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 Job Vacancy Survey Winter 2003

## Western \&

 Southwest Region Job Vacancy SurveyConducted<br>January 17-29, 2003

## State of Colorado

Bill Owens, Governor

## Colorado Department of Labor \& Employment

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Figure 1: Colorado Job Vacancy Survey Regions


The unemployment rate, along with the level and growth rate of employment, has been used as an indicator of labor market conditions for decades. While this indicator provides information about changes in the supply and demand for labor, it reveals nothing about the skills most sought after by employers. As such, individuals preparing themselves for the job market have done so with limited knowledge of what skills are necessary to successfully compete in the contemporary labor market. Employers have had an equally difficult time determining appropriate compensation levels due to a limited knowledge of what similar firms in their region are currently offering.

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

## Introduction

## to the Colorado Job Vacancy Surveys

The CDLE's survey unit collects original data by conducting phone interviews with a representative sample of employers in a given region. The department's economists analyze the raw data, estimate the number of vacancies in the area and publish the report within weeks of the original data collection, providing a timely portrait of the employment situation.

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

## Executive Summary

The fourth Western \& Southwest Job Vacancy Survey was conducted from January 17th through January 29,2003 . The goal of the survey is to provide current information on the demand for workers so that employers, job seekers, economic developers, educators and workforce centers can make more informed decisions in the Western \& Southwest Region.

A random sample of small to mid-size private employers with at least five employees were contacted over the survey period. Additionally, the Colorado Department of

Labor and Employment (CDLE) survey unit attempted to interview all large employers and Government entities with at least five employees in the region. Employers were asked if they were actively hiring at the time of the survey and a variety of questions about the positions that they were seeking to fill.

A total of 1,154 employers, representing approximately $43 \%$ of the region's total employment, responded to the survey. Out of these, 137 were government agencies, 56 were large employers and 961 were small to mid-sized entities. The survey had a $76 \%$ response rate and a $98 \%$ cooperation rate. The margin of sampling error for the overall result is plus or minus $5 \%$ or about 30 vacancies. The major findings of the report are as follows:

- An estimated 577 jobs were open for immediate hire in the region during the survey period, down from 850 a year ago.
.Page 3
- The unemployment rate for January 2003 was $6.0 \%$ compared to $6.3 \%$ in January 2002....Page 5
- The overall average wage offered by surveyed employers is $\$ 10.30$ per hour ............Page 8
- Office and Administrative Support occupations account for almost 20\% of all vacancies

Page 16

- One-hundred ninety seven vacancies are estimated to be open in the Leisure and Hospitality industry group, the most in any industry .Page 7
- Government and large private employers offer higher wages than small to mid-size private employers ........................................................................................................................Page 9
- Over $40 \%$ of the vacancies require at least a high school diploma or GED
.Page 11
- Employers find open positions less difficult to fill than in last year's survey and vacancies have been open for shorter periods of time

Page 13

- Sixty percent of vacancies offer medical insurance with most of them offering to pay a portion of the policy premium

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- Less than $2 \%$ of vacancies offer a sign-on bonus .......................................................Page 15
- Management occupations offer the highest wages while Farming, Fishing \& Forestry occupations offer the lowest average wages $\qquad$ .Page 16

The Western \& Southwest Region consists of Archuleta, Delta, Dolores, Gunnison, Hinsdale, La Plata,
Montezuma, Montrose, Ouray, San Juan, and San Miguel counties. The Demography Section of the Colorado Department of Local Affairs estimated the region's population at just over 170,000 people in July of 2001. La Plata, Montrose, Delta and Montezuma counties make up most of the region's population ( $77 \%$ ) as well as employment ( $74.8 \%$ ). The region employed 82,279 in January 2003 out of a labor force of 87,485 .

Since the first Western \& Southwest Job Vacancy Survey was conducted in the summer of 2001, the number of estimated vacancies has decreased steadily. Although the seasonal nature of the labor market in the Western \& Southwest Region makes it difficult to directly compare the summer survey with the winter survey, it is clear that the drop from 1,500 vacancies in the summer of 2001 to 577 vacancies in the winter of 2003 suggests employers' hiring levels have declined. At the same time the number of people looking for work has increased. In January 2001 the unemployment rate was $5.0 \%$ and there were approximately 4,106 unemployed. In January 2003 the unemployment rate increased to $6.0 \%$ with a total number of 5,206 people unemployed.

Increased unemployment and fewer openings increase competition for job seekers in the Western \& Southwest Region, but they are not alone. This trend is occurring throughout the state and the nation as the U.S. economy struggles to sustain a weak economic recovery. Typically, economic recoveries are accompanied by large increases in output, increasing employment, decreasing unemployment and rising equity markets. Output - the total amount

## Western \& Southwest Region

Figure 2: Employment by County

of good and services produced in an economy, increased each quarter in 2002 preventing the economy from slipping into another recession, although most people do not feel that they are experiencing a growing economy. Fewer people are working in both the state and the nation, wages have increased only slightly and the stock market has not improved.

Many qualified candidates competing for open positions is good for employers looking to hire workers. At the end of the 1990s many employers found it difficult, if not impossible, to hire qualified people at wages they could afford. In the last two surveys employers had many candidates to choose from and found it easier to fill their vacancies.

Figure 3: Vacancies - Last Four Western \& Southwest JVS


Figure 4 shows a 6-year history of both the region's labor force and employment levels between January 1997 and January 2003. Several conclusions may be drawn from this graph:

- The rising trend lines demonstrate that both labor force and employment levels in the region have grown since 1997.
The labor force of the Western \& Southwest Region has grown from 76,537 in January 1997 to 87,485 in January 2003, a $2.3 \%$ annual growth rate. Employment increased from 71,769 to 82,279 during the same period, also a $2.3 \%$ growth rate.


## - The graph illustrates unemployment.

Unemployment is the difference between the number of people in the labor force and the number employed. A person is in the labor force if he/she is either currently working or looking for work. The wider gap between the two lines indicates more people are unemployed. In January 1997 there were 5,121 unemployed compared to 5,206 in January 2003. During the same period the unemployment rate dropped from $6.7 \%$ to 6.0 . How can unemploy-
ment increase and the unemployment rate decrease? The unemployment rate is the percentage of the labor force that is unemployed. While unemployment has increased, the labor force has increased at a faster rate.

