## Tarimer <br> $$
\mathbf{W}_{\text {eld }}^{\text {Region }}
$$

Job Vacancy Survey
Spring 2003


## Larimer Weld Job Vacancy Survey

## Conducted

March 19 - April 7, 2003

## State of Colorado

Bill Owens, Governor

## Colorado Department of Labor \& Employment

Jeffrey M. Wells
Executive Director

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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 indica－ tor provides information about changes in the supply and demand for labor，it reveals nothing about the skills most sought after by employ－ ers．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 equal－ ly 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 meas－ ure 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 lev－ els 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 Survey

The CDLE＇s survey unit collects original data by con－ ducting 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 origi－ nal 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 Spring 2003 Larimer/Weld Job Vacancy Survey was conducted from March 19th through April 7th, 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 Larimer/Weld 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 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 they were seeking to fill.

A total of 1,910 employers, representing approximately $53 \%$ of the region's employment responded to the survey. Of these, 118 are Government agencies, 50 are large employers and 1,742 are small to mid-size employers. The survey has an effective response rate of $84 \%$ and a cooperation rate of $99 \%$. The margin of sampling error for the overall vacancy estimate is plus or minus $1.9 \%$, meaning that the true number of vacancies is between 1,138 and 1,182 . The major findings of the survey follow:

- An estimated 1,160 jobs were available for hire during the survey period, coinciding with a $0.70 \%$ vacancy rate. At this time last year, 3,070 vacancies were estimated. $\qquad$ Page 7
- Health Care and Social Assistance has 397 vacancies followed by Trade, Transportation and Utilities with 264 and Leisure and Hospitality with 178 vacancies Page 7
- The average reported wage for vacancies in this survey is $\$ 14.90$ per hour Page 7
- Ninety percent of the reported openings are full-time permanent positions $\qquad$ .Page 10
- Half of the reported job vacancies require post-secondary education. Candidates with vocational training/certification are highest in demand. Page 11
- Sixty-seven percent of the job vacancies require experience related to, or specific to the occupation

Page 12

- Employers are having less difficulty in filling positions compared to the Spring of 2002 .
.Page 13
- Sixty percent of the vacant positions were open for less than 30 days at the time of the survey. Three percent were open for 60 days or more

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- Healthcare Practitioners and Technical occupations are the most frequently reported of the 22 major occupational groups

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## Larimer/Weld Region

The Larimer/Weld Region, located in north central Colorado encompasses a total of 6,644 square miles. The region, made up of Larimer and Weld counties, has a population of more than 454,000 residents ${ }^{1}$. Larimer County, with 2,640 square miles, includes some of the finest irrigated farmland in the state as well as vast stretches of scenic ranch lands, forests and high mountain peaks. Weld County, on the other hand, covers an area of 4,004 square miles making it the third largest county in the state. The land surface is fairly level in the east, with rolling prairies and low hills near the western border.

The regional economy is a diverse mix of agriculture, advanced technology, manufacturing and service firms.

Weld County is the leading producer of cattle, grains and sugar beets in the state. It is also the second leading producer of oil and gas in the state of Colorado.

Larimer County accounts for $57 \%$ of the region's population (about 259,500 residents). The county grew at a rate of $35 \%$ over the 1990 to 2000 census period, almost $5 \%$ higher than the state's growth rate of $31 \%$ over the same period. Larimer County accounts for $62 \%$ of the employment in the region. Weld County, with $43 \%$ of the regional population, accounts for $38 \%$ of the region's total employment. Within the two counties, almost half of the population in Weld is concentrated in the city of Greeley. In Larimer County $47 \%$ of the population is centered in the city of Fort Collins.

Figure 2: Historical Vacancies - Larimer/Weld Region


The nationally weak economy is evident in the region; the 1,160 estimated vacancies are slightly over one-third of the vacancies found this time last year. Nationally, corporate financial woes, the shakeout in the technology sector in addition to war anxieties directly impacted corporate investments and hiring. The effect of the national econo-
my on the region includes losses in personal investment value and declines in personal spending that hurt industries like trade and manufacturing. Businesses in Colorado or other states that provide services to companies in trade and manufacturing also feel the pinch as these industries try to cut expenses.

[^0]Figure 3 illustrates the historical progression of both the region's labor force and employment levels. The upward trend illustrates growth in both the labor force and employment over the years. The region's employment has grown at an average annual growth rate of $2.3 \%$ from February of 1998 to February of 2003. This growth rate was as high as $4.7 \%$ between 1997 and 1998 and as low as $0.9 \%$ between 1999 and 2000. The labor force has grown at a much faster rate in recent years leading to a larger gap of unemployed people.

This graph, along with Figure 4, also provides a visual representation of unemployment. In Figure 3, unemployment is represented by the gap between the labor force and the employment lines; the wider the distance between the two lines, the greater the number of unemployed. Unemployment tends to peak in January and June each year most likely due to end of school periods and the reentry of students into the labor force.

Figure 3: Employment \& Labor Force Trends for the Larimer/Weld Region (Not Seasonally Adjusted)


Source: CDLE, Local Area Unemployment Statistics, May 2003

Analysis of historical employment trends for the Larimer/Weld Region indicates that employment levels are at their lowest in January and peak in or around the month of October. The Larimer/Weld Job Vacancy Survey
is conducted two times a year in the spring and the fall. Both surveys are timed to measure the demand for labor when employment is strong.

Figure 4: Larimer/Weld Region Unemployment Rate Trend (Not Seasonally Adjusted)


Source: CDLE, Local Area Unemployment Statistics, May 2003

Figure 5: Unemployment Rates for April 2003
(Not Seasonally Adjusted)
Colorado |Larimer/
Statewide Weld
5.7\% 6.2\%


Source: CDLE, Local Area Unemployment Statistics, May 2003

The region employed over 237,400 individuals from a labor force pool of about 253,000 people in April 2003. The region's April unemployment rate of $6.2 \%$ is significantly higher than the state rate of $5.7 \%$ and the national rate of $5.8 \%$. County unemployment rates were $5.7 \%$ for Larimer and $6.9 \%$ for Weld in April of 2003.

Firms in the Larimer/Weld Region are now grouped into 12 categories under the North American Industry Classification System (NAICS). NAICS has replaced the Standard Industrial Classification System (SIC) and better reflects today's economic activity. Advantages to the new system include a greater breakdown of the old SIC Services division, and direct comparability with industries in Mexico and Canada.

