

**LANDER COUNTY, NEVADA:  
DEMOGRAPHIC/ECONOMIC TRENDS,  
INDUSTRIAL AND OCCUPATIONAL TARGETING ANALYSIS,  
AND COMMUNITY BUSINESS MATCHING MODEL ANALYSIS**



**Lander County, Nevada: Demographic/Economic Trends,  
Industrial and Occupational Targeting Analysis,  
and Community Business Matching Model Analysis**

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## TABLE OF CONTENTS

Introduction .....	1
Socio-Economic Trends and Employment/Occupational Projection for Lander County.....	4
Potential Industrial Targets by Plant Openings.....	22
An Analysis of Economic Base and Change in Lander County .....	26
Additional Economic Information from IMPLAN.....	38
Export Enhancement Targeting for Lander County.....	46
Import Substitution Targeting for Lander County.....	54
Focusing Targeting Opportunities with the Mining Sectors in Lander County .....	63
Occupational Linkages to the Gold Mining Industry.....	72
Community Business Matching Model: Concepts and Intitial Results .....	83
Summary and Conclusions .....	97
References.....	109
Appendix A: Employment, Shares of Employment, and Percentage Change in Employment for All Economic Sectors in Lander County.....	112
Appendix B: Location Quotient Values and Percentage Change in Location Quotient Values for All Economic Sectors in Lander County.....	117
Appendix C: Shift-Share and Competitive Position for All Economic Sectors in Lander County. ....	121
Appendix D: Value of Output for All Economic Sectors in Lander County.....	125
Appendix E: Labor Income for All Economic Sectors in Lander County.....	128
Appendix F: Value of Commodity Exports in Lander County.....	131
Appendix G: Value of Commodity Imports in Lander County.....	135
Appendix H: Best Match Sector Description .....	147

## LIST OF TABLES

Table 1. County Population, Rank of Population, and Change in Population Rank, State of Nevada, 1990 to 2000 .....	5
Table 2. Personal Income of Lander County Residents, 2008.....	16
Table 3. Comparison of Personal Income Sources, Lander County, State of Nevada and the United States, 2008 .....	17
Table 4. Projected Sectoral Employment Growth from 2010 to 2020 .....	19
Table 5. Projected Occupational Growth from 2010 to 2020 .....	19
Table 6. Sectors in Which Three or More Establishments Opened Since 2000 in Nonmetropolitan, Mining-Dependent Counties .....	23
Table 7. Top 25 Industry Sectors Ranked by Total Employment in 2009 Along with Employment in 2003, Share of Total Employment for 2003 and 2009, and Percentage Change in Employment from 2003 to 2009.....	27
Table 8. Top 25 Industry Sectors Ranked by Location Quotient in 2009 Along with Location Quotient in 2003, and Percentage Change in Location Quotient from 2003 to 2009 .....	30
Table 9. Top 25 Lander County Sectors Based on Competitive Position, 2003 to 2009.....	35
Table 10. Top 25 Economic Sectors by Value of Output for Lander County, 2009 .....	39
Table 11. Top 25 Economic Sectors by Value of Labor Income for Lander County, 2009 .....	40
Table 12. Top 25 Commodities Exported from Lander County, 2009.....	42
Table 13. Top 25 Commodities Imported to Lander County, 2009 .....	43
Table 14. Sectors with at Least 20 Employees in 2009, Employment Growth from 2003 to 2009, either a Location Quotient Greater than One or an Increasing Location Quotient, and a Positive Competitive Position.....	47
Table 15. Forecasted U.S. Employment Growth Rate, 2008 to 2018 .....	48
Table 16. Employment Potential for Nine Targeted Economic Sectors in Lander County .....	49
Table 17. Quality of Job for Nine Targeted Economic Sectors in Lander County.....	49
Table 18. Nine Targeted Economic Sectors in Lander County by Z-Score.....	50
Table 19. Sectors with Backward or Forward Linkages to the Targeted Industries in Lander County .....	51
Table 20. Top 25 Non- Competitive Commodity Sector Imports for Lander County and Components of Demand.....	56

Table 21. Top 25 Competitive Commodity Sector Imports for Lander County and Components of Demand.....	58
Table 22. Lander County Top 10 Industry Importers and Their Five Most Imported Commodities .59	
Table 23. Top 20 Forward Links to the Gold, Silver, and Other Metal Ore Sector for Lander County and the U.S. ....	64
Table 24. Top 20 Backward Links to the Gold, Silver, and Other Metal Ore Sector for Lander County and the U.S. ....	65
Table 25. Top 20 Forward Links to the Other Nonmetallic Mineral Mining and Quarrying Sector for Lander County and the U.S.....	66
Table 26. Top 20 Backward Links to the Other Nonmetallic Mineral Mining and Quarrying Sector for Lander County and the U.S.....	67
Table 27. Top 20 Forward Links to the Support Activities for Other Mining Sector for Lander County and the U.S. ....	68
Table 28. Top 20 Backward Links to the Support Activities for Other Mining Sector for Lander County and the U.S. ....	69
Table 29. IMPLAN 24 (NAICS 21222 and 21229 – Gold, Silver, and Other Metal Ore Mining) Total Job Loss by Occupation, Using Balance of State Nevada Staffing Patterns and Lander County Multipliers.....	73
Table 30. IMPLAN 24 (NAICS 21222 and 21229 – Gold, Silver, and Other Metal Ore Mining) Employment by Occupation, Using Detailed U.S. Staffing Patterns .....	74
Table 31. Top 10 Knowledge Attributes for Construction and Extraction Workers .....	75
Table 32. Top Compatible Occupations for Construction and Extraction Workers by Compatibility Score.....	77
Table 33. Top Compatible Occupations for Installation, Maintenance, and Repair Workers by Compatibility Score.....	77
Table 34. Top Compatible Occupations for Transportation and Material Moving Workers by Compatibility Score.....	77
Table 35. West Central Nevada Industries with Largest Percentage of Target Occupations.....	81
Table 36. CBM Community Goals and Indicators .....	86
Table 37. Indicators of Community Assets .....	88
Table 38. Battle Mountain Study Area “Best Matches” NAICS Sector with Desirability and Compatibility Indices of 0.90 or Greater .....	94
Table 39. Desirability Index Rankings of 0.90 or Greater .....	95

**LIST OF FIGURES**

Figure 1. Population Indices, Lander County, State of Nevada, the United States, 1969 to 2008..... 6

Figure 2. Annual Percentage Change in Lander County Population, 1969 to 2008..... 7

Figure 3. Employment Indices (1969 = 100) for Lander County, State of Nevada, and the United States, 1969 to 2008..... 8

Figure 4. Per Capita Income Levels (2005 Dollars) for Lander County, State of Nevada, and the United States, 1969 to 2008 ..... 9

Figure 5. Per Capita Income Indices (1969 = 100) for Lander County, State of Nevada, and the United States, 1969 to 2008 ..... 10

Figure 6. Lander County Per Capita Income: Annual Percentage Change, 1970 to 2008..... 11

Figure 7. Earnings Per Job (2005 Dollars) Lander County, State of Nevada, and the United States, 1969 to 2008..... 12

Figure 8. Average Earnings Per Job Indices (1969 = 100): Lander County, State of Nevada and the United States, 1969 to 2008 ..... 13

Figure 9. Lander County Average Earnings Per Job: Annual Percentage Change, 1970 to 2008 ..... 14

Figure 10. Earnings and Per Capita Income Lander County, 1969 to 2008 ..... 15

Figure 11. Top 15 Knowledge Level Scores for Construction and Extraction Workers and Two Top Occupation Matches..... 78

Figure 12. Top 15 Knowledge Level Scores for Occupations Related to Installation, Maintenance, and Repair Workers and Two Top Occupation Matches. .... 79

Figure 13. Top 15 Knowledge Level Scores for Occupations Related to Transportation and Material Moving Workers And Two Top Occupation Matches ..... 80

Figure 14. CBM General Framework ..... 85

Figure 15. Desirability Framework..... 86

Figure 16. Compatibility Framework..... 87

Figure 17. Battle Mountain Regional Economic Development Goals..... 91

Figure 18. Battle Mountain Study Area Economic Development Priorities ..... 92

Figure 19. Battle Mountain Study Area Regional Economic Development Best Match Industries ..... 93

## INTRODUCTION

The objectives of this publication are threefold. One is to provide socio-economic data on Lander County and analyze trends in the data. Second, an industrial and occupational targeting study was completed for Lander County. This analysis will provide back-up data for the Community Business Matching model process for Battle Mountain. Lastly, a Community Business Matching model procedure is applied to Lander County. This publication is divided into eight parts:

- 1) A presentation and analysis of socio-economic data pertaining to Lander County and employment/occupational projections for Lander County,
- 2) An analysis of economic sectors with a propensity for opening new firms in the West,
- 3) An analysis of economic base and economic base change in Lander County,
- 4) Additional economic information and analysis for Lander County,
- 5) Targeting of economic sectors by export enhancement,
- 6) Targeting of economic sectors by import substitution,
- 7) Targeting of occupations for economic development, and
- 8) Targeting through a Community Business Matching model.

### **Why Target Industry Clusters?**

An industry cluster is a geographically bound collection of similar and/or related firms that together create competitive advantages for member firms and the local economy. Industry clusters generally include firms with significant horizontal and/or vertical linkages, or firms with similar resource and/or labor needs. Firms in an industry cluster may interact through purchase-sale relationships; inter-firm collaboration in product development, marketing or research; or a shared reliance on specialized services and labor markets.

The targeting of industrial development programs at specific industry clusters provides four principal advantages.

- 1) The presence of an industry cluster in the area is evidence that the location is attractive to these types of manufactures.
- 2) The multiplier effect associated with attracting new firms to a cluster generally is greater than those resulting from non-cluster firms.
- 3) Members of industry clusters have stronger employment growth over time than firms that are not in clusters.
- 4) Industry clusters have greater potential for new firm spin-offs than groupings of unrelated firms.



### **Why Occupational Targeting?**

For many traditional economic development researchers and practitioners, regional economic analysis has meant examining only industrial strengths and weaknesses and developing strategies to replace declining industries and enhance county economic competitiveness. In short, industry has dominated any approaches to economic development.

With the research of Thompson and Thompson (1985), the trend for economic development is changing. Researchers and economic development practitioners have begun to pay attention to occupations as well as industries. Recently, regional competitiveness has become increasingly dependent upon local knowledge bases and worker quality. Economic development activities that target occupations provide a different angle in formulating development targets. For example, although the mining and casino industries produce completely different products, software engineers in the two sectors often perform similar and interchangeable tasks. Because workers who perform similar tasks can easily move between industries with minimal training, strategies that target sole industries may overlook occupation-based opportunities across industries. For this reason, economic development practitioners need to pay attention to the functions that local workers perform as to the output they produce (Feser, 2003).

### **Why Community Business Matching Model?**

Most economic and occupational targeting is completed without knowledge of economic development desires of the local populace and available assets of the community for a business. The Community Business Matching model attempts to address these limitations by deriving economic goals of the community and listing of assets. Through desirability and compatibility indices, the Community Business Matching model provides to communities economic sectors that meet community economic goals while simultaneously matching community assets to business needs.

Before reporting the cluster targeting results, a brief synopsis of socio-economic data that provides an overview of Lander County is presented. Also, projections of employment and occupations for Lander County from 2010 to 2020 will be discussed.

**SECTION I:**

**SOCIO-ECONOMIC TRENDS AND  
EMPLOYMENT/OCCUPATIONAL PROJECTIONS  
FOR LANDER COUNTY**

## **SOCIO-ECONOMIC TRENDS AND EMPLOYMENT/OCCUPATIONAL PROJECTIONS FOR LANDER COUNTY**

Former professor Gary Smith of Washington State University notes in the Pacific Northwest Regional Economic Analysis Project (PNREAP) website (Smith, 2010):

“Attracting and retaining people to live, work, raise a family, and retire underlies the economic growth of any region. Population growth is both a cause – and a consequence – of economic growth. Patterns of population growth and change reflect differences among regions to attract and retain people both as producers and consumers in their economy.”

### **Population**

With this basic understanding, data and graphs from PNREAP’s website will be examined to further clarify the economic status of Lander County.

- Lander County is located in central Nevada. The county is bordered by Elko County to the north, Humboldt County to the northwest, Pershing and Churchill counties to the west, Nye County to the South, and Eureka County to the east. The community of Battle Mountain is the county seat and population center for Lander County.
- According to the U.S. Census in 2000, the population for Lander County decreased from 6,266 in 1990 to 5,794 in 2000. During this timeframe the population rank in the state for Lander County remained as the twelfth highest (Table 1).
- Also of interest is the growth of Nevada’s urban counties (Clark, Carson City and Washoe Counties), which grew from 1,036,569 in 1990 to 1,767,708 in 2000. The rural counties of Nevada have also realized a population increase from 165,264 in 1990 to 230,549 in 2000. However, even with the rural Nevada population increase, the proportionate urban share of Nevada’s total population increased from 86.25 percent in 1990 to 88.46 percent in 2000.

**Table 1. County Population, Rank of Population, and Change in Population Rank, State of Nevada, 1990 to 2000.**

County	2000		1990		Change in Rank
	Population	Rank	Population	Rank	
Clark	1,375,765	1	741,459	1	0
Washoe	339,486	2	254,667	2	0
Carson City	52,457	3	40,443	3	0
Elko	45,291	4	33,530	4	0
Douglas	41,259	5	27,637	5	0
Lyon	34,501	6	20,001	6	0
Nye	32,485	7	17,781	8	1
Churchill	23,982	8	17,938	7	-1
Humboldt	16,106	9	12,844	9	0
White Pine	9,181	10	9,264	10	0
Pershing	6,693	11	4,334	13	2
<b>Lander</b>	<b>5,794</b>	<b>12</b>	<b>6,266</b>	<b>12</b>	<b>0</b>
Mineral	5,071	13	6,475	11	-2
Lincoln	4,165	14	3,775	14	0
Storey	3,399	15	2,526	15	0
Eureka	1,651	16	1,547	16	0
Esmeralda	971	17	1,344	17	0
Urban <sup>1</sup>	1,767,708		1,036,569		
Rural <sup>2</sup>	230,549		165,262		
<b>TOTAL</b>	<b>1,998,257</b>		<b>1,201,831</b>		

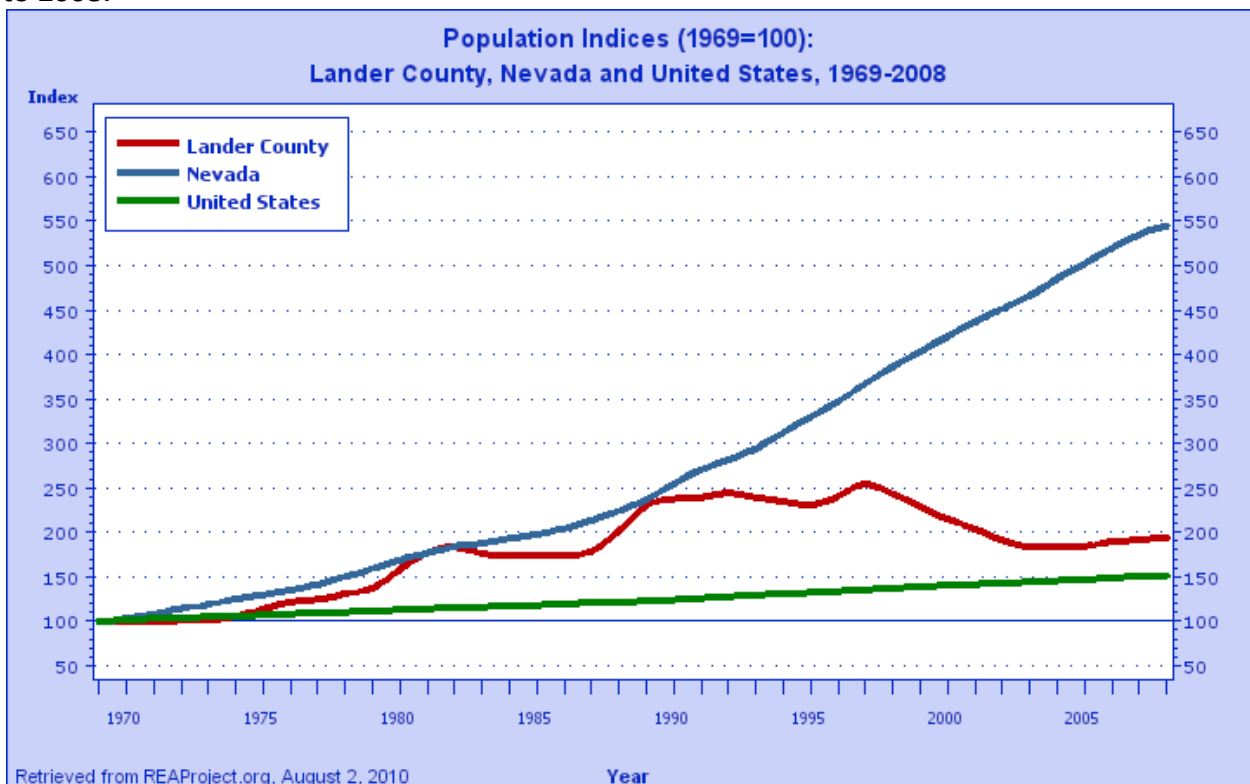
Source: U.S. Department of Commerce. "Census 2000 Redistricting Data (PL-94-171) Summary File, Table PL1 and 1990 Census." Bureau of Census: Washington D.C. 2000 and 1990.

<sup>1</sup> Urban counties of Nevada are Carson City, Clark, and Washoe Counties.

<sup>2</sup> Rural counties are the remaining 14 of Nevada's 17 counties.

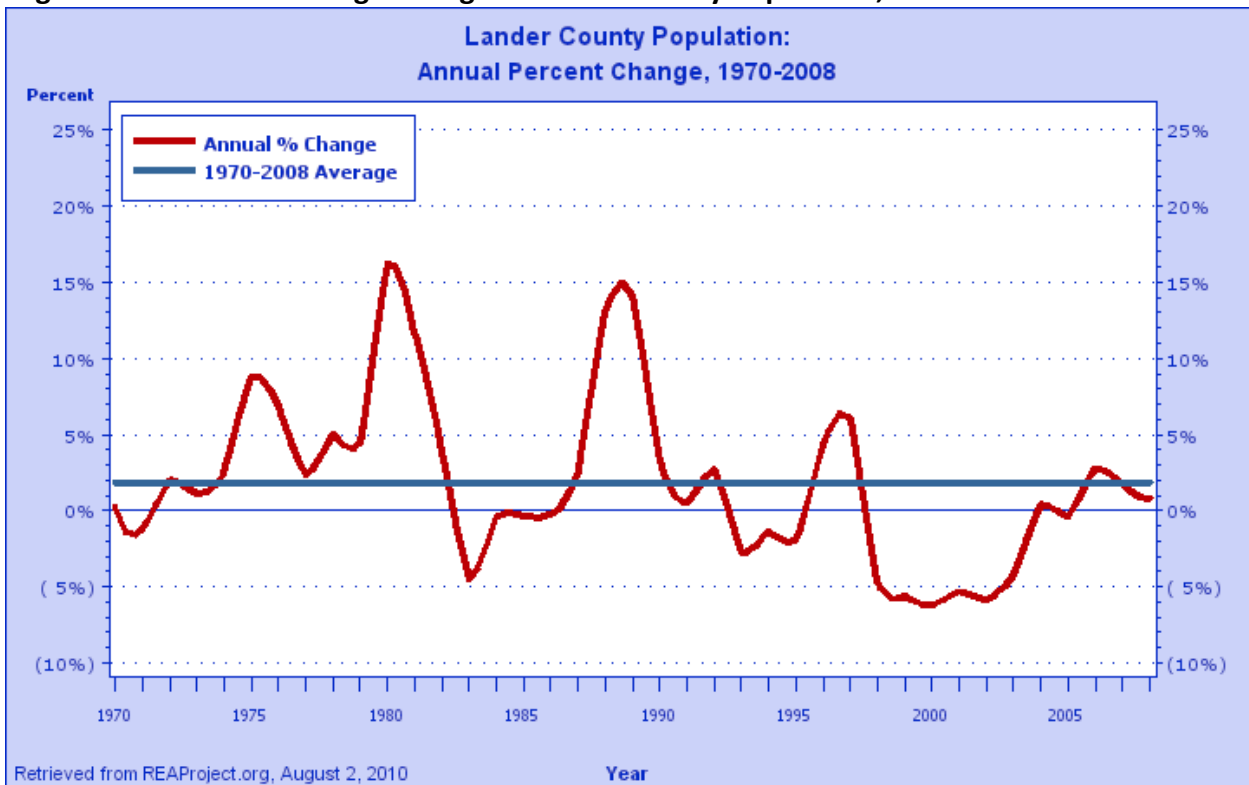
- Lander County population increased from 2,648 in 1969 to 5,127 in 2008, a population increase of approximately 94 percent. From Figure 1, Lander County's population growth exceeded the nation, but lagged behind the state of Nevada.
- Figure 1 allows for a comparison of population growth between Lander County, Nevada and the nation. The growth indices have a base population from 1969 (designated as 100). Each year following 1969 is designated as a percentage of 1969. Thus, the nation's population growth of nearly 51 percent fell short of Nevada's increase of approximately 445 percent and Lander County's population growth of approximately 93.6 percent.

**Figure 1. Population Indices, Lander County, State of Nevada, the United States, 1969 to 2008.**



- Figure 2 highlights the short-run pattern of Lander County’s population growth by tracking the year-to-year percentage change from 1969 to 2008. The average annual percentage change for the entire 40 years is also traced on Figure 2 to provide a benchmark for gauging periods of relatively high and relatively low growth against the long-term trend.
- From Figure 2, the average annual percentage growth of population in Lander County was 1.85 percent from 1969 to 2008.

**Figure 2. Annual Percentage Change in Lander County Population, 1969 to 2008.**

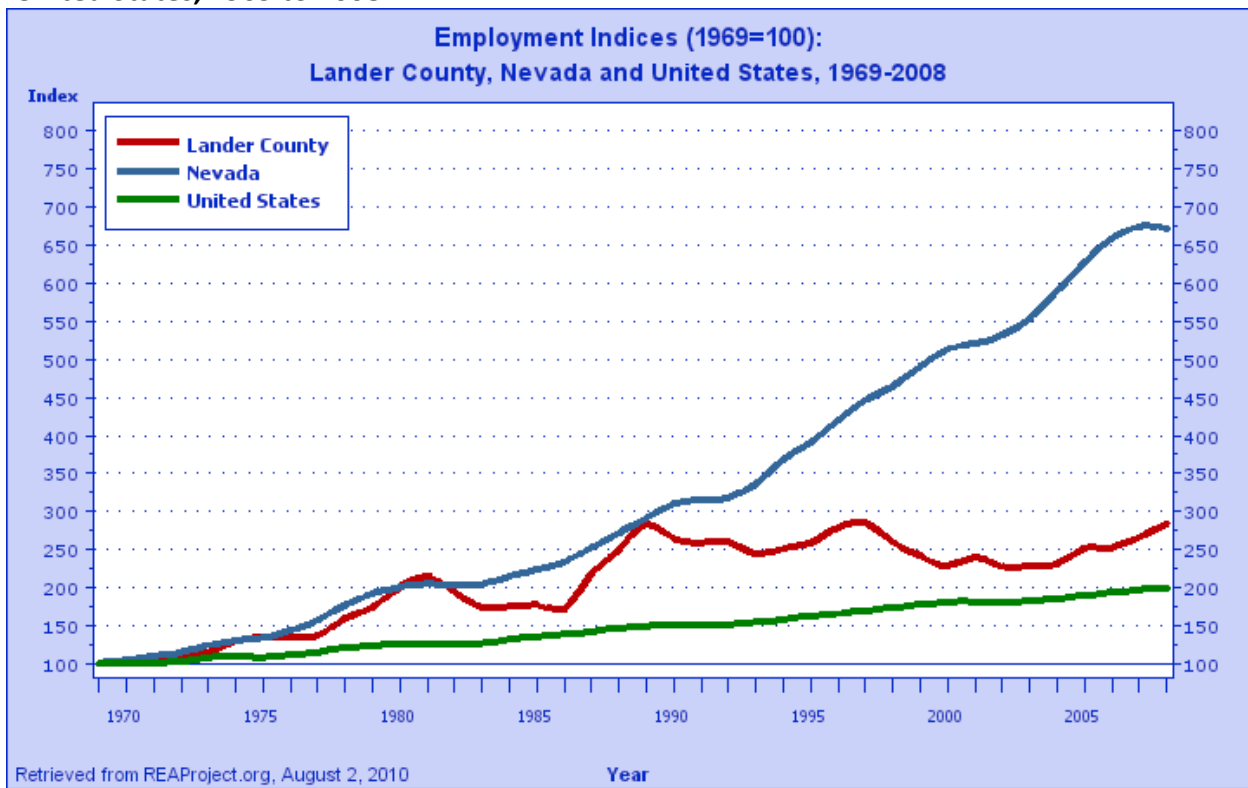


## Employment

According to Smith (2010), “Employment numbers remain the most popular and frequently cited statistic used for tracking local area economic conditions and trends”. The employment data used for Figure 3 are both fulltime and part-time employment by place of work. As one person can hold more than one job, the numbers are not necessarily the number of people employed. These employment numbers are by place-of-work not place-of-residence. Therefore, jobs held by neighboring county residents who commute to Lander County are included in the employment count of Lander County.

- From 1969 to 2008, Lander County employment grew from 1,243 to 3,533 or an employment increase of 184 percent. Figure 3 indicates that Lander County employment grew by 184 percent, the growth was insufficient to keep pace with the state of Nevada employment growth rate of 572.1 percent. However, Lander County’s employment growth rate was greater than the national employment growth rate of 99.6 percent.

**Figure 3. Employment Indices (1969 = 100) for Lander County, State of Nevada, and the United States, 1969 to 2008.**

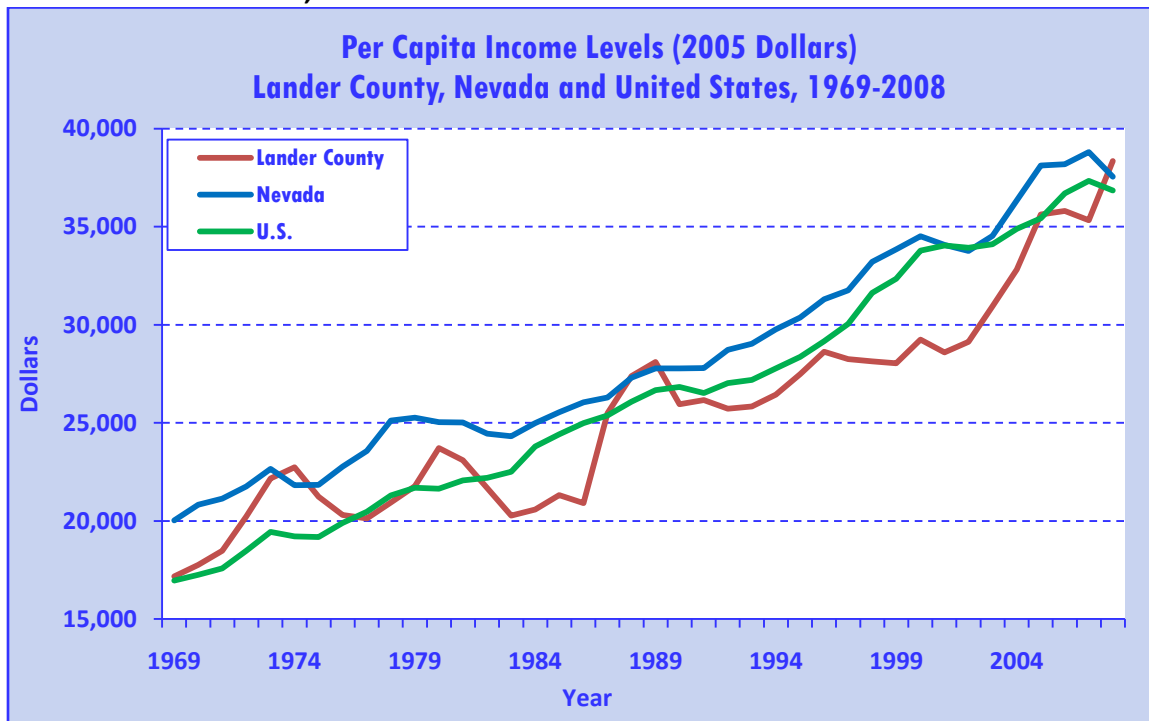


## Per Capita Income

From Smith (2010), “Per Capita Income is one of the most widely used indicators for gauging the economic performance and changing fortunes of local economies. It is used as a yardstick to assess the economic well being of a region’s residents and the quality of consumer markers. Per capita serves as a barometer for calibrating the economic performance of a county over time and to judge differences in relative economic prosperity between counties.”

- Per capita income also grew in Lander County since 1969 from \$17,169 in constant 2005 dollars to \$38,349 in 2008.
- Figure 4 demonstrates the per capita income (expressed in 2005 dollars) of Lander County, the state of Nevada, and the United States.