- Figure 4 demonstrates the region's seasonal trend. Both employment levels and the labor force peak in the middle of the summer and bottom out in the middle of winter. The Job Vacancy Survey is conducted semi-annually in the middle of winter and summer in order to measure the demand for labor at both high and low employment periods.

Surveys conducted in summer represent the demand for labor at a time when employers are nearing peak employment, yet are still in the process of actively recruiting. Vacancies found in winter represent the demand for labor at a time of year when employment is at its seasonal low. A study in winter tells of the type of occupations in demand even when employment is at a traditionally low point of the year.

Figure 4: Employment \& Labor Force Trends in the Western \& Southwest Region


[^0]Over the last six years the unemployment rate has decreased from $6.7 \%$ to $6.0 \%$. Over that period the rate peaked at $7.2 \%$ in February and May of 1998 and bottomed in September of 2001 at $3.4 \%$. The current $6.0 \%$ unemployment rate is higher than in January of 2001, but has decreased from 6.3\% in January of 2002.

The month to month changes of the unemployment rate are less accurate and important than the overall pattern of the unemployment rate over several years. Within a six month period or even a year (July 1998 to July 1999 is a good example), the unemployment rate moves somewhat erratically. Over several years, however, trends in the unemployment rate can clearly be identified. It is the general employment and unemployment trends that the unemployment rate accurately measures.

Figure 5: Western \& Southwest Region Unemployment Rate Trend


Source: CDLE, Local Area Unemployment Statistics


Source: CDLE, Local Area Unemployment Statistics

The overall unemployment rate in the Western \& Southwest region is slightly higher than the statewide rate of $5.9 \%$. Hinsdale County has the lowest unemployment rate at $1.3 \%$ while San Juan County has the highest at $19.6 \%$. Because both counties have a very small labor force, less than 500 people, a small change in the number of unemployed has a large effect on the unemployment rate. San Juan County has 51 more people unemployed than Hinsdale County. Of the larger counties in the region, Montezuma has the highest unemployment rate and La Plata has the lowest.

Figure 7 depicts the distribution of employers and employees in the same industries in which job vacancies are measured. The industry groups are based on 2002 manual of the North American Industry Classification System (NAICS), which is being used in the Job Vacancy Survey for the first time in 2003. Switching to a new classification system will allow the survey to present vacancies in a more relevant, detailed manner that better reflects today's service based economy ${ }^{1}$.

Government employs more people in the Western \& Southwest Region than any other industry. Trade,

Transportation, Utilities, and Other Services employs the second largest number of people and has the largest number of firms. The majority of employment in this industry group comes from retail trade which includes retail stores, car dealerships, grocery stores and gas stations. The Leisure and Hospitality industry, which is closely linked to tourism, is the third largest industry in the region. One of the advantages of the new NAICS classification system is that it will allow in-depth study and reporting of the tourism industry in the region.

Figure 7: Western \& Southwest Employers \& Employees, 1st Quarter, 2002


Source: Colorado Employment and Wages, (ES-202)
${ }^{1}$ For more information on the industry changes please see "An Explanation of the North American Industry Classification System" in the Appendix.

During the survey period, an estimated 577 vacancies were open for immediate hire with firms having at least 5 employees in the Western \& Southwest Region. The total number of estimated vacancies dropped from 850 found in the Winter 2002. Both surveys were done during the same week in January using similar methods. While the drop in vacancies may suggest a decline in hiring activities in line with the general weak economic recovery nationwide, one needs to keep in mind that the Job Vacancy Survey provides a snapshot of the demand for labor at the time of the survey.

The region's estimated vacancy rate is $.9 \%$, meaning that there were approximately 9 vacancies in the survey for every 1,000 positions. The overall vacancy rate is calculated by dividing the estimated number of vacancies by the total of the estimated number of vacancies and total employment. The demand for labor is composed of people currently employed plus all of the open positions that employers want to fill. The results of this survey as well as current employment numbers suggest that the demand for workers has decreased in the region.

The total and industry-specific vacancy rates are two of the most important pieces of information that the Job Vacancy Survey produces. Because of the switch to the North American Industry Classification System it will be impossible to compare the industry vacancy rates for several years. Also, the survey has only been conducted for two years so it is difficult to determine exactly what an overall vacancy rate of $.9 \%$ tells us about the demand for workers in the economy. Watching the change in the vacancy rates through several economic expansions and contractions will help to better gauge the level of demand for labor. When several years of Job Vacancy Survey results are available the vacancy rate will become a telling indicator of the demand for additional workers, much as the unemployment rate serves as a telling measure of the supply of available workers.

Figure 8 demonstrates that the majority of the openings occur in the Leisure and Hospitality industry group. Education and Health Services and Trade, Transportation, Utilities, and Other Services also have many vacancies. Figure 8 also includes the overall average wage offered in each industry. Government agencies and Education and Health Services offer the highest wages, while Leisure and Hospitality and Trade, Transportation, Utilities, and Other Services offer the lowest.

## Vacancies

## Industry, Size and Status

Figure 8: Estimated Vacancies and Average Wages by Industry Group


The amount of employment in an industry does not solely predict the number of vacancies found in that industry. For example, while Government has the highest employment of any industry group, it has relatively few vacancies. On the other hand, the smallest amount of employment is in Education and Health Services yet a large number of vacancie are in that industry. The large number of vacancies in Education and Health services and the relatively few vacancies in Government suggest that the number of vacancies has a lot to do with an industry's particular economic situation and not just its size. Throughout the state and country there is a huge demand for registered nurses and other healthcare professionals. Although almost a fourth of all employment in the region is government related, declining tax revenues are forcing government agencies to hire fewer workers.

The differences in demand among industries illustrates why conducting a job vacancy survey is so important. People in the Western \& Southwest Region need to know which industries are demanding many new workers and which industries are not.

Because wages vary according to an individual's qualifications, employers were asked to provide the range of wages offered for their vacancies. The average wage is then calculated based on the mid-point of that range. The overall average wage offered for all vacancies in the region is $\$ 10.30$ per hour.

While wages do reflect the labor force supply and demand they are also heavily affected by the particular occupations that employers are looking to fill during the survey period. Given that the type and distribution of vacancies found this year is different from a year ago it is difficult to determine whether the increase in the overall wage is due to the occupational mix or to an actual
increase in the wage level. The former scenario is more likely than the latter, but as more Job Vacancy Surveys are conducted over time in the region it will be easier to answer this question.