Figure 6 presents employers and employee data for the 12 JVS sectors used in the Metropolitan Statistical Areas in Colorado (page 29). Data are gathered under the Covered Employment and Wages Program which includes employers who pay Unemployment Insurance Tax. Although $97 \%$ of the nation's employment is covered under the Unemployment Insurance program, positions typically excluded are agriculture, railroad, elected officials and student workers, certain non-profits, the self-employed, domestic and unpaid family workers.

Trade, Transportation and Utilities account for the highest percentage of both employers and employees in the region. Employment concentration of this JVS sector mirrors its size statewide where it accounts for $20 \%$.

Government is the second largest sector in the Larimer/Weld Region. The $1 \%$ of the region's employers classified under Government employ $17 \%$ of the region's workers. Government entities perform functions in the construction, mining, transportation, information, education and health services and other areas in addition
to public administration. Fifty-eight percent of the region's Government employment is in Educational Services due to large educational entities such as Colorado State University and the Poudre Valley School District.

Manufacturing has a higher concentration of employment in the Larimer/Weld region than in the state as a whole. Fifteen percent of the region's workers are employed in this sector compared to only $8 \%$ statewide. However, manufacturing remains a struggling sector in the region due to slow regional and national economic conditions. Employment within the sector declined by $8.5 \%$ during the past year.

The region also has sizable Construction, Health Care and Social Assistance, Leisure and Hospitality, and Professional and Business Services JVS sectors that, individually, employ between $8 \%$ and $10 \%$ of the region's employment. Of these, Health Care and Social Assistance expanded in employment by $8.5 \%$ within the past year. Historically, the Health Care and Social Assistance sub-sector has performed better during slow economic conditions. Literature often cite factors such as long working hours, inflexible scheduling, and stress as major inhibitors for recruitment for health care positions. Other sectors had their share of expansion, but at lower rates. Leisure and Hospitality expanded by $3.8 \%$ while Construction expanded by $3.2 \%$. Growth in the Construction sector may have been fueled by record low interest rates.

Figure 6: Larimer/Weld Employers \& Employees, 2nd Quarter, 2002


Professional and Business Services contracted by $5.3 \%$ within the past year. Lower business spending led to the decline in this sector. Many companies found themselves in adverse financial and economic conditions that required them to downsize their workforce or even close out in more extreme cases.

Financial Activities, Information, and Natural Resources and Mining are relatively small in the region.

## Estimated Vacancies

## JVS Sectors and Employer Size

Figure 7: Estimated Vacancies and Average Wages by JVS Sectors


During the survey period, an estimated 1,160 vacancies were open for immediate hire in the Larimer/Weld Region. Private firms from the America's Labor Market Information System (ALMIS) employer database with five or more employees and all Government institutions constitute the sample frame. All survey data refer to this subset of the population.

Given regional employment of approximately 170,000 jobs, the overall vacancy rate is $0.7 \%$. Beginning this calendar year, the overall vacancy rate is calculated by dividing the estimated number of vacancies by the sum of the estimated vacancies and total employment. This method results in a $1.8 \%$ vacancy rate for the spring 2002 survey.

Hiring activity in this survey shows little similarity between the number of people currently employed in a

JVS sector and the number of estimated vacancies. The one exception is Trade, Transportation, and Utilities. This JVS sector represents $22 \%$ of both regional employment and the estimated vacancies. The Health Care and Social Assistance sector ranks medium among other JVS sectors in terms of employment, but accounts for the largest number of estimated vacancies. Leisure and Hospitality with $15 \%$ of the estimated vacancies, is the third largest hiring JVS sector.

Both Government and Manufacturing account for small proportions of the estimated vacancies in spite of their relatively large employment size in the region. The average wages of $\$ 23.20$ in Manufacturing and $\$ 19.00$ in Government are the highest among all JVS sectors. These wages are significantly above the overall average wage of $\$ 14.90$ for the region.

Health Care and Social Assistance is the only JVS sector with both high vacancies and high average wages. High wages and relatively abundant vacancies reflect the demand for highly skilled candidates within this sector. Ninety-three percent of the vacancies within Health Care and Social Assistance require at least experience in a related field. Other JVS sectors with high vacancies such as Trade, Transportation, and Utilities; and Leisure and Hospitality offer low average wages. Recruitment within these two JVS sectors is active for low skill occupations. Eighty-nine percent of the vacan-
cies within Trade, Transportation, and Utilities and $95 \%$ of those within Leisure and Hospitality do not require a high school diploma to fill posted vacancies. Furthermore, over three-quarters of the vacancies open in each of these JVS sectors require no experience to fill the open vacancies. The narrow range between the average minimum and average maximum wages (Figure 8) reflect the limited range of education and experience required by employers to fill the respective vacancies.

Figure 8: Reported Average Wage Ranges by JVS Sectors


JVS sectors with low numbers of vacancies such as Manufacturing, Construction, and Professional and Business Services offer relatively high average wages. Higher wages are offered within these groups because of the high concentration of occupations requiring higher levels of experience. Eighty-three percent of the vacancies reported in Manufacturing, $86 \%$ of those reported in Professional and Business Services, and all of Construction vacancies require at least experience in a related field. Seventy-five percent of the vacancies reported within the Construction sector and $70 \%$ of those reported within Manufacturing require no education beyond the High School/GED level. The wide range between the aver-
age minimum and average maximum wages (Figure 8) for the Construction and the Manufacturing sectors reflect diverse educational and experience requirements.

Other Services accounts for both the lowest proportion of estimated vacancies and the lowest average wage of $\$ 5.80$. Low wages within this sector reflect low educational and experience requirements to fill open vacancies. All vacancies reported within this sector require no education beyond the High School/GED level. No vacancies were reported within Natural Resources and Mining.

Figure 9: Estimated Vacancies and Average Wages by Employer Size


A little over 2\% of the regional employers in Larimer/Weld are in government. Seventeen percent of current employment and $7 \%$ of reported job vacancies are found in such entities. Employment within this sector is mainly concentrated in educational entities such as Colorado State University or other federal government research extensions.

