Mesa County

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Mesa County

August 2001



Workforce Research & Analysis Labor Market Information Colorado Department of Labor and Employment



Mesa County Job Vacancy Survey Conducted January 15 - February 7, 2001

State of Colorado

Bill Owens, Governor

Colorado Department of Labor & Employment

Vickie Armstrong, Executive Director Jeffrey M. Wells, Deputy Executive Director

Funding Provided in Part by The Colorado Workforce Development Council

August 2001



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The office of Workforce Research and Analysis would like to extend our sincerest gratitude to all the employers of Mesa County who participated in this study. The analysis provided in this document would not be possible without their help.

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Introduction

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 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 level of proficiencies are necessary to successfully compete in the contemporary labor market. The Job Vacancy Survey was adopted by Colorado's Department of Labor and Employment (CDLE) to

Colorado Job Vacancy Survey Regions



This publication is a product of the Colorado Department of Labor and Employment's Labor Market Information Section, Bill LaGrange-Director. This report was prepared by LMI's office of Workforce Research and Analysis. Members of this unit are:

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estimate the number of job vacancies by occupation and provide information on some of the tools employers use to recruit for those positions. The survey measures the demand for labor by employers as opposed to the demand for employment by job seekers.

Job Vacancy Survey pilot studies, initiated by Arapahoe/Douglas Works!, were conducted for the Denver Metro Area in September 1999 and April 2000. The popularity of the reports based on the survey data led the CDLE to expand its coverage so that each region of Colorado would be surveyed on a regular schedule. The survey instrument was revised to

eliminate existing ambiguities as well as enhanced to gather more specific information on job vacancies within the survey constraints. In September 2000, a survey of the Upper Arkansas Valley Region was conducted as a pilot study to test the revised survey instrument.

Results of all completed Job Vacancy Surveys can be found on the Workforce Research and Analysis (WRA) unit's home page at http://lmi.cdle.state.co.us/wra/home.htm.

The survey is funded by a grant from the U.S. Department of Labor's Employment and Training Administration. The Job Vacancy Survey is produced by Labor Market Information's office of Workforce Research and Analysis.

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This report is published semi-annually. Comments, suggestions, and questions regarding content and format are welcome and may be addressed to:

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How to Use This Report

W ith an analysis of labor market conditions, many questions regarding labor demand and supply, as well as labor skills requirements, often arise.

- Is there a labor shortage in the region?
- ◆ If so, what types of labor are in short supply?
- ◆ Is there a shortage of skills?
- What skills are necessary to fill current vacancies?

The answers to these and similar questions are important in the decision-making processes of employers, applicants, trainers, and planning officials. While Labor Market Information (LMI) has long provided information on the local labor force supply, the Job Vacancy Survey (JVS) will further complement this information by providing more details about the demand for labor and offering a more complete picture of local labor markets.

Employers

The JVS measures the area's current vacancies and provides information to employers who may be experiencing difficulty in filling positions due to:

- ♦ a worker shortage,
- an imbalance between job seekers' skills and employers' needs,
- compensation packages that are insufficient as a recruitment tool when compared to market standards.

The JVS identifies certain characteristics of current vacancies according to general categories. The relatively short turnaround time for reporting data and its analysis should benefit employers seeking to evaluate the labor market and their positions in it. For example, upon review of the JVS, an employer can observe the level of vacancies among the region's firms requiring a specific level of education or experience. A high percentage of vacancies might indicate the labor force and/or its skills fall short of market needs, thus calling for increased investment in training, or importing skilled workers. Even if wages are increased or benefits added, the employer may experience delays in filling the position due to the overall shortage of applicants in the area. If a low percentage of vacancies exists for a particular position with the same education or experience requirement, but the employer is finding it difficult to fill, a comparison between the wages offered to that of the market average may indicate the need for an adjustment.

After a series of surveys from the same time of year has been conducted, current and prospective employers will be able to identify industries and/or occupations that may be consistently oversupplied, in equilibrium, or undersupplied. Employers that are relocating to the area can review the Job Vacancy Survey results and determine if the company's employment needs are likely to be filled with little delay (current low vacancies). In addition, the JVS and Occupational Employment Statistics (OES) wage data (which measure current wages being paid by occupation) can be used to develop a benchmark of wages to offer for the upcoming positions.

Job Seekers

For current job seekers, the JVS report is a roadmap that can be used to determine where the best paying jobs are given their skills and level of education. The Job Vacancy Survey helps to illustrate the current supply/demand balance in the local job market and provides associated wages. Job seekers can review LMI's occupational projections (provided in another publication) in addition to the JVS to see if current opportunities can contribute to long-term career goals and adjust their education and training accordingly.

Workforce Centers, Educational Institutions, and Other Government

In the presence of trends shown by a series of Job Vacancy Surveys, public officials, educational institutions, and government agencies will be able to use the information to allocate resources more efficiently among education, training, and job placement programs. The JVS provides short-term illumination of the area's current labor needs. Workforce Center counselors can, in some situations, direct job seekers toward high demand occupations in order to increase placement success, or in a direction that might better suit the needs of the applicants' future career goals.

Workforce Center officials will also be able to review the nature of job vacancies and decide where to focus placement efforts. Future investments in the workforce could be directed toward occupations or industries that show a chronic tendency toward undersupply.

Current vacancy conditions as presented by the JVS, coupled with other Labor Market Information (LMI) reports, can offer a better picture of seasonality and long-term trends that might affect the provisions of future training programs. LMI's Employment and Wage publication (ES-202 data) reports monthly county and statewide industry data on a quarterly basis. To prepare for the high demand of seasonal workers where vacancies persist, Workforce Centers and educators can offer training during the off-season as indicated by the LMI quarterly data. Longer-term industry trends in employment are also recorded on an annual basis in the same report for each county.

Economic Developers

For economic development professionals, the JVS is a tool that can be used to track the labor status of key industries and also evaluate certain features of the area's economic health. JVS results can help economic development professionals determine where labor bottlenecks may occur should current vacancies persist.

Economic developers can also gain greater insight into the region by determining where current labor demand stood at the time, as identified by the JVS, and where the local market is trending using LMI's industry employment projections when such projections come on line.

Caveats

The JVS data should be used as indicators, not actual values, of the demand for workers in the Mesa County Region. Figures from the survey should not be interpreted as annual vacancies. Rather, they are estimates of openings at a point-intime. Users should consider, when comparing the results of one survey to another, the effects seasonality and the business cycle will have on the data. For instance, a decrease in vacancies for construction workers from one season JVS to the next JVS season (typically, one would expect more vacancies in the summer season when demand for labor is the highest) might only represent seasonal variation, not necessarily a long-term decrease in the demand for such workers.

The results of the survey are based only on the sample of responses collected from January 15th through February 7th of 2001 and should not be considered as necessarily portraying the exact distribution of job vacancies in Mesa County. After several years of JVS data are available, it should be easier to identify labor market patterns and changing labor market conditions. This survey identifies current vacancies only and does not explain whether the vacancies are due to employment growth in the occupations or if vacancies are due to job turnover. In addition, not all surveyed firms participated. However, the employers that did participate enabled the production of statistically reliable results for the reported categories. In this first round of surveying, little data was successfully collected from large firms. As a result, analysis for the category of large firms was necessarily eliminated.

Users should keep in mind that the authors of this report are not attempting to project the level of vacancies into the future. In addition, events that have occurred since the time period analyzed, such as plant closings or the migration of people in and out of the area, may have had an effect on the vacancy status of some occupations.

Given the caveats, appropriate and careful application by the user is the most important element for making the information in this report a relevant tool in job vacancy analysis.

Executive Summary

uring the survey period of January 15 to February 7, 2001, about 26.5%, or 527, of firms with at least five employees were contacted in Mesa County. Employers were asked a variety of questions about job vacancies that they were actively seeking to fill. It was the first Job Vacancy Survey (JVS) conducted in this area.

The employers contacted account for nearly 17% of the estimated employment in the large (80 or more employees) and small to mid-size (5 - 79 employees) firms, combined, in Mesa County. One large employer out of 87 (just over 1.0%) and 526 out of 1,905 (almost 28.0%) small to mid-size firms [by America's Labor Market Information System (ALMIS) database classification] provided responses in the survey. Firms reported the title and number of vacancies, if any, for a position at the time of the survey as well as more detail about each vacancy. Information on the compensation offered, the education and experience required, and the employer's perceived difficulty in filling the vacancies was collected.