On average employers in Government and Education and Health Services offer the highest wages. The open positions in Government and Education and Health Services tend to require more skill, education and experience. Leisure and Hospitality as well as Trade, Transportation, Utilities, and Other Services offer the lowest wages. Open positions in these industries tend to require low skills, education and experience.

Figure 9: Reported Average Wage Ranges by Industry Group


Most vacancies are found in the small to mid-size ( 5 to 99 employees) category. Large employers and Government agencies combined make up $34 \%$ of the vacancies.

Does this imply that job seekers should target small to mid-size firms? Not necessarily. It is important to consider that while large firms (private firms with 100 or more employees) make up only $1 \%$ of all firms in the region, they have a large number of vacancies per employer. Overall, there are more vacancies in small to mid-size firms, but because they make up such a large proportion of all firms, there are actually fewer vacancies per employer than with Government or large employers. There are 2.2 vacancies per large private employer, 0.4 vacancies per Government entity and 0.1 vacancies per small to mid-size employer.

Figure 10: Estimated Vacancies and Average Wages by Employer Size


When considering the relative demand for new employees across size classifications it is best to turn to vacancy rates. Large employers have an average vacancy rate of $1.2 \%$, small to mid-size employers $.9 \%$ and Government
$.5 \%$. Thus, relative to their overall employment numbers, large private employers are hiring more than twice as many positions as Government.

Figure 11: Reported Average Wage Ranges by Employer Size


Large employers and Government agencies offer higher wages than small to mid-size firms. The particular occupations found in a size class play a major role in determining the average wage in that category. The vast majority of healthcare related occupations are found in the large size category. Government agencies are dominated by: Education, Training and Library; Management; and Office and Administrative Support occupations. These relatively high paying positions push up the average wages. The most prominent occupational group in the small to mid-size category is Food Preparation and Serving Related with an average wage of $\$ 7.10$ per hour.

The total vacancy estimate, vacancies by industry, and vacancies by size class are gathered by asking employers whether or not they are currently hiring and if so, how many positions they are looking to fill. The survey is designed to produce representative and unbiased estimates for these categories. The rest of the information in the survey describes the characteristics of those vacancies. This information is detailed and unique to this survey. Thus, it is important to point out that these characteristics are not estimated or representative of all the employers in the region. Because CDLE contacts all government agencies and large employers in the region this information is heavily influenced by these two groups. The vacancy characteristics are important and useful but the reader should keep in mind that they may not adequately represent what is being demanded by small to mid-size employers.
Statistical methods will be explored to try and minimize this bias in the future.

Eighty-six percent of the vacancies reported are permanent employment opportunities. Sixty-six percent are fulltime/permanent positions, $20 \%$ are part-time/permanent positions. Fourteen percent of the vacancies are temporary positions, $6 \%$ full-time and $8 \%$ part-time.

The distribution of vacancies across employment status categories has remained consistent throughout the four

Figure 12: Vacancies by Employment Status


Western \& Southwest Job Vacancy Surveys. It will be interesting to see if this pattern continues as the labor market once again tightens. If it does, then it is likely that economic and labor market cycles have little effect on whether employers favor permanent or temporary, parttime or full-time workers in this region.

Figure 13: Reported Average Wage Ranges by Employment Status

by the productivity or value of an employee. The types of positions that are hired full-time/permanent are also generally in occupations that require higher levels of skill, education and experience. The higher the worker's skill, education and experience, the higher the employee's value. This view is supported by the fact that certain occupational groups figure predominantly in certain status categories.

Almost all of the vacancies found in Healthcare Practitioners and Technical occupations, as well as those found in the Office and Administrative Support are for fulltime/permanent positions. The vacancies making up the part-time/temporary group are in: Arts, Design, Entertainment, Sports, and Media; Personal Care and Service; and Protective Service occupations. Many of the full-time/temporary vacancies are in the Food Preparation and Serving Related occupations.

The majority of economic reporting treats all workers as if they are part of the same labor market. For example, if the unemployment rate is high, one might assume there are plenty of qualified candidates and no job openings. The reality is that even in recessions there are many employers who cannot find qualified candidates for their open positions. It is important, therefore, that job seekers have information regarding what education and experience levels are in highest demand.

Over $40 \%$ of the vacancies in the survey require at least a high school diploma or GED and $22 \%$ require vocational training or certification. In the last two job vacancy surveys $18 \%$ of the vacancies have no diploma requirements; down from $33 \%$ and $43 \%$ in the first two surveys. It could be that as job vacancies have decreased and unemployment has increased, employers are demanding higher levels of education believing they can still fill their open positions. Until more surveys are conducted it is difficult to determine if this is the case.

## Vacancies

## Education and Experience Requirements

Figure 14: Vacancies by Education


Generally, the higher the education required for a position, the higher the wages offered. It is important for people considering whether or not to continue their education to have an idea of how it will affect their wage. Bachelor's degrees command on average between
$\$ 20.00$ and $\$ 25.20$ an hour in this survey, while a high school diploma or GED command on average between $\$ 7.20$ and $\$ 8.40$ an hour. While obtaining higher levels of education is expensive and difficult, the difference in pay offers a powerful incentive.

Figure 15: Reported Average Wage Ranges by Education


The majority of positions requiring no diploma are in Food Preparation and Serving Related and Personal Care and Service occupations. Office and Administrative Support occupations are most prevalent in the high school/GED category. Most healthcare related occupations require either vocational training/certification or a bachelor's degree while Management occupations require either a bachelor's degree or an advanced degree.

Employers demand a wide range of experience levels. Fifty-two percent of the vacancies require at least related experience to an occupation, while $48 \%$ of the vacancies require either no experience or general work experience.

Most of the vacancies for Food Preparation and Serving Related occupations require either no work experience or general work experience. Office and Administrative Support occupations require general work experience or experience in a related occupation. Almost all of the healthcare related vacancies require experience in a related field or experience in a particular occupation.

Figure 16: Vacancies by Experience


Positions requiring higher levels of experience generally pay higher wages. The primary reason for this is that workers with higher levels of experience are often

Figure 17: Reported Average Wage Ranges by Experience

more productive. Also, higher level positions such as a manager require related experience to be effective. In this survey, the average wage for positions requiring experience in a particular occupation is twice as high as for those with no experience requirement.

The most frequently reported occupational groups in each experience category are: no experience required-Sales and Related; general work experience-Food Preparation and Serving Related; experience in a related field-Healthcare Practitioner and Technical; experience in this cccupa-tion-Healthcare Practitioner and Technical.