Large employers represent $18 \%$ of current regional employment, but offer about $41 \%$ of the job openings. Fifty percent of the region's large firms are in the Trade, Transportation, and Utilities and the Health Care and Social Assistance JVS sectors. These businesses account
for $89 \%$ of the job vacancies in the large employer category. Another $8 \%$ of the vacancies in this size class are within Manufacturing which accounts for $28 \%$ of the large firms.

Ninety-seven percent of area firms are classified as small to mid-size based on their employment numbers. They account for more than $61 \%$ of the employment and represent approximately $51 \%$ of the vacancies reported by surveyed companies. Fifty-five percent of job vacancies in small to mid-size firms are in Leisure and Hospitality and the Trade, Transportation, and Utilities JVS sectors.

Figure 10: Reported Average Wage Ranges by Employer Size


## Vacancies

## Employment Status, Education \& Experience Requirements

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.

Ninety-eight percent of the job vacancies for which employment status is reported are permanent positions. Full-time permanent positions are offered with average wages that range between $\$ 13.10$ and $\$ 18.40$ while fulltime temporary positions offer lower wages that range between $\$ 8.90$ and $\$ 9.60$ per hour. Almost half of the vacancies in the full-time category are reported in the Health Care and Social Assistance sector with over twothirds of these positions open within large firms.

Eighty percent of part-time permanent positions are available with the Professional and Business Services and the Trade, Transportation, and Utilities JVS sectors. Sixty percent of part-time permanent positions are in small firms while the remaining $40 \%$ are reported to be within large firms. All part-time permanent vacancies are either Personal Care and Services or Office and Administrative Support occupations.

Figure 11: Vacancies by Employment Status


Temporary positions constitute $2 \%$ of the reported vacancies with the majority being full-time positions. Fulltime temporary positions are offered with average wages that range between $\$ 7.90$ and $\$ 9.60$ per hour while the average wage for the limited part-time temporary vacancies do not exceed the legal minimum wage.

Figure 12: Reported Average Wage Ranges by Employment Status


Figure 13: Vacancies by Education


A region's overall labor force is made up of multiple smaller labor groups defined by skills, experience, and education. Ninety-nine percent of reported job vacancies have information on the education and experience requirements of surveyed employers.

Half of all reported vacancies require education beyond the high school level while the other half require high school education or less. Applicants with vocational training or certification are in highest demand followed by applicants with no high-school diploma. Ninety-six percent of the vacancies requiring vocational training or certification are within the Health Care and Social Assistance
sector. Large employers account for $92 \%$ of the vacancies requiring this qualification. Fifty-six percent of all vacancies requiring no high-school diploma are within the Trade, Transportation, and Utilities JVS sector. Over half of these vacancies are reported as Personal Care and Service occupations.

Fifteen percent of the vacancies reported require a minimum of a bachelor's degree compared to $25 \%$ in the spring 2002 report. A majority of vacancies requiring this qualification are found in the government sector. One-quarter of these vacancies are reported as Legal occupations.

Figure 14: Reported Average Wage Ranges by Education


Overall wages offered in this survey fall right in line with educational requirements - the more education required, the higher the pay. Positions requiring vocational training or certification command high wages because of high concentration of healthcare related occupations in this category.

Figure 15: Vacancies by Experience

Figure 15 shows the percent breakdown of vacancies by experience requirement. Two-thirds of all estimated vacancies require at least experience in a related field. Job vacancies for which prior experience is required in the occupation pay the highest wages.


Figure 16: Reported Average Wage Ranges by Experience


Healthcare Practitioner and Technical occupations constitute half of the vacancies where experience in the occupation is required. Wages offered for these vacancies represent the higher end of the wage scale for this experience category. Top wages for vacancies requiring experience in the occupation are offered for management occupations such as administrative services managers, financial managers, and employment, recruitment, and placement specialists. The occupations for which job openings require experience in a related field are
many and varied with no concentration within any specific occupational group. However, the highest wages are associated with either computer related occupations or the engineering profession. General work experience requirements are most often associated with vacancies in Sales and Sales Related occupations. The majority of vacancies with no experience requirement are found in Food Preparation and Serving Related occupations.

## Difficulty to Fill and Time Open for Hire

Employers' ability to find and hire qualified candidates is an important indicator of the supply side of the labor force. More employers claim that they are not having difficulty in filling their vacant positions than in the spring survey of 2002.

Percentage of vacancies reported as somewhat difficult to fill show little change from the spring of last year. This group of vacancies is dominated by Healthcare Practitioners and Technical; Education, Training, and Library; and Office and Administrative Support occupations. Three-quarters of the somewhat difficult to fill vacancies reported under these three major occupational groups are open for periods that extend from 30 to 59 days.

Two percent of the vacancies are considered very difficult to fill compared to $18 \%$ in the spring 2002 survey. Forty percent of vacancies reported very difficult to fill are Healthcare related occupa-

Figure 17: Vacancies by Difficulty to Fill

tions and all are open to hiring for 60 or more days. Difficult to fill positions pay the highest average wages and offer the widest pay ranges.

Figure 18: Vacancies by Time Open for Hire


Sixty percent of the positions reported were open for less than 30 days compared to $60 \%$ a year earlier. Of the vacancies open for less than 30 days, $70 \%$ are considered
not difficult to fill. One quarter of these vacancies are health care related occupations while the remaining are widely dispersed among other occupational groups.

Figure 19: Reported Average Wage Ranges by Time Open for Hire


Ninety-three percent of positions always open for hire are reported as not difficult to fill. Sales related occupations dominate this category of vacancies.

Positions may always be open for hire on account of high turnover rates.

## Vacancies

## Additional Compensation Medical Insurance \& Sign-On Bonus

## Medical Insurance

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

Ninety percent of the available job openings include medical benefits. One-third of these openings are for health care related occupations. Health Care and Social Assistance provides the most health care coverage for open vacancies among all JVS sectors. Eighty-one percent of the vacancies including medical benefits are with large employers or Government entities. Ninetynine percent of the vacancies reported by large employers offer medical insurance. This percentage is lowest among small employers where only $68 \%$ of the vacancies offer medical benefits. Eighty-five percent of the

Figure 20: Employer's Contribution to Medical Insurance

vacancies in Government and 74\% of those in small to mid-size firms have medical benefits. Positions in Leisure and Hospitality are less likely to offer medical insurance benefits.