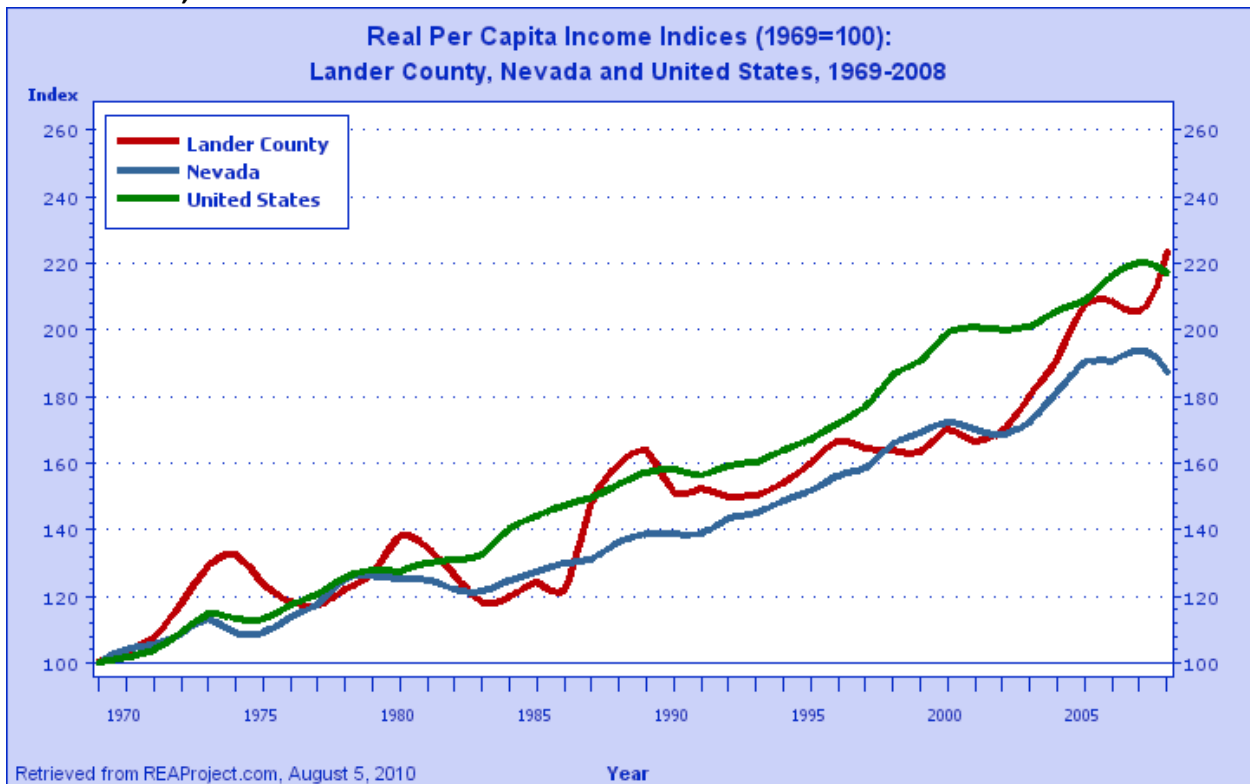
**Figure 4. Per Capita Income Levels (2005 Dollars) for Lander County, State of Nevada, and the United States, 1969 to 2008.**





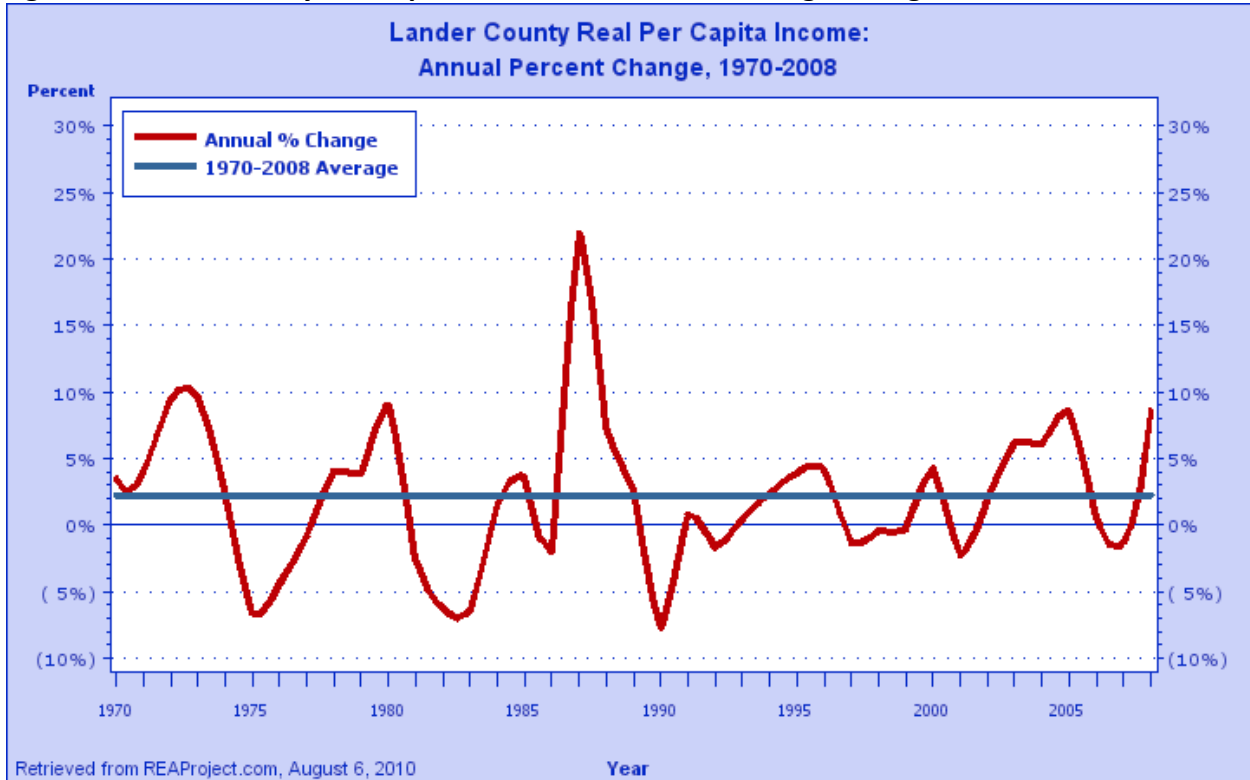
- Figure 5 shows that Lander County's real per capita income climbed 123.4 percent, surpassed the gain by Nevada (87.4 percent), and outpaced the increase nationally (117.2 percent).

**Figure 5. Per Capita Income Indices (1969 = 100) for Lander County, State of Nevada, and the United States, 1969 to 2008.**



- The growth of Lander County’s per capita income is shown in Figure 6 as the annual percentage change, tracked from year to year. The red line shows the short-term changes in per capita income and the blue line is a long-term view of the changes. Over the 39-year study period, per capita income growth for Lander County has been 2.23 percent.

**Figure 6. Lander County Per Capita Income: Annual Percentage Change, 1970 to 2008.**

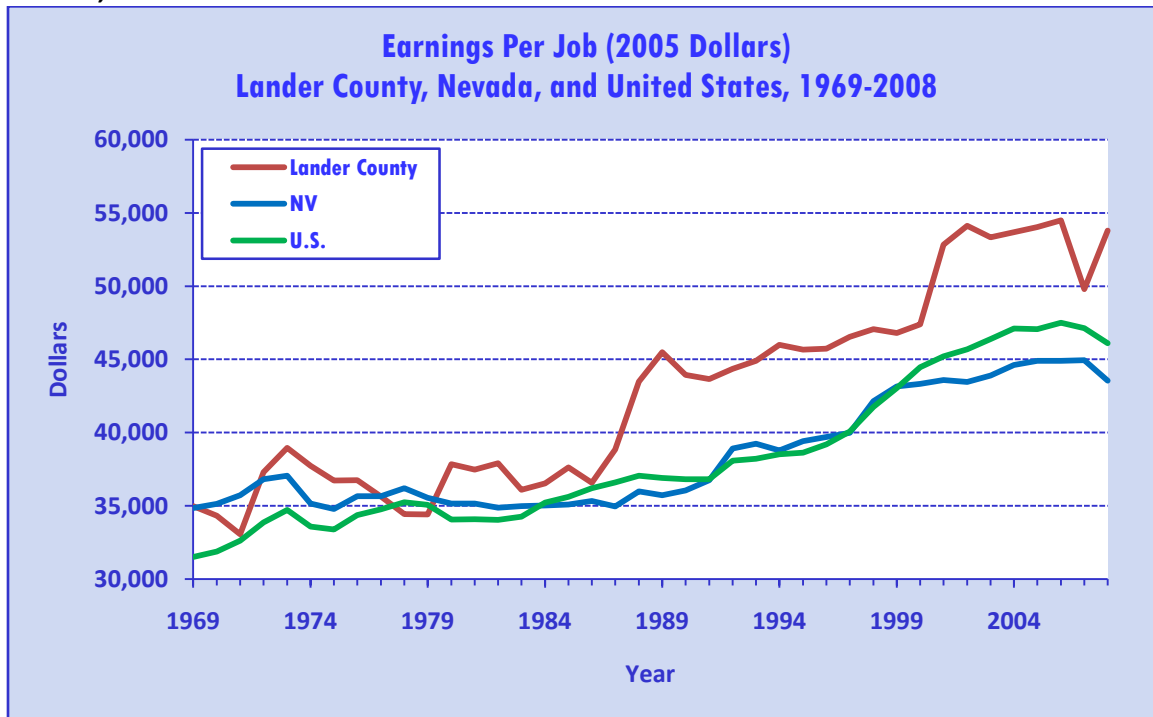


## Earnings Per Job

From Smith (2010): “Average annual earnings per job are computed by dividing U.S. Bureau of Economic analysis total industry earnings estimates by U.S. Bureau of Economic Analysis total fulltime and part-time job estimates.” There is no convenient way to convert the job estimate to fulltime equivalents.

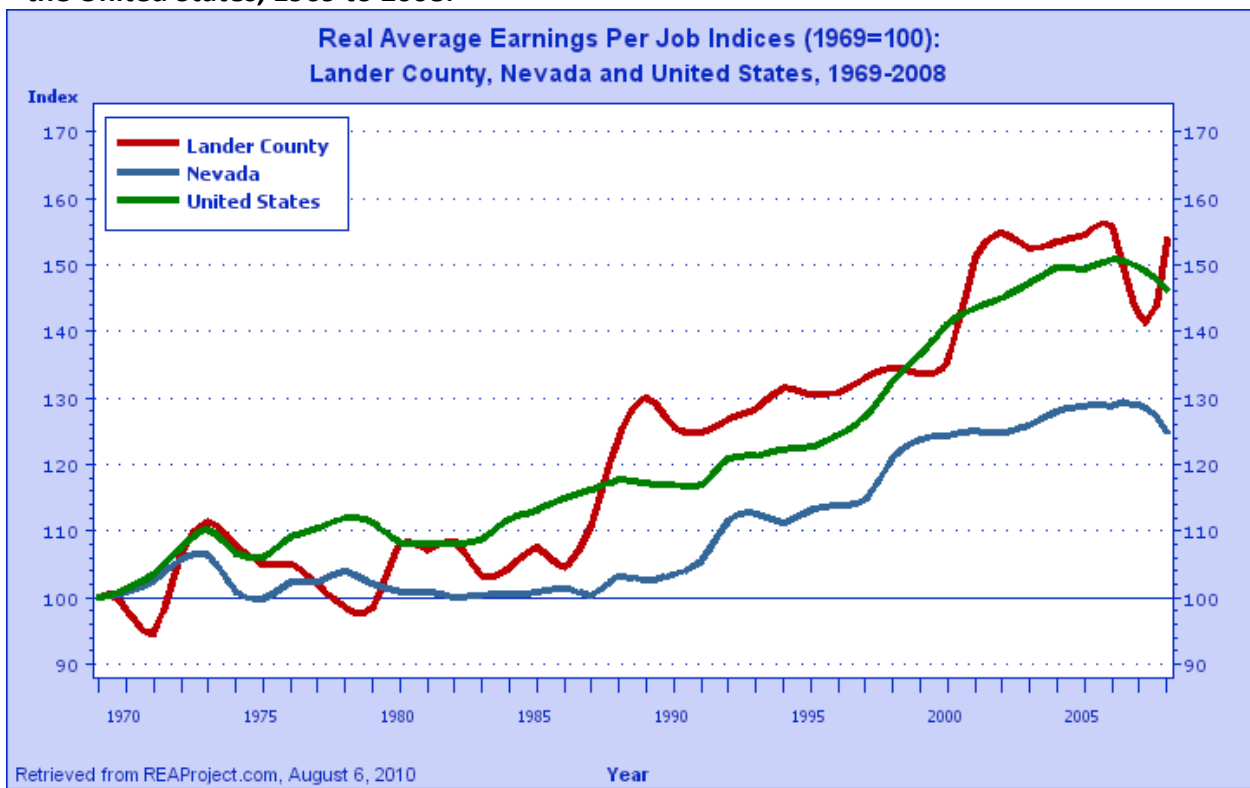
- In constant 2005 dollars, average earnings per job in Lander County increased from \$34,975, in 1969 to \$53,799 in 2008.
- Figure 7 shows the comparison of the average amount earned per job for the nation, the state, and Lander County (in 2005 Dollars). The average earnings per job in 2008 were highest in Lander County, second in the U.S., and last in Nevada. The average earnings per job in 2008 for Lander County, the U.S., and Nevada are approximately \$53,799, \$43,545, and \$46,096, respectively.

**Figure 7. Earnings Per Job (2005 Dollars) Lander County, State of Nevada, and the United States, 1969 to 2008.**



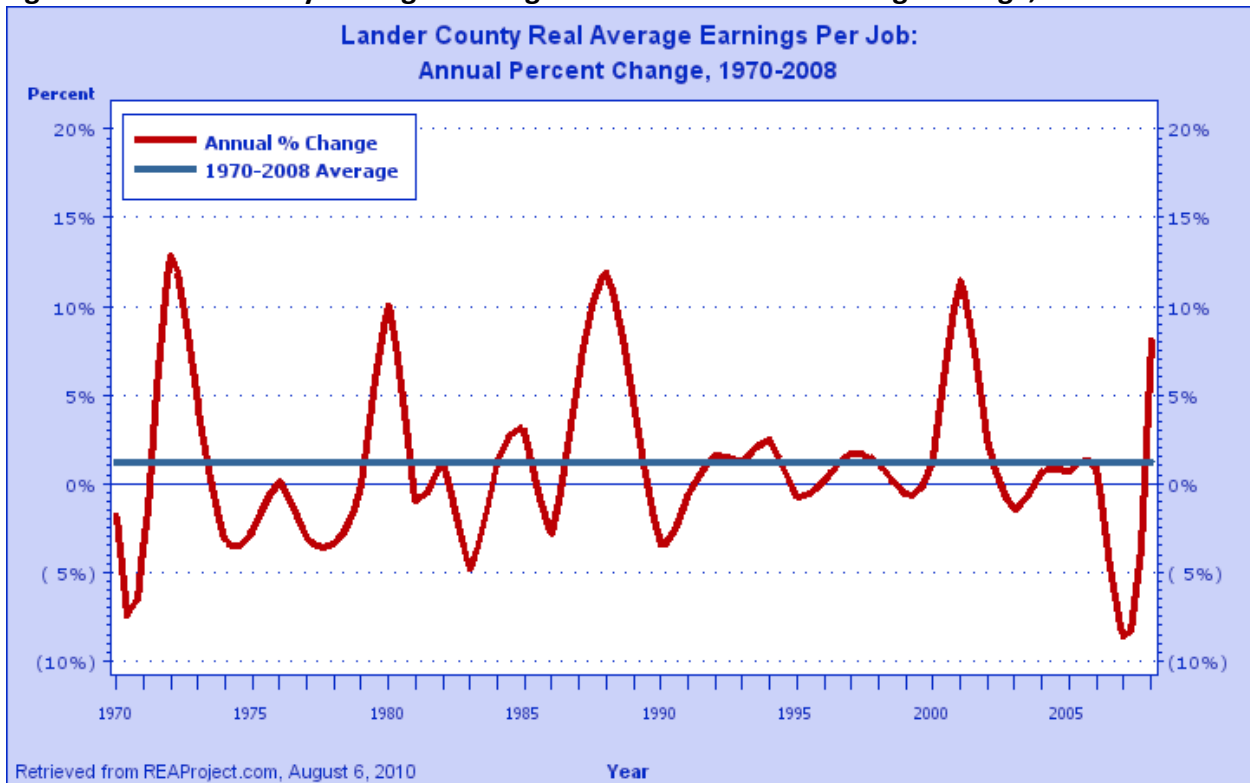
- Figure 8 tracks the changes in real average earnings per job in Lander County, relative to the state and the nation, indexed to the initial year of 1969. Lander County's growth of 53.8 percent in real average earnings per job over the 39 years surpassed the state at 25.0 percent but fell short of the nation at 46.3 percent.

**Figure 8. Average Earnings Per Job Indices (1969 = 100): Lander County, State of Nevada and the United States, 1969 to 2008.**



- The average earnings per job in Lander County can be characterized as variable over the past 39 years with the largest decrease occurring between 2006 and 2007 (Figure 9). Overall, Lander County's real average earnings per job grew on average at an annual rate of 1.04 percent over the 39-year study period.

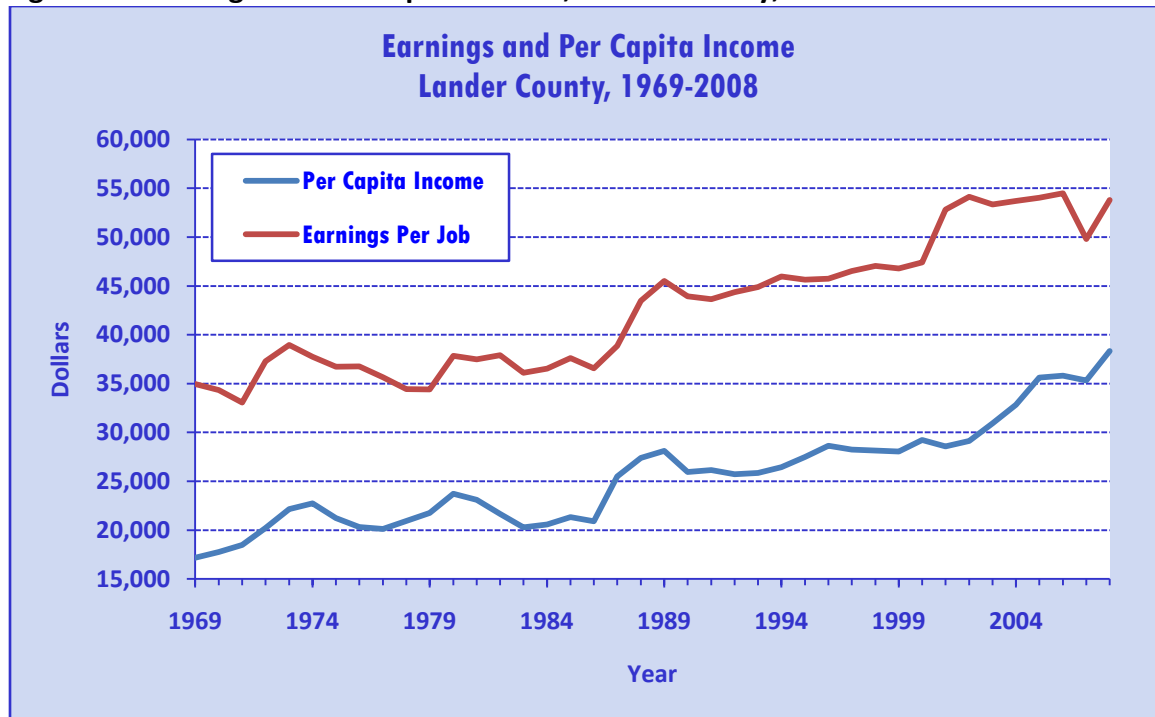
**Figure 9. Lander County Average Earnings Per Job: Annual Percentage Change, 1970 to 2008.**



### Comparison between Earnings and Income Per Capita

- Figure 10 provides a comparison of the average earnings per job and per capita income in Lander County. This figure demonstrates that the average earnings per job have been continuously higher than the per capita income. This also shows that an economic development goal of Lander County could be capturing earning by workers who may live outside of Lander County.

**Figure 10. Earnings and Per Capita Income, Lander County, 1969 to 2008.**



In 2008, Lander County residents received approximately \$214 million in personal income. Of this amount, approximately \$207 million were total earnings in the county in the form of wages and salaries, other labor income, and proprietor’s income. This number is adjusted to net earnings of approximately \$164 million taking into account social security contributions and commuting adjustments. Almost \$24 million was in the form of unearned income from dividends, interest and rents. Approximately \$26 million came from transfer payments such as social security, food stamps, unemployment payments, and veteran’s benefits. These income figures are shown in Table 2.

**Table 2. Personal Income of Lander County Residents, 2008.**

<b>Income Category</b>	<b>(1,000)</b>	<b>(1,000)</b>
Wages and Salaries	\$150,398	
Other Labor Income	\$35,310	
Proprietor's Income	\$21,529	
<b>Total Earnings in Lander County</b>		\$207,237
Less Personal Social Security Contributions	\$19,212	
Plus Residence/Commuting Adjustment	-\$23,895	
<b>Net Earnings of Lander County Residents</b>		\$164,130
Dividends, Interest and Rents	\$24,282	
Transfer Payment	\$25,957	
<b>Total Personal Income, Lander County Residents</b>		\$214,369
<b>Per Capita Personal Income (dollars)</b>		\$41,812

Source: U.S. Department of Commerce. "Regional Economic Information System." Bureau of Economic Analysis: Washington, D.C., 2009.

Social Security contributions are subtracted from total earnings in order to better measure income available to Lander County residents before income taxes (a concept called personal income by economists). Approximately \$19 million of contributions to social insurance programs such as Social Security, Medicare, unemployment, etc. were paid by residents of Lander County.

A commuting adjustment is made to total earnings since some people who earn income in Lander County are not county residents. These people commute into the county to work and take their paycheck back to their county of residence. Some Lander County residents do the same when they work outside Lander County and bring income back to Lander County. Approximately \$24 million more in income is earned by workers who live outside Lander County but work in Lander County, than by residents who live in Lander County but work outside Lander County. This value is subtracted from total earnings in Lander County to derive net earnings for Lander County residents.

Table 3 gives the percentage breakdown of Lander County's income by source and presents similar data for the state and nation. Net earnings by Lander County residents are approximately 76.6 percent of total personal income compared to 64.8 percent, and 66.6 percent for the state and nation, respectively. Dividends, interest and rents, and transfer payments in Lander County account for a smaller percentage of total personal income than in the state or nation. However, disaggregating the segments of non-earned income yields a different perspective. Dividends, interest and rents in Lander County are a smaller proportionate share (11.3 percent) than the state

(23.4 percent) or nation (18 percent). However, transfer payments are a larger percentage of total personal income in Lander County (12.1 percent) than the state (10.8 percent).

The last line of Table 3 shows that Lander County's per capita income is higher than the nation's and the state's. At \$41,812, Lander County's 2008 income per capita was approximately 2 percent more than the state's \$40,936 and approximately 4 percent more than the nation's average of \$40,166.

**Table 3. Comparison of Personal Income Sources, Lander County, State of Nevada and the United States, 2008.**

Personal Income Source	Lander County (%)	Nevada (%)	U.S. (%)
Wages and Salaries	70.2%	53.7%	53.5%
Other Labor Income	16.5%	11.4%	12.2%
Proprietor's Income	10.0%	7.5%	9.1%
Less Personal Social Insurance Contributions	9.0%	7.2%	8.1%
Plus Residence/Commuting Adjustments	-11.1%	-0.6%	0.0%
Net Earnings of Residents	76.6%	64.8%	66.6%
Dividends, Interest and Rents	11.3%	23.4%	18.0%
Transfer Payments	12.1%	11.8%	15.3%
Total	100.0%	100.0%	100.0%
Per Capita Personal Income	\$41,812	\$40,936	\$40,166

Source: U.S. Department of Commerce, "Regional Economic Information system." Bureau of Economic Analysis, Washington, D.C., 2009.

Lander County income can be summarized as follows:

- Per capita income for Lander County in 2008 was \$41,818 which higher than the state's and nation's averages
- Total 2008 place of work earnings for Lander County were \$207 million. Place of work earnings are adjusted by adding the net resident adjustment to derive resident earnings for Lander County, the net residence adjustment for 2008 was -\$24 million. This means \$24 million more was earned by people living outside Lander County but working inside Lander County than by people living inside Lander County and working outside Lander County. These are incomes leaked out of the county.
- Proportionate share of total earnings from dividends, interest and rents and transfer payments are 11.3 percent in Lander County. This proportionate share is lower than the state value of 23.4 percent and the national value of 18 percent. This might mean a lower retiree population base for Lander County.



## **Employment and Occupational Projections for Lander County**

A criticism of targeted economic development by Barkley et al. (1998) was that an economic sector or occupation selected based on past economic growth might be at the end of a growth phase. Past sectoral employment or occupation growth may be a poor predictor of future sectoral employment or occupational sector growth. Therefore for this analysis, sectoral projected employment and occupation growth must be incorporated into targeted economic development analysis.

Obtaining employment and occupational projection data from 2010 to 2020 will provide useful information for Lander County economic development practitioners. These employment and occupational projections were developed by Economic Modeling Specialists, Inc. (EMSI). They used employment and occupational data from the state of Nevada Department of Employment, Training, and Rehabilitation; the U.S. Bureau of Labor; Regional Economic Information System data from the U.S. Department of Commerce, Bureau of Economic Analysis; and occupational staffing patterns from the Occupational Employment Statistics. Projections are based on latest available EMSI industry data; fifteen year past local trends in each industry; growth rates in statewide and, where available, sub-state area industry projections published by individual state agencies; and in part, growth rates in national projections from U.S. Bureau of Labor Statistics.

### **Employment Projections**

Table 4 shows projected sectoral employment growth in Lander County. The largest employment sector is still the Agricultural, Natural Resources, and Mining Sector, which is projected to grow by 52 percent by 2020 and have approximately 55 percent of total Lander County employment. It seems that the Gold Mining Sector will continue to have a significant influence on Lander County by 2020. Also from 2010 to 2020, Lander County total employment is forecasted to increase from 3,683 to 5,085 or a 38.07 percent increase in employment over 10 years.

**Table 4. Projected Sectoral Employment Growth from 2010 to 2020.**

Sectors	2010	2020	Employment	Percentage
	Employment (#)	Employment (#)	Growth (#)	Growth (%)
Agriculture, Natural Resources, and Mining	1,834	2,794	960	52.34%
Construction	48	129	81	168.75%
Education and Health Services	58	70	12	20.69%
Financial Activities	124	178	54	43.55%
Government	537	597	60	11.17%
Information	6	9	3	50.00%
Leisure and Hospitality	243	262	19	7.82%
Manufacturing	30	25	-5	-16.67%
Other services	92	117	25	27.17%
Professional and Business Services	84	108	24	28.57%
Trade, Transportation, and Utilities	627	796	169	26.95%
Total	3,683	5,085	1,402	38.07%

Source: EMSI Complete Employment - 4th Quarter 2010.

**Table 5. Projected Occupational Growth from 2010 to 2020.**

Occupations	2010	2020	Occupational	Percentage
	Occupations (#)	Occupations (#)	Growth (#)	Growth (%)
Construction and extraction occupations	647	1027	380	58.73%
Farming, fishing, and forestry occupations	51	52	1	1.96%
Installation, maintenance, and repair occupations	461	751	290	62.91%
Management, business, and financial occupations	388	474	86	22.16%
Military occupations	14	14	0	0.00%
Office and administrative support occupations	293	365	72	24.57%
Production occupations	225	339	114	50.67%
Professional and related occupations	487	662	175	35.93%
Sales and related occupations	287	374	87	30.31%
Service occupations	379	428	49	12.93%
Transportation and material moving occupations	451	599	148	32.82%
Total	3,683	5,085	1,402	38.07%

Source: EMSI Complete Employment - 4th Quarter 2010.

### **Occupational Projections**

Table 5 shows projected occupational growth in Lander County. The occupation estimated to realize greatest growth from 2010 to 2020 is the Construction and Extraction Occupation. This occupation also is forecasted to have the largest proportionate share of total occupational employment in Lander County with approximately 20.2 percent of total occupational employment

in 2020. The second largest 2020 occupational type in Lander County is the Installation, Maintenance, and Repair Occupation. These two occupations are primarily hired by the Gold Mining Sector; therefore, it is important to Lander County economic decision-makers to realize these occupational types may not be easily transferable to other economic sectors in Lander County if the local Gold Mining Sector reduces operation in the future.

Lander County employment and occupational projections can be summarized as follows:

- Employment in Lander County is forecasted to increase from 3,683 in 2010 to 5,085 in 2020. This is a forecasted 38.07 percent increase in employment.
- The Agricultural, Natural Resources, and Mining Sector is forecasted to realize the largest employment increase by size from 2010 to 2020. This sector's employment is forecasted to increase by 960 employees.
- For Lander County, the Manufacturing Sector is the only local economic sector forecasted for employment decrease from 2010 to 2020.
- As for occupations, the Construction and Extraction Occupations and the Installation, Maintenance, and Repair Occupations are forecasted for the largest size increase from 2010 to 2020.
- These occupations are primarily hired by the Gold Mining Sector so transfer of these occupations to other economic sectors in Lander County can be problematic.

**SECTION II:**

**POTENTIAL INDUSTRIAL**

**TARGETS BY PLANT OPENINGS**

## POTENTIAL INDUSTRIAL TARGETS BY PLANT OPENINGS

Before estimating industrial targets through cluster procedures or the Community Business Matching model, it might be of interest to economic development practitioners to find economic sectors that have demonstrated the greatest propensity for opening new establishments in the U.S. Given the importance of mining in Lander County the openings of new establishments in mining-dependent counties is examined.<sup>1</sup> Since Lander County is classified as a nonmetropolitan county, the examination is limited to nonmetropolitan, mining-dependent counties.<sup>2</sup> There are a total of 128 mining-dependent counties in the U.S., of which 113 are nonmetropolitan counties. Table 6 reports the sectors in which three or more establishments opened since 2000 in nonmetropolitan, mining-dependent counties. Establishments include manufacturing companies with 10 or more employees and non-manufacturing companies with 20 or more employees or sales of \$1 million or more.

The top four sectors in terms of the number of opened establishments are Support Activities for Oil and Gas Operations Sector (91 new establishments), Support Activities for Other Mining Sector (24 new establishments), Drilling Oil and Gas Wells Sector (14 new establishments), and Construction of Other New Nonresidential Structures Sector (13 new establishments). The other sectors reported in Table 6 had eight or fewer new establishments.

Following Table 6 does not give local economic development practitioners information as to the sectors that have a competitive edge in their area. Also, it provides little information as to possible sectors to enhance local economic linkages and potential candidates for import substitution programs. Lastly, Table 6 does not incorporate the preferences of the citizens in Lander County.

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<sup>1</sup> Mining is one of six mutually exclusive economic categories developed by the U.S. Department of Agriculture's Economic Research Service. Mining-dependent counties had 15 percent or more of total county earnings derived from mining between 1998 and 2000 (including metal; coal; oil and gas; stone; sand and gravel; clay, ceramic and refractory minerals; chemical and fertilizer minerals; and miscellaneous nonmetallic minerals, such as gem stones, diatomaceous earth, peat, and talc).

<sup>2</sup> Nonmetropolitan and metropolitan categories are based on the 2004 OMB metropolitan classification. A metropolitan area, as defined by the U.S. Office of Management and Budget, includes one or more counties containing a core urban area of 50,000 or more people, together with any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

**Table 6. Sectors in Which Three or More Establishments Opened since 2000 in Nonmetropolitan, Mining-Dependent Counties.\***

Sector	Number of establishments
Support activities for oil and gas operations	91
Support activities for other mining	24
Drilling oil and gas wells	14
Construction of other new nonresidential structures	13
Oil and gas extraction	8
Mining and oil and gas field machinery manufacturing	7
Coal mining	6
Plate work and fabricated structural product manufacturing	5
Construction machinery manufacturing	5
Machine shops	4
Other general purpose machinery manufacturing	4
Logging	3
Stone mining and quarrying	3
Nonchocolate confectionery manufacturing	3
Other rubber product manufacturing	3
Ready-mix concrete manufacturing	3
Ornamental and architectural metal products manufacturing	3
Boat building	3
Other nonmetallic mineral mining and quarrying	2
Bread and bakery product manufacturing	2
Petroleum refineries	2
All other basic inorganic chemical manufacturing	2
Material handling equipment manufacturing	2
All other miscellaneous electrical equipment and component manufacturing	2
Motor vehicle body manufacturing	2
Ship building and repairing	2
Sign manufacturing	2
Truck transportation	2
Newspaper publishers	2
Commercial and industrial machinery and equipment rental and leasing	2

\*Manufacturing establishments with 10 or more employees and non-manufacturing establishments with 20 or more employees or sales of \$1 million or more included in the Dun and Bradstreet database.