The level of difficulty an employer experiences when filling a vacancy can vary dramatically depending on the nature of the individual vacancy as well as the prevailing labor market conditions. For example, finding a high level executive with the right qualifications is usually more difficult than a waiter or waitress. When jobs are plentiful and labor is in short supply, as it was in Colorado during the late 1990s, it may be difficult to fill vacancies no matter what the position. The composition of the currently available labor pool will also affect the difficulty employers experience when trying to fill vacancies. The availability of candidates suited to fill a vacancy requiring a specific skill set is not always sufficient to meet all of the region's demand. If employers are finding the same positions difficult to fill one survey after another, then local education and training institutions may want to design programs that try to meet that demand.

In addition to asking employers about their perceived difficulty in filling vacant positions, the Job Vacancy Survey also measures the amount of time for which employers have been actively recruiting for positions. This additional information allows readers to make better judgments regarding the difficulty employers are experiencing than if the survey relied wholly on employers' opinions.

Employers are finding it easier to hire qualified workers in this survey than in the winter of 2002. In comparing the Winter 2002 JVS with the Winter 2003 JVS:

- The proportion of vacancies reported as very difficult to fill dropped from $23 \%$ to $13 \%$.
- Openings reported as somewhat difficult to fill dropped from $34 \%$ to $29 \%$.


## Difficulty to Fill and Time Open for Hire

Figure 18: Vacancies by Difficulty to Fill


- Vacancies reported as not difficult to fill increased from $43 \%$ a year ago to $58 \%$ this winter.

Almost all of the Office and Administrative Support as well as Healthcare Practitioners and Technical occupations are considered not difficult to fill. Most of the Management occupations are at least somewhat difficult to fill.

How long a vacancy is open is indicative of the degree of difficulty an employer is having in filling the position. Factors include: the availability of qualified candidates; competition among employers for similar candidates; and the willingness of candidates to accept job duties considering wages and benefits offered. Also, employers may allow more time to fill a vacancy in order to ensure the fit of the candidate with the organization, or because there may be a limited number of qualified applicants.

In this survey, $50 \%$ of the vacancies have been open for less than 30 days and $27 \%$ of the vacancies have been open between 30 and 59 days. Only $8 \%$ of the vacancies have been open for more than 60 days.

Figure 19: Vacancies by Time Open for Hire


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


The survey found that positions open for longer periods of time often have higher associated wages. As higher wages usually accompany occupations that require specialized skills, it may take an employer longer to recruit and hire a candidate with the desired background.

The most prevalent occupations in the always hiring and open less than 30 days categories are Food Preparation and Serving Related occupations. Most of the vacancies in the Healthcare Practitioners and Technical occupations have been open more than 30 days.

## 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 childcare. One of the most important benefits offered to employees is medical insurance via an employer group plan. Employers may pay all, part of or none of the monthly insurance premium. How can an employer offer medical insurance and not pay for it? While this scenario is uncommon, employers can and do offer employees the opportunity to participate in their group medical insurance plans even though they do not contribute to the premium.

Sixty percent of the vacancies offer medical insurance in the Winter 2003 survey. In the last four surveys the percentage of vacancies offering medical insurance has remained fairly constant, between $60 \%-70 \%$. Of these, employers offer to contribute to the premium for the vast majority. Over $20 \%$ of the vacancies included payment of the entire medical insurance premium.

All of the vacancies offering medical insurance without paying any part of the premium are in the healthcare field. There are also many other vacancies in the healthcare field that offer to pay a portion of or the entire medical insurance premium. Most management positions offer to pay the entire medical insurance premium.

## Vacancies

## Additional Compensation

Figure 21: Vacancies by Employer's Contribution to Medical Insurance


## Sign-On Bonus

Two percent of the vacancies offer sign-on bonuses and almost all of those are in the healthcare field. In a labor market where unemployment rates are rising and job vacancies are decreasing few employers are offering sign-
on bonuses. When the labor market once again tightens it will be interesting to learn whether sign-on bonuses will again be frequently used as a recruitment tool.

## Occupations

The information reported in the Job Vacancy Survey is partly intended to provide job seekers and employers with useful and current information to help them make informed decisions about job hunting and hiring. 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 individual occupation level is the most detailed information the survey can provide without breaking confidentiality with participating employers.

To facilitate comparisons between the results of 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 results of the survey show that the most frequently occurring job vacancies do not necessarily offer the highest wages. This indicates that compensation for workers can be explained by the investigation of other vacancy characteristics. Occupations offering the lowest wages tend to be those typically requiring lower levels of education and experience. Occupational groups offering the highest wage in the survey are: Management; Legal; and Life, Physical, and Social Science.
Figure 22: Vacancies and Reported Average Wage Ranges by Major Occupational Groups


## High Demand Occupations

The most demanded occupations in the survey come from a wide variety of occupational groups. Stock Clerks and Order Fillers are in the Office and Administrative Support group, Registered Nurses are in Healthcare Practitioners and Technical and Cashiers are in the Sales and Related group.

The highest paying hot occupations are all in the Health Care Industry. According to this survey Medical and Health Services Managers are offered an average wage of $\$ 21.00$, Medical and Clinical Laboratory Technicians \$20.10, Licensed Practical and Vocational Nurses 15.70 and Registered Nurses \$15.20. Throughout the state Healthcare Practitioners and Technical Occupations are in high demand. People currently preparing to work in the healthcare field should feel confident they will be able to find employment and receive excellent wages.

## Wage Data

Table 1 and 2 contain a list of all the detailed 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. Almost one-third 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.

## 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. Those vacancies reported by small to mid-size employers are then added to the others as well as additional estimated vacancies. The additional estimated vacancies are based on the assumption that the vacancies by occupation in the region are distributed exactly like the filled positions in the region at the major occupational group level. Estimated vacancies by major occupational group are then distributed among the specific occupations reported in the survey.

## Vacancies Found

The number of vacancies by occupation found in the survey.