- The overall vacancy rate in the survey was 2.7%.
- ◆ Ninety-one firms, or 17.3%, reported at least one vacancy.
- Based on the results of the survey, it is estimated that more than 784 positions were available to fill in firms with at least five employees in Mesa County during the period of the survey.
- ◆ Full-time permanent and part-time permanent positions account for over 96% of the vacancies. Full-time permanent positions are responsible for 75% of the total vacancies while part-time permanent positions account for over 21%.
- Small to mid-size firms accounted for almost 89% of total estimated vacancies. However, data on large firms was extremely limited and therefore extrapolation could be performed on only one industry. Even there, the extrapolation cannot be considered to have a high level of confidence.
- ◆ The Service industry group had over 42% of vacancies and the Retail industry group had over 34%.
- Over 25% of the openings required at least some post-secondary education.
- ◆ Approximately 52% of the vacancies required either specific or related experience.
- ◆ About 22% of vacancies were reported as "very difficult" to fill with almost 43% being "somewhat difficult" to fill.
- According to the businesses surveyed, the average wage rate offered for all vacancies was approximately \$10.10 per hour.
- ◆ As expected, the higher the level of education required, the higher the wages offered. Average wages for reported vacancies requiring an advanced degree averaged over twice that of those requiring a high school diploma.
- Although wages increased with experience required, the change was not as dramatic as with education. Wages for vacancies requiring specific experience averaged more than 1½ of the average wage for general experience.
- ◆ Medical insurance was offered for almost two-thirds of vacancies.
- ◆ Signing bonuses were not a factor in hiring for surveyed businesses.

Mesa County

The Mesa County Region, which is Mesa County itself, consists of over 116,000 residents, according to the April 2000 Census, representing a 24.8% increase from April 1990 to April 2000. The Grand Junction Metropolitan Statistical Area (MSA) itself ranks 38th nationally in percentage of growth among MSAs. While the increase is significant, Mesa County still trailed the state average of 30.6% (U.S. Bureau of Census). Colorado ranks third in growth since the 1990 Census.

A comparison of Mesa County with other areas of Colorado shows that only Pueblo County had a lower percentage of growth. The other major population areas in the comparison, Boulder, El Paso, and Larimer counties, as well as the counties that comprise the Denver Metro area (Adams, Arapahoe, Denver, Douglas, and Jefferson), had growth percentages near or above 30% (see *Figure 1*).



During the same period, the population growth percentages for surrounding counties were, in all but one case, higher than that of Mesa County. Of the counties, Delta, Garfield, Gunnison, Montrose, and Pitkin, only one, Pitkin, had a population growth of under 30%. Pitkin County's growth



percentage was 17.5%. Garfield County had the highest growth percentage for the period, 46.1% (see *Figure 2*).

In the case of Pitkin County, the lower growth may well be due to area employment growth being translated from Pitkin County to residence growth in adjoining counties because of housing cost pressures. Both the labor force and employment grew by a greater percentage than population in Pitkin County over the ten year period.





Mesa County fared well in labor force growth with approximately 31.3% from 1990-1998. Mesa County's labor force is just over one-fifth the size of Denver County (about 4% of the Denver Metro area), one-third that of Larimer County and is now about the same as Pueblo County. While the labor force is the same as Pueblo now, Mesa County's labor force grew almost three times faster by percentage. It also grew three times faster than the labor force in Denver County. El Paso and Larimer counties had greater growth than Mesa, 35% and 37%, respectively, since 1990. Employment in Mesa County during December 2000 was 58,014, translating to an unemployment rate of 3.0%. By comparison, unemployment rates in the other counties ranged from 1.6% in Pitkin (during ski season) to 4.0% in Montrose (an off-season period). The overall state unemployment rate was 2.1% during the same time. Garfield County had the second greatest employment and labor force of the counties in the area (See *Figure 5*).



A look at industry composition shows that in Mesa County (and the Grand Junction MSA) the dominant industries, in terms of employment, are Services and Retail Trade. This is commensurate with not only surrounding counties and the state as a whole, but is a nationwide characteristic. That such would be the case can be expected from the logic of economics and what industries have the broadest demand base.

The rest of area employment is relatively evenly spread with Agriculture, Forestry, and Fishing and Mining having the least employment (see *Figure 6*). The balance of employment in industries is similar to other population centers in the state as well. Using LMI's ES-202 data (reported by firms who have employment covered by the State's Unemployment Insurance program), a comparison is presented here of selected population areas. In terms of relative industry employment size, Mesa County has somewhat smaller Government, Retail Trade, and Manufacturing employment, while it has relatively more employment in Construction, Services, and T.C.P.U. than other major population areas.



Construction growth is typically tied to population growth. However, as was previously noted, Mesa County's population growth was a lower percentage from 1990 to 2000 than some other population areas with less growth in the Construction industry group. The reason for this is not clear. It could be due to construction firms headquartered in Mesa County, but doing significant work outside of the county.



The percentage of the economy represented by Retail Trade, while relatively smaller than several of the smaller population areas, is close to larger population areas, such as Denver Metro and El Paso County. This may be an indication of a relatively balanced economy. The single most striking feature in this graph is that Mesa County has a significantly larger percentage of its employment in the Services industry group than any other area. Why the Services industry group is even more dominant in Mesa County than the other areas is not immediately clear.

The Job Vacancy Survey Sample

The Job Vacancy Survey for the Mesa County Region is one in a series of surveys being done for each region of Colorado, including the major population centers. Denver, Colorado Springs, Pueblo, and Larimer/Weld counties are all part of the program that has been initiated by the Workforce Research and Analysis unit of Labor Market Information. In addition, a pilot study was conducted for the Upper Arkansas Region (which is the upper Arkansas River valley, excluding Lake County). The survey for Mesa County is planned to be a semiannual effort. This, the first survey for the Mesa Region, was conducted in the weeks from January 15 to February 7, 2001.

In this survey sample frame, employers with at least 80 employees were classified as "large employers." There are 87 firms classified as "large"

Figure 8: Sample Frame Data

accounting for about 4% of the firms and 39% of the total 46,357 employees in the region. Firms employing between five and 79 individuals were considered "small to mid-size employers." In the sample frame, there are 1,905 such firms, which account for about 96% of the firms and also for the remaining 61% of the total employment.

For a variety of reasons, firms with employment from one to five were excluded from this survey. Micro firms are less stable overall, more difficult to obtain data from because of manpower issues, and are more difficult to track for sampling purposes. In the future, WRA may be able to address this category in sampling, but it was excluded for this round. Micro firms account for approximately 15% of total employment in the Mesa Region, according to LMI figures.



Figure 9: Sample Frame Employment Data by Firm Size



All firms of at least 80 employees were included in the sample frame. The sample frame was stratified for small and mid-size firms so that it would be possible to report on industry divisions as well as by firm size. Because Services and Retail Trade have the greatest employment, the sample frame also had the greatest number of firms and employment to be surveyed from those two industry divisions Those least represented were Manufacturing, Mining, and Ag., Forestry, and Fish *(see Figure 10)*. Mesa County does not have a strong manufacturing presence compared to some other population centers in Colorado.



Over the survey period, a total of 527 (26.5% response rate) of the large and small to mid-size firms in the Mesa Region were contacted. These employers account for approximately 16.8% of the estimated employment in firms with at least five employees. Of the 87 "large" firms in the sample frame, data was successfully collected

from only one. As a result, this survey analysis will not be able to report on firms in the "large firm" category. A total of 526 firms in the small to mid-size employers (27.6% of the sample frame) were contacted. *Figure 10* is a break-down of survey responses regarding firms and employment.

The Survey Instrument

Employers were asked if they had job vacancies, or open positions, which they were actively seeking to fill. Nearly one-fourth of the firms contacted reported at least one vacancy. Firms actively recruiting were then asked for more detail about each position. As complete a description of the vacancy as possible was gathered so that accurate classification of the position by uniform code could be accomplished.