The next sections attempt to provide information for successful export enhancement and import substitution economic development programs. The export enhancement and import substitution program estimates strengths and weaknesses in the economy of Lander County and identifies industrial targets to enhance exports, reduce imports, and build industrial clusters in Lander County.

### **Summary**

- For industrial targeting, it might be of interest to find sectors that have demonstrated a propensity for opening establishments in counties within the same metropolitan and economic categories.
- There are total of 128 mining dependent counties in the U.S., of which 113 are nonmetropolitan counties.
- For nonmetropolitan, mining-dependent counties, the Support Activities for Oil and Gas Operations Sector has the largest number of establishments. However for Lander County, the Support Activities for Other Mining Sector may be a more successful target.
- This procedure does not investigate competitive advantages of local economic sectors and it does not incorporate the preferences for economic development of the Lander County populace.

**SECTION III:**  
**AN ANALYSIS OF ECONOMIC BASE**  
**AND CHANGE IN LANDER COUNTY**



## **AN ANALYSIS OF ECONOMIC BASE AND CHANGE IN LANDER COUNTY**

Analysis of employment data is essential in explaining the structure of the Lander County economy and identifying key industries of the county. Employment data can be used to help determine which industries are growing and which are declining, how competitive these industries are, and the importance of an industry to Lander County's economy.

### **Lander County Employment Analysis**

Using data generated by IMPLAN V3, which is an economic impact assessment modeling system (Minnesota IMPLAN Group, Inc.), the top 25 industry sectors ranked by total employment in 2009 along with employment in 2003, share of total employment for 2003 and 2009, and percentage change in employment from 2003 to 2009 are given in Table 7. Appendix A shows the same data as in Table 7, except for all IMPLAN economic sectors. Overall employment in Lander County increased from 2,219 in 2003 to 3,417 in 2009. For the top 25 sectors by employment in 2009, employment increased from 1,619 in 2003 to 3,088 in 2009, a 91 percent increase. Also, the share of total county employment for the top 25 sectors in Lander County increased from 73 percent in 2003 to 90 percent in 2009.

Lander County is primarily a natural resource driven economy. Between 2003 and 2009 the county's mining sector, the county's largest employer, experienced a substantial increase in employment. For example, the Mining Gold, Silver, and Other Metal Ore Sector's employment increased by 260 percent from 2003 to 2009. In 2003, this sector accounted for 18 percent of the county's total employment while in 2009 it accounted for 42 percent. Additionally, employment in the Support Activities for Other Mining Sector increased by 356 percent. Other sectors that experienced exceptional employment growth are the Scenic and Sightseeing Transportation and Support Activities for Transportation Sector (1,254 percent), Amusement Parks, Arcades, and Gambling Industries Sector (398 percent), and Hotels and Motels Including Casino Hotels Sector (181 percent), suggesting an increase in tourism and recreation. The Wholesale Trade Businesses Sector experienced employment growth of 957 percent. Between 2003 and 2009, 27 new sectors emerged creating 267 new jobs, while only 18 sectors disappeared, yielding a job loss of 310 jobs.

**Table 7. Top 25 Industry Sectors Ranked by Total Employment in 2009 Along with Employment in 2003, Share of Total Employment for 2003 and 2009, and Percentage Change in Employment from 2003 to 2009.**

Sector	Employment Number 2003	Employment Share 2003	Employment Number 2009	Employment Share 2009	Percentage Change in Employment (%)
Mining gold, silver, and other metal ore	398	18%	1,432	42%	260%
Employment and payroll only (state & local govt, education)	212	10%	243	7%	14%
Employment and payroll only (state & local govt, non-education)	223	10%	201	6%	-10%
Retail Stores - Food and beverage	63	3%	110	3%	75%
Hotels and motels, including casino hotels	36	2%	100	3%	181%
Mining and quarrying other nonmetallic minerals	98	4%	92	3%	-6%
Employment and payroll only (federal govt, non-military)	127	6%	88	3%	-30%
Retail Stores - Gasoline stations	78	4%	81	2%	5%
Cattle ranching and farming	53	2%	69	2%	29%
Food services and drinking places	83	4%	68	2%	-18%
Commercial and industrial machinery and equipment repair and maintenance	0	0%	65	2%	New
Wholesale trade businesses	6	0%	61	2%	957%
Scenic and sightseeing transportation and support activities for transportation	4	0%	54	2%	1254%
Amusement parks, arcades, and gambling industries	10	0%	50	1%	398%
Transport by truck	69	3%	48	1%	-31%
Newspaper publishers	7	0%	44	1%	577%
Telecommunications	15	1%	42	1%	174%
Performing arts companies	0	0%	42	1%	New
Support activities for other mining	9	0%	39	1%	356%
Civic, social, professional, and similar organizations	38	2%	39	1%	3%
Couriers and messengers	0	0%	29	1%	New
Real estate establishments	48	2%	24	1%	-50%
Transit and ground passenger transportation	0	0%	23	1%	New
Retail Stores - Motor vehicle and parts	28	1%	22	1%	-20%
Retail Nonstores - Direct and electronic sales	16	1%	21	1%	29%
<b>Top 25 Totals</b>	<b>1,619</b>	<b>73%</b>	<b>3,088</b>	<b>90%</b>	<b>91%</b>

### **Economic Base Analysis for Lander County**

The economic base of a region refers to the relative size of its industries. A region or county is said to have a diversified economic base if sectoral employment or value of output is somewhat equally dispersed among county sectors. Conversely, if only a few industries dominate a local economy, the economy is said to have a concentrated economic base. There are two techniques used to measure economic base and changes in economic base. These techniques are location quotient and shift share analysis.

### **Location Quotient Analysis**

The degree of concentration of Lander County's industries is determined by calculating location quotients (LQ) for individual economic sectors. Location quotients indicate the economic importance of each regional industry relative to the same industry at the national level. The primary focus of location quotients is to identify the industries that are either more important or less important locally, than nationally. The more industries in a community that have higher location quotients, the more diverse is the community's economy. On the other hand, very low location quotients represent industries that are underdeveloped and may offer an opportunity for future development.

A location quotient is calculated by dividing the local share of employment in a particular industry by the national share of employment in that same industry. Algebraically,

$$\frac{\text{Local share of employment in a particular industry}}{\text{National share of employment in that same industry}}$$

Sectors with location quotients greater than 1.0 are sectors in which the county is specialized. When the location quotient for a given sector is greater than 1.0, the relative concentration of employment in that sector in Lander County is greater than in the national economy. Location quotients are used to determine a community's degree of self-sufficiency in a particular sector: 1) if a location quotients for a sector of an economy is equal to one then the economy is self-sufficient in that particular sector, 2) if location quotient is less than one for a particular sector, goods and services are imported to satisfy local demand, 3) if location quotient for a sector of an economy is greater than one, then the region is an exporting sector.

### **Results of Location Quotient Analysis for Lander County**

The top 25 sectors by value of location quotient in 2009 are shown in Table 8. Appendix B shows the same data as Table 8, except for all IMPLAN economic sectors. The overall number of exporting sectors for Lander County was 23 in both 2003 and 2009. Again, the importance of mining to the Lander County economy is evident. The three largest location quotients in 2009 are from the mining industry. The location quotient for the Mining Gold, Silver, and Other Metal Ore Sector increased by 57 percent, from 2,208 in 2003 and 3,462 in 2009, and the location quotient for the Support Activities for Other Mining Sector increased 51 percent, from 94 in 2003 to 141 in 2009. Conversely, the location quotient for the Mining and Quarrying Other Nonmetallic Minerals Sector decreased by 38 percent, from 478 in 2003 to 295 in 2009. Other sectors also experienced dramatic changes in location quotient. For example, the location quotient for the Scenic and Sightseeing Transportation and Support Activities for Transportation Sector increased by 596 percent.

**Table 8. Top 25 Industry Sectors Ranked by Location Quotient in 2009 Along with Location Quotient in 2003, and Percentage Change in Location Quotient from 2003 to 2009.**

<b>Sector</b>	<b>Location Quotient 2003</b>	<b>Location Quotient 2009</b>	<b>Percentage Change in LQ</b>
Mining gold, silver, and other metal ore	2208.36	3462.12	56.77%
Mining and quarrying other nonmetallic minerals	477.93	294.68	-38.34%
Support activities for other mining	93.79	141.29	50.64%
Fertilizer manufacturing	107.81	18.06	-83.24%
Cattle ranching and farming	8.13	10.93	34.44%
Commercial and industrial machinery and equipment repair and maintenance	0.00	8.32	New
Newspaper publishers	1.17	7.00	498.34%
Retail Stores - Gasoline stations	6.33	4.80	-24.08%
Performing arts companies	0.00	4.38	New
Hotels and motels, including casino hotels	2.29	4.37	90.82%
Scenic and sightseeing transportation and support activities for transportation	0.49	4.17	756.93%
Personal and household goods repair and maintenance	0.00	3.27	New
Amusement parks, arcades, and gambling industries	0.98	3.21	228.07%
Employment and payroll only (federal govt, non-military)	5.05	2.09	-58.57%
Telecommunications	0.91	1.95	114.45%
Retail Stores - Food and beverage	1.58	1.88	19.37%
Couriers and messengers	0.00	1.79	New
Transit and ground passenger transportation	0.00	1.72	New
Support activities for agriculture and forestry	3.82	1.30	-65.87%
Employment and payroll only (state & local govt, non-education)	2.65	1.22	-53.93%
Transport by truck	2.72	1.21	-55.49%
Employment and payroll only (state & local govt, education)	1.44	1.20	-17.17%
Civic, social, professional, and similar organizations	3.12	1.03	-67.05%
Animal production, except cattle and poultry and eggs	0.51	0.97	92.06%
Other state and local government enterprises	2.61	0.90	-65.35%

## **Shift-Share Analysis**

Shift-share is an analytical tool to help economic development practitioners decompose employment or economic change over time into local and external factors. Essentially, shift-share breaks employment change into three components. The first component describes the local economy as if it were growing at the same rate as the national economy, i.e., National Growth Component or NG. This assumes that local conditions and structure are the same as the national economy. The second component describes the local economy as made up of different sectors as the national economy, e.g., Industrial Mix Component or IM. This component describes the local differential mix of faster/slower growing components to the national economy. In other words, more employment is concentrated in faster/slower growth components than it is nationally. The third and last component is referred to as the local or competitive share. The local or competitive share presumably is the employment change that is due to local conditions or actions. The latter component can point to industrial clusters to industries that may be targeted for additional analysis and development efforts.

### *National Growth Component*

The first step is to calculate the national share component. Sometimes this is referred to as the National Share (NS). It measures the potential change in local employment assuming the local economy grows at the same rate as the national economy. Multiplying the base year employment in each local sector by the overall national growth rate and summing overall local economic sectors yields the national growth component. The results indicate how many new jobs are created locally due to national economic trends, again assuming the local and national economies are identical. Mathematically, the national share is calculated as shown below:

$$\text{NS} = \frac{\sum (E_{i,t_2} - E_{i,t_1})}{E_{n,t_2} - E_{n,t_1}} \quad (1)$$

Where  $E_{i,t_2}$  is the employment for a community or county for sector  $i$  in time period  $t_2$ .  $E_{i,t_1}$  is national employment in time period  $t_1$  and  $E_{n,t_2}$  is national employment in time period  $t_2$ .  $NS$  is the National Share for sector  $i$ .

### *Industrial Mix Component*

The second step in shift-share analysis is to compute the industrial mix component (IM). The industrial mix component is determined by multiplying the local employment in each economic sector by the difference in the national growth rate for that national economic sector and the overall growth rate for the nation as a whole. A positive industrial mix indicates that the majority

of local or county employment is in sectors that are growing faster than the overall national employment. A negative industrial mix indicates the opposite. Using the same notation as equation 1, the industrial mix is calculated as below:

$$\frac{E_{i,t}}{E_{i,n}} - \frac{E_{j,t}}{E_{j,n}} \quad (2)$$

Where  $E_{i,t}$  is national employment in sector  $i$  in time period  $t$  and  $E_{i,n}$  is national employment in sector  $i$  in time period  $n$ .

*Competitive Effect Component*

The competitive share component (CS) measures the ability of the local economy to capture an increasing (decreasing) share of a particular sector’s growth. This sometimes is referred to as the regional share. It is computed by multiplying the local employment in each sector by the difference in the growth rate of that sector nationally and locally. Summing across sectors derives the county competitive share. A positive competitive share indicates that the community gained additional jobs over that due to national growth and its industrial structure. This gain suggests the community is more competitive (efficient) in securing additional employment than the rest of the nation. It is important to examine the competitive share for both the community and particular sectors. Each yields different information. Again, using the same notation, the competitive (or regional) share is shown below in equation 3:

$$\frac{E_{i,t}}{E_{i,n}} - \frac{E_{j,t}}{E_{j,n}} \quad (3)$$

A positive competitive share allows one to target efforts on industrial sectors that the region has demonstrated a competitive advantage.

*National Share Rate Component*

Comparing different sectors as to growth can be difficult given values in absolute numbers. In order to facilitate comparison of changes between economic sectors, rates can be derived.

$$(4)$$

Where  $R_{i,n}$  is National Sector Rates for sector  $i$ .

*Industrial Mix Rate Component*

$$\text{IMR}_{i,t} = \frac{E_{i,t}}{E_{t,t}} \quad (5)$$

When IMR is the Industrial Mix Rate for sector .

*Competitive Share Rate*

$$\text{CSR}_{i,t} = \frac{E_{i,t}}{E_{t,t}} \quad (6)$$

Where is competitive share rate for sector .

*Competitive Position Rate*

The competitive position rate is derived by subtracting the county overall competitive share rate from individual county competitive share rates or:

$$\text{CPR}_{i,t} = \text{CSR}_{i,t} - \text{CSR}_{t,t} \quad (7)$$

Where is the competitive position rate for sector in time period , and is competitive share rate for the county in time period .

A positive competitive position rate for sector in time period indicates that sector is growing faster than their national counterpart and faster than the rest of the local economy. These are sectors in which the local economy may be gaining national “market share” and in which the local economy is becoming more specialized.

**Results of Shift-Share Analysis**

Lander County’s overall and sectoral employment growth were caused by a variety of reasons such as overall national employment growth, national industry or industry mix differential growth, and local competitive effects. Between 2003 and 2009, Lander County experienced an increase of 1,198 employed workers. Therefore, from 2003 to 2009 overall employment in Lander County grew at about 54 percent. Of these new jobs, 265 were in new sectors, i.e. sectors that had no employment in 2003, but had employment in 2009. Of the remaining 935 new jobs, the national growth component accounts for 74 jobs, the industry mix component accounts for 176, and the competitive component accounts for 679 jobs. The positive industry mix component indicates that the majority of Lander County employment is in sectors that are growing faster than the overall



national employment, and the positive competitive component indicates that Lander County has been more competitive (efficient) in securing additional employment than the rest of the nation. Overall, Lander County has maintained a relative competitive advantage from 2003 to 2009 in creating (or keeping) jobs within county lines.

Table 9 shows the top 25 Lander County sectors by value of competitive position rate. Appendix C shows results of the shift-share analysis for all economic sectors in Lander County with the sectors ranked by competitive position rate. The Scenic and Sightseeing Transportation and Support Activities for Transportation Sector has the largest competitive position rate (12.1746), followed by Wholesale Business Sector (9.2633). Recall that a positive competitive position rate shows that employment in that sector is growing faster than their national counterpart and faster than the rest of the local economy. These could be local economic sectors in which the local economy may be gaining national market share, and in which the Lander County economy is becoming more specialized.

**Table 9. Top 25 Lander County Sectors Based on Competitive Position, 2003 to 2009.**

Sector	NSR	IMR	CSR	Employment Growth Rate	Competitive Position Rate
Scenic and sightseeing transportation and support activities for transportation	0.0334	0.0269	12.4807	12.5411	12.1746
Wholesale trade businesses	0.0334	-0.0295	9.5694	9.5733	9.2633
Newspaper publishers	0.0334	-0.2737	6.0141	5.7738	5.7081
Construction of other new nonresidential structures	0.0334	0.8730	5.6956	6.6021	5.3896
Amusement parks, arcades, and gambling industries	0.0334	-0.0158	3.9577	3.9753	3.6516
Monetary authorities and depository credit intermediation activities	0.0334	0.0096	3.2786	3.3217	2.9725
Construction of other new residential structures	0.0334	-0.1670	2.8242	2.6906	2.5182
Retail Stores - Sporting goods, hobby, book and music	0.0334	-0.0778	2.7547	2.7103	2.4486
Support activities for other mining	0.0334	0.9994	2.5307	3.5636	2.2247
Insurance agencies, brokerages, and related activities	0.0334	0.0274	2.0897	2.1506	1.7836
Mining gold, silver, and other metal ore	0.0334	0.5061	2.0573	2.5968	1.7512
Individual and family services	0.0334	0.2797	1.9366	2.2497	1.6305
Telecommunications	0.0334	-0.1763	1.8820	1.7392	1.5759
Hotels and motels, including casino hotels	0.0334	-0.0436	1.8250	1.8148	1.5189
Construction of new nonresidential commercial and health care structures	0.0334	-0.2988	1.5898	1.3244	1.2838
Retail Stores - Miscellaneous	0.0334	-0.0907	1.5685	1.5113	1.2625
Animal production, except cattle and poultry and eggs	0.0334	-0.2215	1.5119	1.3239	1.2059
Retail Stores - Health and personal care	0.0334	-0.0030	1.3457	1.3761	1.0397
Warehousing and storage	0.0334	0.1392	1.0457	1.2184	0.7396
Home health care services	0.0334	0.2851	0.9343	1.2528	0.6282
Retail Stores - Food and beverage	0.0334	-0.0513	0.7650	0.7471	0.4589
Cattle ranching and farming	0.0334	-0.3879	0.6478	0.2934	0.3418
Offices of physicians, dentists, and other health practitioners	0.0334	0.1306	0.5595	0.7235	0.2534
Construction of new residential permanent site single/multi-family structures	0.0334	-0.6563	0.3950	-0.2279	0.0889
Employment and payroll only (state & local govt, education)	0.0334	-0.1059	0.2174	0.1449	-0.0886

## **Summary**

The economic base of a region refers to the relative size of its industries. A region is said to be diverse with several industries that are relatively large. Conversely, if one or a few industries dominate a local economy, the economy is said to have a concentrated economic base. Two procedures to analyze economic base of an area are location quotients and shift-share analysis.

The economic base depicts industries that Lander County has relative success in attracting and nurturing. These sectors provide a basis for economic targeting activity for a local economy.

Trends in employment and location quotient values for Lander County can be summarized as follows:

- Overall employment in Lander County increased from 2,219 in 2003 to 3,417 in 2009.
- The top 25 economic sectors in Lander County share of total county employment increased from 73 percent in 2003 to 90 percent in 2009.
- Only 23 sectors in Lander County were exporting sectors in 2009.
- The Mining Gold, Silver, and Other Metal Ore Sector was ranked highest in location quotient value in Lander County.

Location quotient values provide insight into economic sectors in Lander County that have been successfully developed. However, they provide no information as to sectors that Lander County has been successful in growing. Shift-share analysis provides information as to competitiveness of Lander County's economic sectors.

- The industry mix share rate for Lander County was approximately 8 percent, and the competitive share rate was approximately 30 percent.
- The Scenic and Sightseeing Transportation and Support Activities for Transportation Sector has the largest competitive position rate.

Past economic growth in Lander County has been based primarily on the mining industry and in particular the Gold Mining Sector. Later in this publication, economic sectors linked to the mining industry will be investigated for possible economic development targeting.

**SECTION IV:**

**ADDITIONAL ECONOMIC  
INFORMATION FROM IMPLAN**

## **ADDITIONAL ECONOMIC INFORMATION FROM IMPLAN**

Using data generated by IMPLAN V3 (Minnesota IMPLAN Group, Inc.), industry sectors ranked by value of output and labor income are given in Tables 8 and 9. Tables 10 and 11 rank sectoral values of exports and imports which provide an indication of their contribution to the Lander County economic base.

### **Sectoral Value of Output and Labor Income**

In 2009, Lander County had 75 active IMPLAN economic sectors. Table 10 shows the top 25 economic sectors by rank for value of output for Lander County. Appendix D shows the rank of all economic sectors in Lander County by value of total output. Total industry output in 2009 was approximately \$1.37 billion, with 98 percent coming from the top 25 output sectors. Again, mining shows its dominance in the Lander County economy. The Gold, Silver, and Other Metal Ore Sector had \$1.12 billion of output or 82 percent of Lander County's total industry output, making it the primary sector for economic development. The concern for diversification in the Lander County economy is of interest.

Table 11 shows the top 25 sectors in Lander County by levels of labor income. Appendix E shows sectoral labor income for all economic sectors in Lander County. Total labor income in Lander County in 2009 was approximately \$215.6 million. The top 25 sectors made up approximately 96 percent of total Lander County labor income. The largest sector in Lander County by labor income is the Mining Gold, Silver and Other Metal Ore Sector which had an estimated \$129 million payroll, 60 percent of labor income in Lander County.

**Table 10. Top 25 Economic Sectors by Value of Output for Lander County, 2009.**

<b>Sector</b>	<b>Output</b>	<b>Percentage of Total Output</b>
Mining gold, silver, and other metal ore	\$1,119,084,928	81.96%
Mining and quarrying other nonmetallic minerals	38,127,508	2.79%
Imputed rental activity for owner-occupied dwellings	23,768,242	1.74%
Support activities for other mining	18,136,348	1.33%
Employment and payroll only (state & local govt, education)	16,463,812	1.21%
Fertilizer manufacturing	14,025,766	1.03%
Hotels and motels, including casino hotels	11,436,924	0.84%
Employment and payroll only (state & local govt, non-education)	11,152,772	0.82%
Cattle ranching and farming	9,903,666	0.73%
Wholesale trade businesses	9,861,969	0.72%
Employment and payroll only (federal govt, non-military)	9,260,387	0.68%
Commercial and industrial machinery and equipment repair and maintenance	8,177,735	0.60%
Transport by truck	6,922,555	0.51%
Telecommunications	5,286,749	0.39%
Scenic and sightseeing transportation and support activities for transportation	4,508,534	0.33%
Retail Stores - Food and beverage	3,865,402	0.28%
Monetary authorities and depository credit intermediation activities	3,849,160	0.28%
Transit and ground passenger transportation	3,536,162	0.26%
Amusement parks, arcades, and gambling industries	3,417,610	0.25%
Retail Stores - Gasoline stations	3,357,335	0.25%
Other state and local government enterprises	3,319,922	0.24%
Food services and drinking places	3,319,346	0.24%
Civic, social, professional, and similar organizations	3,281,178	0.24%
Newspaper publishers	2,566,357	0.19%
Electric power generation, transmission and distribution	2,298,061	0.17%
<b>Subtotal</b>	<b>\$1,338,928,428</b>	<b>98.06%</b>

**Table 11. Top 25 Economic Sectors by Value of Labor Income for Lander County, 2009.**

<b>Sector</b>	<b>Labor Income</b>	<b>Percentage of Labor Income</b>
Mining gold, silver, and other metal ore	129,164,808	59.91%
Employment and payroll only (state & local govt, education)	14,492,610	6.72%
Employment and payroll only (state & local govt, non-education)	9,817,457	4.55%
Employment and payroll only (federal govt, non-military)	8,186,737	3.80%
Mining and quarrying other nonmetallic minerals	7,841,607	3.64%
Commercial and industrial machinery and equipment repair and maintenance	4,388,502	2.04%
Wholesale trade businesses	3,733,246	1.73%
Hotels and motels, including casino hotels	3,613,630	1.68%
Scenic and sightseeing transportation and support activities for transportation	2,846,599	1.32%
Transport by truck	2,630,443	1.22%
Civic, social, professional, and similar organizations	2,307,020	1.07%
Transit and ground passenger transportation	2,085,248	0.97%
Support activities for other mining	2,007,309	0.93%
Retail Stores - Food and beverage	2,006,001	0.93%
Retail Stores - Gasoline stations	1,732,074	0.80%
Amusement parks, arcades, and gambling industries	1,400,383	0.65%
Food services and drinking places	1,175,619	0.55%
Retail Stores - Motor vehicle and parts	1,130,302	0.52%
Monetary authorities and depository credit intermediation activities	1,006,192	0.47%
Fertilizer manufacturing	936,943	0.43%
Other state and local government enterprises	858,439	0.40%
Construction of other new nonresidential structures	826,655	0.38%
Cattle ranching and farming	702,756	0.33%
Employment and payroll only (federal govt, military)	668,242	0.31%
Telecommunications	620,103	0.29%
<b>Total</b>	<b>\$206,178,926</b>	<b>95.63%</b>

## **Sector Industry Value of Exports and Imports**

Export sales by Lander County economic sectors bring dollars into the county economy that provides growth for future economic expansion. Imports by Lander County economic sectors, however, are seen as leakages from the county economy and as such reduce future economic growth potentials. Economic development activities that expand exports by Lander County economic sectors are called “export enhancement.” Conversely, economic development activities that reduce the imports by Lander County economic sectors are called “import substitutions.”

The next two sections of this report will investigate potential export enhancement and import substitution activities. This section will outline Lander County economic sectors. Table 12 shows the value of the top 25 commodities exported from Lander County. Appendix F shows value of all exported commodities. Total industry exports in 2009 were valued at approximately \$1.16 billion. The top 25 commodity sectors made up approximately 99 percent of total exports. The export sales of Mining Gold, Silver, and Other Metal Ore made up approximately 87 percent of total Lander County exports. As can be seen, the Mining, Gold, Silver, and Other Metal Ore Sector provides the primary impetus for future economic development in Lander County.

Most Lander County industries purchase inputs from outside the county. Table 13 shows the value of the top 25 commodities imported to Lander County. Appendix G shows the value of all imported commodities. In 2009, Lander County’s total value of imported commodities was estimated to be approximately 722 million. Note that these goods and services are imported by households and institutions as well as industries. Three of the top 25 exported commodities; Mining Gold, Silver, Other Metal Ore, Support Services for Other Mining, and Wholesale Trade Distribution Services were in the top 25 imported commodities accounting for 29 percent of total imports to the Lander County economy. For import substitution economic development activities, identifying products and services imported by the top exporting sectors is a necessary step. By identifying commodities that are imported, Lander County can devise an import substitution economic development plan.



**Table 12. Top 25 Commodities Exported from Lander County, 2009.**

<b>Commodity Sector</b>	<b>Total Exports</b>	<b>Percentage of Total Exports</b>
Gold, silver, and other metal ore	\$1,007,638,062	86.88%
Other nonmetallic minerals	23,818,766	2.05%
Copper, nickel, lead, and zinc	18,156,126	1.57%
Support services for other mining	17,412,556	1.50%
Fertilizer	13,697,133	1.18%
Hotels and motel services, including casino hotels	10,663,145	0.92%
Employment and payroll only (federal govt, non-military)	9,260,387	0.80%
Cattle from ranches and farms	7,894,815	0.68%
Commercial and industrial machinery and equipment repairs and maintenance	7,619,483	0.66%
All other basic inorganic chemicals	7,047,604	0.61%
Alkalies and chlorine	6,909,357	0.60%
Wholesale trade distribution services	3,314,279	0.29%
Noncomparable foreign imports	2,983,070	0.26%
Scenic & sightseeing transportation services and support activities for transportation	2,938,878	0.25%
Transit and ground passenger transportation services	2,863,145	0.25%
Retail Services - Gasoline stations	2,194,823	0.19%
Amusement parks, arcades, and gambling recreation	1,938,396	0.17%
Truck transportation services	1,479,894	0.13%
Rest of the world adjustment	1,115,528	0.10%
Personal and household goods repairs and maintenance	1,022,840	0.09%
Newly constructed residential permanent site single- and multi-family structures	755,104	0.07%
Performing arts	744,406	0.06%
Civic, social, and professional services	640,739	0.06%
Other newly constructed residential structures	633,093	0.05%
All other petroleum and coal products	615,649	0.05%
<b>Total</b>	<b>\$1,153,357,277</b>	<b>99.44%</b>

**Table 13. Top 25 Commodities Imported to Lander County, 2009.**

<b>Commodity Sector</b>	<b>Total Imports</b>	<b>Percentage of Total Imports</b>
Gold, silver, and other metal ore	\$153,036,270	21.20%
Electricity, and distribution services	41,610,294	5.76%
Support services for other mining	34,201,653	4.74%
Natural gas, and distribution services	25,615,599	3.55%
Management of companies and enterprises	22,589,321	3.13%
Wholesale trade distribution services	19,557,800	2.71%
Refined petroleum products	17,617,310	2.44%
Real estate buying and selling, leasing, managing, and related services	16,494,392	2.28%
Offices of physicians, dentists, and other health practitioners	12,002,588	1.66%
Iron and steel and ferroalloy products	11,868,730	1.64%
Tires	10,874,949	1.51%
Other newly constructed nonresidential structures	10,730,796	1.49%
Lime and gypsum products	10,717,125	1.48%
Insurance	10,237,410	1.42%
Architectural, engineering, and related services	10,134,067	1.40%
Restaurant, bar, and drinking place services	9,331,958	1.29%
Employment and payroll only (federal govt, non-military)	9,257,843	1.28%
Used and secondhand goods	9,228,498	1.28%
Legal services	9,160,276	1.27%
Private hospital services	8,768,867	1.21%
Material handling equipment	8,688,538	1.20%
Monetary authorities and depository credit intermediation services	8,278,375	1.15%
Truck transportation services	7,413,192	1.03%
Newly constructed nonresidential commercial and health care structures	7,336,021	1.02%
Securities, commodity contracts, investments, and related services	7,043,098	0.98%
<b>Total</b>	<b>\$491,794,971</b>	<b>68.12%</b>

## **Summary**

- In 2009, Lander County had 75 IMPLAN designated economic sectors.
- The top 25 economic sectors in Lander County by value of output made up approximately 98 percent of total county value of output.
- The Mining, Gold, Silver, and Other Metal Ore Sector was the leading economic sector in Lander County accounting for approximately 82 percent of total county value of output.
- The Mining Gold, Silver, and Other Metal Ore Sector made up approximately 60 percent of total labor income.
- The value of the top 25 commodities exported from Lander County made up approximately 99 percent of the total value of exports.
- The value of the top 25 commodities imported to Lander County made up approximately 68 percent of the total value of imports. For import substitution activities, identifying commodities that are imported is an initial step.

**SECTION V:  
EXPORT ENHANCEMENT TARGETING  
FOR LANDER COUNTY**

## **EXPORT ENHANCEMENT TARGETING FOR LANDER COUNTY**

Industrial targeting is the method of focusing industrial development programs at specific industries or clusters of related industries to promote economic development of a community, county or region. By narrowing the set of firms for recruitment and retention, targeting allows for more efficient use of a region's limited economic development resources. Targeted economic development has both advantages and disadvantages. Advantages include cost savings to firms in the cluster (localization economies), fostering industrial reorganization and networking among firms, local economic impact, and promotion of entrepreneurial activity. Industrial targeting is not without potential costs. Disadvantages of a "picking winners" approach stem from problems with identifying future competitive advantages of a region based on past data (Barkley, et al., 1998).