## Sign-On Bonus

Less than $1 \%$ of the vacancies offer a sign-on bonus. These vacancies are Construction and Extraction or Installation, Maintenance, and Repair occupations within
the Government or the Construction sectors. Bonus amounts ranged from $\$ 100$ to $\$ 1,000$.

## Occupations

## Major Occupational Groups

In order to help make comparisons between this survey and other sources of employment statistics, all jobs reported are assigned a Standard Occupational Classification (SOC) code from the 2000 Standard Occupational Classification Manual. At the major occu-
pational level shown in figure 21, job vacancies associated with Health Care top the list. Just as Health Care and Social Assistance businesses represents the greatest number of estimated vacancies by JVS sector, Healthcare Practitioners and Technical occupations account for the greatest number of reported vacancies in any occupational group.
Figure 21: Vacancies and Reported Average Wage Ranges by Major Occupational Groups


## Occupational Estimates

Following is a list of all of the detailed SOC job titles assigned to vacancies reported in this survey. Because the CDLE conducts a census of large employers and Government agencies, the list contains titles for nearly all of the vacancies available at the time of the survey. Thirtyfive percent of all small to mid-size employers were contacted for the random sample, so the occupations associated with those vacancies are listed. Though the sample of small to mid-size employers is representative and significant, it is not exhaustive. Most likely, if a different random sample had been drawn there would be some differences in the job titles reported, but there would also be many of the same.

Vacancies estimated and found are displayed for those occupations where at least five vacancies are estimated.

## Estimated Vacancies

Because nearly all large employers and government agencies are contacted, the number of vacancies by occupation for those groups is not estimated; it is an actual count of the vacancies. However, in addition to the number reported, 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 occupations reported in the survey.

## Vacancies Found

The "vacancies found" heading refers to the actual 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.

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 Larimer/Weld Region when available and statewide otherwise. Data were collected over three years, from 1999 through 2001 and are aged to September 2002. A complete description of the OES survey is available on the Internet at: http://www.bls.gov/.

While the Job Vacancy Survey average wages reflect what is being offered to fill vacancies at the time of the survey, OES wage data reflect what 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.

* OES wages reported for Colorado statewide
Insufficient Wage Data Available

* OES wages reported for Colorado statewide
$\dagger$ Insufficient Wage Data Available
* OES wages reported for Colorado statewide
$\dagger$ Insufficient Wage Data Available

| $\begin{aligned} & \text { SOC } \\ & \text { Code } \end{aligned}$ | SOC Occupational Title | Vacancies Estimated | Vacancies Found | Average JVS Wage | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  |  |  |  | Entry-Level | Overall | Experienced | 10th | 25th | 50th | 75th | 90th |
| 37-2011 | Janitors and Cleaners, Except Maids and Housekeeping Cleaners | 7 | 7 | \$9.21 | \$7.07 | \$8.87 | \$9.77 | \$6.49 | \$7.49 | \$8.42 | \$9.79 | \$11.47 |
| 49-9011 | Mechanical Door Repairers | 7 | 3 | \$10.00 | \$13.57 | \$15.35 | \$16.24 | \$12.12 | \$14.61 | \$15.80 | \$17.01 | \$17.74 |
| 49-9021 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | 7 | 3 | \$15.67 | \$11.04 | \$15.43 | \$17.62 | \$10.12 | \$11.94 | \$14.59 | \$18.33 | \$21.87 |
| 49-9042 | Maintenance and Repair Workers, General | 7 | 3 | \$8.00 | \$8.95 | \$13.79 | \$16.21 | \$8.05 | \$10.38 | \$13.32 | \$16.89 | \$20.86 |
| 25-2043 | Special Education Teachers, Secondary School | 7 | 7 | $\dagger$ | \$29,536.00 | \$40,781.00 | \$46,403.00 | \$26,888.00 | \$31,914.00 | \$39,596.00 | \$48,079.00 | \$56,889.00 |
| 43-6013 | Medical Secretaries | 6 | 6 | \$15.99 | \$9.55 | \$12.59 | \$14.11 | \$8.83 | \$10.56 | \$12.66 | \$14.81 | \$16.62 |
| 29-1127 | Speech-Language Pathologists | 6 | 6 | \$22.49 | \$16.42 | \$22.25 | \$25.18 | \$15.35 | \$17.76 | \$22.34 | \$26.30 | \$28.67 |
| 51-9061 | Inspectors, Testers, Sorters, Samplers, and Weighers | 6 | 2 | \$12.19 | \$8.78 | \$13.51 | \$15.89 | \$8.04 | \$9.83 | \$12.82 | \$16.18 | \$20.46 |
| 51-9111 | Packaging and Filling Machine Operators and Tenders | 6 | 2 | \$10.00 | \$7.14 | \$9.65 | \$10.92 | \$6.34 | \$8.12 | \$9.65 | \$10.76 | \$13.08 |
| 41-3011 | Advertising Sales Agents | 5 | 1 | $\dagger$ | \$10.61 | \$19.20 | \$23.49 | \$9.36 | \$11.92 | \$15.47 | \$24.01 | \$35.29 |
| 41-3099 | Sales Representatives, Services, All Other | 5 | 1 | $\dagger$ | \$9.83 | \$23.06 | \$29.68 | \$8.38 | \$11.52 | \$18.20 | \$30.33 | \$51.45 |
| 41-9022 | Real Estate Sales Agents | 5 | 1 | $\dagger$ | \$10.02 | \$19.97 | \$24.94 | \$9.26 | \$11.02 | \$18.07 | \$20.91 | \$33.77 |
| 49-3023 | Automotive Service Technicians and Mechanics | 5 | 2 | $\dagger$ | \$9.59 | \$16.32 | \$19.67 | \$8.57 | \$10.86 | \$15.26 | \$20.19 | \$26.29 |
| 15-1021 | Computer Programmers | 5 | 3 | \$14.49 | \$16.45 | \$26.91 | \$32.14 | \$14.03 | \$19.33 | \$26.72 | \$34.33 | \$41.05 |
| 25-4021 | Librarians | 5 | 5 | \$17.37 | \$13.49 | \$19.15 | \$21.98 | \$12.30 | \$15.06 | \$18.86 | \$22.78 | \$26.94 |
| 25-9031 | Instructional Coordinators | 5 | 5 | \$9.45 | \$10.86 | \$21.29 | \$26.51 | \$9.95 | \$11.94 | \$19.75 | \$27.46 | \$39.51 |
| 53-3022 | Bus Drivers, School | 5 | 1 | \$7.75 | \$9.14 | \$10.84 | \$11.70 | \$8.43 | \$9.67 | \$10.69 | \$11.96 | \$13.96 |
| 53-7051 | Industrial Truck and Tractor Operators | 5 | 1 | $\dagger$ | \$9.13 | \$12.37 | \$13.97 | \$8.43 | \$10.03 | \$11.93 | \$14.26 | \$17.18 |