Information on the compensation offered, including medical insurance subsidies and signing bonuses, for

each vacancy was solicited. Employers were asked for a minimum and maximum wage, if there was a difference. In addition, position requirements, such as education level and experience, were queried.

We also wanted to find out how long the vacancies had existed and the employer's perceived difficulty in filling the vacancy (see appendix and methodology for more detail).

Timing Considerations

Employment in most areas has a seasonal pattern. Because of predominant industries of an area, there is a period when employment is the highest and a period when it is the lowest. The timing of the survey was developed with the intent of measuring the demand for labor at intervals that provide the most useful information. For the Mesa County Region, the lowest labor force and employment levels occur in the January to February time, while the peak for the labor force and employment occurs during the summer. The actual peak varies somewhat from year to year (*Figure 11*). The intent behind the Job Vacancy Survey is to gain greater understanding about the demand for labor and how demand and supply interact during the more extreme periods—in this case January/February and during the summer. As a result, the JVS has been scheduled to be completed during those times.

Below is a graph of the recent history of employment in the Grand Junction MSA revealing the seasonality of labor in that area.



Difficulties in hiring at the two times may signal different issues. A study of any labor shortage during the winter low period may not indicate a general labor availability problem. Rather, it may indicate that labor for certain types of occupations is in short supply. On the other hand, a labor shortage during the summer may indicate specific occupation groups where shortages exist, but it may also indicate a generalized labor shortage. The two conditions have different implications for decision-makers, especially in government and job training positions.

Vacancies

he survey produced data from all but two of the industry divisions: Government and Durable Manufacturing. In addition, low employment levels were reported for Finance. Insurance, and Real Estate (F.I.R.E.), Non-Durable Manufacturing, Agriculture, Forestry, and Fishing, and Mining. Other than F.I.R.E., which has a substantial presence in the Grand Junction area, the total employment levels for these indus-



tries is relatively low. The response rates made the usefulness of those particular industries less reliable than the industries with greater representation. *Figure 12* shows surveyed employment by industry from the small to mid-size firms.

Vacancy rates by industry group provide a different picture, one more reflective of where the activity is occurring in the labor force/employer interface (see *Figure 13*). The shown percentages obviously represent different numbers of vacancies, depending on the size of employment for that industry group. It is more likely that a group with low employment level will have a relatively high vacancy rate. This tendency is indeed reflected in the graph. Construction, a much smaller employment group than Retail, has the same vacancy rate. Mining and Non-Durable Manufacturing are tied with the next highest rate. Both are very small employers in the area.

Higher vacancy rates tend to indicate a more dynamic labor situation than other industries. The dynamism can be either positive or negative of course. Both a rapidly growing industry and one in turmoil for some reason (financial, labor strife, reorganization, etc.) could have relatively high vacancy rates. Both might experience comparatively greater hiring stress, but might well have significantly different priorities as they evaluate new talent.

Based on the results of the survey, it is estimated that over 784 positions were available to fill in firms with at least five employees in the Mesa Region during the period of January 15 to February 7, 2001. This estimation was derived from vacancy rates reported for actual employment levels and extrapolated to the total employment for the appropriate individual industry divisions. The data analyzed in this section includes the limited large firm response obtained. While insufficient to report on either large firms or large firm industries alone, the data is still important for analysis of other vacancy characteristics.



time temporary positions have increased dramatically nationally in the last decade as regulations and firm needs changed.

Small to mid-size retail and service producing employers account for most of the vacancies estimated in Mesa County. Retail Trade and Services had approximately 3 1/2 to 4 times as many vacancies estimated as the next highest industry division. As has been mentioned previously, those two industries accounted for the highest employment levels in both the economy in general and also the survey itself.

Full-time/Permanent

Figure 15: Extrapolated Vacancies by Major Industry Group for Small to Mid-Size Firms



The relatively low number of vacancies estimated for F.I.R.E. may be a result of the low response from that division and may not reflect the true level of vacancies. The same can be stated about the Government (no responses obtained), Manufacturing (no responses from Durable Manufacturing), Mining, and Agriculture divisions. Neither Manufacturing nor Agriculture reported any vacancies.

Future surveys will most likely achieve greater response rates and afford increased accuracy of

analysis. Nonetheless, it is perfectly consistent with other locations that Services and Retail Trade have the most vacancies.

Probably more interesting to most readers is the breakdown of estimated vacancies by occupation group. *Figure 16* gives a good representation of what groups were most significant in estimated vacancies. Vacancies reported in the survey are also shown in the graph.



Figure 16: Estimated and Reported Vacancies by Major Occupation Group

Estimated vacancies in the Food Preparation and Serving occupations (210) were over twice that of the next highest occupation, Sales and Related occupations (92). In addition, Food Preparation and Serving occupations accounted for almost 27% of all estimated vacancies. Food Preparation and Serving occupations are those with typically low education and experience requirements and as such, does not offer adequate opportunity for a substantial portion of the labor force. It is this occupation group that is greatly responsible for the high percentage of "Always Hiring" classification mentioned below as well. Out of 75 vacancies for which employers reported that they were always hiring, 40 of them occurred in the Food Preparation and Serving occupations. As the reader can see from the graph, there is a strong drop off in estimated vacancies from Food Preparation and Serving to the occupation group with the fourth highest estimation, Installation, Maintenance, and Repair. The initial drop off is then followed by another drop, from about the 7th to the 10th places. The ranking shows that Trade vacancies dominated the Mesa County job market during the survey period. The next grouping of occupations were those that represent more fundamental portions of the economy. Architecture, Construction, Maintenance, Production, and Transportation. Significant here, is that the High Tech sector was not one of the more prominent parts of the local economic activity, unlike some Front Range economies.

All other occupations with reported vacancies had very few openings. Many of these occupations with a small number of vacancies were those requiring higher education levels and would also have relatively higher stability. The occupations would also have fewer positions so the expectation would be for fewer vacancies.



Experience Requirements

A long with position status (that is, permanent vs. temporary and full-time vs. part-time), this characteristic was reported by all firms that had vacancies. The experience required was remarkably evenly split among the four categories–all being in the mid- to upper twenty percent. Combined differently, approximately 52% of the vacant positions have requirements of specific or related experience while about 48% have only general or even no work experience as mandates.

As was the case with education, there is a bias toward lower requirements than were reported for the Denver JVS. The percentage of vacancies with no experience required was virtually identical (23.4% in Mesa County versus 22% in the Denver JVS). In Mesa County however, the percentage for general work experience was 24.4% while in the Denver JVS it was 16%.

The additional percentage in this category was taken almost evenly from the other two categories, experience in a related field and experience in the same occupation. The Denver JVS reported 32% and 30%, respectively.

Figure 18: Vacancies by Experience Level Required

No Experience

Required

23.4%

General Work

Experience

24.4%

That the experience required was divided into virtual quadrants while the educational requirements were not could be an indication of a relatively narrow range of expertise required and/or that some firms may be trying to make up for lower education requirements through stiffer experience demands. It would require a study specifically aimed at such issues to know for sure.

Experience in

this

Occupation

24.9%

Whatever the reason, there are many vacant positions that do not have rigorous educational standards, but do call for pertinent experience.

Experience in

a Related

Field

27.3%

Graphing education requirements versus experience provides some interesting information. In some ways, a look at the relationship discloses features that could be expected. For instance, vacancies having advanced degree demands also had the highest levels of experience requirements. This makes sense because advanced degrees are the most technical and therefore same occupation experience would be more crucial.

Those vacancies requiring no diploma had the highest percentage of vacancies needing no experience. Vacancies with high school diploma/GED requirements also required relatively more experience, in general work experience and also related experience. There are some features of requirements shown in the graph that might be surprising too. The fact that some vacancies with no diploma or a high school diploma/GED that had significant percentages of the "same occupation" experience requirement might surprise some readers. In addition, a greater percentage of vacancies needing vocational/technical training also necessitated "same occupation" experience than did vacancies needing a bachelor's degree. The high specificity of many technical training programs most probably accounts for this difference.



Two-year degree vacancies only required related occupation experience in this survey. This is probably because two-year degrees are quite general in their scope compared to some other types of training or degrees.