### **Targeted Economic Development: Application to Existing Economic Sectors**

There are two channels through which targeting may increase economic activity in an area; "export enhancement," which represents increases in export sales to buyers outside a region, and "import substitution," which represents decreases in purchases of inputs and final goods from economic agents outside a region. In this part of the report, "export enhancement" is analyzed using data generated by IMPLAN V3 (Minnesota IMPLAN Group, Inc.).

### **Export Enhancement**

As mentioned earlier, one channel of economic development is export enhancement. This channel of economic development focuses on local economic sectors that have export sales. Through export base theory, those sectors with export sales provide the monetary inflows to an economy for current and future economic development. This economic strategy seeks to expand the exports of specific sectors which could enhance future economic development in Lander County. For export enhancement, two screens will be used to target and focus potential export enhancement development strategies for Lander County.

*Screen Step 1:*

As a first step in identifying expanding industry clusters in Lander County we have utilized four screening criteria:

- 1) County industry employment number was at least 20 in 2009,
- 2) County industry employment increased from 2003 to 2009,
- 3) Location quotient for Lander County exceeded 1.00 in 2009 or the location quotient increased from 2001 to 2009, and
- 4) Competitive position from Lander County shift-share analysis was positive between 2003 and 2009.

The first two criteria identify sectors that have a significant presence in the region, and based on the previous employment growth rates, promising potential employment growth in the future. Location quotient and competitive position criteria are used to identify industries that have a competitive advantage in maintaining and attracting employment, and industries that are performing well locally relative to the national average. For Lander County, out of 75 active economic sectors in 2009 sectors only nine met all four targeting criteria (Table 14).

**Table 14. Sectors with at Least 20 Employees in 2009, Employment Growth from 2003 to 2009, either a Location Quotient Greater than One or an Increasing Location Quotient, and a Positive Competitive Position.**

Sector	2009 Employment	Percentage Change in Employment	2009 Location Quotient	Percentage Change in LQ	2009 Competitive Position
Cattle ranching and farming	69	29%	10.93	34%	0.34
Mining gold, silver, and other metal ore	1,432	260%	3,462.12	57%	1.75
Support activities for other mining	39	356%	141.29	51%	2.22
Retail Stores - Food and beverage	110	75%	1.88	19%	0.46
Scenic and sightseeing transportation and support activities for transportation	54	1,254%	4.17	757%	12.17
Newspaper publishers	44	577%	7.00	498%	5.71
Telecommunications	42	174%	1.95	114%	1.58
Amusement parks, arcades, and gambling industries	50	398%	3.21	228%	3.65
Hotels and motels, including casino hotels	100	181%	4.37	91%	1.52

*Screen Step 2:*

After the initial nine sectors were identified in the first screen, a second screen was employed to rank economic sectors for targeting. For the second screen, the nine economic sectors will be evaluated by forecasted employment growth, employment potential, and quality of job.

Establishments in economic sectors with rapid employment growth are likely to expand and create new employment more rapidly than establishments in slow or declining industries. The potential sectoral employment growth impacts can be derived using forecasts by the U.S. Department of Labor. The current employment figures and employment forecasts for the nine targeted sectors from the previous section are presented in Table 15. These Department of Labor forecasts project an employment increase in four of the nine targeted sectors from 2008 to 2018 (Woods, 2009). The largest projected increases are in the Scenic and Sightseeing Transportation and Support Activities for Transportation Sector (1.6 percent), and the Amusement Parks, Arcades, and Gambling Industries Sector (1.4 percent).

**Table 15. Forecasted U.S. Employment Growth Rate, 2008 to 2018.**

<b>Sector</b>	<b>2008 U.S. Employee (thousands)</b>	<b>2008 U.S. Establishments</b>	<b>Projected Annual Employment Rate of Change 2008-2018</b>	<b>Rank</b>
Cattle ranching and farming	46,434	7,656	-0.4%	5
Mining gold, silver, and other metal ore	17,562	328	-1.1%	7
Support activities for other mining	13,894	980	-2.6%	9
Retail Stores - Food and beverage	2,866,733	139,397	0.4%	4
Scenic and sightseeing transportation and support activities for transportation	617,227	44,069	1.6%	1
Newspaper publishers	323,601	9,138	-2.1%	8
Telecommunications	1,019,147	47,197	-0.9%	6
Amusement parks, arcades, and gambling industries	186,498	4,832	1.4%	2
Hotels and motels, including casino hotels	1,768,687	50,784	0.5%	3

### **Employment Potential**

Employment potential is defined as the direct and indirect employment per million dollars of output. High employment sectors are often low employee compensation sectors that are not an indicator of quality of jobs. However, the number of jobs created should be a consideration, and by including both number of jobs and quality of jobs as criteria, the sectors that do both will be favored while those that do neither will be eliminated. By including direct and indirect employment, sectors with strong linkages to high employment potential are favored.

All employment potential values can be found in Table 16. The top employment potential sectors are the Retail Stores – Food and Beverage Sector (29.01), the Newspaper Publishers Sector (18.44), and the Amusement Parks, Arcades, and Gambling Industries Sector (15.93).

**Table 16. Employment Potential for Nine Targeted Economic Sectors in Lander County.**

<b>Sector</b>	<b>Employment Potential</b>	<b>Rank</b>
Cattle ranching and farming	9.23	7
Mining gold, silver, and other metal ore	1.57	9
Support activities for other mining	2.69	8
Retail Stores - Food and beverage	29.01	1
Scenic and sightseeing transportation and support activities for transportation	13.28	4
Newspaper publishers	18.44	2
Telecommunications	9.49	6
Amusement parks, arcades, and gambling industries	15.93	3
Hotels and motels, including casino hotels	9.90	5

**Quality of Jobs**

Quality of jobs is defined as the total employee compensation per total job created by a given sector. The quality of job is determined not only by what the economic sector pays its employees but also its linkages to other high quality jobs.

All quality of job values can be found in Table 17. The top quality of job sectors are the Mining Gold, Silver, and Other Metal Ore Sector (\$73,875.41), the Scenic and Sightseeing Transportation and Support Activities for Transportation Sector (\$46,648.12), and the Support Activities for Other Mining Sector (\$40,947.48). Comparisons of economic sectors and Tables 16 and 17 are complicated by the fact that a given economic sector may rate high in one criterion but low in another. For example, the Mining, Gold, Silver, and Other Metal Ore Sector ranks highest in quality of jobs but seventh in employment potential. Therefore, to combine these three criteria, the Z-score procedure is employed.

**Table 17. Quality of Job for Nine Targeted Economic Sectors in Lander County.**

<b>Sector</b>	<b>Quality of Job</b>	<b>Rank</b>
Cattle ranching and farming	\$10,944.01	8
Mining gold, silver, and other metal ore	\$73,875.41	1
Support activities for other mining	\$40,947.48	3
Retail Stores - Food and beverage	\$14,959.59	6
Scenic and sightseeing transportation and support activities for transportation	\$46,648.12	2
Newspaper publishers	\$3,602.58	9
Telecommunications	\$12,162.19	7
Amusement parks, arcades, and gambling industries	\$25,646.10	5
Hotels and motels, including casino hotels	\$31,720.62	4



### **Z-Score Analysis**

The three criteria used in Step 2 screening are of different dimensions. Therefore, analysis and ranking of these nine economic sectors based on the three criteria must be combined through an index of economic criterion. In order to combine criteria values and weight them, the Z-score normalization procedure is used.

Table 18 ranks the top nine economic sectors by Z-score. This Z-score was calculated using equal weights for each criterion. That is, each criterion is weighted one-third. If a different weighting is used, it is possible that the ranking of these nine sectors would change. Also from the nine targeted sectors, economic clusters could be derived.

**Table 18. Nine Targeted Economic Sectors in Lander County by Z-Score.**

<b>Sector</b>	<b>Z-score</b>
Scenic and sightseeing transportation and support activities for transportation	0.7553
Retail Stores - Food and beverage	0.6319
Amusement parks, arcades, and gambling industries	0.4996
Hotels and motels, including casino hotels	0.1463
Mining gold, silver, and other metal ore	0.0837
Cattle ranching and farming	-0.3975
Telecommunications	-0.4828
Newspaper publishers	-0.5285
Support activities for other mining	-0.7081

### **Potential Cluster Linkages with Nine Export Enhancement Sectors**

Economic sectors supplying inputs to or purchasing outputs from the nine targeted economic sectors may be good candidates for industry targeting and recruitment. Economic sectors linked to the nine targeted sectors may find Lander County a competitive location if proximity to input supplies and products market is desired. Such proximity is especially valued by (1) manufacturing using “just-in-time” inventory replacement, or (2) firms producing specialized goods in small-batch production runs.

The IMPLAN database was used to identify any forward or backward linkages from the nine targeted industries. A backward link of a targeted sector is a sector that supplies the targeted sector with commodities or services. Backward links are counted if a sector supplies at least 2 percent of the total value of intermediate purchases by the targeted sector. A forward link to a targeted sector is a sector that purchases the targeted sector’s output. Forward links are counted if

a sector purchases more than 1 percent of the total value of intermediates sales of the targeted sector. Sectors with three or more forward and backward linkages to the nine targeted sectors were identified as industries that will find Lander County an attractive location if the nine targeted industries continue to develop in Lander County.

Typically, the recruitment of sectors with strong linkages to the targeted economic sectors may be a second phase of targeted industrial development. Expansion of existing industry clusters will make Lander County a more attractive location for linked sectors, and thus, reduce the efforts/incentives required to attract establishments in the linked economic sectors.

Table 19 lists the economic sectors with three or more links to the nine export enhancement sectors in Lander County. Sectors with five or more links may be classified as having the strongest buy-sell relationships. There were 15 sectors with strong buy-sell relationships. The sectors with the most links were the Wholesale Trade Sector (11), the Truck Transportation Sector (11), and the Telecommunications Sector (10).

**Table 19. Sectors with Backward or Forward Linkages to the Targeted Industries in Lander County.**

Sector Name	Target Purchasers (Forward Links)	Target Suppliers (Backward Links)	Total Links
Wholesale trade	5	6	11
Truck transportation	4	7	11
Telecommunications	3	7	10
Newspaper publishers	3	6	9
Monetary authorities and depository credit intermediation	2	6	8
Commercial and industrial machinery and equipment repair and maintenance	4	4	8
Gold, silver, and other metal ore mining	6	1	7
Real estate	1	6	7
Food services and drinking places	5	2	7
Other state and local government enterprises	3	4	7
Civic, social, professional, and similar organizations	2	4	6
Support activities for other mining	4	1	5
Scenic and sightseeing transportation and support activities for transportation	2	3	5
Hotels and motels, including casino hotels	4	1	5
Postal service	0	5	5
Other nonmetallic mineral mining and quarrying	4	0	4
Retail - Food and beverage	3	1	4
Cattle ranching and farming	2	1	3
Imputed rental value for owner-occupied dwellings	3	0	3
Custom computer programming services	2	1	3
Waste management and remediation services	0	3	3
Performing arts companies	2	1	3
Personal and household goods repair and maintenance	1	2	3

## Summary

- “Export enhancement” attempts to increase export sales to buyers outside Lander County.
- For expansion of export, two screenings are used.
- The first screening step was to identify expanding industries that have a significant presence in Lander County and that Lander County has been successful in attracting and nurturing:
  - i. County industry employment number of at least 20 in 2009,
  - ii. County industry employment increased from 2003 to 2009,
  - iii. Location quotient in Lander County exceeded 1.0 in 2009 or the location quotient increased from 2003 to 2009, and
  - iv. Competitive position from Lander County shift-share analysis was positive between 2003 and 2009.
- Criteria i and ii identified sectors that have a significant presence in the county. Location quotient and competitive position criteria are used to identify sectors that have a competitive advantage in maintaining and attracting employment, and industries which are performing well locally relative to the national average. Nine sectors met all four criteria.
- Screening step 2 employs:
  - i. Forecasted employment growth rates,
  - ii. Employment potential, and
  - iii. Quality of job.
- Under screening step 2, a Z-score index of economic sector criteria is used to rank economic sectors for potential export enhancement activities in Lander County.
- Results of the index sector criteria indicates the top nine economic sectors for favorable impact to Lander County from export enhancement were the Scenic and Sightseeing Transportation and Support Activities for Transportation Sector; the Retail Sores – Food and Beverage Sector; the Amusement Parks, Arcades, and Gambling Industries Sector; the Hotels and Motels including Casino Hotels Sector; the Mining Gold, Silver, and Other Metal Ore Sector; the Cattle Ranching and Farming Sector; the Telecommunications Sector; the Newspaper Publishers Sector; and the Support Activities of Other Mining Sector.
- Economic sectors supplying inputs to or purchasing outputs from the nine targeted economic sectors may be good sectors for economic targeting and recruitment.
- Lander County economic sectors with five or more economic linkages to the nine targeted export enhancement sectors may be classified as economic sectors with the strongest buy-sell linkages. The economic sectors in Lander County with the most economic linkages are the Wholesale Trade Sector (11), the Truck Transportation Sector (11), and the Telecommunication Sector (10).

**SECTION VI:**  
**IMPORT SUBSTITUTION TARGETING**  
**FOR LANDER COUNTY**

## **IMPORT SUBSTITUTION TARGETING FOR LANDER COUNTY**

### **Cluster Targeted Economic Development: Application to Import Substitution Efforts**

As was stated previously, there are two ways in which economic sectors could increase economic activity in an area. One activity is “export enhancement,” which attempts to increase export purchases from buyers outside. The second economic development activity is “import substitution,” which attempts to decrease purchases outside the economy of study.

Table 13 shows the top 25 commodity sectors by value of imports to Lander County. The sector with the largest imports is the Gold, Silver, and Other Metal Ore Sector, which is also the largest exporter. The openness of the Lander County economy shows its influence in the regional economy. What is needed is to identify not only value of imports by the largest sectors but also the commodities these sectors import.

### **Import Substitution Analysis**

Because Lander County is a fairly “open economy,” there are large shipments of goods and services into Lander County (i.e., imports) as well as shipment of goods and services out of Lander County (i.e., exports). There are two sources of demand for imports into Lander County. First, industries within Lander County import goods and services that they need for their production processes. Second, households and government import goods and services into the county. For example, when a household purchases an automobile from the retail sector in Lander County, a large portion of the payment eventually goes to the Automobile Manufacturing Sector outside of the county. Local, state and federal agencies within the county also purchase goods and services, some of which are imported from outside Lander County. Together with investment and inventory, government and household purchases are referred to as “institutions” and make up institution purchases of goods produced inside and outside of Lander County. Combining the institutional import analysis with the Lander County commercial sector analysis would help Lander County economic development decision-makers to target local commercial sector activities (Harris et al., 2001).

The import estimates from IMPLAN V3 (Minnesota IMPLAN Group, Inc.) can be used to identify potential “gaps” and “holes” in the local economy that can serve as a starting point for economic development strategies. These “gaps” and “holes” can occur for one of two reasons. First, a given industry in Lander County may demand a certain good or service as an input into their production process or a household or government sector may demand the good or service. For some economic sectors, certain inputs may not be available in the Lander County economy, hence

must be imported into Lander County. This type of import can be classified as a “gap” in a local economy.

Second, the good or service that a given sector or institution may demand is produced in Lander County, but is not purchased locally for some reason. This type of import is often referred to as a “disconnect” in the local economy. Disconnects can occur because of national contracts, a specific input specification can be produced only in one area, or the quantity of input is not produced of a given good or service to fulfill local demand.

Economic development or targeting can be formulated to close the gaps or holes and/or enhance the level of connection between existing economic sectors. For example, large gaps in the economy may identify opportunities to attract or start new businesses. This is one method that can be used to target selected economic sectors. The second economic development policy, often referred to as “import substitution,” aims at building stronger networks between and across existing economic sectors.

While the methods outlined here and applied later in the paper serve as a starting point to identify specific sectors, some gaps and disconnects are logical once they are further explored. In some instances because of volume requirement, a gap cannot be addressed. Another reason why a disconnect may not be overcome is that the quality of input required by a local business cannot be produced by the local input supplier. Disconnects may also exist because somewhat different products are aggregated into the same commodity sector.

### **Non-Competitive Imports**

The IMPLAN database was used to derive two types of imports. Non-competitive imports are imports for which there is no production in the Lander County economy. Competitive imports are those imports of goods and services that are produced locally.

Table 20 shows the 25 non-competitive commodity sector imports. The largest commodity sector imports were Natural Gas and Distribution Services at \$25.6 million. The majority of the demand for this product comes from Lander County industries. In fact, it is the largest industry import. For obvious reasons, this is not a potential target for Lander County.

However, a large natural gas pipeline is being developed in Northeast Nevada. Lander County economic decision-makers may want to consider potential economic development opportunities from El Paso Corporation’s Ruby Pipeline.

What is needed is a Lander County study group to identify potential industry and institutional imports that could be targeted. The second largest industry import is from the Management of Companies and Enterprise Commodity Sector. The largest institutional demand,

which is primarily Lander County households, is for Private Hospital Services. Thus the Management of Companies and Enterprise and the Private Hospital Sectors may be industries to target because they potentially could meet local demand for company management and hospital services.

**Table 20. Top 25 Non- Competitive Commodity Sector Imports for Lander County and Components of Demand.**

<b>Commodity Sector</b>	<b>Industry Imports</b>	<b>Institution Imports</b>	<b>Total Imports</b>
Natural gas, and distribution services	\$ 23,329,086	\$ 2,286,512	\$ 25,615,599
Management of companies and enterprises	\$ 22,589,321	\$ -	\$ 22,589,321
Refined petroleum products	\$ 10,215,516	\$ 7,401,793	\$ 17,617,310
Iron and steel and ferroalloy products	\$ 11,868,282	\$ 447	\$ 11,868,730
Tires	\$ 10,622,769	\$ 252,180	\$ 10,874,949
Lime and gypsum products	\$ 10,713,703	\$ 3,422	\$ 10,717,125
Insurance	\$ 3,785,863	\$ 6,451,547	\$ 10,237,410
Used and secondhand goods	\$ 7,665,049	\$ 1,563,450	\$ 9,228,498
Legal services	\$ 5,396,778	\$ 3,763,499	\$ 9,160,276
Private hospital services	\$ -	\$ 8,768,867	\$ 8,768,867
Material handling equipment	\$ 8,660,070	\$ 28,467	\$ 8,688,538
Pharmaceutical preparations	\$ 125,032	\$ 6,475,256	\$ 6,600,288
Nondepository credit intermediation and related services	\$ 4,982,198	\$ 1,130,613	\$ 6,112,811
Construction machinery	\$ 5,478,315	\$ 164,953	\$ 5,643,268
Motor vehicle parts	\$ 4,945,147	\$ 521,200	\$ 5,466,347
Other plastics products	\$ 4,878,970	\$ 516,055	\$ 5,395,025
Industrial gas	\$ 4,356,700	\$ 74,704	\$ 4,431,404
Nursing and residential care services	\$ -	\$ 4,106,562	\$ 4,106,562
All other crop farming products	\$ 3,650,701	\$ 23,481	\$ 3,674,182
Funds, trusts, and other financial services	\$ 407,331	\$ 2,225,168	\$ 2,632,499
Medical and diagnostic labs and outpatient and other ambulatory care services	\$ 9,866	\$ 2,552,090	\$ 2,561,957
Data processing- hosting- ISP- web search portals	\$ 309,627	\$ 2,128,689	\$ 2,438,316
Automotive equipment rental and leasing services	\$ 1,212,744	\$ 1,197,352	\$ 2,410,096
Petroleum lubricating oils and greases	\$ 2,270,622	\$ 123,577	\$ 2,394,199
Scientific research and development services	\$ 516,511	\$ 1,833,939	\$ 2,350,450

## **Competitive Imports**

The interaction of the Lander County economy can be described as complex. While it is clear that there should be analysis of the feasibility of an industry locating in the area when inputs to local sectors are not produced locally, the importation of locally produced manufacturing goods and services is less clear. The importation of locally produced goods and services may be due to gaps, such as a small local economic sector that cannot supply local demands, or a disconnect which may be due to price, detailed product specification, or national or regional contracts which supersede local contracts.

Table 21 shows the top 25 competitive commodity sectors imported into Lander County. Each of the sectors may provide an opportunity for import substitution for the Lander County economy. However, some of these sectors may be “disconnects” for which local industries may not be able to supply local demand because of contracts or other specific product requirements. Industries with low import substitution potential will have limited local markets. The recruitment of firms in economic sectors with low import substitution potential should not be discouraged. However, the recruitment of firms in these economic sectors should focus on the advantages of Lander County as a competitive location for production and not as a location with a strong local market for industries’ products.

Table 21 reports the institutional and industry demands as well the imports for top 25 competitive import commodities. The industry competitive import commodity sector with the largest value is the Gold, Silver, and Other Metal Ore Sector. However, there might be limited import substitution possibilities here. Electricity and distribution services imports are being addressed by Newmont Mining Corporation building their own power plant. The institutional competitive import sector with the largest value is the Offices of Physicians, Dentists, and Other Health Practitioners Sector. There are demands by Lander County households and government met by outside suppliers. In order to investigate the import, the local health practitioners sector may investigate services offered and not offered to determine feasibility of expansion. This may be a gap where specialized health procedures are only offered in metropolitan areas and cannot be offered in Lander County.



**Table 21. Top 25 Competitive Commodity Sector Imports for Lander County and Components of Demand.**

<b>Commodity Sector</b>	<b>Industry Imports</b>	<b>Institution Imports</b>	<b>Total Imports</b>
Gold, silver, and other metal ore	\$ 150,200,378	\$ 2,835,887	\$ 153,036,270
Electricity, and distribution services	\$ 38,502,625	\$ 3,107,671	\$ 41,610,294
Support services for other mining	\$ 34,201,653	\$ -	\$ 34,201,653
Wholesale trade distribution services	\$ 10,793,012	\$ 8,764,788	\$ 19,557,800
Real estate buying and selling, leasing, managing, and related services	\$ 6,957,517	\$ 9,536,875	\$ 16,494,392
Offices of physicians, dentists, and other health practitioners	\$ -	\$ 12,002,588	\$ 12,002,588
Other newly constructed nonresidential structures	\$ -	\$ 10,730,796	\$ 10,730,796
Architectural, engineering, and related services	\$ 9,749,408	\$ 384,659	\$ 10,134,067
Restaurant, bar, and drinking place services	\$ 673,889	\$ 8,658,069	\$ 9,331,958
Employment and payroll only (federal govt, non-military)	\$ -	\$ 9,257,843	\$ 9,257,843
Used and secondhand goods	\$ 7,665,049	\$ 1,563,450	\$ 9,228,498
Monetary authorities and depository credit intermediation services	\$ 4,330,494	\$ 3,947,880	\$ 8,278,375
Truck transportation services	\$ 6,223,949	\$ 1,189,243	\$ 7,413,192
Newly constructed nonresidential commercial and health care structures	\$ -	\$ 7,336,021	\$ 7,336,021
Securities, commodity contracts, investments, and related services	\$ 3,992,225	\$ 3,050,874	\$ 7,043,098
Telecommunications	\$ 3,088,645	\$ 2,897,145	\$ 5,985,790
Fertilizer	\$ 3,852,523	\$ 2,065,280	\$ 5,917,803
Commercial and industrial machinery and equipment rental and leasing services	\$ 4,272,507	\$ 215,033	\$ 4,487,540
Rail transportation services	\$ 3,844,936	\$ 257,573	\$ 4,102,509
Leasing of nonfinancial intangible assets	\$ 3,978,099	\$ -	\$ 3,978,099
Newly constructed residential permanent site single- and multi-family structures	\$ -	\$ 3,395,564	\$ 3,395,564
Services to buildings and dwellings	\$ 2,696,569	\$ 655,032	\$ 3,351,601
Accounting, tax preparation, bookkeeping, and payroll services	\$ 2,185,793	\$ 941,024	\$ 3,126,817
Management, scientific, and technical consulting services	\$ 2,190,227	\$ 868,611	\$ 3,058,837
Maintained and repaired nonresidential structures	\$ 601,518	\$ 2,070,840	\$ 2,672,357

**Economic Sectors that Import**

The first part of the import substitution section listed commodities that are imported by Lander County economic sectors. In order to reduce imports, Lander County economic development decision-makers need to know the economic sectors that are the largest importers and what those sectors import.

From Table 13, the Mining, Gold, Silver, and Other Ore Sector is the largest importer in Lander County. Of interest to Lander County economic decision-makers is not only the value of imports by the Mining, Gold, Silver, and Other Ore Sector, but the commodities this sector is importing. From Table 22, the Gold, Silver and Other Ore Sector imports substantially from the Support Activities for Other Mining Sector. Just what is being imported from that sector may provide a business opportunity in Lander County. Also, energy sectors such as the Natural Gas Distribution Sector and the Electric Power Generation, Transmission, and Distribution Sector are import substitution opportunities. Given the current construction activities in Northeast Nevada of a natural gas pipeline, construction of electric power plants by gold mining industries, and potential green energy development on reclaimed mining sites, import substitution activities for these commodities are being addressed.

**Table 22. Lander County Top 10 Industry Importers and Their Five Most Imported Commodities.**

<b>Industry Sector</b>	<b>Commodity Sector</b>	<b>Estimated Import Value</b>
Gold, silver, and other metal ore		
	Gold, silver, and other metal ore mining	\$ 150,144,022
	Electric power generation, transmission, and distribution	\$ 35,107,461
	Support activities for other mining	\$ 27,622,131
	Management of companies and enterprises	\$ 19,558,646
	Natural gas distribution	\$ 19,086,837
Other nonmetallic mineral mining and quarrying		
	Support activities for other mining	\$ 3,781,454
	Electric power generation, transmission, and distribution	\$ 1,804,475
	Natural gas distribution	\$ 1,301,273
	Other nonmetallic mineral mining and quarrying	\$ 1,188,348
	Truck transportation	\$ 858,550
Support services for other mining		
	Architectural, engineering, and related services	\$ 3,508,092
	Support activities for other mining	\$ 2,798,065
	Iron and steel mills and ferroalloy manufacturing	\$ 1,540,957
	Petroleum refineries	\$ 582,334
	Lessors of nonfinancial intangible assets	\$ 567,010

<b>Industry Sector</b>	<b>Commodity Sector</b>	<b>Estimated Import Value</b>
Fertilizer manufacturing		
	Fertilizer manufacturing	\$ 3,756,047
	Natural gas distribution	\$ 2,246,452
	Petroleum refineries	\$ 1,078,288
	Other nonmetallic mineral mining and quarrying	\$ 700,695
	Truck transportation	\$ 621,173
Imputed rental value for owner-occupied dwellings		
	Nondepository credit intermediation and related activities	\$ 2,394,283
	Real estate	\$ 1,127,228
	Insurance carriers	\$ 841,317
	Maintenance and repair construction of residential structures	\$ 675,326
	Monetary authorities and depository credit intermediation	\$ 287,058
Cattle ranching and farming		
	All other crop farming	\$ 1,568,885
	Petroleum refineries	\$ 598,206
	Real estate	\$ 589,394
	Grain farming	\$ 524,223
	Other animal food manufacturing	\$ 492,934
Hotels and motels, including casino hotels		
	Electric power generation, transmission, and distribution	\$ 407,362
	Management of companies and enterprises	\$ 337,474
	Advertising and related services	\$ 331,895
	Services to buildings and dwellings	\$ 235,060
	Insurance carriers	\$ 226,312
Truck transportation		
	Petroleum refineries	\$ 821,437
	Couriers and messengers	\$ 310,438
	Insurance carriers	\$ 257,973
	Truck transportation	\$ 197,320
	Employment services	\$ 171,743
Wholesale trade		
	Wholesale trade	\$ 303,166
	Management of companies and enterprises	\$ 232,830
	Real estate	\$ 186,728
	Couriers and messengers	\$ 154,089
	Advertising and related services	\$ 130,033

Industry Sector	Commodity Sector	Estimated Import Value
Telecommunications		
	Telecommunications	\$ 615,234
	Motion picture and video industries	\$ 197,342
	Cable and other subscription programming	\$ 172,931
	Architectural, engineering, and related services	\$ 118,211
	Real estate	\$ 105,094

### **Summary**

- “Import substitution” attempts to decrease purchases of inputs and final goods outside of Lander County.
- IMPLAN derives two types of imports. Non-competitive imports are those imports not produced in Lander County. Competitive imports are goods and services produced in Lander County.
- The top non-competitive import in Lander County is the Natural Gas and Distribution Sector. With the current construction of El Paso Corporation’s Ruby Pipeline, this could reduce commodity sector’s imports.
- The top competitive import was the Gold, Silver, and Other Metal Ore Sector. However, another large competitive import is the Electricity and Distribution Services Sector. With construction of electric power plants by mining industries and emphasis on green power production on reclaimed mine sites, these imports may provide economic development opportunities in Lander County.
- The Mining, Gold, Silver, and Other Metal Ore Sector is a large importer. If Lander County could meet some of the input demands of this sector, these actions would reduce dollar loss from imports.

**SECTION VII:  
FOCUSING TARGETING OPPORTUNITIES  
WITH THE MINING SECTOR IN  
LANDER COUNTY**

## **FOCUSING TARGETING OPPORTUNITIES WITH THE MINING SECTORS IN LANDER COUNTY**

### **Linkages Analysis for Lander County Mining Sectors**

Through the history of the Lander County economy, the mining industry has been a major presence in the economy. Because the mining industry has a large presence in the Lander County economy, a detailed analysis of economic linkages for the mining sector may provide insight for Lander County economic development. The most important mining sectors in Lander County are the Gold, Silver, and Other Metal Ore Mining Sector; the Other Nonmetallic Mineral Mining and Quarrying Sector; and the Support Activities for Other Mining Sector. The IMPLAN V3 input-output model (Minnesota IMPLAN Group, Inc.) is used to derive the economic sectors that either supply these three mining sectors with inputs or purchase outputs from the mining sectors for use in their production processes. To develop potential linkages for the mining sectors, the Lander County forward and backward linkages are compared to the national forward and backward linkages. From these comparisons, potential economic sectors may be identified for economic development by Lander County.

The top 10 forward and backward linkages to the three aforementioned mining sectors for the U.S. and Lander County are displayed in Tables 23 through 28. Examining the differences between the U.S. and Lander County linkages may reveal possible target industries for economic development. The potential expansion of forward linkages is somewhat limited. For example, Fertilizer Manufacturing that is a substantial national forward linkage to both the Gold Mining and Other Nonmetallic Mineral Sector is also a substantial forward linkage in Lander. In other cases, national forward linkages such as the Primary Smelting and Refining of Nonferrous Metal Sector and the Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying Sector may not be feasible for Lander County because of economics of scale.

Potential backward linkage economic development possibilities are more evident. For example, nationally the Electric Power Generation, Transmission, and Distribution Sector supplies 6.92 percent of total input purchases made by the Gold, Silver, and Other Metal Ore Mining Sector. The same sector in Lander supplies 1.82 percent of the Lander Gold Mining input purchases. Thus Electric Power Generation has expansion potential.

Lander County economic development practitioners are aware of the importance of mining to their local economy. Building economic linkages to these sectors builds upon the strength of those sectors but also could provide relative stability from such a “boom-bust” economic sector.