[^1]Table 1: Occupations with 5 or More Estimated Vacancies Page 3
Table 2: Occupations with Fewer than 5 Estimated Vacancies

| SOC Code | SOC Occupational Title | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  | Entry | Overall | Experien ced | 10th | 25th | 50th | 75th | 90th |
| 13-2011 | Accountants and Auditors | \$15.47 | \$22.11 | \$25.43 | \$14.76 | \$16.64 | \$20.16 | \$25.62 | \$33.30 |
| 11-3011 | Administrative Services Managers | \$14.42 | \$25.88 | \$31.61 | \$12.89 | \$16.88 | \$25.38 | \$33.81 | \$41.28 |
| 29-1121 | Audiologists | \$14.99 | \$18.57 | \$20.36 | \$14.42 | \$16.08 | \$18.87 | \$21.24 | \$22.70 |
| 35-3011 | Bartenders | \$6.10 | \$7.70 | \$8.50 | \$5.71 | \$6.14 | \$6.85 | \$9.02 | \$11.45 |
| 43-3011 | Bill and Account Collectors | \$9.42 | \$12.94 | \$14.69 | \$8.91 | \$10.14 | \$12.21 | \$14.94 | \$18.95 |
| 19-4021 | Biological Technicians | \$10.12 | \$15.23 | \$17.79 | \$9.25 | \$11.10 | \$14.14 | \$18.96 | \$23.40 |
| 51-7011 | Cabinetmakers and Bench Carpenters | \$7.31 | \$12.23 | \$14.69 | \$6.29 | \$8.81 | \$12.01 | \$15.73 | \$19.30 |
| 19-2031 | Chemists | \$18.30 | \$24.68 | \$27.87 | \$17.07 | \$20.31 | \$23.87 | \$27.90 | \$34.93 |
| 39-9011 | Child Care Workers | \$6.41 | \$8.01 | \$8.82 | \$6.02 | \$6.91 | \$7.94 | \$8.93 | \$10.38 |
| 17-2051 | Civil Engineers | \$19.57 | \$27.10 | \$30.88 | \$18.94 | \$21.01 | \$25.35 | \$32.68 | \$40.13 |
| 27-2022 | Coaches and Scouts | \$18,545 | \$57,935 | \$77,631 | \$16,019 | \$19,219 | \$47,331 | \$83,499 | \$136,098 |
| 13-1041 | Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation | \$14.95 | \$21.30 | \$24.48 | \$14.30 | \$16.42 | \$20.15 | \$25.49 | \$31.40 |
| 11-3021 | Computer and Information Systems Managers | \$21.91 | \$39.31 | \$48.03 | \$18.58 | \$26.80 | \$40.48 | \$51.20 | \$59.21 |
| 15-1031 | Computer Software Engineers, Applications | \$21.16 | \$32.44 | \$38.08 | \$19.74 | \$24.08 | \$31.04 | \$39.92 | \$46.01 |
| 15-1032 | Computer Software Engineers, Systems Software | \$29.86 | \$37.11 | \$40.73 | \$29.16 | \$32.05 | \$35.88 | \$44.45 | \$51.29 |
| 15-1099 | Computer Specialists, All Other | \$9.65 | \$18.26 | \$22.55 | \$9.30 | \$10.52 | \$15.74 | \$25.31 | \$31.22 |
| 11-9021 | Construction Managers | \$23.09 | \$30.42 | \$34.07 | \$21.83 | \$24.88 | \$28.27 | \$34.42 | \$42.88 |
| 51-4031 | Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic | \$8.96 | \$12.78 | \$14.70 | \$8.12 | \$10.15 | \$12.98 | \$15.53 | \$17.27 |
| 43-9021 | Data Entry Keyers | \$8.28 | \$10.68 | \$11.89 | \$7.84 | \$8.58 | \$9.72 | \$11.86 | \$14.44 |
| 15-1061 | Database Administrators | \$17.92 | \$27.53 | \$32.34 | \$16.09 | \$20.24 | \$28.34 | \$34.95 | \$39.97 |
| 31-9091 | Dental Assistants | \$11.87 | \$14.96 | \$16.50 | \$11.40 | \$12.33 | \$13.97 | \$17.98 | \$20.42 |
| 29-1031 | Dietitians and Nutritionists | \$15.87 | \$20.64 | \$23.02 | \$15.07 | \$17.46 | \$20.81 | \$24.14 | \$26.99 |
| 35-9021 | Dishwashers | \$6.15 | \$7.13 | \$7.62 | \$5.81 | \$6.36 | \$7.19 | \$8.08 | \$8.62 |
| 27-3041 | Editors | \$13.28 | \$19.83 | \$23.10 | \$12.21 | \$15.14 | \$18.83 | \$23.83 | \$30.81 |
| 11-9031 | Education Administrators, Preschool and Child Care Center/Program | \$10.34 | \$15.50 | \$18.08 | \$9.26 | \$11.83 | \$15.16 | \$18.41 | \$22.52 |
| 17-2071 | Electrical Engineers | \$25.10 | \$34.69 | \$39.48 | \$22.23 | \$28.50 | \$34.06 | \$41.28 | \$49.58 |
| 47-2111 | Electricians | \$12.02 | \$18.86 | \$22.29 | \$11.28 | \$13.26 | \$17.86 | \$22.81 | \$29.73 |
| 17-3024 | Electro-Mechanical Technicians | \$15.30 | \$19.33 | \$21.35 | \$13.31 | \$17.53 | \$19.78 | \$21.68 | \$24.89 |
| 17-2072 | Electronics Engineers, Except Computer | \$23.55 | \$31.96 | \$36.17 | \$21.82 | \$26.57 | \$32.27 | \$36.58 | \$42.93 |
| 25-2021 | Elementary School Teachers, Except Special Education | \$28,377 | \$40,226 | \$46,151 | \$26,248 | \$30,897 | \$37,849 | \$47,279 | \$57,342 | OES wages reported for Colorado statewide $\dagger$ Insufficient Wage Data Available