Mesa County Job Vacancy Survey





Over 1% of respondents failed to report the perceived difficulty in hiring and over 3% failed to report the length of time the position was open, perhaps because the latter was unknown offhand. The discrepancy adds to the challenge of interpreting hiring difficulty and vacancy duration.

The largest category for difficulty is "Somewhat Difficult." Forty-two percent of vacancies were in this class. There was therefore, some perceived difficulty in hiring for almost two-thirds of the positions when combined with the percentage of "Very Difficult."

Thirty-six percent of the positions for which there were vacancies had employers who were always hiring for that position. Another 42% of vacancies were open 30 days or less. Continual hiring could indicate steady growth or high turnover – possibly a combination of the two. It could also indicate a problem with quality in new hires. Both classifications are probably made up largely of vacancies with lower education requirements.

Qualitative issues cannot be easily discerned and it is very possible that those vacancies considered "Very Difficult" to fill are deemed so as much because of quality issues as available manpower. If so, it would indicate a mismatch between the overall labor skill set and those skills needed by employers. The general impression from this data is that there is no unusual stress in the labor market at the time of this survey. That is not to say there aren't specific areas where there is more stress in the labor market. It only means that at any given time in an economy, there will be those areas where employers have more difficulty with labor or hiring than employers in general. It is certainly possible that the overall difficulty is to some degree higher than under less dynamic circumstances.

Since 78% of reporting firms had either vacancies open less than 30 days or were always hiring, the Time Open category indicates that the labor market is not particularly stressed overall. This does not comport with the reported difficulty in hiring (mentioned previously). The explanation may come, in part, from the fact that hiring is a difficult and often unpleasant business intrinsically, thus leading to higher subjective ratings.

To be certain of the above interpretations however, more surveys will be needed. Since this survey was conducted during a low period for the labor force, the picture that emerges from the peak time may be entirely different.

Wages*

Major Occupational Groups

A ccording to the data compiled from the employers surveyed, the average wage rate offered for all vacancies was \$10.10 per hour. Further analysis of the data reveals differences in wage ranges due to position characteristics as well as the education and skill levels required to fill a position.

The occupation groups with the top maximum wages included business related, technical, healthcare practitioners, sales, and construction. The top wage reported was for Architecture and Engineering occupations (\$33.70/hr.). The next highest groups were Healthcare Practitioners and Technical occupations (\$25.00/hr.), Computer and Mathematical (\$24.00/hr.), and Construction and Extraction (\$24.00/hr.) (see *Figure 22*).

The lowest reported wages were for Food Preparation and Serving (\$2.10/hr.); Transportation and Material Moving (\$5.20/hr.), Personal Care and Service (\$5.30/hr.), Sales and Related (\$5.50/hr.), and Installation, Maintenance, and Repair (\$5.80/hr.) occupation groups. There is obviously a broad range of skill and education levels needed within some of the occupation groups, such as Sales and Related and Protective Services.



* All wages represented in this section are rounded to the nearest ten cents.

Wage ranges were quite variable from occupation to occupation. The Architecture and Engineering occupation group had a wage range (\$13.60 to \$33.70) that was approximately 70% of the maximum wage. On the other hand, Protective Services had no variation (\$6.00/hr.). All of the open positions for Protective Services were evidently entry level. *Figure 22* provides a good look at the wage ranges between the major occupation groups.

On the whole, those occupation groups that have a wide skill range or work venue are the ones that have the greatest percentage variation in wages. The occupations that vary the most, by percentage, are Food Preparation and Serving Related; Sales and Related; Healthcare Practitioners and Technical; Installation, Maintenance, and Repair; and Transportation and Material Moving.

In some cases, such as Sales and Related occupations or Installation, Maintenance, and Repair, there may be substantial opportunities for advancement without further specific academic or technical training. In other cases, possibly with Healthcare Practitioners and Technical occupations, the wage range noted may be due to different levels of education and technical training. Nevertheless, it is possible that those occupation groups with the wider wage range, will in general, offer more opportunities for upward mobility without additional academic/technical training. Those occupation groups with narrower wage ranges in the survey seem to fall into three major categories: occupations that have more specific skill/training requirements, fields that are more labor intensive, and as an artifact of the survey, occupations that had few responses.

Building, Grounds, and Maintenance, Protective Services, and Management are examples of the last of these categories. Each had only one or two vacancies reported. Obviously a representative wage range is difficult to determine with only two responses and impossible to ascertain with only one vacancy.

Architecture and Engineering, Computer and Mathematical, and Healthcare Practitioners and Technical are examples of occupation requiring more specific skill/training requirements. Each had sufficient responses to develop a range (though still relatively small numbers) and had narrower ranges than more labor intensive occupations.

The labor-intensive positions include (but are not limited to) Production, Grounds, Building and Maintenance, and Protective Services. In these occupations, the wage range may be narrow because of entry-level positions which a relatively plentiful supply of available labor or because of stringently mandated wages by union contract. Protective Services may be better explained by the few vacancies reported, as previously described.

Occupation Status

The survey found that full-time permanent openings had offering wages that were substantially higher than other categories. One hundred twenty nine full-time permanent vacancies reported had an average of \$11.50 per hour wage versus the next highest category wage of \$7.00 per hour for part-time temporary positions. Only one vacancy was reported for this second category so it is difficult to tell how representative that wage is this time around.

Part-time permanent vacancies had an average wage of \$6.60/hour. The lowest average wage was for full-time temporary vacancies. This group had



an average wage of \$5.80/hour.

While the part-time temporary positions had a higher wage than did the full-time temporary positions in this survey, it is possible that the actual relationship may be reversed. Future surveys should illuminate this issue further.

Another point of interest is the large difference in wage between full-time permanent positions and all other types. This could be a characteristic of the local economy occupation mix, a seasonal issue, or a survey anomaly.