**Table 23. Top 20 Forward Links to the Gold, Silver, and Other Metal Ore Sector for Lander County and the U.S.**

Lander County		United States	
Sector	%	Sector	%
Gold, silver, and other metal ore mining	99.96%	Gold, silver, and other metal ore mining	19.43%
Fertilizer manufacturing	0.04%	Primary smelting and refining of nonferrous metal (except copper and aluminum)	16.24%
		Nonferrous metal (except copper and aluminum) rolling, drawing, extruding and alloying	11.51%
		Motor vehicle parts manufacturing	11.46%
		Copper, nickel, lead, and zinc mining	9.52%
		All other basic inorganic chemical manufacturing	9.17%
		Alumina refining and primary aluminum production	3.64%
		Industrial gas manufacturing	2.40%
		Petroleum refineries	2.08%
		Fertilizer manufacturing	1.42%
		All other miscellaneous electrical equipment and component	1.27%
		Petrochemical manufacturing	1.06%
		Other pressed and blown glass and glassware manufacturing	0.92%
		Synthetic dye and pigment manufacturing	0.82%
		Paint and coating manufacturing	0.81%
		Spring and wire product manufacturing	0.80%
		Dental equipment and supplies manufacturing	0.74%
		Other basic organic chemical manufacturing	0.68%
		Metal cutting and forming machine tool manufacturing	0.65%
		Relay and industrial control manufacturing	0.64%

**Table 24. Top 20 Backward Links to the Gold, Silver, and Other Metal Ore Sector for Lander County and the U.S.**

Lander County		United States	
Sector	%	Sector	%
Gold, silver, and other metal ore mining	88.16%	Gold, silver, and other metal ore mining	46.42%
Truck transportation	2.93%	Electric power generation, transmission, and distribution	6.92%
Wholesale trade	2.63%	Support activities for other mining	6.19%
Electric power generation, transmission, and distribution	1.82%	Management of companies and enterprises	4.48%
Monetary authorities and depository credit intermediation	0.88%	Natural gas distribution	4.05%
Rail transportation	0.59%	Copper, nickel, lead, and zinc mining	2.60%
Scenic and sightseeing transportation and support activities for transportation	0.56%	Wholesale trade	2.50%
Civic, social, professional, and similar organizations	0.53%	Lime and gypsum product manufacturing	2.28%
Telecommunications	0.40%	Truck transportation	1.61%
Support activities for other mining	0.28%	Material handling equipment manufacturing	1.45%
Other state and local government enterprises	0.23%	Iron and steel mills and ferroalloy manufacturing	1.43%
Securities, commodity contracts, investments, and related activities	0.12%	Tire manufacturing	1.38%
Lessors of nonfinancial intangible assets	0.12%	Petroleum refineries	1.30%
Commercial and industrial machinery and equipment rental and leasing	0.11%	State and local government electric utilities	1.13%
Real estate	0.11%	Architectural, engineering, and related services	1.02%
Business support services	0.09%	Construction machinery manufacturing	0.99%
Architectural, engineering, and related services	0.07%	Industrial gas manufacturing	0.98%
Services to buildings and dwellings	0.07%	Rail transportation	0.85%
Other support services	0.06%	Monetary authorities and depository credit intermediation	0.79%
Waste management and remediation services	0.05%	Legal services	0.76%



**Table 25. Top 20 Forward Links to the Other Nonmetallic Mineral Mining and Quarrying Sector for Lander County and the U.S.**

Lander County		United States	
Sector	%	Sector	%
Other nonmetallic mineral mining and quarrying	58.41%	Fertilizer manufacturing	24.91%
Fertilizer manufacturing	35.02%	Lime and gypsum product manufacturing	6.65%
Gold, silver, and other metal ore mining	6.02%	Petroleum refineries	4.63%
Other state and local government enterprises	0.33%	All other basic inorganic chemical manufacturing	4.36%
Imputed rental value for owner-occupied dwellings	0.06%	Other state and local government enterprises	3.80%
Telecommunications	0.05%	Soap and cleaning compound manufacturing	3.5%
Construction of other new nonresidential structures	0.04%	Semiconductor and related device manufacturing	3.17%
Scenic and sightseeing transportation and support activities for transportation	0.02%	Other basic organic chemical manufacturing	2.96%
Commercial and industrial machinery and equipment repair and maintenance	0.02%	Mineral wool manufacturing	2.91%
Construction of new residential permanent site single- and multi-family structures	0.01%	All other chemical product and preparation manufacturing	2.41%
		Other nonmetallic mineral mining and quarrying	2.34%
		All other crop farming	2.26%
		Construction of other new nonresidential structures	2.07%
		Industrial gas manufacturing	1.89%
		Paper mills	1.78%
		Hospitals	1.75%
		Ground or treated mineral and earth manufacturing	1.52%
		Adhesive manufacturing	1.39%
		Miscellaneous nonmetallic mineral products	1.37%
		Grain farming	1.20%

**Table 26. Top 20 Backward Links to the Other Nonmetallic Mineral Mining and Quarrying Sector for Lander County and the U.S.**

Lander County		United States	
Sector	%	Sector	%
Truck transportation	47.28%	Support activities for other mining	22.86%
Wholesale trade	7.47%	Electric power generation, transmission, and distribution	9.71%
Electric power generation, transmission, and distribution	7.21%	Truck transportation	9.19%
Monetary authorities and depository credit intermediation	4.98%	Natural gas distribution	7.35%
Rail transportation	4.77%	Architectural, engineering, and related services	4.99%
Scenic and sightseeing transportation and support activities for transportation	4.69%	Management of companies and enterprises	4.91%
Support activities for other mining	2.92%	Other nonmetallic mineral mining and quarrying	3.65%
Telecommunications	2.70%	Construction machinery manufacturing	3.54%
Securities, commodity contracts, investments, and related activities	2.46%	Petroleum refineries	2.87%
Civic, social, professional, and similar organizations	2.30%	Wholesale trade	2.51%
Other nonmetallic mineral mining and quarrying	1.75%	Rail transportation	2.42%
Other state and local government enterprises	1.09%	Commercial and industrial machinery and equipment rental and leasing	2.02%
Architectural, engineering, and related services	1.03%	Securities, commodity contracts, investments, and related activities	1.90%
Commercial and industrial machinery and equipment rental and leasing	0.95%	Monetary authorities and depository credit intermediation	1.70%
Business support services	0.90%	State and local government electric utilities	1.57%
Other support services	0.87%	Iron and steel mills and ferroalloy manufacturing	1.51%
Postal service	0.79%	Material handling equipment manufacturing	1.20%
Newspaper publishers	0.75%	Mining and oil and gas field machinery manufacturing	1.06%
Retail - Food and beverage	0.60%	Lessors of nonfinancial intangible assets	1.01%
Lessors of nonfinancial intangible assets	0.56%	Legal services	0.93%

**Table 27. Top 20 Forward Links to the Support Activities for Other Mining Sector for Lander County and the U.S.**

Lander County		United States	
Sector	%	Sector	%
Gold, silver, and other metal ore mining	80.72%	Coal mining	32.69%
Other nonmetallic mineral mining and quarrying	11.08%	Support activities for other mining	14.00%
Support activities for other mining	8.18%	Sand, gravel, clay, and ceramic and refractory minerals mining and quarrying	13.62%
Other state and local government enterprises	0.01%	Other nonmetallic mineral mining and quarrying	8.17%
Imputed rental value for owner-occupied dwellings	0.01%	Drilling oil and gas wells	7.82%
Construction of other new nonresidential structures	0.01%	Stone mining and quarrying	6.70%
		Gold, silver, and other metal ore mining	5.43%
		Copper, nickel, lead, and zinc mining	5.08%
		Iron ore mining	3.05%
		Scientific research and development services	1.69%
		Construction of other new nonresidential structures	0.40%
		Ready-mix concrete manufacturing	0.23%
		Other state and local government enterprises	0.13%
		Imputed rental value for owner-occupied dwellings	0.09%
		Grain farming	0.02%
		Management of companies and enterprises	0.02%
		Cut stone and stone product manufacturing	0.02%
		Ground or treated mineral and earth manufacturing	0.02%
		All other crop farming	0.01%
		Rail transportation	0.01%

**Table 28. Top 20 Backward Links to the Support Activities for Other Mining Sector for Lander County and the U.S.**

Lander County		United States	
Sector	%	Sector	%
Wholesale trade	20.73%	Architectural, engineering, and related services	26.12%
Monetary authorities and depository credit intermediation	14.89%	Support activities for other mining	20.28%
Civic, social, professional, and similar organizations	10.36%	Iron and steel mills and ferroalloy manufacturing	7.10%
Architectural, engineering, and related services	10.13%	Lessors of nonfinancial intangible assets	4.41%
Truck transportation	6.10%	Petroleum refineries	3.77%
Support activities for other mining	4.88%	Wholesale trade	3.69%
Lessors of nonfinancial intangible assets	4.58%	Monetary authorities and depository credit intermediation	2.43%
Waste management and remediation services	4.35%	Management of companies and enterprises	2.34%
Telecommunications	3.81%	Construction machinery manufacturing	2.27%
Personal and household goods repair and maintenance	3.22%	Steel product manufacturing from purchased steel	2.18%
Real estate	2.14%	Natural gas distribution	1.67%
Newspaper publishers	1.43%	Motor vehicle parts manufacturing	1.64%
Other support services	1.42%	Legal services	1.64%
Rail transportation	1.22%	Commercial and industrial machinery and equipment rental and leasing	1.17%
Commercial and industrial machinery and equipment repair and maintenance	1.05%	Other plastics product manufacturing	1.08%
Commercial and industrial machinery and equipment rental and leasing	1.03%	Coating, engraving, heat treating and allied activities	1.00%
Securities, commodity contracts, investments, and related activities	0.87%	Waste management and remediation services	0.95%
Other state and local government enterprises	0.87%	Real estate	0.94%
Hotels and motels, including casino hotels	0.86%	All other crop farming	0.88%
Business support services	0.79%	Machine shops	0.87%

## **Summary**

- The mining sectors of Gold, Silver, and Other Metal Ores, Other Nonmetallic Mineral and Quarrying, and Support Activities for Other Mining have historically led economic activity and development in Lander County.
- Comparing backward and forward linkages of the same national mining sectors may provide information as to potential economic development targets for Lander County.
- Potential national backward linkages such as the Electric Power Generation, Transmission, and Distribution Sector may provide economic development opportunities for Lander County. In fact, Lander County gold mining sectors have built electric power plants. In addition, the possible development of green energy plants on reclaimed gold mine sites in Lander County provides the county with a potential economic development opportunity.

**SECTION VIII:**

**OCCUPATIONAL LINKAGES**

**TO THE GOLD MINING INDUSTRY**

## OCCUPATIONAL LINKAGES TO THE GOLD MINING INDUSTRY

### Lander County Gold Mining Job Loss Solution

Many of Nevada's rural counties, such as Lander, have boom and bust economies because mining is a major part of their economies. Mines may close down or drastically reduce their workforce, and many former miners will be forced to leave the area. This section examines the knowledge and skill base of miners in order to find the occupations with the closest match to those skills. Industries that hire large percentages of these occupations are possible targets for recruitment by local economic development agencies and local policy-makers.

Gold mining jobs are in IMPLAN sector 24, the Gold, Silver, and Other Metal Ore Mining Sector (NAICS codes 21222 and 21229). Using the 2009 IMPLAN model for Lander County, the employment multiplier for the Gold, Silver, and Other Metal Ore Mining Sector was approximately 1.23, so that for one hundred jobs lost directly in facilities support in Lander County, an additional 23 jobs in the Lander County economy are lost for a total of 123 jobs. Using a staffing pattern matrix created from the Department of Employment, Training and Rehabilitation data for rural Nevada, the distribution of occupational impacts are estimated and listed in Table 29.<sup>3</sup> Therefore, if there was a 100 worker loss by the Gold, Silver, and Other Metal Ore Mining Sector, the highest job loss (42) would be in construction and extraction occupations. Another 22 jobs would be lost in installation, maintenance and repair occupations while another 18 jobs would be lost in transportation and material moving occupations.

Using more detailed national staffing patterns data, specific occupations most likely to be impacted by a gold mine layoff can be estimated. In Table 30 from the national staffing pattern data from IMPLAN, operating engineers, mobile heavy equipment operators and continuous mining machine operators are likely to make up a the largest number of the layoffs if a mine is closed. Operating engineers and other construction equipment operators make up almost 14 percent of the workers in gold mines according to national level data. An additional 9 percent are mobile heavy equipment mechanics, and approximately 8 percent are continuous mining machine operators.

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<sup>3</sup> Various Nevada Staffing Patterns by Industry and Occupation are available from the Nevada Department of Employment, Training and Rehabilitation, Research and Analysis Bureau at <http://www.nevadaworkforce.com/cgi/dataanalysis/?PAGEID=94>

**Table 29. IMPLAN 24 (NAICS 21222 and 21229 – Gold, Silver, and Other Metal Ore Mining) Total Job Loss by Occupation, Using Balance of State Nevada Staffing Patterns and Lander County Multipliers.**

<b>Occupation Description</b>	<b>Occupation Code</b>	<b>% in Occupation</b>	<b># in Occupation</b>
Construction and Extraction Occupations	47-0000	33.8%	42
Installation, Maintenance, and Repair Occupations	49-0000	18.2%	22
Transportation and Material Moving Occupations	53-0000	14.8%	18
Production Occupations	51-0000	5.6%	7
Office and Administrative Support Occupations	43-0000	5.2%	6
Architecture and Engineering Occupations	17-0000	4.8%	6
Life, Physical, and Social Science Occupations	19-0000	3.4%	4
Sales and Related Occupations	41-0000	3.3%	4
Management Occupations	11-0000	2.8%	3
Unknown	NA	2.1%	3
Business and Financial Operations Occupations	13-0000	1.4%	2
Food Preparation and Serving Related Occupations	35-0000	1.1%	1
Building and Grounds Cleaning and Maintenance Occupations	37-0000	0.8%	1
Healthcare Practitioners and Technical Occupations	29-0000	0.8%	1
Protective Service Occupations	33-0000	0.7%	1
Personal Care and Service Occupations	39-0000	0.4%	0
Computer and Mathematical Occupations	15-0000	0.3%	0
Education, Training, and Library Occupations	25-0000	0.2%	0
Arts, Design, Entertainment, Sports, and Media Occupations	27-0000	0.1%	0
Healthcare Support Occupations	31-0000	0.1%	0
Community and Social Services Occupations	21-0000	0.1%	0
Legal Occupations	23-0000	0.0%	0
Farming, Fishing, and Forestry Occupations	45-0000	0.0%	0
<b>Grand Total</b>	<b>NA</b>	<b>100.0%</b>	<b>123</b>

Source: DETR Staffing Patterns Data for 2006-2016, IMPLAN National Industry by Occupation Matrix, UCED calculations.



**Table 30. IMPLAN 24 (NAICS 21222 and 21229 – Gold, Silver, and Other Metal Ore Mining) Employment by Occupation, Using Detailed U.S. Staffing Patterns.**

IMPLAN Industry Sector	Occupation Code	Occupation Description	% National Gold Mine Workers
24	47-2073	Operating Engineers and Other Construction Equipment Operators	13.55%
24	49-3042	Mobile Heavy Equipment Mechanics, Except Engines	9.00%
24	47-5041	Continuous Mining Machine Operators	7.57%
24	53-3032	Truck Drivers, Heavy and Tractor-Trailer	5.34%
24	49-9041	Industrial Machinery Mechanics	4.57%
24	47-2111	Electricians	4.52%
24	47-5042	Mine Cutting and Channeling Machine Operators	4.42%
24	49-9042	Maintenance and Repair Workers, General	3.03%
24	17-2151	Engineers, Including Mining Safety Engineers	3.01%
24	47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	2.97%
24	49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	2.49%
24	47-5049	Mining Machine Operators, All Other	1.98%
24	51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	1.97%
24	49-9099	Installation, Maintenance, and Repair Workers, All Other	1.96%
24	51-4121	Welders, Cutters, Solderers, and Brazers	1.85%
24	47-5021	Earth Drillers, Except Oil and Gas	1.68%
24	19-4031	Chemical Technicians	1.60%
24	47-5099	Extraction Workers, All Other	1.59%
24	51-1011	First-Line Supervisors/Managers of Production and Operating Workers	1.52%
24	51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	1.33%
24	49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	1.30%

Source: IMPLAN Industry by Occupation Matrix.

The first step in finding compatible replacement jobs is to determine what other industry sectors hire similar occupations (Economic Modeling Specialists Inc., 2008). The two industrial sectors that employ the next largest percentages of operating engineers and other construction equipment operators are the Nonmetallic Mineral Mining Sector and the Sand, Gravel, Clay, and Ceramic and Refractory Minerals Mining and Quarrying Sector. Sectors with a large percentage of mobile heavy equipment mechanics are also primarily other types of mining sectors. However, the workforce of the Commercial and Industrial Machinery and Equipment Rental and Leasing Sector hires 6.5 percent of its workforce from mobile heavy equipment mechanics occupations. All sectors with over 5 percent continuous mining machine operators on the workforce are also in the mining industry. These are not promising prospects in the event of a mine shutdown, since it is unlikely that other mining operations will expand operations.

To locate additional compatible replacement jobs, occupations were found that require similar job skills and pay similar wages, and explore industries that have large numbers of jobs available in those occupation categories. Following procedures by Economic Modeling Specialists Inc. (2008), a comparison of jobs with knowledge dimensions similar to mining occupations could be estimated. An occupation by knowledge matrix with aggregated data was created using the Occupational Information Network (O\*NET) database. O\*NET is developed under the sponsorship of the U.S. Department of Labor, Employment and Training Administration. The O\*NET database contains data on skills, abilities, knowledge and other attributes needed for each of over 800 occupation categories.

The O\*NET table on knowledge levels and importance was aggregated to 22 broad occupation categories using Nevada 2008 employment by occupation as weights. In the O\*NET table, each of 33 different knowledge areas are scored from 0 to 7 on the level of knowledge needed for each type of occupation. As an example, Table 31 lists the top 10 knowledge attributes for construction and extraction workers, where the top ranked knowledge attribute was “building and construction” with a score of 4.51 out of 7.

**Table 31. Top 10 Knowledge Attributes for Construction and Extraction Workers.**

O*NET Knowledge Code	Top Knowledge Attributes	Knowledge Level (0 to 7)
2.C.3.d	Building and Construction	4.51
2.C.3.e	Mechanical	3.75
2.C.4.a	Mathematics	3.40
2.C.3.c	Design	3.26
2.C.8.a	Public Safety and Security	3.12
2.C.1.e	Customer and Personal Service	3.07
2.C.2.a	Production and Processing	2.86
2.C.3.b	Engineering and Technology	2.85
2.C.6	Education and Training	2.84
2.C.7.a	English Language	2.81

Source: O\*NET Database, NV DETR 2008 Occupational Employment, UCED aggregation.

To compare knowledge levels required for different occupations, a procedure outlined by Economic Modeling Specialists, Inc. (2008) was followed. O\*NET also scores each of the knowledge areas for importance to the occupation. The Economic Modeling Specialists, Inc. (2008) compatibility formula squares the difference between the original job occupation’s score and the new occupation’s score for each type of knowledge attribute and weights it with the importance of the attribute to the new occupation. Within the best matching quartile, a score from 0 (not compatible) to 100 (perfect compatibility) is assigned according to this “distance”

measured between the two occupations. The closer a score is to 100, the better the match is between the original occupation and the prospective occupation.

From Table 30, the occupation categories most likely to lose jobs in the event of a mine layoff were:

- 1) Construction and extraction occupations
- 2) Installation, maintenance and repair occupations
- 3) Transportation and material moving occupations.

The results in Tables 32 to 34 present the occupation categories with knowledge requirements most similar to these three categories. Table 32 lists the top compatible occupations for construction and extraction workers. The construction and extraction occupation is a perfect match for itself with a score of 100. The two most compatible occupation categories, given their knowledge score, are installation, maintenance and repair occupations and production occupations. However, installation, maintenance and repair occupations have a score that indicates these occupations are much closer in types of knowledge needed for the job with a score of 66, than the production occupations would be with a score of 50. Average and median annual wage is also shown. While the installation, maintenance and repair occupations have average and median annual wages that are less than 10 percent lower than average annual wages for construction and extraction occupations, the average production worker has an annual wage that is 34 percent lower. Tables 33 and 34 show the top matches for installation, maintenance and repair occupations and transportation and material moving occupations.

To better visualize the “distance” between the top 15 knowledge scores for construction and extraction workers and the corresponding scores for installation, maintenance and repair workers and production workers, they are graphed in Figure 11. Similarly, Figures 12 and 13 show the top 15 knowledge scores for installation, maintenance and repair occupations and transportation and material moving occupations.

**Table 32. Top Compatible Occupations for Construction and Extraction Workers by Compatibility Score.**

Occupation code	Description	Compatibility Score	NV Average Annual Wage	NV Median Annual Wage
470000	Construction and Extraction Occupations	100	\$ 48,229	\$ 45,324
490000	Installation, Maintenance, and Repair Occupations	66	\$ 43,902	\$ 42,332
510000	Production Occupations	50	\$ 31,928	\$ 28,680

Source: Nevada DETR, Nevada 2009 Occupational Employment & Wages, O\*NET Knowledge Attribute Table, UCED.

**Table 33. Top Compatible Occupations for Installation, Maintenance, and Repair Workers by Compatibility Score.**

Occupation code	Description	Compatibility Score	NV Average Annual Wage	NV Median Annual Wage
490000	Installation, Maintenance, and Repair Occupations	100	\$ 43,902	\$ 42,332
470000	Construction and Extraction Occupations	67	\$ 48,229	\$ 45,324
510000	Production Occupations	33	\$ 31,928	\$ 28,680

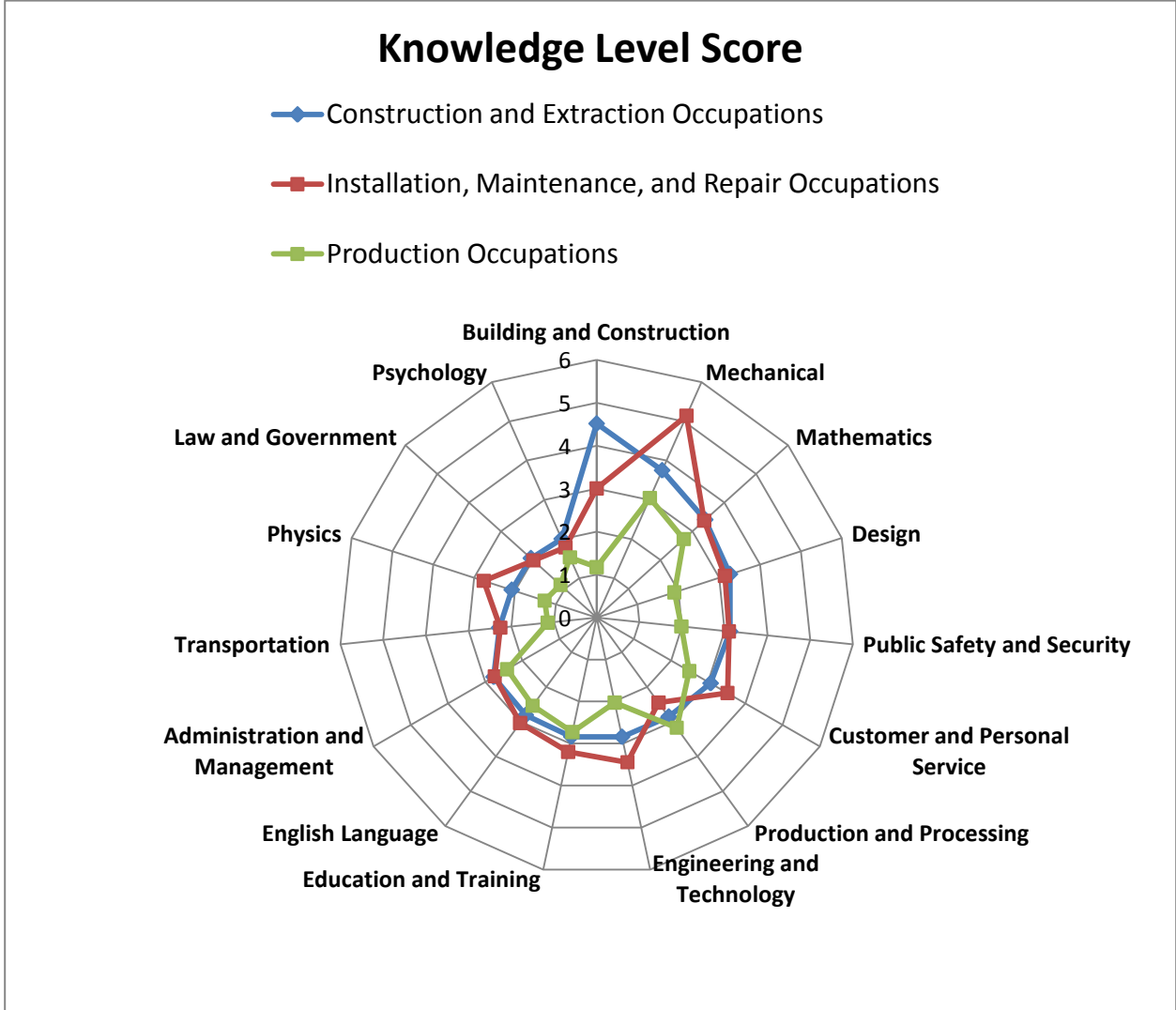
Source: Nevada DETR, Nevada 2009 Occupational Employment & Wages, O\*NET Knowledge Attribute Table, UCED.

**Table 34. Top Compatible Occupations for Transportation and Material Moving Workers by Compatibility Score.**

Occupation code	Description	Compatibility Score	NV Average Annual Wage	NV Median Annual Wage
530000	Transportation and Material Moving Occupations	100	\$ 30,906	\$ 27,708
370000	Building and Grounds Cleaning and Maintenance Occupations	59	\$ 26,476	\$ 26,658
510000	Production Occupations	44	\$ 31,928	\$ 28,680

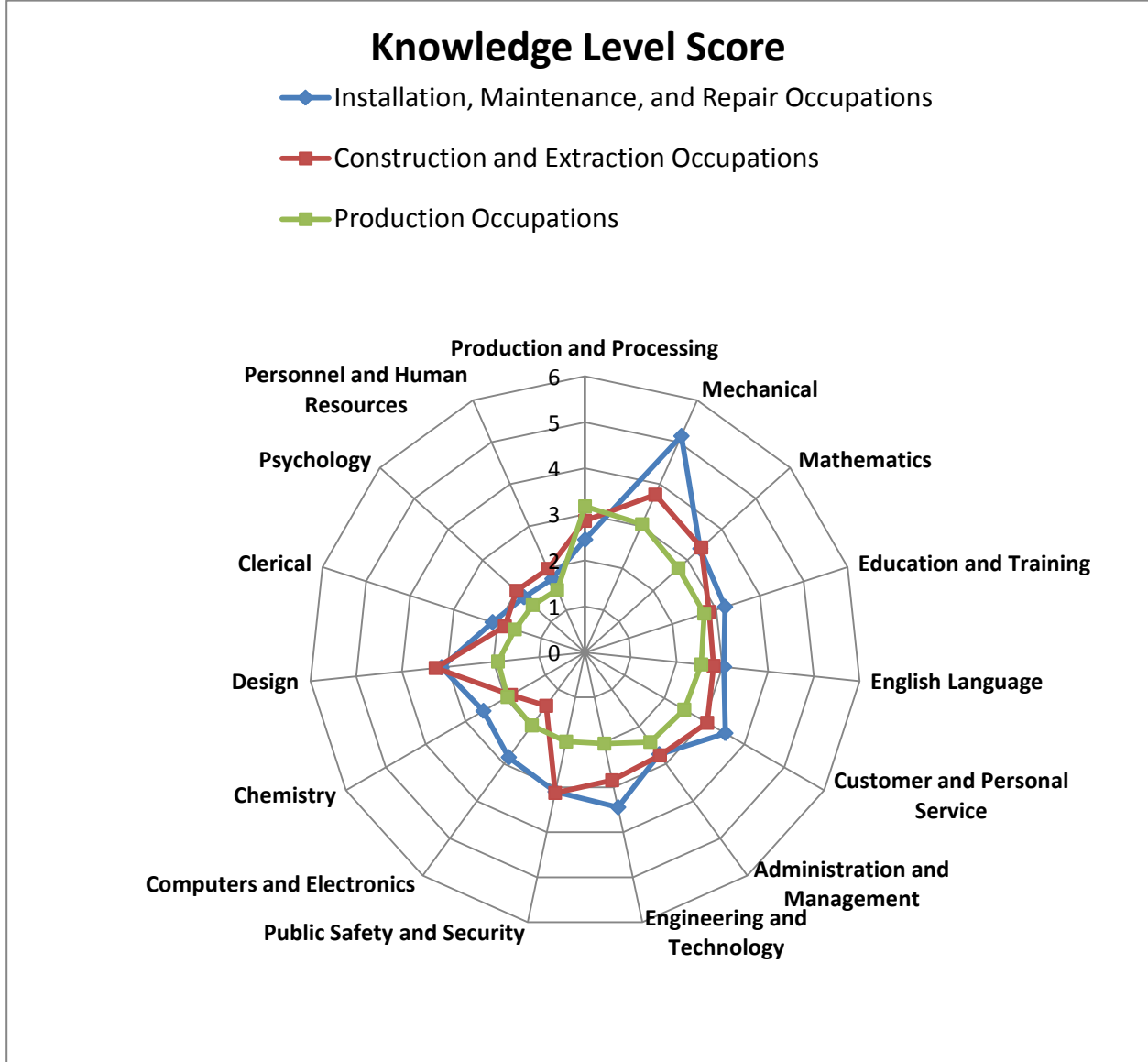
Source: Nevada DETR, Nevada 2009 Occupational Employment & Wages, O\*NET Knowledge Attribute Table, UCED.

Figure 11. Top 15 Knowledge Level Scores for Construction and Extraction Workers and Two Top Occupation Matches.