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

| SOC Code | SOC Occupational Title | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  | Entry | Overall | $\begin{gathered} \text { Experien } \\ \text { ced } \end{gathered}$ | 10th | 25th | 50th | 75th | 90th |
| 29-2041 | Emergency Medical Technicians and Paramedics | \$10.76 | \$15.27 | \$17.52 | \$9.86 | \$11.81 | \$14.42 | \$18.00 | \$21.92 |
| 11-9041 | Engineering Managers | \$32.20 | \$45.31 | \$51.88 | \$28.38 | \$37.77 | \$44.76 | \$55.66 | \$66.22 |
| 17-2199 | Engineers, All Other | \$22.02 | \$29.99 | \$33.97 | \$20.56 | \$23.66 | \$30.88 | \$35.07 | \$37.79 |
| 43-6011 | Executive Secretaries and Admi | \$11.55 | \$15.62 | \$17.65 | \$10.74 | \$12.35 | \$14.63 | \$17.56 | \$21.86 |
| 47-5099 | Extraction Workers, All Other | \$12.81 | \$15.79 | \$17.29 | \$12.18 | \$13.11 | \$14.54 | \$16.79 | \$20.61 |
| 45-2092 | Farmworkers and Laborers, Crop, Nursery, and Greenhouse | \$6.02 | \$8.55 | \$9.82 | \$5.75 | \$6.36 | \$8.03 | \$10.46 | \$12.39 |
| 11-3031 | Financial Managers | \$20.70 | \$33.43 | \$39.79 | \$19.08 | \$23.01 | \$31.49 | \$42.37 | \$52.69 |
| 47-1011 | First-Line Supervisors/Managers of Construction Trades and Extraction Workers | \$18.22 | \$24.97 | \$28.34 | \$16.71 | \$19.65 | \$23.28 | \$28.56 | \$34.90 |
| 37-1011 | First-Line Supervisors/Managers of Housekeeping and Janitorial Workers | \$9.44 | \$13.37 | \$15.33 | \$8.82 | \$9.98 | \$11.80 | \$15.86 | \$20.40 |
| 33-1012 | First-Line Supervisors/Managers of Police and Detectives | \$20.57 | \$28.51 | \$32.48 | \$19.29 | \$22.74 | \$29.25 | \$34.16 | \$38.42 |
| 51-1011 | First-Line Supervisors/Managers of Production and Operating Workers | \$15.69 | \$22.59 | \$26.03 | \$14.16 | \$17.77 | \$21.24 | \$26.41 | \$33.20 |
| 41-1011 | First-Line Supervisors/Managers of Retail Sales Workers | \$10.92 | \$17.74 | \$21.14 | \$10.04 | \$11.92 | \$15.11 | \$19.57 | \$29.34 |
| 35-9099 | Food Preparation and Serving Related Workers, All Other | \$6.34 | \$8.06 | \$8.92 | \$6.05 | \$6.61 | \$7.50 | \$8.97 | \$11.12 |
| 35-2021 | Food Preparation Workers | \$6.53 | \$8.70 | \$9.78 | \$6.22 | \$7.10 | \$8.20 | \$9.69 | \$12.81 |
| 35-3041 | Food Servers, Nonrestaurant | \$6.19 | \$7.51 | \$8.17 | \$5.80 | \$6.28 | \$7.09 | \$8.55 | \$9.68 |
| 45-4011 | Forest and Conservation Workers | \$10.00 | \$15.44 | \$18.15 | \$8.46 | \$12.03 | \$15.37 | \$18.92 | \$21.52 |
| 11-1021 | General and Operations Managers | \$19.60 | \$37.25 | \$46.07 | \$17.11 | \$23.03 | \$33.84 | \$48.26 | t |
| 27-1024 | Graphic Designers | \$12.67 | \$18.09 | \$20.81 | \$11.49 | \$14.70 | \$18.42 | \$21.42 | \$24.92 |
| 25-1071 | Health Specialties Teachers, Postsecondary | \$22,044 | \$61,340 | \$80,987 | \$17,576 | \$25,611 | \$54,887 | \$85,519 | \$129,767 |
| 31-9099 | Healthcare Support Workers, All Other | \$8.38 | \$11.01 | \$12.31 | \$7.75 | \$9.13 | \$10.77 | \$12.71 | \$14.23 |
| 51-9198 | Helpers--Production Workers | \$6.43 | \$9.49 | \$11.01 | \$6.20 | \$6.97 | \$9.04 | \$11.42 | \$13.56 |
| 47-4051 | Highway Maintenance Workers | \$13.40 | \$17.51 | \$19.58 | \$12.30 | \$14.41 | \$17.99 | \$20.50 | \$22.02 |
| 49-9099 | Installation, Maintenance, and Repair Workers, All Other | \$8.65 | \$14.53 | \$17.45 | \$7.91 | \$9.61 | \$13.05 | \$19.60 | \$23.11 |
| 27-1025 | Interior Designers | \$15.29 | \$21.45 | \$24.54 | \$14.55 | \$16.38 | \$19.25 | \$22.89 | \$33.12 |
| 51-6011 | Laundry and Dry-Cleaning Workers | \$7.33 | \$8.75 | \$9.47 | \$6.97 | \$7.52 | \$8.30 | \$9.69 | \$12.13 | * OES wages reported for Colorado statewide + Insufficient Wage Data Available