Table 1: Occupations With More Than 10 Vacancies

		I		1999-2000 OES Wage Data							
		2001 JVS	S Data	Average Wages by Experience Percentile Distribution							
		Estimated	Average	Ū	0,						
ONet Code	Occupation Title	Vacancies	Wage	Entry	Overall	Experienced	10th	25th	50th	75th	90th
	Counter Attendants, Cafeteria, Food Concession, and										
35-3022.00	Coffee Shop	57	\$5.90	\$5.77	\$6.90	\$7.47	\$5.60	\$6.00	\$6.88	\$7.93	\$8.57
41-9021.00	Real Estate Brokers	39	*	*	*	*	*	*	*	*	*
	First-Line Supervisors/Managers of Food Preparation										
35-1012.00	and Serving Workers	36	\$3.86	\$7.52	\$9.62	\$10.67	\$7.18	\$7.83	\$8.96	\$10.20	\$13.26
	Combined Food Preparation and Serving Workers,										
35-3021.00	Including Fast Food	36	\$6.41	\$5.70	\$6.28	\$6.58	\$5.51	\$5.69	\$5.99	\$6.59	\$8.08
51-9198.01	Production Laborers	32	\$10.50	\$5.75	\$8.03	\$9.16	\$5.52	\$6.07	\$8.80	\$9.90	\$10.57
35-2021.00	Food Preparation Workers	28	\$5.55	\$6.28	\$8.73	\$9.95	\$5.84	\$6.84	\$8.19	\$10.96	\$12.64
31-1012.00	Nursing Aides, Orderlies, and Attendants	27	\$9.08	\$6.48	\$7.90	\$8.61	\$5.88	\$6.84	\$7.87	\$8.97	\$10.03
41-2031.00	Retail Salespersons	24	\$7.48	\$5.79	\$8.95	\$10.52	\$5.72	\$6.13	\$7.45	\$9.72	\$13.99
53-3031.00	Driver/Sales Workers	23	\$5.46	\$5.67	\$9.23	\$11.00	\$5.60	\$5.84	\$6.66	\$12.02	\$16.72
35-2014.00	Cooks, Restaurant	18	\$6.65	\$5.89	\$7.42	\$8.19	\$5.62	\$6.25	\$7.35	\$8.46	\$9.76
47-2051.00	Cement Masons and Concrete Finishers	17	\$11.57	*	*	*	*	*	*	*	*
17-2051.00	Civil Engineers	16	\$22.92	\$19.64	\$25.77	\$28.83	\$18.25	\$20.88	\$24.77	\$31.26	\$37.73
25-9041.00	Teacher Assistants	16	\$8.40	\$6.35	\$8.01	\$8.84	\$5.88	\$6.78	\$7.82	\$9.03	\$10.62
33-9032.00	Security Guards	16	\$6.00	\$7.37	\$10.36	\$11.85	\$6.94	\$7.93	\$9.38	\$11.33	\$16.97
49-3023.00	Automotive Service Technicians and Mechanics	16	\$10.23	\$7.81	\$13.41	\$16.21	\$6.50	\$9.53	\$13.50	\$16.54	\$20.65
47-2181.00	Roofers	13		\$9.08	\$12.39	\$14.05	\$8.35	\$10.14	\$12.10	\$14.14	\$17.14
47-2221.00	Structural Iron and Steel Workers	13	\$12.50	\$11.22	\$13.46	\$14.59	\$10.13	\$12.12	\$13.40	\$15.24	\$16.45
15-1041.00	Computer Support Specialists	11	\$14.63	\$11.47	\$15.87	\$18.07	\$11.00	\$12.89	\$15.26	\$18.18	\$22.15
17-2141.00	Mechanical Engineers	11	\$25.36	\$18.96	\$27.38	\$31.59	\$17.57	\$20.53	\$26.72	\$35.23	\$42.13
	Mining and Geological Engineers, Including Mining										
17-2151.00	Safety Engineers	11	*	\$23.56	\$31.93	\$36.12	\$22.71	\$25.81	\$30.26	\$34.42	\$48.47
21-1093.00	Social and Human Service Assistants	11	\$10.75	\$7.16	\$8.96	\$9.85	\$6.86	\$7.38	\$8.25	\$10.58	\$12.64
35-2011.00	Cooks, Fast Food	11	\$5.75	\$5.67	\$6.40	\$6.76	\$5.56	\$5.75	\$6.05	\$6.94	\$8.26
35-3031.00	Waiters and Waitresses	11	\$5.60	\$5.70	\$6.43	\$6.79	\$5.55	\$5.76	\$6.11	\$7.36	\$8.29
35-9021.00	Dishwashers	11	\$5.91	\$5.75	\$6.32	\$6.60	\$5.39	\$5.74	\$6.33	\$7.14	\$7.95
43-6011.00	Executive Secretaries and Administrative Assistants	11	\$16.92	\$9.51	\$12.49	\$13.98	\$8.98	\$9.71	\$11.32	\$15.16	\$17.74
49-3023.01	Automotive Master Mechanics	11	\$19.00	\$7.81	\$13.41	\$16.21	\$6.50	\$9.53	\$13.50	\$16.54	\$20.65

Gray shading denotes the use of State OES wage data due to lack of local data.

Italics denotes figures derived from annual statewide data.

* denotes no data or inadequate data



Occupations With Less Than 10 Vacancies Reported

There were 261 total vacancies estimated for the occupations with less than 10 vacancies each. This number represents about one-third of all estimated vacancies for the region. The occupations in this list are diverse, offering no readily discernable pattern to their presence on the list or their distribution on it - other than the fact that they all have estimated vacancies of 10 or fewer. However, one common characteristic of most of the occupations seems to be that they are in more specialized fields and therefore would have fewer overall existing positions (as opposed to vacancies).

Occupations that are more specialized on this list can be included in major groups such as Art, Design, Entertainment, Sports and Media; Legal; Life, Physical and Social Sciences; Business and Financial Operations; Management; and Education, Training and Library.

The average survey wage for all occupations with less than ten estimated vacancies was \$12.70 compared to \$10.10 for all.

		1999-2000 OES Wage Data							
		А	verage Wa	ges					
O*NET Code	O*NET Occupation Title	Entry	Overall	Experienced	10th	25th	50th	75th	90th
11-3042.00	Training and Development Managers	*	*	*	*	*	*	*	*
11-9121.00	Natural Sciences Managers	\$22.48	\$34.70	\$40.81	\$19.82	\$26.12	\$33.84	\$42.51	\$52.23
	Employment, Recruitment, and Placement								
13-1071.00	Specialists	\$13.19	\$19.30	\$22.35	\$12.24	\$14.43	\$16.50	\$22.08	\$30.33
13-1073.00	Training and Development Specialists	\$13.21	\$18.81	\$21.60	\$12.81	\$15.07	\$18.36	\$23.00	\$26.40
13-2011.02	Auditors	\$12.91	\$20.43	\$24.19	\$12.32	\$14.24	\$18.27	\$23.51	\$32.12
13-2041.00	Credit Analysts	\$13.32	\$21.17	\$25.10	\$12.36	\$14.72	\$19.18	\$24.41	\$35.09
15-1021.00	Computer Programmers	\$16.44	\$26.88	\$32.11	\$13.91	\$19.50	\$27.02	\$36.41	\$43.11
15-1031.00	Computer Software Engineers, Applications	\$22.57	\$31.60	\$36.12	\$21.67	\$24.88	\$30.78	\$38.11	\$43.39
17-2061.00	Computer Hardware Engineers	\$24.89	\$35.09	\$40.18	\$23.13	\$26.92	\$33.38	\$41.66	\$51.18
17-3022.00	Civil Engineering Technicians	\$11.62	\$17.79	\$20.88	\$10.31	\$13.50	\$16.62	\$21.00	\$27.05
19-1023.00	Zoologists and Wildlife Biologists	\$16.92	\$24.07	\$27.64	\$15.34	\$18.78	\$23.60	\$28.41	\$33.86
	Substance Abuse and Behavioral Disorder								
21-1011.00	Counselors	\$10.14	\$13.04	\$14.48	\$8.93	\$11.09	\$12.41	\$14.34	\$18.15
21-2011.00	Clergy	*	*	*	*	*	*	*	*
23-1011.00	Lawyers	\$26.82	\$39.21	\$45.41	\$22.99	\$32.74	\$38.88	\$43.73	\$62.45
27-2012.03	Program Directors	\$12.02	\$19.94	\$23.89	\$11.56	\$12.88	\$16.61	\$22.88	\$32.47
27-3011.00	Radio and Television Announcers	*	*	*	*	*	*	*	*
29-1041.00	Optometrists	*	*	*	*	*	*	*	*
29-1071.00	Physician Assistants	\$19.73	\$24.30	\$26.58	\$17.76	\$22.09	\$24.53	\$27.47	\$32.40
29-2081.00	Opticians, Dispensing	\$9.88	\$13.88	\$15.88	\$9.21	\$10.80	\$11.72	\$13.33	\$27.91
	Hosts and Hostesses, Restaurant, Lounge,								
35-9031.00	and Coffee Shop	\$5.90	\$6.89	\$7.39	\$5.63	\$6.10	\$6.86	\$7.89	\$8.52
	Janitors and Cleaners, Except Maids and								
37-2011.00	Housekeeping Cleaners	\$6.14	\$7.82	\$8.67	\$5.78	\$6.42	\$7.48	\$8.59	\$10.90
37-2012.00	Maids and Housekeeping Cleaners	\$5.73	\$6.59	\$7.02	\$5.52	\$5.78	\$6.28	\$7.32	\$8.96
	First-Line Supervisors/Managers of Personal								
39-1021.00	Service Workers	\$7.88	\$12.77	\$15.22	\$6.79	\$9.10	\$11.44	\$14.43	\$21.38
	Hairdressers, Hairstylists, and								
39-5012.00	Cosmetologists	\$6.76	\$8.93	\$10.02	\$6.27	\$7.31	\$8.62	\$10.11	\$11.85
39-6021.00	Tour Guides and Escorts	\$7.92	\$11.36	\$13.08	\$7.34	\$8.65	\$11.66	\$13.63	\$15.70
39-9011.00	Child Care Workers	\$5.67	\$5.90	\$6.01	\$5.53	\$5.67	\$5.90	\$6.13	\$6.91