Figure 23: Top Hot Jobs

| SOC Occupation Title | Average <br> JVS Wage |
| :--- | :---: |
| Stock Clerks and Order Fillers | $\$ 7.90$ |
| Registered Nurses | $\$ 15.20$ |
| Cashiers | $\$ 7.20$ |
| Carpenters | $\dagger$ |
| Combined Food Preparation and Serving Workers, | $\$ 5.80$ |
| Including Fast Food | $\$ 7.50$ |
| Retail Salespersons | $\$ 6.10$ |
| Maids and Housekeeping Cleaners | $\$ 8.50$ |
| Industrial Truck and Tractor Operators | $\$ 7.70$ |
| Recreation Workers | $\$ 9.30$ |
| Nursing Aides, Orderlies, and Attendants | $\$ 9.20$ |
| Receptionists and Information Clerks | $\$ 5.70$ |
| Waiters and Waitresses | $\$ 21.00$ |
| Medical and Health Services Managers | $\dagger$ |
| Umpires, Referees, and Other Sports Officials | $\$ 11.60$ |
| First-Line Supervisors/Managers of Food | $\$ 10.50$ |
| Preparation | $\$ 7.30$ |
| Bookkeeping, Accounting, and Auditing Clerks | $\$ 6.60$ |
| Tellers | $\$ 11.90$ |
| Dining Room and Cafeteria Attendants and | $\dagger$ |
| Bartender Helpers | $\$ 15.70$ |
| Secretaries, Except Legal, Medical, and Executive |  |
| Maintenance and Repair Workers, General |  |
| Licensed Practical and Licensed Vocational Nurses |  |
| Insufficient Wage Data Available |  |

## Average JVS Wage

Average wages found in the survey are reported for each occupation. Reported averages are based solely on information provided by employers responding to this survey and do not reflect information from other sources or wages paid to currently filled positions.

## Occupational Employment Statistics (OES) Wage Data

Occupational Employment Statistics (OES) wage data are provided for each occupation. OES data are based on a national survey of employers and refer to filled positions, not vacancies. The data provided here are reported for the Western and Southwest Region when available and statewide otherwise. Data were collected in 2000 and 2001 and aged to 2002 using the Employment Cost Index (ECI). A complete description of the OES survey and the ECI is available on the Internet at: http://www.bls.gov/.

While the Job Vacancy Survey average wages reflect what was being offered to fill vacancies at the time of the survey, OES wage data reflect what was being paid to filled positions. Together, these data provide employers and job seekers with a good indication of the compensation offered in the current job market.
Table 1: Occupations with 5 or More Estimated Vacancies

| SOC <br> Code | SOC Occupational Title | Vacancies Estimated | Vacancies Found | Average <br> JVS <br> Wage | Occupational Employment Statistics Wage Data |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  |  |  |  | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 43-5081 | Stock Clerks and Order Fillers | 49 | 26 | \$7.90 | \$7.35 | \$13.67 | \$16.83 | \$6.78 | \$8.32 | \$14.92 | \$18.14 | \$20.82 |
| 29-1111 | Registered Nurses | 36 | 30 | \$15.20 | \$14.97 | \$19.13 | \$21.22 | \$14.43 | \$16.35 | \$19.22 | \$21.55 | \$23.12 |
| 41-2011 | Cashiers | 32 | 14 | \$7.20 | \$6.03 | \$7.84 | \$8.73 | \$5.64 | \$6.03 | \$6.69 | \$8.30 | \$14.66 |
| 47-2031 | Carpenters | 30 | 4 | $\dagger$ | \$8.90 | \$10.45 | \$11.24 | \$8.37 | \$9.42 | \$10.35 | \$11.39 | \$13.44 |
| * 35-3021 | Combined Food Preparation and Serving Workers, Including Fast Food | 28 | 17 | \$5.80 | \$6.09 | \$7.50 | \$8.21 | \$5.78 | \$6.33 | \$7.25 | \$8.42 | \$9.92 |
| 41-2031 | Retail Salespersons | 27 | 12 | \$7.50 | \$6.09 | \$8.37 | \$9.52 | \$5.83 | \$6.41 | \$7.43 | \$8.57 | \$12.68 |
| 37-2012 | Maids and Housekeeping Cleaners | 19 | 9 | \$6.10 | \$6.07 | \$6.71 | \$7.04 | \$5.60 | \$5.93 | \$6.48 | \$7.03 | \$8.55 |
| 53-7051 | Industrial Truck and Tractor Operators | 15 | 4 | \$8.50 | \$7.41 | \$9.15 | \$10.03 | \$7.02 | \$7.88 | \$8.99 | \$10.54 | \$12.10 |
| 39-9032 | Recreation Workers | 14 | 8 | \$7.70 | \$6.98 | \$9.07 | \$10.12 | \$6.42 | \$7.53 | \$8.70 | \$10.91 | \$12.83 |
| 31-1012 | Nursing Aides, Orderlies, and Attendants | 13 | 9 | \$9.30 | \$7.74 | \$8.87 | \$9.43 | \$7.39 | \$7.83 | \$8.57 | \$9.79 | \$11.41 |
| 43-4171 | Receptionists and Information Clerks | 12 | 7 | \$9.20 | \$8.35 | \$11.14 | \$12.52 | \$7.38 | \$9.73 | \$11.95 | \$13.01 | \$13.65 |
| * 35-3031 | Waiters and Waitresses | 12 | 7 | \$5.70 | \$6.07 | \$8.68 | \$9.98 | \$5.66 | \$6.08 | \$6.79 | \$9.60 | \$11.08 |
| 11-9111 | Medical and Health Services | 11 | 4 | \$21.00 | \$16.09 | \$25.37 | \$30.00 | \$15.19 | \$17.53 | \$25.10 | \$29.26 | \$36.67 |
| * 27-2023 | Umpires, Referees, and Other Sports Officials | 11 | 11 | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ |
| 35-1012 | First-Line <br> Supervisors/Managers of Food Preparation | 10 | 6 | \$11.60 | \$7.70 | \$11.44 | \$13.30 | \$7.44 | \$8.24 | \$9.99 | \$14.60 | \$18.52 |
| 43-3031 | Bookkeeping, Accounting, and Auditing Clerks | 10 | 6 | \$10.50 | \$7.77 | \$11.14 | \$12.82 | \$7.29 | \$8.61 | \$10.63 | \$13.96 | \$16.21 |
| 43-3071 | Tellers | 9 | 5 | \$7.30 | \$6.08 | \$7.80 | \$8.65 | \$5.73 | \$6.26 | \$7.33 | \$9.63 | \$10.58 |
| * 35-9011 | Dining Room and Cafeteria Attendants and Bartender Helpers | 8 | 5 | \$6.60 | \$6.09 | \$7.16 | \$7.69 | \$5.73 | \$6.18 | \$6.95 | \$8.05 | \$8.78 |