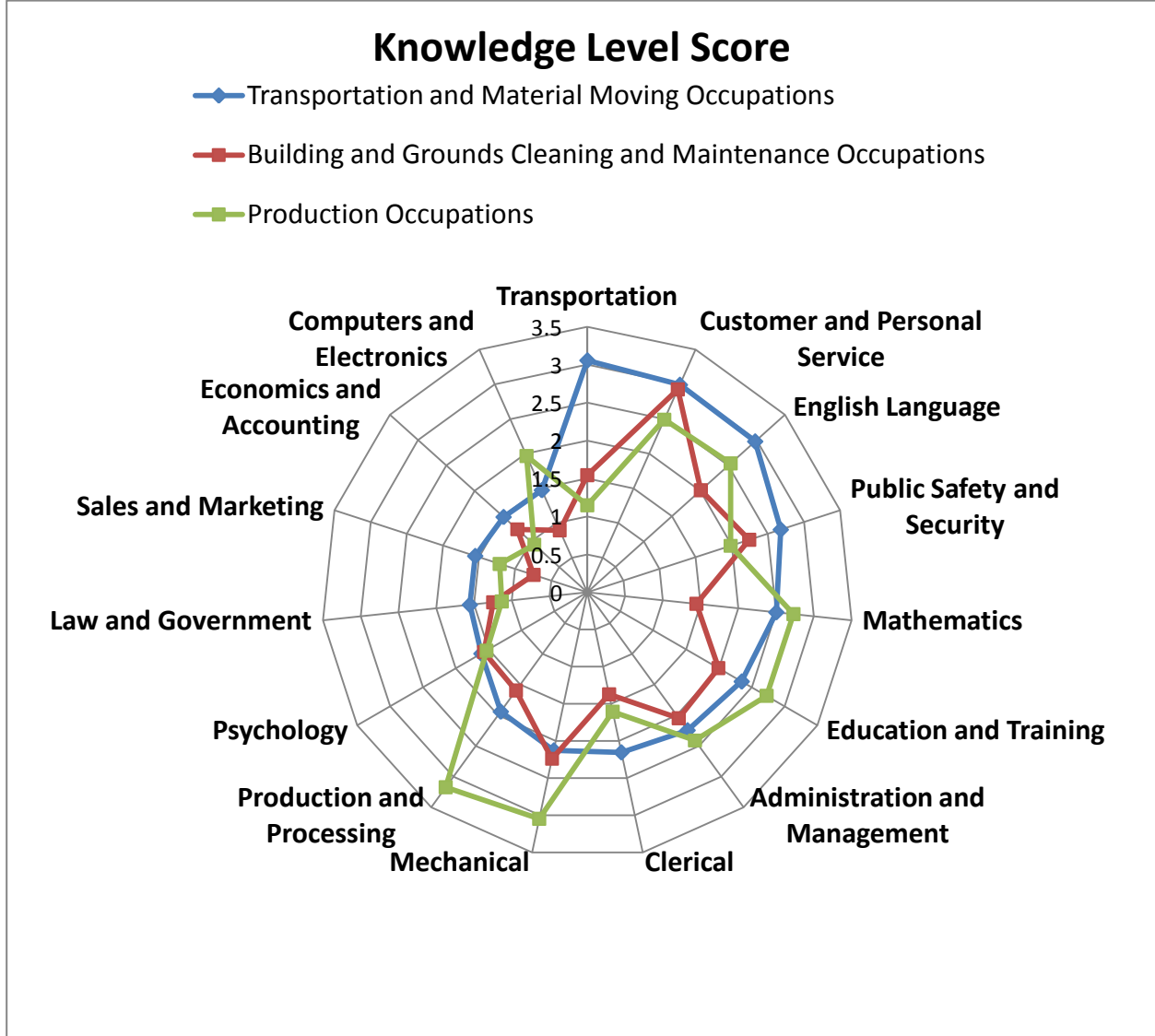
Source: O\*NET Knowledge Table, UCED aggregations.

Figure 12. Top 15 Knowledge Level Scores for Occupations Related to Installation, Maintenance, and Repair Workers and Two Top Occupation Matches.



Source: O\*NET Knowledge Table, UCED aggregations.

Figure 13. Top 15 Knowledge Level Scores for Occupations Related to Occupations Related to Transportation and Material Moving Workers And Two Top Occupation Matches.



Source: O\*NET Knowledge Table, UCED aggregations.

Industry sectors that employ the largest percentage of the targeted occupations listed in Tables 32 to 34 are the given in Table 35.

**Table 35. West Central Nevada Industries with Largest Percentage of Target Occupations.**

Occupation Code	Target Occupation	Industries with Largest Percentage of Workforce in Target Occupations:		
370000	Building and Grounds Cleaning and Maintenance Occupations	Administrative and Support	Healthcare and Social Assistance	Accommodation and Food Services
410000	Sales and Related Occupations	Retail Trade	Wholesale Trade	Healthcare and Social Assistance
430000	Office and Administrative Support Occupations	Finance and Insurance	Wholesale Trade	Management of Companies
470000	Construction and Extraction Occupations	Construction	Mining	Administrative and Support
490000	Installation, Maintenance, and Repair Occupations	Utilities	Mining	Transportation
510000	Production Occupations	Manufacturing	Utilities	Other Services
530000	Transportation and Material Moving Occupations	Transportation	Mining	Wholesale Trade

Source: Nevada DETR 2008 & 2009 Nevada Occupational Employment & Wages.

**Summary**

Often economic development efforts center on targeting industries or economic sectors for potential location or relocation. As Thompson and Thompson (1985) have pointed out, regional competitiveness has increasingly been dependent upon the local knowledge base. Thompson and Thompson (1985) also suggest that economic strategies that target occupations may be more successful than those that target industries. Occupations can move from industry to industry and therefore this strategy could focus on local labor talents.

This section investigated the occupational skills of those in the mining sector. Results of this study show mining occupations that compare closely to other occupational skills and average wages. Results show economic sectors where mining occupations could cross over if layoffs occurred and economic sectors that could expand to take advantage of Lander County’s labor skills.



**SECTION IX:**

**COMMUNITY BUSINESS MATCHING MODEL:**

**CONCEPTS AND INITIAL RESULTS**

## COMMUNITY BUSINESS MATCHING MODEL: CONCEPTS AND INITIAL RESULTS

### **Introduction**

Regional economic development programs have traditionally concentrated on attracting export oriented, goods-producing industries, such as manufacturing. Local economic development professionals pursue such programs because export industries generate local expenditures for existing economic sectors, a result of the additive development effect. Moreover, success in attracting a manufacturing firm is highly visible with abundant opportunities for media coverage (Elisinger, 1995), in addition to the direct measurable effects of increases in employment and income.

Recruitment programs aimed at export oriented, goods-producing industries, however, are relatively expensive with a high degree of risk, which can result in low net returns for smaller communities with limited resources. Hansen (1970) found that many communities may have limited success at industrial recruitment because they may lack the assets desired by businesses. In order to assist in recruitment, tax concessions may be granted to new or relocating firms, which limit the opportunities for local fiscal gains. The use of tax concessions can increase the local tax burden because the cost of increased services for the new business may not be necessarily offset by an expansion in the tax base (Tweeten and Brinkman, 1976). Moreover, firms that are attracted to a community if offered sufficient incentives are also likely to leave if better offers are found elsewhere (Winder, 1969; Kilkenny and Melkonyan, 2002). McNamara and Green (1988) concluded that planning commissions continue to emphasize the recruitment of export-oriented industries. However, as planners become more educated about the possibilities for import substitution, the pursuit of alternative economic development strategies, such as local services and retail sector development is more common (Deller, 2007).

Economic development planners and practitioners have often felt the need to act quickly and so have recruited industries with little or no input from community residents. Without the support of local residents, the sustainability of these efforts may be questionable (Blakely, 1994; Ayres, 1996). Incorporating community preferences adds complexity to development strategies and to the decision-making processes needed to formulate them. When citizen input is solicited, environmental and social goals must be addressed alongside objectives for economic development (see e.g., Mountain Association for Community Development, 1997). Development strategies become more complex since tradeoffs between economic, environmental, and social goals are inevitable. Strategies that ignore these interactions run the risk of unintended long-term consequences, such as sprawl at the expense of environmental quality. Decision making

that incorporates community preferences can be difficult since the issues under consideration can be hard to quantify. Further, if there is a diversity of views within a community, as is likely, there will not be unanimity regarding the weights that should be given to different goals.

The Community-Business Matching (CBM) model provides a framework for addressing the complexities that arise when community preferences are elicited and economic development goals must be weighted alongside environmental and social goals. The objective of CBM is to assist communities in identifying their goals for overall community development, the type of businesses that will be most compatible with these goals, and the types of infrastructure and community assets that will help them attracting those businesses. CBM is a transparent and replicable process for measuring community goals and assets relative to economic development and a systematic procedure for matching these goals with the characteristics and requirements of businesses. Importantly, CBM can reveal differences in preferences among community members and therefore provide a foundation for discussion and reevaluation of priorities.

CBM was piloted in 1995 in Richmond, Vermont (Buescher et al., 2001) using a business profile dataset that included only the agricultural sector. The researchers concluded that CBM showed promise as an economic development tool. They cautioned, however, that the business data would need to be appropriate for the purpose. In 2002, a group of community development professionals from Montana State University, University of Nevada, Reno and the University of Hawaii became interested in the model by Buescher et al. (2001) and began to adapt it for use in the Western United States. Several aspects of the model were refined and surveys were prepared to collect both business and community level data. CBM was piloted in the town of Anaconda, Montana and results of the pilot have been used to target Anaconda's economic development efforts and enhance community assets in order to attract the desired businesses.

Interestingly, the community used the process in a way that differed somewhat from what was initially expected. Rather than restricting their focus to targeting and recruiting new businesses, the community identified opportunities for collaboration and expansion within the existing construction industry. This activity suggests that the community took advantage of the CBM results to build on existing strengths, pursuing activities consistent with clustering approaches (Gabe, 2007). Further, it confirms that communities can more finely hone their economic development strategies by engaging in the CBM process.

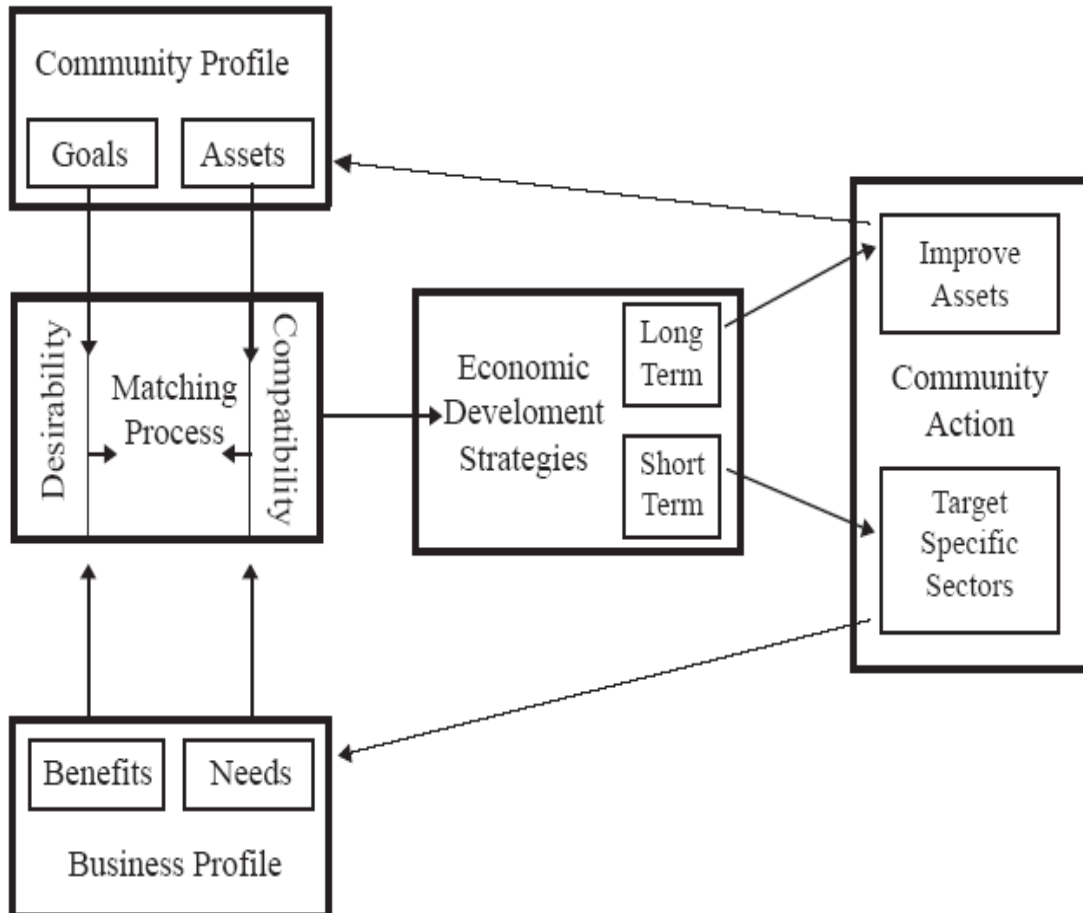
### **Community Business Matching (CBM) Conceptual Model**

The objective of CBM is to assist communities in targeted economic development. First, the community must quantify their goals and asset availability; and second determine if any businesses are likely to be compatible with the community's goals for economic development

and asset availability and find the community an attractive place to locate. The best “match” occurs when the goals of the community correspond to the benefits provided by a business, and when the assets of the community correspond with the demands of the business. The CBM process also provides an opportunity for the community to refine its economic development strategies based on the knowledge gained from possible industry matches identified by the model.

The two dimensions of the CBM model are captured in desirability and compatibility indices that rank potential matches. The desirability index makes use of objective measures of a new or expanded business’ impacts on a community along dimensions such as job growth, environmental impacts, fiscal impacts, and quality of life issues. The desirability of a firm or sector is determined by incorporating community weights on the importance of each of these impacts. Compatibility index compares available community assets with business asset needs. Both desirability and compatibility indices are further discussed in the following pages. Figure 14 provides the general framework for the CBM procedure.

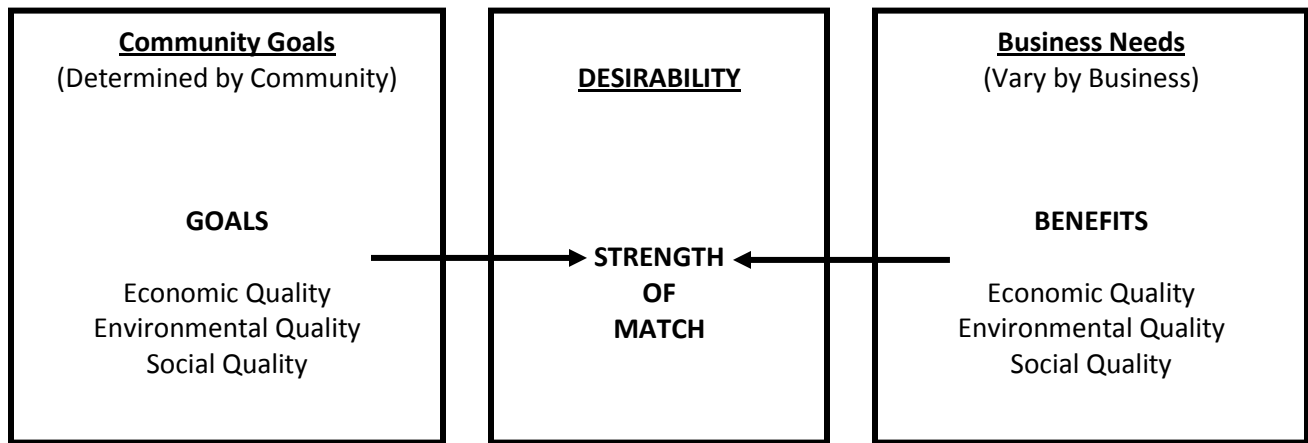
**Figure 14. CBM General Framework.**



**Community Profile – Desirability Framework**

Calculation of the desirability index follows three primary goals including: Economic Quality, Environmental Quality and Social Quality for local residents. Economic Quality measures the potential for business and worker revenues to remain in the local economy. Environmental Quality measures a business’s stewardship of natural resources, including air and water quality. Social Quality of Life describes the impact of available jobs on the well-being of the community. Quantifiable indicators are used to identify the underlying characteristics of each goal. Each goal and associated indicators are ranked by communities and compared against the potential contribution of individual businesses to the indicators if they were to relocate to the communities. Figure 15 and Table 35 describe the framework to determine desirability index.

**Figure 15. Desirability Framework.**



**Table 36. CBM Community Goals and Indicators.**

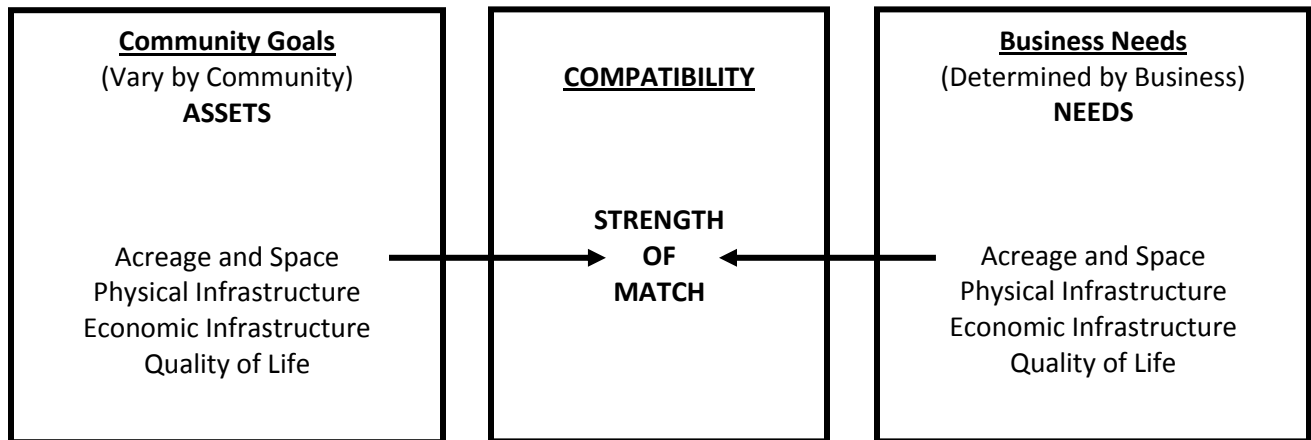
Goal	Indicator
G1 Economic Quality	I1 Every new job generates additional jobs in the community
	I2 New businesses return profits to the community
	I3 New businesses hire locally
	I4 New businesses buy locally
	I5 New businesses increase the average local wage
G2 Environmental Quality	I1 New businesses do not pollute the water
	I2 New businesses do not release toxic chemicals in the air
	I3 New businesses stay in compliance with hazardous waste management
	I4 New businesses do not emit greenhouse gas
	I5 New businesses do not develop undeveloped land
G3 Social Quality	I1 New businesses increase the local tax base
	I2 New jobs are full-time
	I3 New jobs offer benefits (health and/or retirement)
	I4 New jobs provide training programs
	I5 New businesses support community activities

"New" implies that one or more businesses in a given industry have expanded or joined the local economy.

## **Business Profile – Compatibility Framework**

The compatibility index measures the fit between a community's asset availability and an industry's need for those assets. For example, one industry might be best served by sites near a major airport, while another might demand a highly skilled labor force. Communities that lack these assets will likely face challenges in targeting these industries and may decide to develop these assets to assist in their targeting efforts. At the same time, businesses' location decisions are complicated, and often based on a range of criteria (Goetz, 1997; Reum and Harris, 2006). These criteria include available land and buildings, access to transportation, utility and telecommunications infrastructure, labor skills and costs, and quality of life (Leatherman, et al., 2007; McNamara et al., 1995; Glaser and Bardo, 1991). These business demands are matched with community's existing assets at the chosen site. Figure 16 and Table 37 describes the framework to determine compatibility index.

**Figure 16. Compatibility Framework.**



**Table 37. Indicators of Community Assets.**

Space	Physical Infrastructure	Business Development Environment	Quality of Life
Undeveloped land	Interstate highway	Cluster of suppliers	Crime rate
Building space	Package freight	Cluster of customers	Affordable housing
Expansion site	Railhead	Managerial labor	Clean air and water
	Rail freight	Skilled labor	Natural ecosystem
	Passenger air	Unskilled labor	Outdoor opportunities
	Port/harbor	Labor cost	Social and cultural activities
	International port	Workers compensation tax	Retail shopping
	Natural gas pipeline	Business tax rate	Schooling (K-12)
	3-phase electric	Government incentive	University/college
	Fiber optic	Union labor	Health care
	High-volume water supply	Occupational training	Public safety services
	Wastewater disposal	Financial institutions	
	Solid waste disposal	Business associations	
	Cell phone signal		
	Public transportation		
	High-speed internet		

### **Battle Mountain Region CBM Process Implementation**

The first step in implementing the CBM process for Battle Mountain was to form a regional advisory committee whose primary purpose was to assist in leading the CBM community process. This was the leadership group of the Project F.I.N.D. (Future Industrial Needs Discovery Project) of the Lander County Economic Development Authority. The committee met monthly and participated in several strategic planning sessions to establish procedures for collecting primary data specific to regional economic development goals and assessing regional assets that contribute to economic development.

Regional and community economic development goals and priorities were determined through survey sessions, held in Battle Mountain. During the survey sessions, advisory committee members developed marketing plans to get populace in Lander County to participate in the survey. This survey was facilitated by University of Nevada Cooperative Extension and University Center for Economic Development personnel. Lander County populace was encouraged to participate through the community newspaper and by owners of Battle Mountain businesses.

A total of 81 residents completed the seven page questionnaire on goals and priorities for community development, which include indicators of economic, environmental and social quality. This questionnaire required participants to choose between two goals/priorities as to which is more important to them and then by how much through a rating scale between 1 and 9 (1=equally

important to 9=extremely more important). This format made participants make trade-offs as it pertained to regional community development goals and priorities. For example, if the goal/priority for a community was to expand commercial business operations this could include sites on or near environmentally sensitive lands. A choice needs to be made between business expansions, environmental protection, or both are equally important. In the questionnaire each goal and indicator for community development was compared to each other.

The second part of the CBM process involved collecting regional asset data using a specific questionnaire. Selected advisory committee members were requested to lead this process with the assistance of university personnel. Although some of the data were immediately available, it did require requesting assistance from local governmental and economic development agencies to complete the survey.

All data collected at the community level, goals/priorities and community asset, were then entered into the CBM computer model and analyzed on a regional and individual community basis. Regional and community primary data was then matched with primary data collected from the 50 fastest growing North American Industrial Classification System (NAICS) sectors. Over 2,500 actual businesses representing the 50 NAICS sectors have been surveyed by telephone over the last two years asking specific questions related to business operations and factors important when considering expansion or relocation decisions.

Matching community and business responses generated desirability and compatibility indices for each industry, which is presented in a scatter plot with one axis representing desirability index and the other axis representing compatibility index. Index results are measured between 0.00 and 1.00 and interpreted two ways. First, desirability index measures the goals and priorities of the “average community member” against the potential contributions to the goals that individual NAICS sectors would make to a community if they were to move to the community. A perfect 1.0 index indicates that the community’s goals perfectly match the NAICS sector’s contribution. Second, compatibility index measures how well a community’s existing assets match with the NAICS sector asset needs. A perfect 1.0 index indicates that the community has the required assets to meet the NAICS sector needs. In some instances, a result may show a high desirability index (e.g., between .90 and 1.0) but a low compatibility index (e.g., between .60 and .70). This can be interpreted as the NAICS sector meeting the goals of the community but the community not meeting the asset needs of the NAICS sector and reducing the probability of attracting firms in that specific NAICS sector. A community could then use this result to develop short and long-term strategies to improve assets thus creating a better overall match with a highly desirable industry.



On the other hand, a community may have a low desirability index and a high compatibility index, which indicates the NAICS sector does not meet community goals but the community does have the necessary assets to meet the NAICS sector needs. Normally a community would decide to not put recruiting efforts into this type of NAICS sector because without the support of the community, it reduces the probability of success. The best match is when both the desirability and compatibility index are high (e.g. 0.80 to 1.0).

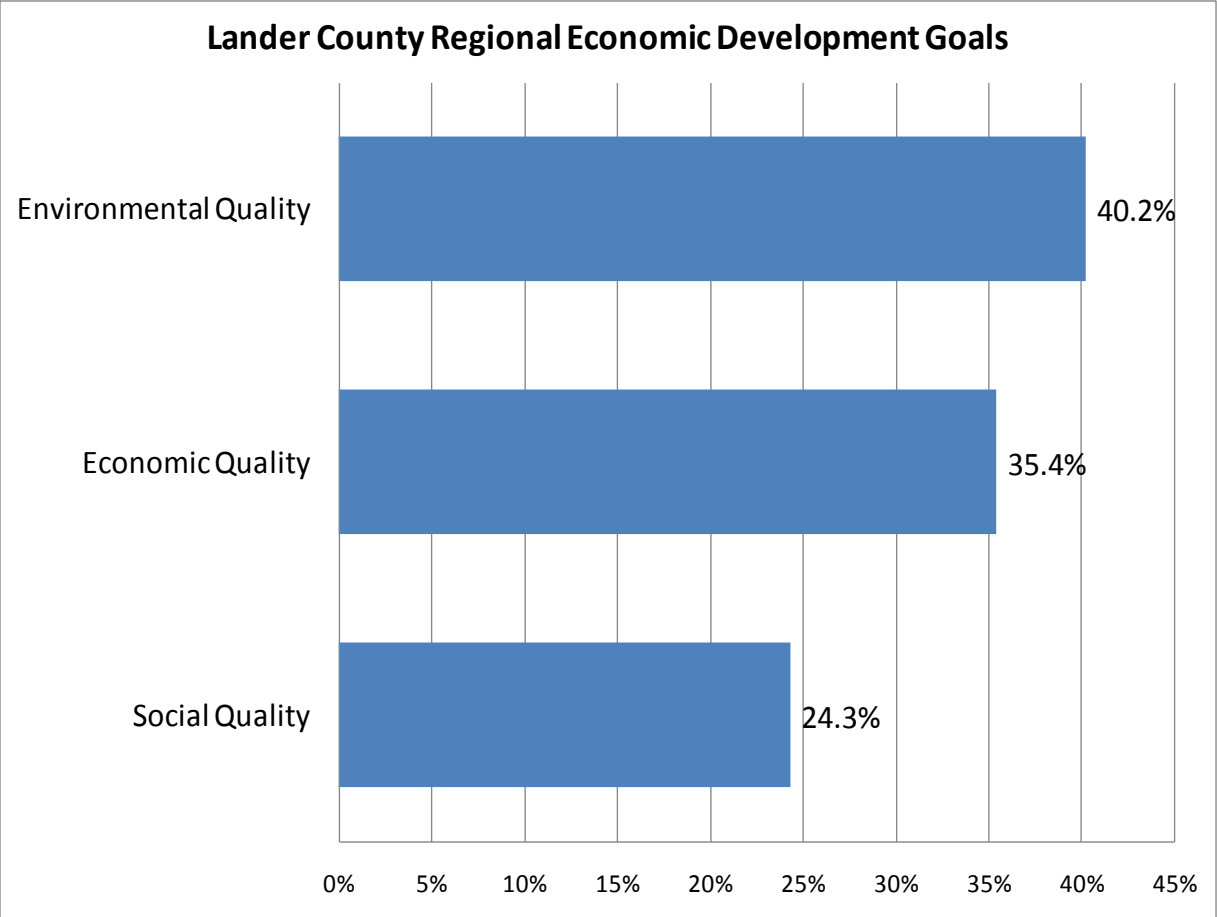
### **Battle Mountain Community CBM Results**

CBM results are presented for the Battle Mountain Study Area. Economic development goals (community surveys), economic development priorities (community surveys), and best match industry results are reported for the study area. The overall goal of this analysis is to identify NAICS sectors that have the best desirability and compatibility match (i.e. highest index measures) for the Battle Mountain community. However, additional emphasis is put upon the desirability indices which reflect resident economic development goals and priorities for the Battle Mountain Study Area. A high desirability index and low compatibility index match could be strengthened if compatibility issues (i.e. insufficient warehousing, infrastructure, etc.) are addressed through economic development investment.

Figure 17 presents the regional economic development goals generated through community surveys administered to 81 residents in Battle Mountain. Applying analytic hierarchy process (AHP) to the average responses of the 81 individuals, environmental quality was rated as the top goal for the regional economy by the “average community member,” with its weight being 40.2 percent. The weight placed on economic quality was 35.4 percent and that on social quality was 24.3 percent.

Figure 18 reports the Battle Mountain priorities for economic development. The highest priority expressed by respondents was that new businesses be in compliance with hazardous water management in Battle Mountain at 12.2 percent. Other priorities receiving high responses include: new businesses do not release toxic chemicals in the air (10.4 percent), new businesses hire locally (9.9 percent), and new businesses do not pollute the water (9.2 percent).

Figure 17. Battle Mountain Regional Economic Development Goals.