		1999-2000 OES Wage Data Average Wages Percentile Distribution							
O*NET Code	O*NET Occupation Title	Entry	Overall	Experienced	10th	25th	50th	75th	90th
	First-Line Supervisors/Managers of Retail	-							
41-1011.00	Sales Workers	\$8.94	\$14.54	\$17.34	\$8.54	\$9.83	\$11.97	\$15.37	\$22.02
	First-Line Supervisors/Managers of Non-								
41-1012.00	Retail Sales Workers	\$11.34	\$20.83	\$25.58	\$10.58	\$12.62	\$18.29	\$29.11	\$37.14
41-2011.00	Cashiers	\$5.83	\$8.06	\$9.18	\$5.73	\$6.16	\$7.42	\$9.25	\$12.44
41-2021.00	Counter and Rental Clerks	\$5.76	\$8.11	\$9.28	\$5.75	\$6.02	\$7.20	\$8.84	\$12.66
	Sales Representatives, Mechanical								
41-4011.04	Equipment and Supplies	\$15.82	\$26.59	\$31.97	\$14.52	\$17.58	\$23.35	\$36.23	\$47.01
41-9011.00	Demonstrators and Product Promoters	\$7.08	\$8.26	\$8.85	\$6.76	\$7.29	\$8.17	\$9.44	\$10.37
41-9041.00	Telemarketers	\$6.17	\$8.45	\$9.59	\$5.78	\$6.72	\$7.90	\$9.89	\$12.20
43-3051.00	Payroll and Timekeeping Clerks	\$10.02	\$14.40	\$16.59	\$9.42	\$11.12	\$12.93	\$15.24	\$17.02
43-4051.00	Customer Service Representatives	\$7.76	\$11.01	\$12.64	\$7.12	\$8.61	\$10.43	\$13.15	\$16.10
43-5081.01	Stock Clerks, Sales Floor	\$6.83	\$10.80	\$12.79	\$6.15	\$7.42	\$9.75	\$14.24	\$16.89
43-6012.00	Legal Secretaries	\$10.93	\$14.15	\$15.76	\$10.54	\$11.59	\$13.21	\$16.45	\$19.66
43-9061.00	Office Clerks, General	\$6.97	\$9.74	\$11.13	\$6.69	\$7.57	\$9.26	\$11.71	\$13.38
	First-Line Supervisors and Manager/Supervisors- Construction Trades								
47-1011.01	Workers	\$13.19	\$18.22	\$20.73	\$12.07	\$14.09	\$17.66	\$21.67	\$25.68
47-2031.00	Carpenters	\$10.85	\$13.75	\$15.20	\$10.81	\$11.68	\$13.14	\$15.44	\$16.99
47-2121.00	Glaziers	\$9.81	\$15.35	\$18.11	\$8.88	\$11.31	\$15.33	\$19.16	\$21.98
47-2152.00	Plumbers, Pipefitters, and Steamfitters	\$11.44	\$15.63	\$17.72	\$11.01	\$12.37	\$14.18	\$18.90	\$22.09
47-2152.02	Plumbers	\$11.44	\$15.63	\$17.72	\$11.01	\$12.37	\$14.18	\$18.90	\$22.09
47-4011.00	Construction and Building Inspectors	\$14.85	\$17.84	\$19.33	\$14.47	\$15.58	\$17.49	\$20.06	\$21.69
	First-Line Supervisors/Managers of								
49-1011.00	Mechanics, Installers, and Repairers	\$15.34	\$22.31	\$25.80	\$13.66	\$17.47	\$21.98	\$26.53	\$32.24
49-2011.03	Office Machine and Cash Register Servicers	\$11.14	\$15.12	\$17.11	\$10.77	\$12.08	\$14.80	\$18.36	\$20.41
	Electric Home Appliance and Power Tool								
49-2092.01	Repairers	\$8.49	\$12.76	\$14.90	\$7.79	\$9.48	\$11.90	\$14.78	\$19.32
49-9021 00	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$11.47	\$16.72	\$10.35	\$10.68	\$12.77	\$15.83	\$20.02	\$24.02
49-9042.00	Maintenance and Repair Workers, General	\$7.21	\$11.78	\$14.07	\$6.53	\$8.17	\$11.09	\$14.89	\$18.13

Table 2: Occupations With Less Than 10 Vacancies - Page 2 -

Table 2: Occupations	With Less	Than 10	Vacancies -	Page 3
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		1999-2000 OES Wage Data								
		Α	verage Wa	ges		Percei	entile Distribution			
O*NET Code	O*NET Occupation Title	Entry	Overall	Experienced	10th	25th	50th	75th	90th	
	HelpersInstallation, Maintenance, and									
49-9098.00	Repair Workers	\$5.72	\$8.93	\$10.53	\$5.67	\$6.00	\$7.78	\$11.47	\$14.02	
51-4121.01	Welders, Production	\$9.89	\$12.84	\$14.32	\$9.20	\$10.96	\$12.45	\$14.57	\$17.17	
51-6093.00	Upholsterers	\$9.54	\$12.78	\$14.40	\$8.81	\$10.61	\$12.46	\$15.19	\$17.28	
51-7021.00	Furniture Finishers	\$8.03	\$12.17	\$14.24	\$6.82	\$9.55	\$12.04	\$14.81	\$16.97	
53-3032.00	Truck Drivers, Heavy and Tractor-Trailer	\$11.81	\$14.42	\$15.73	\$10.71	\$13.12	\$14.75	\$16.13	\$16.96	
53-3032.01	Truck Drivers, Heavy	\$11.81	\$14.42	\$15.73	\$10.71	\$13.12	\$14.75	\$16.13	\$16.96	
53-3033.00	Truck Drivers, Light or Delivery Services	\$6.55	\$10.42	\$12.35	\$5.97	\$7.51	\$9.81	\$12.50	\$16.56	
	Laborers and Freight, Stock, and Material									
53-7062.00	Movers, Hand	\$6.96	\$9.39	\$10.61	\$6.66	\$7.52	\$9.01	\$11.08	\$12.89	
53-7081.00	Refuse and Recyclable Material Collectors	\$9.47	\$13.32	\$15.24	\$8.36	\$11.01	\$13.08	\$15.67	\$18.37	

Gray shading denotes the use of State OES wage data due to lack of local data. *Italics denotes figures derived from annual statewide data.*

* denotes no data or inadequate data

Education and Wages

There were 177 vacancies reported overall with education level requirements. Of those vacancies, over 76% had high school diploma or no diploma requirements (see *Figure 24*). The wage range percentage of the maximum range was the highest for advanced degree positions and the narrowest for no diploma positions. The ranges, as a percentage, were remarkably narrow however, 6% to 7% of maximum. The survey queried starting wages however, so these ranges do not represent



the entire range that would be available for any length of tenure.

The wage progression across education levels was completely consistent with each higher level of education having a higher minimum, average, and maximum wages than lower levels. The average starting minimum wage for advanced degree vacancies was \$19.80/hr. and the maximum wage was \$21.30/hr. The average starting minimum wage for vacancies needing no diploma was \$6.80/hr. and the average maximum wage was \$7.20/hr. The wage difference associated with education from no diploma to an advanced degree in this survey was therefore \$13.00/hr. for minimum starting pay and \$14.10/hr. for maximum starting pay. An interesting note from the survey is that the increase associated with education is greater from no diploma to a two-year degree than it is from a two-year degree to an advanced degree. The wage increase difference in the two increments varies from 3 to 1 for minimum starting pay to over 5 to 1 for maximum starting pay. The indication then, is that the greatest monetary reward (in terms of starting pay) for education comes from progressing to the level of a two-year degree. This is not to say that career pay, opportunities, benefits, or personal satisfaction might not present an entirely different scenario. Higher education levels almost always offer higher lifetime earnings than lower education levels.



Experience and Wages

Like the question on education, 177 vacancies reported had experience requirements. The requirements were biased toward the lower end of the spectrum, but not drastically so. Almost evenly split were requirements for related occupation experience and general work experience, 50 and 53 vacancies, respectively.

The difference in distribution was between the categories of specific occupation experience and no work experience. There were 32 vacancies with specific occupation needs and 42 with no work experience needs.

Since the bias toward the lower end of the experience spectrum is small, the result is a distribution that nearly approximates a bell curve.

Experience then, is an area that does not stand out as a frictional or discontinuity source in the labor market.