| $\begin{aligned} & \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | Vacancies <br> Estimated | Vacancies Found | Average JVS Wage | Occupational Employment Statistics Wage Data |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  |  |  |  | Entry- <br> Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 43-6014 | Secretaries, Except Legal, Medical, and Executive | 7 | 4 | \$11.90 | \$8.77 | \$11.78 | \$13.29 | \$7.98 | \$9.39 | \$10.93 | \$14.70 | \$16.71 |
| 49-9042 | Maintenance and Repair | 6 | 2 | $\dagger$ | \$8.14 | \$13.18 | \$15.69 | \$7.31 | \$9.36 | \$12.86 | \$16.63 | \$20.19 |
| 29-2061 | Licensed Practical and Licensed Vocational Nurses | 6 | 5 | \$15.70 | \$10.06 | \$11.93 | \$12.86 | \$9.63 | \$10.58 | \$11.99 | \$13.39 | \$14.30 |
| * 33-2011 | Fire Fighters | 5 | 5 | $\dagger$ | \$14.12 | \$20.68 | \$23.96 | \$12.96 | \$16.05 | \$21.18 | \$25.66 | \$28.04 |
| * 49-9021 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | 5 | 1 | $\dagger$ | \$10.67 | \$15.44 | \$17.83 | \$9.82 | \$11.50 | \$14.85 | \$18.25 | \$22.56 |
| * 35-2011 | Cooks, Fast Food | 5 | 3 | $\dagger$ | \$6.11 | \$8.43 | \$9.58 | \$5.89 | \$6.57 | \$8.14 | \$10.21 | \$11.93 |
| 49-3023 | Automotive Service Technicians and Mechanics | 5 | 1 | $\dagger$ | \$8.12 | \$12.55 | \$14.78 | \$7.73 | \$8.41 | \$10.61 | \$16.79 | \$19.92 |
| * 29-2012 | Medical and Clinical Laboratory Technicians | 5 | 4 | \$20.10 | \$10.65 | \$14.73 | \$16.76 | \$9.90 | \$11.48 | \$13.97 | \$17.51 | \$20.90 |
| * 35-9099 | Food Preparation and Serving Related Workers, All Other | 5 | 3 | $\dagger$ | \$6.80 | \$9.07 | \$10.21 | \$6.31 | \$7.26 | \$8.58 | \$10.39 | \$12.56 |
| 51-9061 | Inspectors, Testers, Sorters, Samplers, and Weighers | 5 | 1 | $\dagger$ | \$6.44 | \$9.96 | \$11.70 | \$5.99 | \$6.93 | \$9.65 | \$11.02 | \$16.29 |
| * 51-9021 | Crushing, Grinding, and Polishing Machine Setters, Operators and Tenders | 5 | 1 | $\dagger$ | \$9.57 | \$13.64 | \$15.67 | \$9.18 | \$10.31 | \$12.84 | \$16.43 | \$19.94 |
| 43-4051 | Customer Service Representatives | 5 | 3 | $\dagger$ | \$8.33 | \$10.60 | \$11.74 | \$7.75 | \$8.77 | \$10.02 | \$11.20 | \$14.07 |
| * 45-2093 | Farmworkers, Farm and Ranch Animals | 5 | 5 | $\dagger$ | \$6.09 | \$8.36 | \$9.50 | \$5.80 | \$6.40 | \$7.72 | \$10.11 | \$12.23 |

[^1]$\dagger$ Insufficient Wage Data Available
Table 2: Occupations with Fewer than 5 Estimated Vacancies


[^2]$\dagger$ Insufficient Wage Data Available
Table 2: Occupations with Fewer than 5 Estimated Vacancies Page 2