Table 2: Occupations with Fewer than 5 Estimated Vacancies Page 3

| SOC Code | SOC Occupational Title | Occupational Employment Statistics Wage Data (2002) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average Wages |  |  | Percentile Distribution |  |  |  |  |
|  |  | Entry | Overall | Experien ced | 10th | 25th | 50th | 75th | 90th |
| * 43-4121 | Library Assistants, Clerical | \$7.36 | \$9.84 | \$11.08 | \$6.89 | \$8.01 | \$9.61 | \$11.55 | \$13.58 |
| 19-4099 | Life, Physical, and Social Science Technicians, All Other | \$11.73 | \$18.38 | \$21.70 | \$11.17 | \$13.09 | \$18.04 | \$23.12 | \$26.98 |
| 13-2071 | Loan Counselors | \$12.27 | \$15.21 | \$16.68 | \$11.77 | \$13.18 | \$15.46 | \$17.19 | \$18.23 |
| 11-9199 | Managers, All Other | \$18.12 | \$30.76 | \$37.09 | \$16.03 | \$21.66 | \$28.86 | \$38.78 | \$49.67 |
| 11-2021 | Marketing Managers | \$21.56 | \$36.84 | \$44.48 | \$18.25 | \$25.81 | \$38.26 | \$45.57 | \$56.41 |
| 21-1013 | Marriage and Family Therapists | \$13.64 | \$16.05 | \$17.25 | \$12.60 | \$14.41 | \$15.88 | \$17.45 | \$20.47 |
| 17-2141 | Mechanical Engineers | \$20.30 | \$28.53 | \$32.66 | \$18.93 | \$22.20 | \$28.47 | \$33.82 | \$39.76 |
| 29-2012 | Medical and Clinical Laboratory Technicians | \$10.90 | \$14.12 | \$15.73 | \$10.02 | \$11.76 | \$13.53 | \$16.46 | \$19.75 |
| 21-1022 | Medical and Public Health Social Workers | \$14.02 | \$18.25 | \$20.36 | \$13.00 | \$14.99 | \$17.39 | \$21.21 | \$25.77 |
| * 31-9093 | Medical Equipment Preparers | \$9.50 | \$11.98 | \$13.22 | \$9.01 | \$10.08 | \$11.68 | \$13.40 | \$15.44 |
| * 49-9062 | Medical Equipment Repairers | \$17.40 | \$22.92 | \$25.69 | \$15.19 | \$20.07 | \$23.61 | \$26.84 | \$28.92 |
| 31-9094 | Medical Transcriptionists | \$12.50 | \$14.99 | \$16.22 | \$12.01 | \$13.17 | \$14.94 | \$16.89 | \$18.14 |
| * 13-1121 | Meeting and Convention Planners | \$13.27 | \$19.10 | \$22.02 | \$12.23 | \$14.88 | \$18.25 | \$22.68 | \$27.54 |
| 21-1023 | Mental Health and Substance Abuse Social Workers | \$11.99 | \$14.16 | \$15.24 | \$11.39 | \$12.20 | \$13.62 | \$16.07 | \$18.34 |
| 51-4081 | Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic | \$8.16 | \$10.84 | \$12.18 | \$7.67 | \$8.89 | \$10.41 | \$12.51 | \$14.27 |
| 15-1071 | Network and Computer Systems Administrators | \$18.20 | \$26.27 | \$30.31 | \$16.69 | \$20.14 | \$25.66 | \$31.91 | \$36.13 |
| 15-1081 | Network Systems and Data Communications Analysts | \$19.05 | \$25.32 | \$28.46 | \$16.49 | \$22.25 | \$25.16 | \$28.70 | \$35.81 |
| 39-2021 | Nonfarm Animal Caretakers | \$6.78 | \$8.81 | \$9.84 | \$6.36 | \$7.27 | \$8.26 | \$10.12 | \$12.90 |
| * 29-2033 | Nuclear Medicine Technologists | \$19.26 | \$22.78 | \$24.55 | \$18.46 | \$20.30 | \$23.07 | \$25.90 | \$27.71 |
| 31-2011 | Occupational Therapist Assistants | \$13.24 | \$15.97 | \$17.33 | \$12.56 | \$13.96 | \$15.92 | \$17.85 | \$20.23 |
| 29-1122 | Occupational Therapists | \$17.53 | \$22.17 | \$24.50 | \$15.81 | \$19.10 | \$22.30 | \$25.88 | \$28.07 |
| 39-9021 | Personal and Home Care Aides | \$7.54 | \$9.31 | \$10.20 | \$7.22 | \$8.02 | \$9.18 | \$10.48 | \$11.81 |
| 31-2022 | Physical Therapist Aides | \$8.67 | \$11.03 | \$12.20 | \$8.12 | \$9.04 | \$10.19 | \$12.19 | \$14.36 |
| 29-1123 | Physical Therapists | \$20.28 | \$24.44 | \$26.52 | \$19.21 | \$21.70 | \$24.80 | \$27.32 | \$29.37 |
| 43-5031 | Police, Fire, and Ambulance Dispatchers | \$11.46 | \$15.95 | \$18.19 | \$10.81 | \$12.40 | \$15.42 | \$19.60 | \$22.51 |
| 33-9099 | Protective Service Workers, All Other | \$6.08 | \$9.48 | \$11.18 | \$5.85 | \$6.58 | \$8.18 | \$10.72 | \$15.39 |
| * 31-1013 | Psychiatric Aides | \$8.93 | \$10.90 | \$11.90 | \$8.14 | \$9.38 | \$10.55 | \$12.45 | \$14.25 |
| * 29-1124 | Radiation Therapists | \$23.15 | \$26.98 | \$28.90 | \$21.92 | \$24.05 | \$26.78 | \$30.42 | \$34.35 |
| 39-9032 | Recreation Workers | \$6.95 | \$8.78 | \$9.69 | \$6.37 | \$7.43 | \$8.29 | \$9.37 | \$12.09 |
| 11-2022 | Sales Managers | \$20.21 | \$38.42 | \$47.52 | \$17.54 | \$23.73 | \$36.30 | \$48.81 | $\dagger$ |

[^2] $\dagger$ Insufficient Wage Data Available

[^3]$\dagger$ Insufficient Wage Data Available


## Sector Briefs

## Health Care and Social Assistance

A1though the Health Care and Social Assistance sector ranks sixth in the Larimer/Weld Region in terms of employment, it accounts for the largest number of vacancies estimated in this report. This sector accounted for about $10 \%$ of total employment or about 18,400 people ${ }^{2}$ in the second quarter of 2002 . The sector's demand for workers seems immune to seasonal fluctuations.

With a new system of sector classification under NAICS, data at the sector level only go back to first quarter 2001 and are available through second quarter 2002 at the writing of this report. Health Care and Social Assistance remained a healthy sector in the Larimer/Weld Region in spite of the adverse economic conditions expe-
rienced at the national, state, and local levels. Employment increased by $7.0 \%$ between the first quarter of 2001 and the first quarter of 2002 ; and by $8.7 \%$ between the second quarters of the same years.