**Figure 18. Battle Mountain Study Area Economic Development Priorities.**

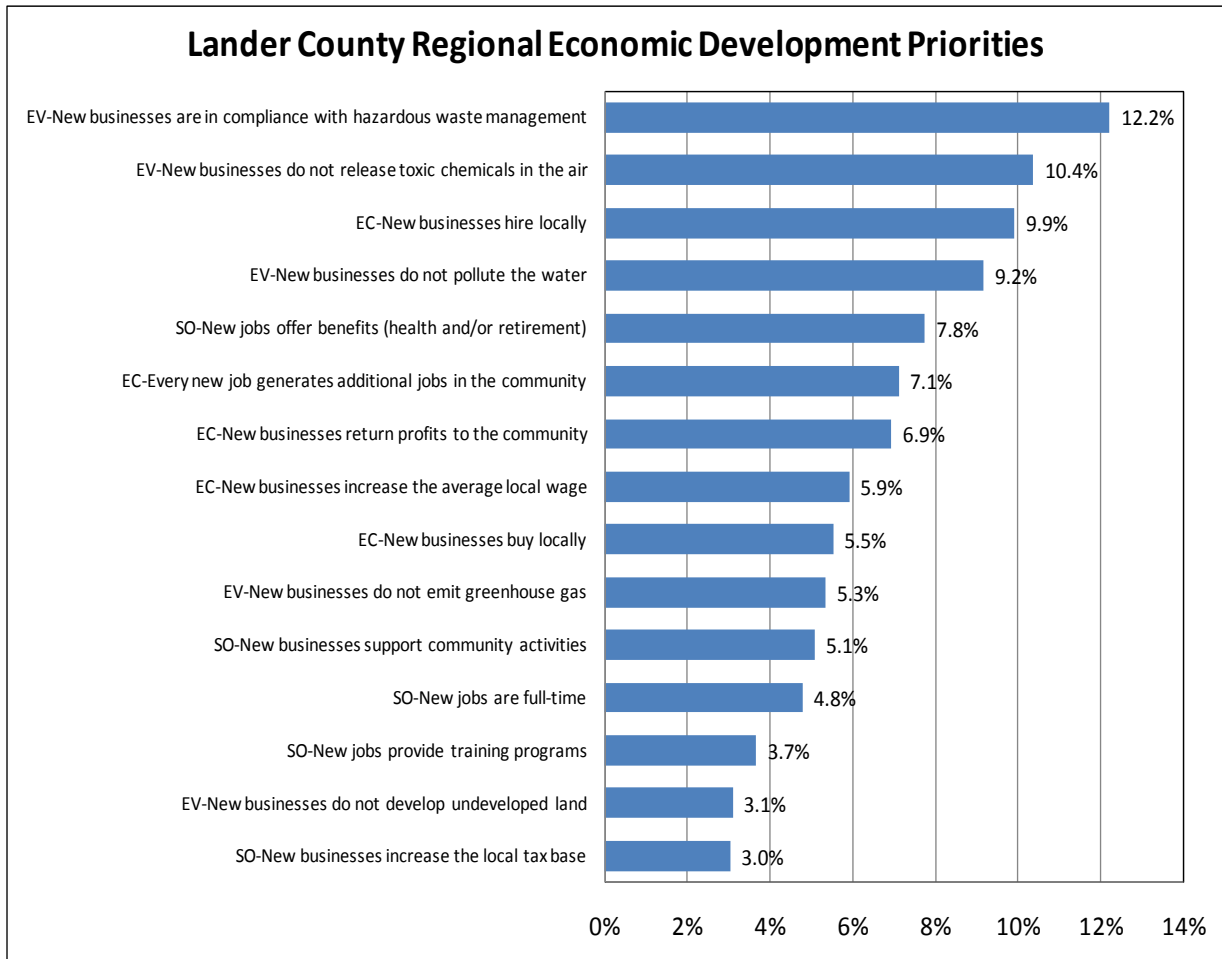
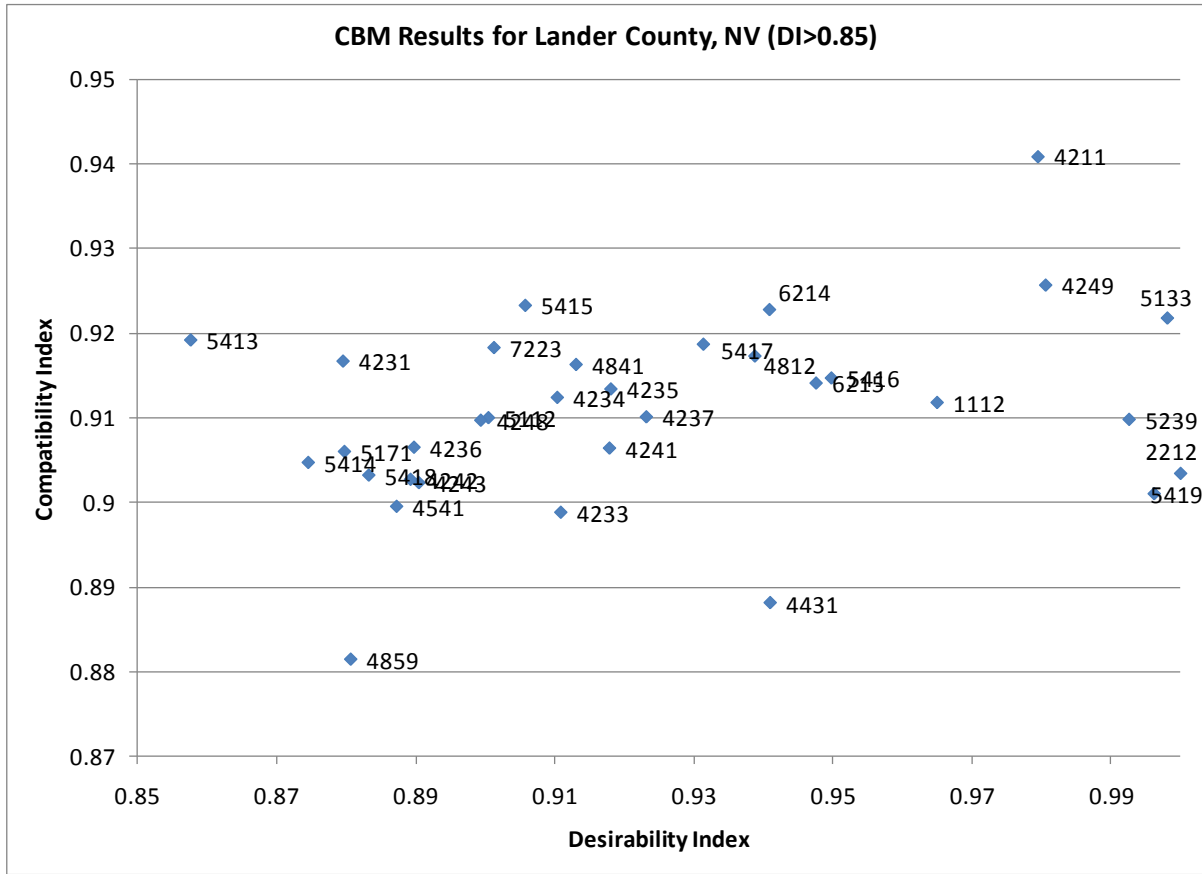


Figure 19 shows the best match industries, considering community desirability and industry compatibility, by four-digit NAICS for the Battle Mountain Study Area. According to the data used in the calculations, the most desirable industry is 2212 (Natural Gas Distribution Sector) with a 100 percent match. This means that this industry meets 100 percent of the goals of Battle Mountain for economic development. The most compatible industry is 4211 (Motor Vehicle and Motor Vehicle Parts and Suppliers Merchants Wholesalers Sector).

**Figure 19. Battle Mountain Study Area Regional Economic Development Best Match Industries.**



NAICS sectors with strong desirability and compatibility index matches (.90 or greater) are presented in Table 38. These NAICS sectors are considered as having the “Best Match” and should be strongly considered in any targeted economic development recruitment strategy developed for the Battle Mountain Study Area.

**Table 38. Battle Mountain Study Area “Best Matches” NAICS Sector with Desirability and Compatibility Indices of 0.90 or Greater.**

NAICS	Description	Desirability	Compatibility
4211	Motor Vehicle and Motor Vehicle Parts and Supply Wholesalers	0.9795	0.9409
5133	Telecommunications	0.9981	0.9218
4249	Miscellaneous Non-Durable Goods Merchant Wholesalers	0.9806	0.9257
2212	Natural Gas Distribution	1.0000	0.9034
5239	Other Financial Investment Activities	0.9926	0.9098
5419	Other Professional, Scientific, and Technical Services	0.9962	0.9010
1112	Vegetables and Melon Farming	0.9650	0.9118
5416	Management, Scientific, and Technical Consulting Service	0.9498	0.9147
6214	Outpatient Care Center	0.9409	0.9228
6215	Medical and Diagnostic Laboratories	0.9476	0.9141

Table 39 reports the NAICS sectors with desirability indices 0.90 or greater. The importance or value of the desirability index is that the stronger the index the more acceptable a NAICS sector meets regional economic development goals. Many of these NAICS sectors are also reported in Table 30, but there are additional NAICS sectors that show a strong desirability index and lower compatibility index. This means the area’s current assets do not adequately meet these NAICS sector’s asset needs. However, through aggressive economic development planning, asset deficiencies or weaknesses could be improved to strengthen the overall match. These additional NAICS sectors should still be considered as having potential in the area and should be further studied and considered for short- and long-term strategic economic development planning. A more detailed description and information for best matched NAICS sectors is presented in Appendix H.

**Table 39. Desirability Index Rankings of 0.90 or Greater.**

<b>NAICS</b>	<b>Description</b>	<b>Desirability</b>	<b>Compatibility</b>
2212	Natural Gas Distribution	1.0000	0.9034
5133	Telecommunications	0.9981	0.9218
5419	Other Professional, Scientific, and Technical Services	0.9962	0.9010
5239	Other Financial Investment Activities	0.9926	0.9098
4249	Miscellaneous Non-Durable Goods Merchant Wholesalers	0.9806	0.9257
4211	Motor Vehicle and Motor Vehicle Parts and Supply Wholesalers	0.9795	0.9409
1112	Vegetables and Melon Farming	0.9650	0.9118
5416	Management, Scientific, and Technical Consulting Services	0.9498	0.9147
6215	Medical and Diagnostic Laboratories	0.9476	0.9141
4431	Retail Electronic and Appliance Stores	0.9410	0.8881
6214	Outpatient Care Centers	0.9409	0.9228
4812	Nonscheduled Air Transportation	0.9388	0.9173
5417	Scientific Research and Development Services	0.9314	0.9187
4237	Hardware, Plumbing, and Heating Equipment and Supplies Merchant Wholesalers	0.9232	0.9101
4235	Metal and Mineral Except Petroleum Merchant Wholesalers	0.9181	0.9134
4241	Paper and Paper Products Merchant Wholesalers	0.9179	0.9064
4841	General Freight Trucking	0.9131	0.9163
4233	Lumber and Other Construction Materials and Merchant Wholesalers	0.9109	0.8988
4234	Professional and Commercial Equipment and Supply Merchant Wholesalers	0.9104	0.9124
5415	Computer Systems Design and Related Services	0.9058	0.9233
7223	Special Food Services	0.9013	0.9183
5112	Software Publishers	0.9005	0.9100

**SECTION X:**  
**SUMMARY AND CONCLUSIONS**

## SUMMARY AND CONCLUSIONS

This section summarizes the results of the cluster targeting procedures and the Community Business Matching model.

### **Recommended Cluster Targeting Sectors for Export Enhancement**

- Export enhancement economic development activities seek to target local economic sectors which provide monetary inflows into Lander County for current and future economic development. The export enhancement strategy is divided into three screening processes. For the first screening step, the screening criteria are:
  - 1) County industry employment is 20 employees or more in 2009,
  - 2) County industry employment increased from 2003 to 2009,
  - 3) Location quotients for Lander County exceeded 1.00 in 2009 or location quotient increases from 2003 to 2009, and
  - 4) Comparative position from Lander County shift-share analysis was positive between 2003 and 2009.
- From the first screen, nine economic sectors were identified for ranking by the second step. Insights into the potential area level impacts associated with the nine targeted sectors are compared to the below three characteristics:
  - 1) *Forecasted Employment Growth Rate*: Establishments in economic sectors with rapid national employment growth are more likely to expand and to create new jobs more rapidly than establishments in slow growth or declining economic sectors.
  - 2) *Employment Potential*: Employment potential is the direct and indirect employment per dollar of output. By including direct and indirect employment, sectors with strong linkages to high employment potential are identified.
  - 3) *Quality of Job*: This is defined as the total employee compensation per total job created by a given economic sector. The quality of job is determined by what the economic sector pays its employees, but also its linkages to other high quality employees.
- These three criteria were used to derive an index by employing Z-score procedures. The three criteria were weighted equally. These nine (9) sectors are ranked highest to lowest below by Z-score:
  - Scenic and Sightseeing Transportation and Support Activities for the Transportation Sector
  - Retail Trade-Food and Beverage Stores Sector
  - Amusement Parks, Arcades, and Gambling Industries Sector
  - Hotels and Motels Including Casino Hotels Sector
  - Mining Gold, Silver, and Other Metal Ore Sector
  - Cattle Ranching and Farming Sector
  - Telecommunications Sector



- Newspaper Publishers Sector
- Support Activities of Other Mining Sector
- Also, economic sectors in Lander County that supply inputs or purchase outputs from these nine (9) targeted economic sectors may be good sectors to develop a cluster for Lander County economic targeting.
- Lander County has 15 economic sectors with five or more economic linkages to the nine targeted export enhancement sectors. These 15 sectors could be classified as economic sectors with the strongest buy-sell linkages. The economic sectors in Lander County with the three highest linkages are the Wholesale Trade Sector (11), the Truck Transportation Sector (11), and the Telecommunications Sector (10).

### **Import Substitution Targets**

- Import substitution seeks to decrease purchases of inputs and final goods from outside Lander County.
- Imports in Lander County can be classified as non-competitive and competitive imports.
- Non competitive imports are those imports to Lander County that are not produced in Lander County.
- Competitive imports are those imports that are produced in Lander County.
- The Mining, Gold, Silver and Other Metal Ore Sector is the largest importer of sectors in Lander County. One of the commodities it imports is the Electricity and Distribution Service Sector. With construction of electric power plants by mining industries and emphasis on green energy development on reclaimed mine sites, these actions could reduce Lander County imports.

### **Potential Economic Targeting for the Mining Industry in Lander County**

- The mining sector has played an important part in the past, current and future economic activity in Lander County.
- Forward and backward linkages of the national and Lander County Gold, Silver, and Other Metal Mining Sector; the Other Nonmetallic Mineral Mining and Quarrying Sector; and the Support Activities for Other Mining Sector were identified and compared.
- For Lander County, both the Gold Silver, and Other Metal Mining Sector and the Other Nonmetallic Mineral Mining and Quarrying Sector backward linkages' to the Electric Power Generation, Transmission, and Distribution Sector may be an economic development opportunity. This fits well with current electric power construction by local gold mines and the potential development and construction of green energy projects on reclaimed mines.

## **Occupational Targeting**

- As Thompson and Thompson (1985) have pointed out, regional competitiveness has increasingly been dependent upon the local knowledge base.
- Thompson and Thompson (1985) also suggested that economic strategies that target occupations may be more successful than those that target industries. Occupations can move from industry to industry and therefore this strategy could focus on local labor talents.
- This section looks at occupations in the mining industry and what local sectors require similar labor talents.
- The Bureau of Labor Statistics O\*NET database was used to derive labor skills by occupation.
- Economic sectors with similar occupational skills of those in mining are the Construction Sector, the Transportation Sector, and the Wholesale Sector.

## **Community Business Matching Model**

- Often, economic development planners and practitioners recruit industries with little or no input from community residents. Without the support of local residents, the sustainability of these efforts may be questionable (Blakley, 1994; Ayers, 1996).
- Incorporating community preferences adds complexity to development strategies and to the decision-making process to formulate them.
- The Community Business Matching (CBM) model provides a framework for communities to formulate their goals for economic development, determine the assets required to meet these goals and the demands of business.
- CBM model determines the “best” match for a community when the goals of the community correspond to the benefits provided by the business, and when the assets of the community correspond with the demands of the business.
- The two dimensions of the CBM process are desirability and compatibility.
- The desirability index shows to what degree a business matches the goals of economic development by the community.
- The compatibility index measures the degree the community assets and economic development goals meet the demands of the business.
- From the Battle Mountain populace, environmental quality was the highest ranked goals, followed by economic quality and social quality.
- Following CBM procedures, 10 NAICS sectors were identified as having the best match for targeted economic development in Battle Mountain. Best match was defined as those NAICS sectors that reported at least 0.90 index rating for both desirability (community goals and wants) and compatibility (business/industry needs). The best NAICS sectors include:
  - 4211 Motor Vehicle and Motor Vehicle Parts and Supply Wholesalers
  - 5133 Telecommunications
  - 4249 Miscellaneous Non-Durable Goods Merchant Wholesalers

- 2212 Natural Gas Distribution
- 5239 Other Financial Investment Activities
- 5419 Other Professional, Scientific, and Technical Services
- 1112 Vegetables and Melon Farming
- 5416 Management, Scientific, and Technical Consulting Services
- 6214 Outpatient Care Center
- 6215 Medical and Diagnostic Laboratories

Appendix H shows a detailed analysis of these NAICS sectors. These targets were derived from a business data set that has the forecasted fastest growing economic sectors with above average wages. Another business mailing has been completed that focused on the green industry and those CBM analyses will be ready in three months. In addition, asset maps for mining areas to be reclaimed have not been completed. These asset maps could be used by the CBM model to derive appropriate targets.

### **Additional Targeting Profile Efforts**

Additional information could be collected for each candidate sector to future target Lander County economic development efforts. Extra data such as establishment numbers, sectoral power and water usage, occupational hiring by candidate sectors, educational levels employed by candidate sectors, and transportation mode used by each sector.

The attached blank form could be employed by Project F.I.N.D. or Lander County Economic Development Authority members to develop further information on targeted economic sectors. Definitions of each category on the input sheets are described as follows:

#### *Four Components for Industry Targeting:*

- 1) Total Employee Compensation per Employee is the per employee employment compensation by sector in 2009.
- 2) Employment Growth Rate in Nevada from 2002 to 2009 is the percentage growth rate in sectoral employment for the state of Nevada.
- 3) Employment Growth Rate in the U.S. from 2002 to 2009 is the percentage growth rate in sectoral employment from 2002 to 2009 for the nation.
- 4) Employment Growth Rate in Lander County from 2002 to 2009 is the percentage growth rate in sectoral employment from 1992 to 1998 for the Lander County.

**TARGETING PROFILE**

COUNTY: \_\_\_\_\_

SECTOR: \_\_\_\_\_

SIC: \_\_\_\_\_

NAICS: \_\_\_\_\_

**Four Components for Industry Targeting**

Total Employee Compensation per Employee \_\_\_\_\_

Employment Growth Rate in Nevada, 2002-2009 \_\_\_\_\_

Employment Growth Rate in United States, 2002-2009 \_\_\_\_\_

Employment Growth Rate in Lander County, 2002-2009 \_\_\_\_\_

**Growth and Change**

Percentage Employment Growth Expected in United States \_\_\_\_\_

**General Information**

Number of Firms in Nation \_\_\_\_\_

Number of Firms in State \_\_\_\_\_

Number of Firms in Lander County \_\_\_\_\_

United States Employees per Establishment \_\_\_\_\_

Average Hourly Wage of Production Employees \_\_\_\_\_

Establishments Started in West Since 1990 \_\_\_\_\_

### **Energy and Utility Usage Per Establishment**

Electricity Per Year (million kWh) \_\_\_\_\_

Natural Gas Per Year (1,000 cu. ft.) \_\_\_\_\_

Water Consumption Per Year (million gallons) \_\_\_\_\_

Water Discharge Per Year (million gallons) \_\_\_\_\_

### **Education**

Less than High School Education (%) \_\_\_\_\_

High School Graduates (%) \_\_\_\_\_

Some College Education (%) \_\_\_\_\_

Associates Degree (%) \_\_\_\_\_

Bachelor's Degree (%) \_\_\_\_\_

Graduate Education (%) \_\_\_\_\_

### **Transportation Mode**

Shipments by Rail (%) \_\_\_\_\_

Shipments by Highway (%) \_\_\_\_\_

Shipments by Air (%) \_\_\_\_\_

Shipments by Water (%) \_\_\_\_\_

Shipments by Multiple Modes (%) \_\_\_\_\_

**Occupations**

- Management, Business, and Financial Occupations \_\_\_\_\_
- Professional, Technical, and Related Occupations \_\_\_\_\_
- Service Occupations \_\_\_\_\_
- Sales and Related Occupations \_\_\_\_\_
- Office and Administrative Support Occupations \_\_\_\_\_
- Farming, Fishing, and Forestry Occupations \_\_\_\_\_
- Construction, Extraction, Installation, Maintenance,  
Repair, and Production Occupations \_\_\_\_\_
- Transportation and Material Moving Occupations \_\_\_\_\_

**Export and Import**

- Percent of Total Output Exported Out of Study Area (%) \_\_\_\_\_
- Percent of Total Input Imported from Outside of Study Area (%) \_\_\_\_\_

**MAJOR ECONOMIC LINKAGES**

**Backward Linkages**

<b>IMPLAN NUMBERS</b>	<b>DESCRIPTION</b>	<b>PERCENT</b>
		_____
		_____
		_____
		_____
		_____

**Forward Linkages**

<b>IMPLAN NUMBERS</b>	<b>DESCRIPTION</b>	<b>PERCENT</b>
		_____
		_____
		_____
		_____
		_____

Data for the four components can show whether the employment sector growth in Lander County followed state and/or national trends as well as whether the employment growth in this sector was greater, equal to, or lower than the other twenty-three (23) candidate sectors. Total employee compensation per employee shows sectors with relatively higher paying jobs.

### **Growth and Change**

*Percentage Employment Growth Expected in U.S.* is the average annual forecasted sectoral employment growth rate by Bureau of Labor Statistics (Woods, 2009) from 2008 to 2018. Barkley, et al. (1998) stated that a criticism of industrial targeting studies was that targeted sectors are based on past economic growth that might have ended. Past employment growth is a poor predictor of future employment growth. Therefore, U.S. sectoral average annual employment projections from 2008 to 2018 are used in this study. Sectors with higher projected national growth rates are more favorable targets.

### **General Information**

*Number of Firms in Nation* is the number of sectoral establishments nationwide.

*Number of Firms in State* is the number of sectoral establishments statewide.

*Number of Firms in Lander County* is the number of sectoral establishments in the Lander County.

*U.S. Employees Per Establishment* is the number of employees by sector divided by the number of establishments nationwide.

*Average Hourly Wage of Production Employee* is the sectoral hourly wage per production employee nationwide.

*Establishments Started in the West Since 1990* is the number of establishments by sector that were started in the Western United States since 1990.

General information data can be used to determine establishment numbers by sector in Lander County. This figure can show the presence of this sector in the Lander County economy. A large presence may imply a cluster that may hold possibilities for further development. The national employment per establishment provides an estimate of employment potential in the sector. Average hourly wage for production employees can be compared with data from the Nevada Department of Employment, Training, and Rehabilitation. Finally, data from Chapter II was used to obtain the number of establishments started in the west since 1990 for each targeted sector. Sectors with larger numbers of start-ups may be candidates for targeted development. Low numbers of start-ups may indicate sectors to be selected for local retention and expansion efforts.



### **Energy and Utility Usage Per Establishment**

*Electricity Per Year (million kwh)* is the number of kilowatts per establishment nationally for a given sector.

*Natural Gas Per Year (1,000 cubic feet)* is the number of cubic feet of natural gas used per establishment nationally for a given sector.

*Water Consumption Per Year (million gallons)* is the number of gallons consumed per establishment nationally for a given sector.

*Water Discharge Per Year (million gallons)* is the number of gallons of water discharged per establishment nationally for a given sector.

Information about the energy and utility usage per establishment provide power and water demands for targeted sectors. This data can be used to determine if Lander County has the electricity and natural gas power supply for a targeted industry, as well as water and sewage infrastructure for the water consumption and discharge demands of the candidate sector.

### **Education**

*Less Than High School Education (%)* compares the percentage of the adult population in Lander County with the percentage of employees in the sector nationally that have less than a high school education.

*High School Graduation (%)* compares the percentage of the adult population in Lander County with the percentage of employees in the sector nationally that have a high school degree.

*Some College Education (%)* compares the percentage of the adult population in Lander County with the percentage of employees in the sector nationally that have some college education.

*Associate Degree (%)* compares the percentage of the adult population in Lander County with the percentage of employees in the sector nationally that have associate degrees.

*Bachelor's Degree (%)* compares the percentage of the adult population in Lander County with the percentage of employees in the sector nationally that have bachelor's degrees.

*Graduate Education (%)* compares the percentage of the adult population in Lander County with the percentage of employees in the sector nationally that have graduate degrees.

Data from the education section can be used to determine whether the education of the labor supply in Lander County meets the educational levels of the targeted industries. Labor supply problems are possible if sectoral labor education levels differ greatly from those in the Lander County population. The education data could also be used by the Nevada System of Higher Education (NSHE) for planning and initiating training programs.

## **Transportation Mode**

*Shipments by Rail (%)* is the percentage of total shipments that are shipped by rail in the state and nation for the given sector.

*Shipments by Highway (%)* is the percentage of total shipments that are shipped by highway in the state and nation for a given sector.

*Shipments by Air (%)* is the percentage of total shipments that are shipped by air in the state and nation for a given sector.

*Shipments by Water (%)* is the percentage of total shipments that are shipped by water in the state and nation for a given sector.

*Shipments by Multiple Modes (%)* is the percentage of total shipments that are shipped by multiple modes in the state and nation for a given sector.

Data from the transportation mode section could provide information as to possible transportation difficulties in Lander County for a targeted sector. Given the increased use of “just-in-time” inventory by U.S. manufacturing, the mode of transportation used by a given targeted industry is important in determining its location.

## **Occupations**

*Management, Business, and Financial Occupations (%)* is the percentage of total national employment in a given sector in the management, business, and financial occupation designation.

*Professional, Technical, and Related Occupations (%)* is the percentage of total national employment in a given sector in the professional, technical, and related occupations designation.

*Service Occupations (%)* is the percentage of total national employment in a given sector in the service occupations designation.

*Office and Administrative Support Occupations (%)* is the percentage of total national employment in a given sector in the office and administrative support occupations designation.

*Farming, Fishing, and Forestry Occupations (%)* is the percentage of total national employment in a given sector in the farming, fishing, and forestry occupations designation.

*Construction, Extraction, Installation, Maintenance, Repair, and Production Occupations (%)* is the percentage of total national employment in a given sector in the construction, extraction, installation, maintenance, repair, and production occupations designation.

*Transportation and Material Moving Occupation (%)* is the percentage of total national employment in a given sector in the transportation and material moving occupation designation.

Data from the occupation section could be matched with data from the state of Nevada Department of Employment, Training, and Rehabilitation to determine if an occupation mix resides in Lander County that would meet the occupation mix of the targeted industry. If a mismatch is found, either labor will have to in-commute or migrate to Lander County, or the sector should be lowered as a targeting prospect.

### **Export and Import**

*Percentage of Total Output Exported Out of the Study Area (%)* is the percentage of total output for a given economic sector that is purchased by other sectors outside the study area.

*Percentage of Total Input Imported from Outside the Study Area (%)* is the percentage of total input for a given economic sector that purchases inputs from outside the study economy.

Data about the percentage of total output exported outside the study area yields information as to value-added opportunities in the study area. Percentage of total inputs purchased outside the study area by a given sector yields sales leakage or import substitution opportunities in Lander County.

### **Major Economic Linkages**

*Backward Linkages (%)* is the percent of total sectoral input that are purchased from other Lander County economic sectors. This identifies potential backward clustering opportunities with Lander County sectors.

*Forward Linkages (%)* is the percentage of total sectoral output that is purchased by other Lander County economic sectors. This identifies potential forward clustering opportunities with Lander County sectors.

Data from the major economic linkages section provides initial information on potential buying and selling clusters in Lander County.

## REFERENCES

- Ayres, J. 1996. "Essential Elements of Strategic Visioning." In N. Walzer, ed. Community Strategic Visioning Programs, p. 21-36. Westport, Connecticut: Praeger.
- Barkley, D., M. Henry, and S. Wright. "Industrial Targeting for Economic Development: Anderson County." Extension Economics Report ERR 170, Cooperative Extension Service, Clemson University, 1998.
- Blakely, E. 1994. *Planning Local Economic Development: Theory and Practice (2<sup>nd</sup> edition)*. Thousand Oaks, California: Sage Publications.
- Buescher, M., P. Sullivan, C. Haalbrecht, and M. Lucas. 2001. "the Community Business Matching Project: New Tool for Rural Development." *Journal of Sustainable Agriculture*, 17(4): 57-74.
- Deller, S. "Import Substitution and the Analysis of Gaps and Disconnects." Targeting Regional Economic Development. S. Goetz, S. Deller, and T. Harris, eds. Routledge: New York, 2009, p. 365-388.
- Department of Labor/Employment and Training Administration. O\*NET 12.0 Database. 2008. <http://www.onetcenter.org/developers.html>.
- Dun & Bradstreet. Harrisinfo Selectory Database. <http://www.selectory.com/Selectory/>. Accessed Aug. 5, 2009.
- Economic Modeling Specialists Inc. 2008. "Strategic Responses to Layoffs and Re-Employment," [www.economicmodeling.com](http://www.economicmodeling.com).
- Economic Modeling Specialists, Inc. "Analyst 2.5," Moscow, Idaho, 2010.
- Elisinger, P. 1995. "State Economic Development in the 1990s: Politics and Policy Learning." *Economic Development Quarterly*, 9:146-158.
- Feser, Edward. "Benchmark Value Chain Industry Clusters for Applied Regional Research." 2005. Working Paper. Department of Urban and Regional Planning and Regional Economics Applications Laboratory (REAL), University of Illinois at Urbana-Champaign.
- Gabe, T. "Impact of Agglomeration on the Economy." S. Goetz, S. Deller, T. Harris, eds. Routledge: New York, 2009, p. 84-100.
- Hansen, N.M. 1970. *Rural Poverty and the Urban Crisis*. Bloomington, Indiana: Indiana University.
- Harris, T., R. Davis, M. Landis, C. Torrealday, and G. Borden. Battle Mountain Retail Sector Analysis. University of Nevada, Reno, University Center for Economic Development: Reno, Nevada, Technical Report UCED 2010/2011-03, January 2011.
- Headwater Economics. Economic Profile System. 2009. A Socioeconomic Profile: Forest County, Wisconsin. [http://www.headwaterseconomics.org/profiles/p\\_Forest\\_County\\_Wisconsin.pdf](http://www.headwaterseconomics.org/profiles/p_Forest_County_Wisconsin.pdf).

- Kilkenny, M. and T. Melkonyan. 2002. "Local Fiscal Strategy to Retain Heterogeneous Firms." *Journal of Regional Science*, 42(4): 753-771.
- McNamara, K. and G. Green. 1988. "Local and Regional Economic Development Practitioners." *Journal of the community Development Society*, 19: 42-55.
- Minnesota IMPLAN Group, Inc. IMPLAN Professional System (data and software), 502 2<sup>nd</sup> Street, Suite 301, Hudson, WI 54016 [www.implan.com](http://www.implan.com)
- Mountain Association for Community Economic Development. 1997. *Communities by Choice: An Introduction to Sustainable Community Development*. Berea, Kentucky: The Mountain Association for Community Economic Development.
- National Association of Counties. Data and Demographics. 58 Counties in California Sorted by Population. [http://www.naco.org/Template.cfm?Section=Data\\_and\\_Demographics&Template=/cffiles/counties/state\\_sorted.cfm](http://www.naco.org/Template.cfm?Section=Data_and_Demographics&Template=/cffiles/counties/state_sorted.cfm).
- Nevada Department of Employment, Training, and Rehabilitation (DETR). 2010. Nevada Workforce Informer Interactive Data Bases. [www.nevadaworkforce.com](http://www.nevadaworkforce.com).
- Smith, Gary. 2009. Pacific Northwest Regional Economic Analysis Project. <http://www.pnreap.org>.
- Thompson, W. and P. Thompson. "From Industry to Occupations: Rethinking Local Economic Development." *Economic Development Commentary*, 9(1985).
- Tweeten, L. and G.L. Brinkman. 1976. *Micropolitan Development: Theory and Practice of Greater Rural Economic Development*. Ames, Iowa: Iowa State University Press, 1976.
- U.S. Department of Labor. 2007 Quarterly Census of Employment and Wages. Bureau of Labor Statistics: Washington, D.C., 2007.
- U.S. Department of Commerce. Regional Economic Information System, Table CA04 Personal Income and Employment Summary. Bureau of Economic Analysis: Washington, D.C., 2009. <http://www.bea.gov/regional/reis/>.
- U.S. Department of Labor. Employment Projections. Employment and Output by Detailed Industry. 2008. Bureau of Labor Statistics. <http://www.bls.gov/emp/empinddetail>.
- Winder, R. 1969. "Economic Development and Social Change." *Proceedings of Government Relations and Planning Conference*. Washington, D.C.: American Institute of Planners.
- Woods, R. "Industry Output and Employment Projections to 2018." *Monthly Labor Review*, 132, No. 11 (2009): 52-81.