| SOC <br> Code | SOC Occupational Title | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  | EntryLevel | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| * 39-1021 | First-Line Supervisors/Managers of Personal Service Workers | \$8.31 | \$12.53 | \$14.64 | \$7.62 | \$9.00 | \$11.01 | \$13.91 | \$20.33 |
| * 33-3031 | Fish and Game Wardens | \$17.75 | \$22.74 | \$25.24 | \$16.22 | \$19.65 | \$23.98 | \$26.30 | \$27.69 |
| * 39-9031 | Fitness Trainers and Aerobics Instructors | \$8.40 | \$14.76 | \$17.93 | \$7.64 | \$9.46 | \$13.23 | \$18.23 | \$25.86 |
| * 35-3041 | Food Servers, Nonrestaurant | \$6.18 | \$8.78 | \$10.08 | \$5.92 | \$6.71 | \$8.51 | \$10.63 | \$12.63 |
| * 45-4011 | Forest and Conservation Workers | \$11.12 | \$15.15 | \$17.16 | \$10.16 | \$12.09 | \$14.46 | \$17.90 | \$20.98 |
| * 11-9061 | Funeral Directors | \$12.76 | \$18.87 | \$21.91 | \$12.16 | \$13.88 | \$16.96 | \$20.85 | \$32.24 |
| 11-1021 | General and Operations Managers | \$16.41 | \$29.12 | \$35.47 | \$14.09 | \$20.08 | \$26.74 | \$33.42 | \$44.63 |
| 37-3019 | Grounds Maintenance Workers, All Other | t | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | $\dagger$ | 1 |
| 47-4051 | Highway Maintenance Workers | \$9.68 | \$13.59 | \$15.55 | \$8.53 | \$10.99 | \$14.81 | \$16.23 | \$17.10 |
| * 43-4081 | Hotel, Motel, and Resort Desk Clerks | \$7.45 | \$9.28 | \$10.20 | \$7.09 | \$8.09 | \$9.38 | \$10.54 | \$11.31 |
| 37-2011 | Janitors and Cleaners, Except Maids and Housekeepers | \$6.83 | \$9.57 | \$10.94 | \$6.33 | \$7.38 | \$9.19 | \$10.76 | \$13.14 |
| * 23-1011 | Lawyers | \$24.59 | \$38.29 | \$45.14 | \$21.46 | \$28.35 | \$34.88 | \$46.64 | \$64.51 |
| 33-9092 | Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers | + | † | $\dagger$ | $\dagger$ | + | $\dagger$ | + | $\dagger$ |
| *53-7063 | Machine Feeders and Offbearers | \$8.21 | \$10.53 | \$11.69 | \$7.66 | \$8.71 | \$10.09 | \$11.84 | \$14.09 |
| 11-9199 | Managers, All Other | \$13.84 | \$23.11 | \$27.75 | \$12.85 | \$14.74 | \$22.49 | \$31.05 | \$34.91 |
| 29-2011 | Medical and Clinical Laboratory Technologists | \$15.21 | \$18.72 | \$20.49 | \$14.27 | \$16.73 | \$19.46 | \$21.19 | \$22.23 |
| * 31-9092 | Medical Assistants | \$9.54 | \$12.18 | \$13.50 | \$9.09 | \$10.06 | \$11.72 | \$13.77 | \$16.47 |
| * 43-6013 | Medical Secretaries | \$9.53 | \$11.84 | \$13.00 | \$9.05 | \$9.96 | \$11.39 | \$13.54 | \$15.93 |
| 31-9094 | Medical Transcriptionists | \$8.03 | \$10.59 | \$11.88 | \$7.55 | \$8.09 | \$9.13 | \$12.80 | \$14.28 |
| * 21-1014 | Mental Health Counselors | \$10.98 | \$16.95 | \$19.93 | \$10.17 | \$11.74 | \$15.16 | \$21.88 | \$26.41 |
| 25-4013 | Museum Technicians and Conservators | t | † | t | $\dagger$ | t | t | $\dagger$ | $\dagger$ |
| 47-2073 | Operating Engineers and Other Construction Equipment Operators | \$10.17 | \$11.78 | \$12.59 | \$9.46 | \$10.01 | \$10.92 | \$13.75 | \$16.25 |
| * 37-3012 | Pesticide Handlers, Sprayers, and Applicators, Vegetation | \$8.38 | \$12.51 | \$14.57 | \$7.94 | \$8.90 | \$11.56 | \$15.40 | \$19.06 |
| * 29-1123 | Physical Therapists | \$20.88 | \$25.65 | \$28.04 | \$19.42 | \$22.53 | \$25.25 | \$27.96 | \$33.16 |
| * 29-1069 | Physicians and Surgeons, All Other | \$23.12 | \$49.85 | \$63.21 | \$17.93 | \$26.31 | \$57.29 | \$70.72 | t |
| 33-3051 | Police and Sherifi's Patrol Officers | \$11.65 | \$14.11 | \$15.34 | \$10.81 | \$12.21 | \$13.96 | \$16.37 | \$17.68 |
| * 31-1013 | Psychiatric Aides | \$9.26 | \$11.12 | \$12.05 | \$8.62 | \$9.59 | \$10.78 | \$12.69 | \$14.22 |
| * 29-2034 | Radiologic Technologists and Technicians | \$14.22 | \$18.25 | \$20.25 | \$13.18 | \$15.54 | \$18.38 | \$21.04 | \$23.26 |
| 29-1126 | Respiratory Therapists | \$17.11 | \$19.18 | \$20.22 | \$13.50 | \$18.38 | \$19.80 | \$21.24 | \$22.09 |

[^3]

## Goods Producing Industries

## Highlights

The Goods Producing Industry Group consists of the Agriculture, Forestry, Fishing \& Hunting; Mining; Manufacturing; and Construction sectors. Mining and Manufacturing are relatively small industries in the region, but Agriculture and Construction are both large and important.

The severe draught in the Western \& Southwest Region, one of the worst in the last few hundred years, has put a major strain on the agricultural sector. A lack of grazing land and high hay prices forced ranchers throughout the region to thin their herds. In La Plata County, for example, the number of livestock is just over $50 \%$ of normal. Farmers have had an equally difficult time. Many bean farmers in the region have decided not to plant this year and the hay crop has been severely reduced. Fortunately, Colorado and the San Juan Mountains have had a relatively wet winter. The drought will not end in 2003, but it may become less severe. ${ }^{2}$

The construction sector makes up approximately $10 \%$ of the employment in the Western \& Southwest Region.

One of the most important factors affecting the construction industry is population growth. The more people that move to the Western \& Southwest Region the more houses, stores, roads, schools, etc. are needed in the region. Over the last decade Colorado has been one of the fastest growing states in the country, and the Western \& Southwest Region has been one of the fastest growing regions in the state. A relatively large and healthy construction industry is a positive sign that the economy of the region is continuing to grow.

In this survey, it is estimated that there are 33 open positions in Goods Producing industries, $6 \%$ of the total. Both agriculture and construction are highly seasonal industries and so it is expected that the numbers of vacancies in the summer 2003 survey will increase.

The average wage offered for this industry in the survey is $\$ 11.50$. All of the vacancies in Goods Producing industries are in construction and manufacturing. In terms of occupational groups, the most vacancies are in Computer and Mathematical as well as Construction and Extraction occupations.

It will be interesting to see how the level and type of vacancies found differ in the Summer 2003 JVS.

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 employer's seeking?

- Are employers having difficulty filling positions?


## How to Use This Report

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

TThe 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 industry segment along with indications of difficulty filling these positions should caution a firm requiring a similar labor profile.

## Job Seekers

TThe 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

TThe 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 bottle-
necks may occur should current vacancies persist. Economic developers can also generate a comprehensive picture of the region by determining where labor demand stands today, as identified by the survey, and
where the local market is trending using Labor Market Information's employment projections.

## Caveats

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

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

Nonsampling 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 an industry due to non-response, and estimating errors. The majority of non-sampling errors
are corrected in the Job Vacancy Survey's extensive review and validation process that takes place before estimates are published. The study provides estimates of job openings for a point-in-time and does not attempt to project the level of vacancies into the future. Readers should be aware that events having occurred since the time period analyzed such as plant closings or the migration of people in and out of the area might significantly affect the vacancy status of some occupations. Job openings are very dynamic - current openings are being filled, new positions are being created, and some roles are being phased-out.

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

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

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

The number of vacancies-used to calculate the job vacancy rate-is an important
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.
for estimation of a job vacancy rate and the total job vacancies within a region by

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 job vancin

## Methodology

TThe Job Vacancy Survey was designed to accurately estimate the number of job vacancies for firms employing 5 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 employment in the region is found in large and government employers that make up only $1 \%-2 \%$ of the total number of firms. Censusing these entities allows us to cover a large portion of the region's employment while contacting relatively few entities.

The Western \& Southwest survey was conducted from January 17, to January 29, 2003. For the purpose of this report, private and government employers with 5 or more employees are referred to as the sample frame. Firms with fewer than 5 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 approximately $80 \%$ of the region's total employment.