Within Health Care and Social Assistance there are four sub-sectors: Ambulatory Health Care Services, Hospitals, Nursing and Residential Care Facilities, and Social Assistance. Ambulatory Health Care Services is the largest sub-sector with $36 \%$ of the sector employment followed by Hospitals at 29\%. Nursing and Residential Care accounts for $22 \%$ while Social Assistance ranks last at $13 \%$ of the total employment.

[^4]
## How to Use This Report

With the analysis of labor market conditions, many questions regarding labor demand and supply, as well as labor skills requirements, often arise...
-How many job openings are there?
-What industries are hiring?

## 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
-What skills are employer's 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.
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

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

TisThe 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.

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 non-estimated 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.

## 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 impor-
tant 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 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 character-
istics 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.

## Survey Sample

TThe Larimer/Weld survey was conducted from March $19^{\text {th }}$ through April $7^{\text {th }}$. 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 a small proportion of the total employment. Employment in the sample frame accounts for $87 \%$ 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 200 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 sur-

## JVS Sectors

The new North American Industry Classification System increases the number of major industry 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 Larimer/Weld Region, the 20 NAICS sectors have been combined into 12 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 31.

## Data Collection

Data for the Job Vacancy Survey is 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 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.
veyed 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 in a sector 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 20\% of the employment in the sample universe, while private industry employers make up the remaining $80 \%$. Large firms account for $23 \%$ of private industry employment in the sample universe. Firms employing from five to 199 individuals are considered small to mid-size employers, and account for the
remaining $77 \%$ of the private industry employment.

The margin of error for the overall vacancy estimate is plus or minus $1.9 \%$ or 20 vacancies at a .95 certainty level. In other words, in 95 out of 100 samples taken, the actual number of vacancies for the region will be between 1,138 and 1,182 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 $83.9 \%$. This measures the quality of the survey database, or the success experienced in contacting eligible employers. The cooperation rate is $99.4 \%$ and measures the success in obtaining data once an employer is contacted.

| LarimerWeld Region NSSectors | $\rightarrow$ NA/CS Sectors |
| :---: | :---: |
| Natural Resources \& Mining | Agriculture, Forestry, Fishing, \& Hunting Mining |
| Construction | Construction |
| Manufacturing | Manufacturing |
| Trade, Transportation, \& Utilities | Utilities <br> Wholesale Trade <br> Retail Trade <br> Transportation \& Warehousing |
| Other Services (except Public Administration) | Other Services (except Public Administration) |
| Information | Information |
| Financial Activities | Finance \& Insurance <br> Real Estate \& Rental \& Leasing |
| Professional \& Business Services | Professional, Scientific, \& Technical Services <br> Management of Companies \& Enterprises <br>  <br> Waste Management \& Remediation Services |
| Educational Services | Educational Services |
| Health Care \& Social Assistance | Health Care \& Social Assistance |
| Leisure \& Hospitality | Accommodation \& Food Services Arts, Entertainment, \& Recreation |
| Government | Public Administration |

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

## 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.

## 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.

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 ${ }^{1}$. 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. <br> 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, which are scheduled in 5 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.

## Occupational Coding

TThe 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.

## 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 Industry Classification System |
| :---: | :---: |
| Agriculture, Forestry, \& Fishing | Agriculture, Forestry, Fishing, \& Hunting |
| Mining | Mining |
| Construction | Construction |
| Manufacturing | Manufacturing |
| Transportation, Communications \& Public Utilities | Utilities <br> Transportation \& Warehousing |
| Wholesale Trade | Wholesale Trade |
| Retail Trade | Retail Trade Accommodation \& Food Services |
| Finance, Insurance, \& Real Estate | Finance \& Insurance <br> Real Estate \& Rental \& Leasing |
| Services | Information <br> Professional, Scientific, \& Technical Services <br>  <br> Remediation Services <br> Educational Services <br> Health Care \& Social Assistance <br> Arts, Entertainment, \& Recreation <br> Other Services (except Public Administration) |
| Public Administration | Public Administration |
| (parts of all divisions) | Management of Companies \& Enterprises |

U.S. Bureau of the Census, U.S. Department of Commerce

## Glossary

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

## Average Maximum Wage

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

## Average Minimum Wage

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

## Computer Assisted Telephone Interviewing (CATI)

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

## Cooperation Rate

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

## Educational Attainment

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

## Effective Response Rate

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

## Employed Persons (Employment)

Persons 16 years and over in the civilian non-institutional population who, during the reference period
a) did any work at all (at least 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.

## 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 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 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 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.

## Sign-on Bonus

An additional financial incentive offered by a firm to a potential new employee to influence his/her decision to agree to employ-
ment 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.

we urge you to
See
COLORADO first

State parks to explore
in the region
Lory
Boyd Lake

## Barbour Ponds

Colorado State Parks
http://parks.state.co.us/home

Photo Courtesy of Colorado State Parks

## Larimer Weld Region

## Workforce Centers

Larimer County Workforce Center/Fort Collins
3842 South Mason Street
Fort Collins, CO 80525
Phone: (970) 223-2470
Fax: (970) 223-7456
E-mail: Icwc@co.larimer.co.us
Larimer County Workforce Center/Loveland 418 East 4th Street
Loveland, CO 80537
Phone: (970) 667-4261
Fax: (970) 663-7271
E-mail: Icwc@co.larimer.co.us

Employment Services of Weld County
1551 North 17th Avenue
Greeley, CO 80632
Phone: (970) 353-3800
Fax: (970) 356-3975
E-mail: Iperez@co.weld.co.us
Employment Services of Weld County 330 Park Avenue
Fort Lupton, CO 80621
Phone: (970) 857-3039 x5981
Fax: (970) 356-0122

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


[^0]:    ${ }^{1}$ US. Census Bureau, July 2001 Estimates.

[^1]:    $\dagger$ Insufficient Wage Data Available

[^2]:    OES wages reported for Colorado statewide

[^3]:    * OES wages repoed for Colorado stewide

[^4]:    ${ }^{2}$ Based on ES-202 Covered Employment and Wages, a census of employers required by law to pay unemployment insurance tax.