The relationship between starting wage levels, whether minimum, average, or maximum, is nearly linear. Each level of experience carries with it an almost equal increment increase in pay. There is however, a slightly higher incremental increase from general work experience to related work experience (\$4.20/hr.) than the average increment across the entire range (\$3.30/hr.).



The difference in pay associated with experience levels is not as great as that associated with education. The difference from lowest education level to the highest for minimum starting pay was \$13.00/hr. (as stated above) while for experience, the same comparison yielded over \$8.00/hr. For maximum starting pay, the difference was just over \$14.00/hr. for education and a little under \$10.00/hr. for experience.



On the other hand, the return for experience seems more predictable. While with experience each higher level of attainment was exclusively higher than the level below, the highest level of education is not exclusive. There were starting wages reported for the bachelors degree level that were higher than lower starting wages for advanced degrees, indicating involvement of other factors in wage determination.

Medical Insurance Benefits

Medical Insurance Benefits

Two-thirds of the vacancies with reports on medical insurance benefits have employer contributions to some degree. Of the 144 vacancies, 50 included no contribution, 58 included a partial benefit contribution, and 36 vacancies provided full payment. In addition, 33 vacancies had no medical benefit report associated with them.

The wage distribution related to vacancies within the different reporting categories was not surprising. Those vacancies which had no benefit report also had the lowest average wage, \$6.60/hr. The vacancies with total benefit payment had the highest wage, \$15.40/hr.

The technical, management, and legal occupations were those with the highest averages of medical benefit contribution Id (see *Figure 29* and *Table 3*).

Wage levels and employer medical insurance contribution levels tended to be correlated. The occupations with low wages also tended to not have employer medical insurance contributions either. Protective Services, Food Preparation and Serving, and Personal Services averaged no contribution and had a higher incidence of nonreporting as well.

In the middle (partial contribution), there is an admixture of occupations, from Installation,



Table 3: Medical Insurance Contribution ID					
Medical Insurance Contribution	ID				
Not Reported	0				
No Contribution	1				
Partial Payment	2				
Total Payment	3				
ContributionWedical Insurance ContributionNot Reported No Contribution Partial Payment Total Payment	ution ID ID 0 1 2 3				

Maintenance & Repair to Community & Social Services, and on to Production occupations.



No occupation had all of its associated vacancies reported with full payment of medical insurance premiums. Medical insurance benefits are, as one would expect, highly variable.

Another relationship to consider is that of medical insurance contributions with vacancy status (see *Figure 30*). Part-time vacancies, whether permanent or temporary, were all without employer contributions toward medical insurance. It should be remembered however, that temporary positions obtained through an agency frequently have medical benefits through the agency.

Permanent full-time vacancies had the highest contribution level overall. Twenty-eight percent of these vacancies had full payment of premiums and another 50% had partial premium payments.



Only 10% of vacancies that were full-time temporary positions had any contribution reported. Almost 46% (or 18) of vacancies were without report on medical insurance contributions. Because of this substantial percentage, which was far higher than any other status, it is difficult to compare full-time and part-time permanent positions. If Mesa County follows other areas, contribution levels are higher for full-time positions than part-time ones. Taken together, the survey data indicate that the likelihood of employer contributions for medical insurance increases dramatically for permanent full-time positions. Also indicated is that there are substantial numbers of workers without employeraided medical benefits.

Signing Bonus

Employers were asked about their use of signing bonuses as an extra incentive to possible new hires. Too few firms reported using this incentive to make any analysis possible.

Concluding Remarks

The January/February 2001 Mesa County Job Vacancy Survey has addressed the Mesa County economy, including population and labor force, compared to surrounding counties and other major population areas of the state. The profile implied during the survey period and from historical data is one of a growing and apparently healthy economy. No industries or major occupation groups stand out in the analysis. The industries and occupation groups that would be expected to have the highest employment levels and most vacancies do, in fact, have them. There are no large surprises in wages among industries or occupations.

The Mesa County economy had a vacancy distribution, which was biased more toward lower education and experience requirement positions. The economy overall, as per earlier analysis, is reasonably well balanced. As compared to other major population centers (*Figure 7* on page 9), there were only modest variations in industry distribution. The Mesa County economy had a slight bias toward Services and away from Retail and Durable Manufacturing as compared to most other areas. Two areas that may be more remarkable are the distribution and frequency of medical insurance employer contributions and also the wage return on education and experience. The survey raises questions about the medical insurance coverage for workers in the Mesa County economy. Given the limitations of a survey of this type, the further insight into this issue is not possible.

While the relationships between experience and wage and also education and wage are not surprising, the survey helps to define and characterize those relationships. The information should be useful to a variety of users, but should be of special interest to job seekers.

Future surveys will provide additional insights into the Mesa County labor market. Seasonal and trend information will become evident and further distinctions, such as between firm size, will be possible. Despite the limitations of this initial survey, it is hoped that this report provides many useful, if not enlightening, glimpses into the Mesa County labor market during the winter of 2001.

Occupation Wage Tables

Comparison of the vacancies reported are provided on the following pages. The table lists major occupation groups and the wage ranges referred to earlier in the report.

Based on job titles and/or job descriptions supplied by employers at the time of the survey, vacancies were assigned O*NET job titles which were then linked to Occupation Employment Statistics (OES) wage data. More information on the O*NET occupational coding system is available at http://online.onetcenter.org/. OES wage data presented are from the Mesa County Wages (For more on OES Wage data: http://lmi.cdle.state.co.us/wages/wages.htm). Wage data not available for occupations in Mesa County are statewide averages. The titles listed may provide a better understanding of the types of employment to which this report refers.

Table	4. Occupation Group Mage Ranges				
MjrOccGrp	Occupation Title	Vacancies	Minimum Wage	Average Wage	Maximum Wage
35	Food preparation and serving related	59	\$2.13	\$5.99	\$13.94
47	Construction and extraction	25	\$8.00	\$14.34	\$24.04
53	Transportation and material moving	20	\$5.15	\$7.44	\$19.23
41	Sales and related	19	\$5.50	\$8.99	\$22.00
49	Installation, maintenance, and repair	14	\$5.75	\$12.46	\$21.78
51	Production	11	\$8.00	\$11.09	\$14.00
17	Architecture and engineering	9	\$13.82	\$22.29	\$33.65
39	Personal care and service	9	\$5.25	\$6.49	\$15.00
43	Office and administrative support	8	\$7.00	\$11.60	\$19.13
31	Healthcare support	5	\$6.25	\$7.56	\$8.00
15	Computer and mathematical	4	\$9.61	\$16.87	\$24.04
21	Community and social services	4	\$7.75	\$11.67	\$17.00
29	Healthcare practitioners and technical	4	\$6.50	\$12.88	\$25.00
13	Business and financial operations	3	\$8.00	\$12.89	\$23.64
25	Education, training, and library	3	\$7.20	\$8.40	\$9.60
27	Arts, design, entertainment, sports, and media	3	\$10.58	\$11.30	\$12.02
33	Protective service	3	\$6.00	\$6.00	\$6.00
11	Management	2	\$15.87	\$19.71	\$23.56
37	Building and grounds cleaning and maintenance	2	\$7.28	\$8.81	\$10.95
23	Legal	1	\$16.83	\$16.83	\$16.83

– Table 4: Occupation Group Wage Ranges-

Methodology

Survey Instrument and Redesign

The Job Vacancy Survey was initiated in Denver and five other MSAs across the nation as a pilot study regarding the nature of vacant positions in the labor market. As a result of the success of the Denver Job Vacancy Survey, studies have been approved for all of Colorado's Workforce Development Regions.

