in the region (all four counties) are in local government, which include city and county agencies. Thirty-four percent work in federal government while only 17% are in state government.

Large employers include the school districts, parks and recreation, and City & County offices in addition to correctional facilities. Vacancies within

the school districts include administrators and both middle and secondary school teachers. While vacancies currently exist for correctional officers, cafeteria cooks, and various office-related positions, many of the government vacancies for this report are healthcare-related. This includes positions such as physicians, surgeons, family practitioners, registered nurses, and other highly specialized psychologists and social workers. Vacancies are also found as medical managers, librarians, secretaries, bus drivers, and highway maintenance workers.

Twenty-five percent of all Government vacancies in this report offer annual wages at approximately \$50,000 with some nearing or topping \$100,000 annually. An additional 25% of the Government vacancies offer annual wages ranging \$30,000 to \$40,000 and the remaining 50% of vacancies are offered at less than \$30,000. With all vacancies in this sector, an increased level of education is associated with an increase in wages offered. Eighty-seven percent of the Government vacancies require either experience in the occupation or in a related occupation. Teachers and bus drivers are reported to be part-time vacancies while all others are full-time job opportunities.

**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](http://www.coworkforce.com/lmi/oeo/oeo.htm). Projections highlight growing as well as declining occupations. Public officials, educational institutions, and Government agencies can use this survey information to effectively apply resources to education, training, and job placement programs. Investments in the workforce can be directed toward occupations or industries that continuously contribute to the local economy or to those where there is a constant need for workers.

## Economic Developers

Economic development professionals can use the Job Vacancy Survey to track the labor situation in key industries and evaluate the area's labor needs. The survey results help determine where bottlenecks may occur should current vacancies persist. Economic developers can also generate a comprehensive picture of the region by determining where labor demand stands today, as identified by the survey, and where the local market is trending using Labor Market Information's employment projections.

## Caveats

**The Job Vacancy Survey uses sampling methods to estimate overall 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 44% of the employment in the region is found in large and government employers that make up only 3% of the total number of firms. Conducting a census of these entities allows us to cover a large portion of the region's employment while contacting relatively few entities.



## Survey Sample

The Upper Arkansas Region Survey was conducted from January 3rd through 12th, 2005. 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 51% 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 52% of the employment in the sample frame, while private industry employers make up the remaining 48%. Large firms account for 33% 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 67% of private industry employment.

The margin of error for the overall vacancy estimate is plus or minus 5% or about five vacancies at a .95 certainty level. In other words, in 95 out of 100 samples taken, the actual number of vacancies in the region will be between 128 and 138 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 88%. 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.

In the Upper Arkansas 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 27.

Upper Arkansas Region JVS Sectors	include → NAICS Sectors
<b>Goods-Producing</b>	Agriculture, Forestry, Fishing & Hunting Mining Construction Manufacturing
<b>Trade, Transportation, Utilities &amp; Other Services</b>	Utilities Wholesale Trade Retail Trade Transportation & Warehousing Other Services (except Public Administration)
<b>Information, Financial Activities &amp; Professional &amp; Business Services</b>	Information Finance & Insurance Real Estate & Rental & Leasing Professional, Scientific & Technical Services Management of Companies & Enterprises Administrative & Support & Waste Management & Remediation Services
<b>Education &amp; Health Services</b>	Educational Services Health Care & Social Assistance
<b>Leisure &amp; Hospitality</b>	Accommodation & Food Services Arts, Entertainment & Recreation
<b>Government</b>	Public Administration

## Data Collection

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

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

Employers are asked if they have job vacancies or open positions which they are actively seeking to fill. Those that are actively hiring are then asked to provide more detail about each position—compensation offered, levels of education and experience required, and the employer’s perceived difficulty in filling the vacancy along with the number of days the position has been 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 purposes<sup>1</sup>. 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 Committee<sup>2</sup>. Government agencies from the United States, Mexico and Canada<sup>3</sup> 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.

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

<sup>2</sup>ECPC 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

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

**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

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

#### **Average Maximum Wage**

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

#### **Average Minimum Wage**

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

#### **Computer Assisted Telephone Interviewing (CATI)**

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

#### **Cooperation Rate**

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

#### **Educational Attainment**

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

#### **Effective Response Rate**

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

#### **Employed Persons (Employment)**

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

- a) did any work at all (at least one hour) as paid employees, worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family, and

- b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs.

#### **Employer**

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

#### **Full-time Employee**

Employees who usually work 35 hours per week or more.

#### **Goods Producing Industries (NAICS)**

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

#### **Industry**

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

#### **Job Seeker**

A person actively looking for employment or researching career options.

#### **Job Vacancy**

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

#### **Job Vacancy Rate**

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

#### **Labor Force**

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

#### **Medical Insurance**

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

#### **Medical Insurance Premium**

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

**North American Industry Classification System (NAICS)**

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

**Not Seasonally Adjusted**

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

**Occupation**

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

**Part-time Employee**

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

**Percentile Wage Estimate**

Shows what percentage of workers in an occupation earn less than a given wage and what percentage earn more. For example, a 25th percentile wage of \$15.00 indicates that 25% of workers (in a given occupation in a given area) earn at or less than \$15.00; therefore 75% of workers earn at or more than \$15.00.

**Permanent Employment**

A vacancy is classified as a permanent position if the employee is hired to be employed for more than six months.

**Sample**

A subset of the population selected for interview as a representative subset of the sample frame.

**Sample Frame**

A listing of all units in a population. For this report the sample frame includes employers with five or more employees; government entities are drawn from the Quarterly Census of Employment and Wages while private companies come from the ALMIS (America's Labor Market Information System) database.

**Seasonally Adjusted**

Seasonal adjustment removes the effects of events that follow a more or less regular pattern each year. These adjustments make it easier to observe the cyclical and other non-seasonal movements in a data series.

**Service Producing Industries (NAICS)**

Includes utilities; wholesale trade; retail trade; transportation and warehousing; information; finance and insurance; real estate and rental and leasing; professional, scientific, and technical services; management of companies and enterprises; administrative and support and waste management and remediation services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; other services (except public administration); public administration.

**Sign-on Bonus**

An additional financial incentive offered by a firm to a potential new employee to influence his/her decision to agree to employment with that firm. The bonus, for purposes of this survey, is a monetary lump sum.

**Standard Occupational Classification (SOC) System**

This system is used by all Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of over 820 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 23 major groups, 96 minor groups, and 449 broad occupations. Each broad occupation includes detailed occupations requiring similar job duties, skills, education, or experience.

**Temporary Employment**

A vacancy is classified as a temporary position if the employee is hired to be employed for six months or less.

**Unemployed Persons**

Persons 16 years of age and over who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the four-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

**Unemployment Rate**

The unemployment rate represents the number unemployed as a percent of the labor force.

**Wages**

Hourly straight-time wage rate or, for workers not paid on an hourly basis, straight-time earnings divided by the corresponding hours. Straight-time wage and salary rates are total earnings before payroll deductions, excluding premium pay for overtime and for work on weekends and holidays, shift differentials, and non-production bonuses such as lump-sum payments provided in lieu of wage increases.





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