The Job Vacancy Survey separates employers into either government or private industry. Private firms are then split into large
and small to mid-size categories. Firms with at least 100 employees are considered large employers. Attempts are made to contact all government agencies and large firms in the sample frame. The remaining small to midsize firms are split into industry groups. The number of firms surveyed in each industry varies according to the number of employees and employers in the industry. In most industries half of all employers are contacted in an industry up to 200 employers. In industries with less than 1000 employees, efforts are made to capture at least 500 employees in the sample. If less than 500 employees work in an industry 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 $19 \%$ of the employment in the sample universe, while private industry employers make up the remaining $81 \%$ Large firms account for $24 \%$ of private industry employment in the sample universe. Firms employing from 5 to 99 individuals are considered small to mid-size employers, and account for the remaining $76 \%$ of the private industry employment.

| NAICS Industry Sectors |  |
| :---: | :---: |
| Government |  |
| Public Administration |  |
| Priv |  |
| Goods Producing Industries |  |
| Agriculture, Forestry, Fishing \& Hunting Mining | Construction Manufacturing |
| Service Producing Industries |  |
| Utilities <br> Wholesale Trade <br> Retail Trade <br> Transportation and Warehousing <br> Other Services <br> Information <br> Finance and Insurance <br> Real Estate and Rental Leasing | Professional, Scientific and Technical Services Management of Companies and Enterprises Administrative and Support and Waste Management Educational Services Health Care and Social Assistance Arts, Entertainment, and Recreation Accommodation and Food Services |

The response rate for this survey is $76 \%$ and the cooperation rate is $98 \%$. The response rate measures how successful the survey is at contacting eligible employers. The cooperation rate measures how willing employers are to participate in the survey
once they are contacted. The margin of sampling error for the overall results is plus or minus 5 percent or about 30 vacancies ${ }^{3}$. In other words, in 95 out of 100 samples the actual number of vacancies in the Western \& Southwest Region during the survey
would be between 547 and 607. These statistics are intended to give the reader confidence that the estimates in this survey are accurate and that the survey was conducted according to recognized survey research standards.

## 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 public sector for several years, Colorado is the first state in the nation to pioneer the use CATI data collection for the Job Vacancy Survey.

Professional interviewers, trained in economic data collection processes, gather

## Wage Conversion

S
tandard 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.
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

## 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.
offered, levels of education and experience required, and the employer's perceived difficulty in filling the vacancy along with the number of days the position has been opened. Employers are also asked if sign-on bonuses and health insurance coverage are offered for these positions. These data are collected in addition to the minimum and maximum wages in order to describe more fully the compensation offered.

## Occupational Coding

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

[^4]
## 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

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 ${ }^{1}$. 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 ${ }^{2}$. Government agencies from the United States, Mexico and Canada ${ }^{3}$ were tasked with the development of a system that accounted for rapid changes in the U.S and world economies.

## Industrial Classification vs. Occupational Classification

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

## Benefits

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

Relevant-NAICS recognizes hundreds of new businesses in the economy with 20 broad industry sectors, up from SIC's 10 . Some new industry categories include an Information Sector and a Health Care and 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 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 informa-tion-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 and 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.
${ }^{1}$ Executive 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
${ }^{2}$ 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
${ }^{3}$ Specifically, Mexico's Instituto Nacional de Estadística, Geografía e Informàtica (INEGI) and Statistics Canada


## Comparison of NAICS and SIC Major Industry Groups

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

[^5]
## Goods Producing Industries (NAICS)

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

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 and also permits the interviewer to educate the respondents on the importance of timely and accurate information.

## Cooperation Rate

The number of completed interviews divided by the number of eligible survey units contacted. 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 number of surveyed units not deemed ineligible. 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 1 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.

## Industry

A group of establishments that produce similar products or provide similar services. For example, all establishments that manufacture automobiles are in the same industry. A given industry, or even a particular establishment in that industry, might have employees in dozens of occupations. The North American Industry Classification System (NAICS) groups similar establishments 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 industries.

## Part-time Employee

An employee who usually works between 1 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 less than $\$ 15.00$; therefore $75 \%$ of workers earn 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 5 or more employees; government entities are drawn from ES-202 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.

## Shortage (as in shortage of workers)

Shortages occur in a market economy when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available, and willing to do that job.

## 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 4 -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.


# ...see colorado first 

State parks to explore
in the region
Crawford
Mancos
Navajo
Paonia
Ridgway
Sweitzer Lake
Colorado State Parks
http://parks.state.co.us/home

Ridgway State Park
Photo provided by Martin G. Kleinsorge Courtesy of Colorado State Parks

## Western \& Southwest Region

Workforce Centers<br>Delta Colorado Workforce Center<br>Montrose Colorado Workforce Center<br>Durango Workforce Center<br>206 Ute Street<br>Delta, CO 81416<br>Phone: 970-874-5781<br>Fax: 970-874-0091<br>E-mail: delta@CWFC.NET<br>525 East Main Street<br>Montrose, CO 81401<br>Phone: 970-249-7783<br>Fax: 970-249-0445<br>E-mail: montrose@CWFC.NET<br>Cortez Workforce Center<br>217 West Main Street<br>Cortez, CO 81321<br>Phone: 970-565-3759<br>Fax: 970-565-0916<br>E-mail: cortez@CWFC.NET<br>331 South Camino Del Rio \#C<br>Durango, CO 81301<br>Phone: 970-247-0308<br>Fax: 970-247-0328<br>E-mail: durango@CWFC.NET<br>Gunnison Colorado Workforce Center 109 E. Georgia Avenue Gunnison, CO 81230<br>Phone: 970-641-0031<br>Fax: 970-641-5258<br>E-mail: gunnison@CWFC.NET<br>WORKFORCE<br>Pagosa Springs Workforce Center<br>449 San Juan Street<br>Pagosa Springs, CO 81147<br>Phone: 970-264-4133<br>Fax: 970-264-4134<br>E-mail: pagosasprings@CWFC.NET

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


[^0]:    Source: CDLE, Local Area Unemployment Statistics

[^1]:    * OES wages reported for Colorado statewide

[^2]:    * OES wages reported for Colorado statewide

[^3]:    * OES wages reported for Colorado statewide
    + Insufficient Wage Data Available

[^4]:    ${ }^{3}$ Confidence Interval of 95

[^5]:    U.S. Bureau of the Census, U.S. Department of Commerce