After evaluation and redesign of the survey instrument, the JVS was introduced to the Upper Arkansas Valley Region as the pilot study of the first rural area. In choosing questions, considerations were made regarding various form and gradations. Decisions were made to address the core of what was required in order to stay within the defined limits. Page one (Part A) of the survey was expanded to not only state the purpose of the survey, but also to collect employer information; verifying addresses, number of employees, and establishing contact names. Email and fax numbers were added to provide a means of contacting employers for notification of survey results. A review of Page two (Part B) survey questions follows:

- **A**-The "Job Title" section remained relatively the same, although a definition of Full- versus Part-time was included.
- **B**—"Number of vacancies for which your firm is actively recruiting": The objective was to get a measure of the job market from the employer's point of view. A variant of this question was, "Number of vacancies that your firm currently has." *Actively recruiting* was queried due to the possible presence of vacancies that were deliberately left vacant. Also revised was the query for Permanent vs. Temporary identification in addition to the vacancy classification of Full- or Part-time status.
- **C**–Wages/Salary: This question was revised to request the maximum and the minimum rate of pay to evaluate variations in pay given different applicant qualifications.
- **D**–"Is a sign-on bonus offered to the person hired to fill this vacancy?" This has become an important

question to gauge the extra effort to which employers were going to hire qualified staff. In addition to noting whether or not a bonus is offered, the revised survey allowed a dollar amount to be entered. While the Mesa County Region pilot study did not produce a high enough response rate to present the sign-on bonus results, future surveys may offer such results for businesses to compare the use of this incentive.

- E-"Is medical insurance offered?" In addition, the revised survey prompted for the portion (if any) that the firm contributed. To better understand the relationship between types of positions, pay, vacancies, and the existence of medical insurance, it was important to note how much the firm contributed to the insurance premium.
- **F**—"What is the typical education level required to fill this vacancy?" Examination of the nature of the job market and the needs of employers included the query of educational requirements.
- **G**—"What is the typical type of experience required to qualify for this vacancy?" This also adds to the characteristics that employers are looking for in applicants. It was important to expand this question, allowing the firm to note the nature of the experience requested. During times of excess labor supply, applicant qualifications demanded tend to increase. During periods of limited supply, the reverse tends to occur.
- **H**—"How long has this vacancy been open?" This question was added to the revised survey to gauge the tightness of the labor market. It provides an objective measure that can be tracked and compared across time.
- I–"How difficult is this vacancy to fill?" Questions H and I together help to evaluate the challenges employers face in the timely hiring of personnel and the degree to which the supply of labor falls short of demand.

Survey Sample Methodology

The central question this survey is designed to answer is: What is the number of job vacancies per 100 positions in the Mesa County Region? The types of firms were categorized into groups, or stratifications, and the resulting percentages of vacancies for each category were used to estimate total job vacancies from each group.

In order to define the types of firms to place into the stratifications, the following decisions were made. Only firms with five or more employees were included in the survey. To protect confidentiality among the firms sampled, analysis was kept at the major industry and occupation group levels. The list of Mesa County Region firms, with their contact information, staff size and industry classification was obtained from the ALMIS database.

The list of employers was categorized into the three main groups; large employers (80 or more); small to mid-sized (5-79) goods producing; and small to mid-sized service producing firms.

The survey was designed to contact all 87 large employers in the area. Response was obtained from one large employer. The list of the small to mid-sized firms was randomized. A sample of sufficient size to achieve a predictable level of accuracy for the estimates of job vacancies was taken from the randomized list. The survey included 1,905 small to mid-size firms, of which a total of 526 responded to the survey.

Definitions

Annual Salary

The monetary return for one year's work. The definition does not include benefits (*e.g.*, insurance, retirement program, or stock plans).

Average

The arithmetic average (also called the mean) for a group of items is defined as the sum of the values of the items divided by the number of items. The average income for three households will be calculated as follows:

Avera	age Household income
	The sum of individual households incomes
=	The number of households

 $= \frac{\$30,000 + \$44,000 + \$40,000}{3} = \$38,000$

Full-time and Part-time Employment

To be classified as full-time employment a position must require a minimum of 35 hours of work a week. Part-time employment refers to cases where a position requires less than 35 hours of work a week.

Job Vacancy Rate

Is the number of openings in a specific occupation expressed as a share of total employment in that same occupation.

Level of Education

Refers to completed programs of work. High school diplomas, associate, professional, vocational, bachelors, and graduate degrees all are examples of programs of work.

Medical Insurance Premium

Refers to the monthly payments that a holder of an insurance policy pays in order to keep his/her policy current.

Mid-Point

For the purpose of this survey, the Mid-Point refers to the wage halfway between the average minimum and average maximum wages as reported by survey respondents.

O*NET Occupation Codes

The O*NET database includes information on skills, abilities, knowledge, work activities, and interests associated with occupations. This information can be used to facilitate career exploration, vocational counseling, and a variety of human resources functions, such as developing job orders and position descriptions and aligning training with current workplace needs.

Information on O*NET is available for over 950 occupations. Each occupational title and code is based on the most current version (1999) of the Standard Occupational Classification system.

Definition from the O*NET Welcome web page: http://online.onetcenter.org/

Permanent and Temporary Employment

Employment is classified as permanent if it will be filled for more than six months. Temporary employment on the other hand refers to those positions which will be filled for six months or less.

Sample Frame

The set of employers randomly chosen for the survey from the whole population of employers. Since vacancies and employment data were the central objectives of the survey, the sample frame was designed to allow necessary representation in those categories.

Sign-on Bonus

An additional financial incentive offered by a firm to new employees in order to influence their decisions to agree to employment with that firm. The bonus, for purposes of this survey, is a monetary lump sum.

Vacancy

An established position that is currently unfilled for which the firm is actively recruiting to fill. The definition does not include positions that are anticipated, but not yet created.

Wage

The monetary return per hour of work. The definition does not include benefits (*e.g.*, insurance, retirement program, or stock plans).

Mesa County Job Vacancy Survey

Appendix - Survey Instrument

BILL OWENS Governor

VICKIE L. ARMSTRONG Executive Director

JEFFREY M. WELLS Deputy Executive Director



DEPARTMENT OF LABOR AND EMPLOYMENT

LABOR MARKET INFORMATION WORKFORCE RESEARCH AND ANALYSIS

Two Park Central, Suite 300 1515 Arapahoe Street Denver, Colorado 80202-2117 (303) 318-8890

Dear Employer,

The State of Colorado is conducting a survey the results of which will assist business leaders, policy makers, and education professionals in addressing the current worker shortage. Your participation in the study is essential to developing accurate, useful information.

All responses to the survey are considered confidential. No data identifying individual firms directly or indirectly will be published or released. If you have any questions regarding this survey, feel free to contact Michael Patton, the Workforce Research and Analysis unit's administrator for this survey, toll-free at (877) 224-6081.

The aggregate results of this survey will be made available to the public. The final publication will provide information on:

- The number of vacancies by industry, occupation, and education requirements for your labor market area
- o Average wage or salary being offered by occupation
- Whether or not firms are offering health insurance and/or sign-on bonuses for those vacancies, and
- How much, on average, those sign-on bonuses are

If you provide us with a fax number or e-mail address, we will send you notification when it becomes available. At that time you may either order a copy at no cost to you, or download the publication from our website, which will be printed on the announcement.

Thank you for your time and participation in this important study.

Sincerely,

Alexandra E. Hall Senior Economist Workforce Research and Analysis



<u>Mesa County</u> Job Vacancy Survey

Survey ID: 299510001

Company ID:

Survey Instructions

- Please direct this survey to the manager or human resources professional responsible for hiring and recruitment at your business.
- Please **respond within three business days.** Your assistance will allow us to complete this survey in a timely manner.
- Return this survey by fax to (877) 222-0921. This number is toll-free.

For the purposes of this survey, a vacancy at your company is a job opening for which your firm is actively recruiting. Only provide information for job vacancies within Mesa County.

Part A: About Your Firm

1. Who may we contact regarding job vacancies at your location and at other Grand

Junction area locations?_____

- 2. Contact's:
 - a. Job Title _____
 - b. Phone # _____
 - c. Fax #_____
 - d. E-Mail Address
- 3. Company Name:
- 4. Number of Employees working within the Grand Junction area:
- 5. Do you have any job vacancies for which your firm is actively recruiting?

🗆 Yes 🛛 🗅 No

6. Would you like to be notified when the survey results are released?

🗆 Yes 🛛 🗅 No

If you answered yes to question number five, please complete the next page of this survey. If you have more vacancies than will fit on the next page, please make copies before you begin filling out the form. Thank you very much for your participation in the survey. We look forward to providing you with a final copy of the study.

Part B: About Your Vacancies, See next page -

Mesa County Job Vacancy Survey

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