**APPENDIX A:**

**EMPLOYMENT, SHARES OF EMPLOYMENT,  
AND PERCENTAGE CHANGE IN EMPLOYMENT  
FOR ALL ECONOMIC SECTORS  
IN LANDER COUNTY**

**Appendix A: Employment, Shares of Employment, and Percentage Change in Employment for All Economic Sectors in Lander County.**

Sector	Employment Number 2003	Employment Share 2003	Employment Number 2009	Employment Share 2009	Percentage Change in Employment (%)
Mining gold, silver, and other metal ore	398.2	18%	1432.4	42%	260%
Employment and payroll only (state & local govt, education)	212.4	10%	243.2	7%	14%
Employment and payroll only (state & local govt, non-education)	222.9	10%	201.0	6%	-10%
Retail Stores - Food and beverage	63.0	3%	110.2	3%	75%
Hotels and motels, including casino hotels	35.6	2%	100.1	3%	181%
Mining and quarrying other nonmetallic minerals	98.0	4%	92.2	3%	-6%
Employment and payroll only (federal govt, non-military)	126.8	6%	88.4	3%	-30%
Retail Stores - Gasoline stations	77.7	4%	81.2	2%	5%
Cattle ranching and farming	53.0	2%	68.5	2%	29%
Food services and drinking places	82.8	4%	68.1	2%	-18%
Commercial and industrial machinery and equipment repair and maintenance	0.0	0%	65.0	2%	New
Wholesale trade businesses	5.8	0%	60.8	2%	957%
Scenic and sightseeing transportation and support activities for transportation	4.0	0%	53.9	2%	1254%
Amusement parks, arcades, and gambling industries	10.1	0%	50.2	1%	398%
Transport by truck	68.5	3%	47.5	1%	-31%
Newspaper publishers	6.5	0%	44.1	1%	577%
Telecommunications	15.4	1%	42.3	1%	174%
Performing arts companies	0.0	0%	42.2	1%	New
Support activities for other mining	8.6	0%	39.1	1%	356%
Civic, social, professional, and similar organizations	37.8	2%	38.9	1%	3%
Couriers and messengers	0.0	0%	28.7	1%	New
Real estate establishments	47.8	2%	23.9	1%	-50%
Transit and ground passenger transportation	0.0	0%	22.9	1%	New
Retail Stores - Motor vehicle and parts	28.1	1%	22.5	1%	-20%

Sector	Employment Number 2003	Employment Share 2003	Employment Number 2009	Employment Share 2009	Percentage Change in Employment (%)
Retail Nonstores - Direct and electronic sales	15.9	1%	20.5	1%	29%
Insurance agencies, brokerages, and related activities	5.4	0%	16.9	0%	215%
Retail Stores - Health and personal care	6.5	0%	15.4	0%	138%
Support activities for agriculture and forestry	38.9	2%	15.4	0%	-60%
Retail Stores - General merchandise	0.0	0%	15.3	0%	New
Construction of other new nonresidential structures	2.0	0%	15.2	0%	660%
Retail Stores - Miscellaneous	5.8	0%	14.6	0%	151%
Other state and local government enterprises	24.4	1%	14.4	0%	-41%
Employment and payroll only (federal govt, military)	0.0	0%	14.3	0%	New
Retail Stores - Building material and garden supply	11.7	1%	13.0	0%	11%
Individual and family services	3.3	0%	10.7	0%	225%
Private elementary and secondary schools	0.0	0%	10.3	0%	New
Personal and household goods repair and maintenance	0.0	0%	10.3	0%	New
Retail Stores - Sporting goods, hobby, book and music	2.8	0%	10.3	0%	271%
Offices of physicians, dentists, and other health practitioners	5.2	0%	8.9	0%	72%
Construction of new nonresidential commercial and health care structures	3.8	0%	8.8	0%	132%
Business support services	0.0	0%	8.8	0%	New
Fertilizer manufacturing	35.2	2%	8.1	0%	-77%
Monetary authorities and depository credit intermediation activities	1.8	0%	7.8	0%	332%
US Postal Service	7.0	0%	7.3	0%	5%
Animal production, except cattle and poultry and eggs	3.0	0%	7.0	0%	132%
Custom computer programming services	0.0	0%	6.9	0%	New
Other amusement and recreation industries	4.5	0%	6.6	0%	45%
Retail Stores - Clothing and clothing accessories	0.0	0%	6.3	0%	New
Home health care services	2.6	0%	5.9	0%	125%
Warehousing and storage	2.6	0%	5.9	0%	122%



Sector	Employment Number 2003	Employment Share 2003	Employment Number 2009	Employment Share 2009	Percentage Change in Employment (%)
Other support services	0.0	0%	5.3	0%	New
Employment services	23.2	1%	5.1	0%	-78%
Services to buildings and dwellings	67.1	3%	4.9	0%	-93%
Maintenance and repair construction of nonresidential structures	0.0	0%	4.8	0%	New
Electric power generation, transmission, and distribution	8.5	0%	4.4	0%	-48%
Construction of new residential permanent site single/multi-family structures	5.3	0%	4.1	0%	-23%
Construction of other new residential structures	1.0	0%	3.7	0%	269%
Waste management and remediation services	8.3	0%	3.3	0%	-60%
Securities, commodity contracts, investments, and related activities	0.0	0%	3.2	0%	New
Fitness and recreational sports centers	0.0	0%	2.8	0%	New
Construction of new nonresidential manufacturing structures	0.0	0%	2.7	0%	New
Transport by rail	2.1	0%	2.5	0%	19%
Retail Stores - Furniture and home furnishings	7.8	0%	2.3	0%	-70%
Maintenance and repair construction of residential structures	0.0	0%	2.0	0%	New
Management, scientific, and technical consulting services	0.0	0%	2.0	0%	New
Architectural, engineering, and related services	0.0	0%	1.9	0%	New
Support activities for oil and gas operations	0.0	0%	1.8	0%	New
Electronic and precision equipment repair and maintenance	0.0	0%	1.5	0%	New
Accounting, tax preparation, bookkeeping, and payroll services	0.0	0%	1.4	0%	New
Lessors of nonfinancial intangible assets	0.0	0%	1.0	0%	New
Commercial and industrial machinery and equipment rental and leasing	0.0	0%	1.0	0%	New
Promoters of performing arts and sports and agents for public figures	0.0	0%	1.0	0%	New
Advertising and related services	0.0	0%	1.0	0%	New
Personal care services	0.0	0%	1.0	0%	New
Automotive repair and maintenance, except car washes	159.1	7%	0.0	0%	-100%
All other crop farming	90.0	4%	0.0	0%	-100%

Sector	Employment Number 2003	Employment Share 2003	Employment Number 2009	Employment Share 2009	Percentage Change in Employment (%)
Dairy cattle and milk production	26.4	1%	0.0	0%	-100%
Legal services	10.0	0%	0.0	0%	-100%
Bowling centers	6.2	0%	0.0	0%	-100%
Veterinary services	3.1	0%	0.0	0%	-100%
Insurance carriers	2.8	0%	0.0	0%	-100%
Pharmaceutical preparation manufacturing	2.5	0%	0.0	0%	-100%
Retail Stores - Electronics and appliances	2.1	0%	0.0	0%	-100%
Child day care services	1.7	0%	0.0	0%	-100%
Community food, housing, and other relief services, including rehabilitation	1.7	0%	0.0	0%	-100%
State and local government passenger transit	1.4	0%	0.0	0%	-100%
Grain farming	1.2	0%	0.0	0%	-100%
Nondepository credit intermediation and related activities	1.0	0%	0.0	0%	-100%
<b>Total</b>	2219	100%	3417	100%	54%

**APPENDIX B:**

**LOCATION QUOTIENT VALUES AND  
PERCENTAGE CHANGE IN LOCATION  
QUOTIENT VALUES FOR ALL ECONOMIC SECTORS  
IN LANDER COUNTY**

**Appendix B: Location Quotient Values and Percentage Change in Location Quotient Values for All Economic Sectors in Lander County.**

<b>Sector</b>	<b>Location Quotient 2003</b>	<b>Location Quotient 2009</b>	<b>Percentage Change in LQ</b>
Mining gold, silver, and other metal ore	2208.36	3462.12	56.77%
Mining and quarrying other nonmetallic minerals	477.93	294.68	-38.34%
Support activities for other mining	93.79	141.29	50.64%
Fertilizer manufacturing	107.81	18.06	-83.24%
Cattle ranching and farming	8.13	10.93	34.44%
Commercial and industrial machinery and equipment repair and maintenance	0.00	8.32	New
Newspaper publishers	1.17	7.00	498.34%
Retail Stores - Gasoline stations	6.33	4.80	-24.08%
Performing arts companies	0.00	4.38	New
Hotels and motels, including casino hotels	2.29	4.37	90.82%
Scenic and sightseeing transportation and support activities for transportation	0.49	4.17	756.93%
Personal and household goods repair and maintenance	0.00	3.27	New
Amusement parks, arcades, and gambling industries	0.98	3.21	228.07%
Employment and payroll only (federal govt, non-military)	5.05	2.09	-58.57%
Telecommunications	0.91	1.95	114.45%
Retail Stores - Food and beverage	1.58	1.88	19.37%
Couriers and messengers	0.00	1.79	New
Transit and ground passenger transportation	0.00	1.72	New
Support activities for agriculture and forestry	3.82	1.30	-65.87%
Employment and payroll only (state & local govt, non-education)	2.65	1.22	-53.93%
Transport by truck	2.72	1.21	-55.49%
Employment and payroll only (state & local govt, education)	1.44	1.20	-17.17%
Civic, social, professional, and similar organizations	3.12	1.03	-67.05%
Animal production, except cattle and poultry and eggs	0.51	0.97	92.06%
Other state and local government enterprises	2.61	0.90	-65.35%
Lessors of nonfinancial intangible assets	0.00	0.83	New
Insurance agencies, brokerages, and related activities	0.37	0.73	New
Transport by rail	0.97	0.72	New
Other amusement and recreation industries	0.98	0.69	New
Other support services	0.00	0.69	New
Retail Stores - Health and personal care	0.43	0.67	54.74%
Retail Stores - Sporting goods, hobby, book and music	0.26	0.67	160.55%
Retail Stores - Motor vehicle and parts	0.99	0.62	-38.13%
Retail Nonstores - Direct and electronic sales	0.79	0.61	-23.04%
Retail Stores - Building material and garden supply	0.69	0.54	-21.80%
Electric power generation, transmission, and distribution	1.62	0.53	-67.21%

<b>Sector</b>	<b>Location Quotient 2003</b>	<b>Location Quotient 2009</b>	<b>Percentage Change in LQ</b>
Wholesale trade businesses	0.07	0.52	606.73%
US Postal Service	0.66	0.52	-21.61%
Private elementary and secondary schools	0.00	0.51	New
Retail Stores - Miscellaneous	0.26	0.47	78.76%
Waste management and remediation services	1.78	0.45	-74.79%
Warehousing and storage	0.34	0.44	26.94%
Support activities for oil and gas operations	0.00	0.39	New
Business support services	0.00	0.39	New
Food services and drinking places	0.60	0.33	-45.39%
Employment and payroll only (federal govt, military)	0.00	0.31	New
Individual and family services	0.18	0.30	66.07%
Electronic and precision equipment repair and maintenance	0.00	0.30	New
Commercial and industrial machinery and equipment rental and leasing	0.00	0.28	New
Fitness and recreational sports centers	0.00	0.26	New
Retail Stores - General merchandise	0.00	0.26	New
Custom computer programming services	0.00	0.25	New
Home health care services	0.20	0.23	14.65%
Retail Stores - Furniture and home furnishings	0.92	0.22	-75.73%
Construction of other new nonresidential structures	0.08	0.22	167.58%
Maintenance and repair construction of nonresidential structures	0.00	0.21	New
Monetary authorities and depository credit intermediation activities	0.07	0.21	178.03%
Construction of other new residential structures	0.07	0.21	185.85%
Construction of new residential permanent site single/multi-family structures	0.15	0.21	37.39%
Maintenance and repair construction of residential structures	0.00	0.21	New
Construction of new nonresidential manufacturing structures	0.00	0.21	New
Construction of new nonresidential commercial and health care structures	0.10	0.20	112.34%
Retail Stores - Clothing and clothing accessories	0.00	0.20	New
Real estate establishments	0.74	0.17	-77.52%
Promoters of performing arts and sports and agents for public figures	0.00	0.11	New
Services to buildings and dwellings	2.43	0.10	-95.82%
Offices of physicians, dentists, and other health practitioners	0.10	0.10	-0.64%
Management, scientific, and technical consulting services	0.00	0.08	New
Employment services	0.43	0.08	-82.61%
Advertising and related services	0.00	0.06	New
Securities, commodity contracts, investments, and related activities	0.00	0.06	New
Personal care services	0.00	0.05	New
Accounting, tax preparation, bookkeeping, and payroll services	0.00	0.05	New
Architectural, engineering, and related services	0.00	0.05	New

<b>Sector</b>	<b>Location Quotient 2003</b>	<b>Location Quotient 2009</b>	<b>Percentage Change in LQ</b>
All other crop farming	46.90	0.00	-100.00%
Dairy cattle and milk production	8.13	0.00	-100.00%
Bowling centers	7.18	0.00	-100.00%
Automotive repair and maintenance, except car washes	5.06	0.00	-100.00%
Pharmaceutical preparation manufacturing	0.86	0.00	-100.00%
In-vitro diagnostic substance manufacturing	0.86	0.00	-100.00%
Biological product (except diagnostic) manufacturing	0.86	0.00	-100.00%
Medicinal and botanical manufacturing	0.86	0.00	-100.00%
Veterinary services	0.78	0.00	-100.00%
State and local government passenger transit	0.43	0.00	-100.00%
Legal services	0.42	0.00	-100.00%
Retail Stores - Electronics and appliances	0.28	0.00	-100.00%
Community food, housing, and other relief services, including rehabilitation	0.18	0.00	-100.00%
Grain farming	0.17	0.00	-100.00%
Insurance carriers	0.12	0.00	-100.00%
Child day care services	0.11	0.00	-100.00%
Nondepository credit intermediation and related activities	0.08	0.00	-100.00%
Steel product manufacturing from purchased steel	0.01	0.00	-100.00%

**APPENDIX C:**  
**SHIFT-SHARE AND COMPETITIVE POSITION FOR ALL  
ECONOMIC SECTORS IN LANDER COUNTY**

**Appendix C: Shift-Share and Competitive Position for All Economic Sectors in Lander County.**

<b>Sector</b>	<b>NSR</b>	<b>IMR</b>	<b>CSR</b>	<b>Employment Growth Rate</b>	<b>Competitive Position Rate</b>
Scenic and sightseeing transportation and support activities for transportation	0.0334	0.0269	12.4807	12.5411	12.1746
Wholesale trade businesses	0.0334	-0.0295	9.5694	9.5733	9.2633
Newspaper publishers	0.0334	-0.2737	6.0141	5.7738	5.7081
Construction of other new nonresidential structures	0.0334	0.8730	5.6956	6.6021	5.3896
Amusement parks, arcades, and gambling industries	0.0334	-0.0158	3.9577	3.9753	3.6516
Monetary authorities and depository credit intermediation activities	0.0334	0.0096	3.2786	3.3217	2.9725
Construction of other new residential structures	0.0334	-0.1670	2.8242	2.6906	2.5182
Retail Stores - Sporting goods, hobby, book and music	0.0334	-0.0778	2.7547	2.7103	2.4486
Support activities for other mining	0.0334	0.9994	2.5307	3.5636	2.2247
Insurance agencies, brokerages, and related activities	0.0334	0.0274	2.0897	2.1506	1.7836
Mining gold, silver, and other metal ore	0.0334	0.5061	2.0573	2.5968	1.7512
Individual and family services	0.0334	0.2797	1.9366	2.2497	1.6305
Telecommunications	0.0334	-0.1763	1.8820	1.7392	1.5759
Hotels and motels, including casino hotels	0.0334	-0.0436	1.8250	1.8148	1.5189
Construction of new nonresidential commercial and health care structures	0.0334	-0.2988	1.5898	1.3244	1.2838
Retail Stores - Miscellaneous	0.0334	-0.0907	1.5685	1.5113	1.2625
Animal production, except cattle and poultry and eggs	0.0334	-0.2215	1.5119	1.3239	1.2059
Retail Stores - Health and personal care	0.0334	-0.0030	1.3457	1.3761	1.0397
Warehousing and storage	0.0334	0.1392	1.0457	1.2184	0.7396
Home health care services	0.0334	0.2851	0.9343	1.2528	0.6282
Retail Stores - Food and beverage	0.0334	-0.0513	0.7650	0.7471	0.4589
Cattle ranching and farming	0.0334	-0.3879	0.6478	0.2934	0.3418
Offices of physicians, dentists, and other health practitioners	0.0334	0.1306	0.5595	0.7235	0.2534
Construction of new residential permanent site single- and multi-family structures	0.0334	-0.6563	0.3950	-0.2279	0.0889
Employment and payroll only (state & local govt, education)	0.0334	-0.1059	0.2174	0.1449	-0.0886



<b>Sector</b>	<b>NSR</b>	<b>IMR</b>	<b>CSR</b>	<b>Employment Growth Rate</b>	<b>Competitive Position Rate</b>
Retail Nonstores - Direct and electronic sales	0.0334	0.0906	0.1650	0.2891	-0.1410
Retail Stores - Building material and garden supply	0.0334	-0.0798	0.1577	0.1113	-0.1484
US Postal Service	0.0334	-0.1356	0.1510	0.0489	-0.1550
Retail Stores - Gasoline stations	0.0334	-0.1094	0.1214	0.0454	-0.1847
Transport by rail	0.0334	0.0474	0.1077	0.1886	-0.1984
Other amusement and recreation industries	0.0334	0.3413	0.0703	0.4450	-0.2358
Retail Stores - Motor vehicle and parts	0.0334	-0.1679	-0.0675	-0.2019	-0.3736
Mining and quarrying other nonmetallic minerals	0.0334	-0.0094	-0.0831	-0.0590	-0.3892
Food services and drinking places	0.0334	-0.0225	-0.1882	-0.1773	-0.4943
Transport by truck	0.0334	0.0127	-0.3523	-0.3062	-0.6584
Support activities for agriculture and forestry	0.0334	-0.2556	-0.3823	-0.6044	-0.6883
Employment and payroll only (state & local govt, non-education)	0.0334	0.2800	-0.4117	-0.0983	-0.7178
Employment and payroll only (federal govt, non-military)	0.0334	0.0961	-0.4321	-0.3026	-0.7382
Retail Stores - Furniture and home furnishings	0.0334	-0.2155	-0.5221	-0.7041	-0.8281
Electric power generation, transmission, and distribution	0.0334	0.0252	-0.5413	-0.4827	-0.8474
Automotive repair and maintenance, except car washes	0.0334	-0.4870	-0.5465	-1.0000	-0.8525
Other state and local government enterprises	0.0334	0.1075	-0.5519	-0.4109	-0.8579
Employment services	0.0334	-0.1842	-0.6291	-0.7799	-0.9351
Waste management and remediation services	0.0334	0.0420	-0.6715	-0.5961	-0.9775
Fertilizer manufacturing	0.0334	-0.1152	-0.6890	-0.7707	-0.9950
Dairy cattle and milk production	0.0334	-0.3130	-0.7204	-1.0000	-1.0265
Medicinal and botanical manufacturing	0.0334	-0.2226	-0.8108	-1.0000	-1.1169
Steel product manufacturing from purchased steel	0.0334	-0.1713	-0.8622	-1.0000	-1.1682
Bowling centers	0.0334	-0.1228	-0.9107	-1.0000	-1.2167
Retail Stores - Electronics and appliances	0.0334	-0.1090	-0.9244	-1.0000	-1.2305
Nondepository credit intermediation and related activities	0.0334	-0.1083	-0.9251	-1.0000	-1.2312
Insurance carriers	0.0334	-0.0941	-0.9394	-1.0000	-1.2454

<b>Sector</b>	<b>NSR</b>	<b>IMR</b>	<b>CSR</b>	<b>Employment Growth Rate</b>	<b>Competitive Position Rate</b>
State and local government passenger transit	0.0334	-0.0704	-0.9630	-1.0000	-1.2691
All other crop farming	0.0334	-0.0610	-0.9725	-1.0000	-1.2785
Pharmaceutical preparation manufacturing	0.0334	-0.0588	-0.9747	-1.0000	-1.2807
Legal services	0.0334	-0.0429	-0.9905	-1.0000	-1.2966
Community food, housing, and other relief services, including rehabilitation	0.0334	-0.0416	-0.9919	-1.0000	-1.2979
Real estate establishments	0.0334	0.4598	-0.9931	-0.4999	-1.2992
Child day care services	0.0334	-0.0402	-0.9932	-1.0000	-1.2993
Civic, social, professional, and similar organizations	0.0334	1.0653	-1.0684	0.0304	-1.3744
Services to buildings and dwellings	0.0334	0.1393	-1.0997	-0.9269	-1.4057
In-vitro diagnostic substance manufacturing	0.0334	0.2365	-1.2700	-1.0000	-1.5760
Grain farming	0.0334	0.2834	-1.3168	-1.0000	-1.6229
Veterinary services	0.0334	0.3459	-1.3793	-1.0000	-1.6854
Biological product (except diagnostic) manufacturing	0.0334	0.5330	-1.5665	-1.0000	-1.8725

**APPENDIX D:**  
**VALUE OF OUTPUT FOR ALL ECONOMIC**  
**SECTORS IN LANDER COUNTY**

**Appendix D: Value of Output for All Economic Sectors in Lander County.**

<b>Sector</b>	<b>Total Output</b>	<b>Percent of Total Output</b>
Mining gold, silver, and other metal ore	\$1,119,084,928	81.96%
Mining and quarrying other nonmetallic minerals	38,127,508	2.79%
Imputed rental activity for owner-occupied dwellings	23,768,242	1.74%
Support activities for other mining	18,136,348	1.33%
Employment and payroll only (state & local govt, education)	16,463,812	1.21%
Fertilizer manufacturing	14,025,766	1.03%
Hotels and motels, including casino hotels	11,436,924	0.84%
Employment and payroll only (state & local govt, non-education)	11,152,772	0.82%
Cattle ranching and farming	9,903,666	0.73%
Wholesale trade businesses	9,861,969	0.72%
Employment and payroll only (federal govt, non-military)	9,260,387	0.68%
Commercial and industrial machinery and equipment repair and maintenance	8,177,736	0.60%
Transport by truck	6,922,556	0.51%
Telecommunications	5,286,750	0.39%
Scenic and sightseeing transportation and support activities for transportation	4,508,534	0.33%
Retail Stores - Food and beverage	3,865,403	0.28%
Monetary authorities and depository credit intermediation activities	3,849,160	0.28%
Transit and ground passenger transportation	3,536,163	0.26%
Amusement parks, arcades, and gambling industries	3,417,611	0.25%
Retail Stores - Gasoline stations	3,357,335	0.25%
Other state and local government enterprises	3,319,922	0.24%
Food services and drinking places	3,319,347	0.24%
Civic, social, professional, and similar organizations	3,281,179	0.24%
Newspaper publishers	2,566,357	0.19%
Electric power generation, transmission, and distribution	2,298,062	0.17%
Real estate establishments	1,933,507	0.14%
Construction of other new nonresidential structures	1,905,074	0.14%
Retail Stores - Motor vehicle and parts	1,622,118	0.12%
Personal and household goods repair and maintenance	1,476,063	0.11%
Insurance agencies, brokerages, and related activities	1,126,277	0.08%
Construction of new nonresidential commercial and health care structures	1,074,852	0.08%
Transport by rail	1,045,216	0.08%
Performing arts companies	969,418	0.07%
Employment and payroll only (federal govt, military)	965,488	0.07%
Retail Stores - Building material and garden supply	846,374	0.06%
Retail Stores - Health and personal care	816,081	0.06%
Retail Stores - General merchandise	778,434	0.06%
Construction of new residential permanent site single- & multi-family structures	755,104	0.06%
Offices of physicians, dentists, and other health practitioners	734,657	0.05%

Sector	Total Output	Percent of Total Output
Waste management and remediation services	724,686	0.05%
US Postal Service	634,520	0.05%
Construction of other new residential structures	633,093	0.05%
Maintenance and repair construction of nonresidential structures	559,190	0.04%
Retail Stores - Miscellaneous	418,789	0.03%
Retail Nonstores - Direct and electronic sales	408,419	0.03%
Securities Commodity contracts, investments and related activities	403,077	0.03%
Lessors of nonfinancial intangible assets	395,014	0.03%
Individual and family services	354,620	0.03%
Animal production, except cattle and poultry and eggs	350,308	0.03%
Other amusement and recreation industries	327,034	0.02%
Custom computer programming services	321,526	0.02%
Retail Stores - Sporting goods, hobby, book and music	321,256	0.02%
Support activities for oil and gas operations	308,574	0.02%
Construction of new nonresidential manufacturing structures	307,342	0.02%
Business support services	300,924	0.02%
Home health care services	287,859	0.02%
Retail Stores - Clothing and clothing accessories	281,916	0.02%
Other support services	271,860	0.02%
Support activities for agriculture and forestry	253,651	0.02%
Warehousing and storage	252,468	0.02%
Maintenance and repair construction of residential structures	251,867	0.02%
Couriers and messengers	240,306	0.02%
Electronic and precision equipment repair and maintenance	212,095	0.02%
Management, scientific, and technical consulting services	192,644	0.01%
Architectural, engineering, and related services	184,417	0.01%
Services to buildings and dwellings	183,180	0.01%
Commercial and industrial machinery and equipment rental and leasing	179,646	0.01%
Retail Stores - Furniture and home furnishings	175,242	0.01%
Private elementary and secondary schools	170,515	0.01%
Advertising and related services	120,419	0.01%
Personal care services	111,689	0.01%
Fitness and recreational sports centers	75,362	0.01%
Employment services	74,897	0.01%
Accounting, tax preparation, bookkeeping, and payroll services	46,855	0.00%
Promoters of performing arts and sports and agents for public figures	24,136	0.00%
<b>Total</b>	<b>\$1,365,336,496</b>	<b>100.00%</b>

**APPENDIX E:**

**LABOR INCOME FOR ALL**

**ECONOMIC SECTORS IN LANDER COUNTY**

**Appendix E: Labor Income for All Economic Sectors in Lander County.**

<b>Sector</b>	<b>Labor Income</b>	<b>Percent of Labor Income</b>
Mining gold, silver, and other metal ore	129,164,808	59.91%
Employment and payroll only (state & local govt, education)	14,492,610	6.72%
Employment and payroll only (state & local govt, non-education)	9,817,457	4.55%
Employment and payroll only (federal govt, non-military)	8,186,737	3.80%
Mining and quarrying other nonmetallic minerals	7,841,607	3.64%
Commercial and industrial machinery and equipment repair and maintenance	4,388,502	2.04%
Wholesale trade businesses	3,733,246	1.73%
Hotels and motels, including casino hotels	3,613,630	1.68%
Scenic and sightseeing transportation and support activities for transportation	2,846,599	1.32%
Transport by truck	2,630,443	1.22%
Civic, social, professional, and similar organizations	2,307,020	1.07%
Transit and ground passenger transportation	2,085,248	0.97%
Support activities for other mining	2,007,309	0.93%
Retail Stores - Food and beverage	2,006,001	0.93%
Retail Stores - Gasoline stations	1,732,074	0.80%
Amusement parks, arcades, and gambling industries	1,400,383	0.65%
Food services and drinking places	1,175,619	0.55%
Retail Stores - Motor vehicle and parts	1,130,302	0.52%
Monetary authorities and depository credit intermediation activities	1,006,192	0.47%
Fertilizer manufacturing	936,943	0.43%
Other state and local government enterprises	858,439	0.40%
Construction of other new nonresidential structures	826,655	0.38%
Cattle ranching and farming	702,756	0.33%
Employment and payroll only (federal govt, military)	668,242	0.31%
Telecommunications	620,103	0.29%
Personal and household goods repair and maintenance	556,624	0.26%
Performing arts companies	510,860	0.24%
Construction of new nonresidential commercial and health care structures	503,908	0.23%
US Postal Service	486,765	0.23%
Electric power generation, transmission, and distribution	471,662	0.22%
Retail Stores - Building material and garden supply	452,196	0.21%
Retail Stores - Health and personal care	439,989	0.20%
Retail Stores - General merchandise	406,475	0.19%
Insurance agencies, brokerages, and related activities	383,611	0.18%
Offices of physicians, dentists, and other health practitioners	346,692	0.16%
Newspaper publishers	335,922	0.16%
Transport by rail	268,670	0.12%
Maintenance and repair construction of nonresidential structures	268,281	0.12%
Individual and family services	238,183	0.11%

Sector	Labor Income	Percent of Labor Income
Construction of new residential permanent site single- & multi-family structures	236,115	0.11%
Retail Stores - Miscellaneous	228,993	0.11%
Waste management and remediation services	222,325	0.10%
Construction of other new residential structures	212,198	0.10%
Support activities for agriculture and forestry	199,350	0.09%
Real estate establishments	191,278	0.09%
Home health care services	179,361	0.08%
Retail Stores - Sporting goods, hobby, book and music	160,503	0.07%
Construction of new nonresidential manufacturing structures	153,608	0.07%
Other amusement and recreation industries	134,888	0.06%
Business support services	123,103	0.06%
Retail Stores - Clothing and clothing accessories	115,086	0.05%
Maintenance and repair construction of residential structures	113,194	0.05%
Retail Nonstores - Direct and electronic sales	111,432	0.05%
Management, scientific, and technical consulting services	105,128	0.05%
Architectural, engineering, and related services	95,096	0.04%
Warehousing and storage	94,917	0.04%
Electronic and precision equipment repair and maintenance	94,217	0.04%
Support activities for oil and gas operations	93,562	0.04%
Securities, commodity contracts, investments, and related activities	92,168	0.04%
Custom computer programming services	91,412	0.04%
Other support services	87,839	0.04%
Retail Stores - Furniture and home furnishings	81,845	0.04%
Animal production, except cattle and poultry and eggs	67,023	0.03%
Personal care services	64,832	0.03%
Couriers and messengers	62,165	0.03%
Advertising and related services	51,586	0.02%
Employment services	51,140	0.02%
Services to buildings and dwellings	49,818	0.02%
Commercial and industrial machinery and equipment rental and leasing	46,760	0.02%
Private elementary and secondary schools	46,104	0.02%
Fitness and recreational sports centers	31,901	0.01%
Accounting, tax preparation, bookkeeping, and payroll services	26,536	0.01%
Lessors of nonfinancial intangible assets	20,979	0.01%
Promoters of performing arts and sports and agents for public figures	7,641	0.00%
<b>Total</b>	<b>\$215,592,868</b>	<b>100.00%</b>



**APPENDIX F:**  
**VALUE OF COMMODITY EXPORTS IN LANDER COUNTY**

**Appendix F: Value of Commodity Exports in Lander County.**

<b>Commodity Sector</b>	<b>Exports</b>	<b>Percent of Total Exports</b>
Gold, silver, and other metal ore	1,007,638,062	86.88%
Other nonmetallic minerals	23,818,766	2.05%
Copper, nickel, lead, and zinc	18,156,126	1.57%
Support services for other mining	17,412,556	1.50%
Fertilizer	13,697,133	1.18%
Hotels and motel services, including casino hotels	10,663,145	0.92%
Employment and payroll only (federal govt, non-military)	9,260,387	0.80%
Cattle from ranches and farms	7,894,815	0.68%
Commercial and industrial machinery and equipment repairs and maintenance	7,619,483	0.66%
All other basic inorganic chemicals	7,047,604	0.61%
Alkalies and chlorine	6,909,357	0.60%
Wholesale trade distribution services	3,314,279	0.29%
Noncomparable foreign imports	2,983,070	0.26%
Scenic & sightseeing transportation services & support activities for transportation	2,938,878	0.25%
Transit and ground passenger transportation services	2,863,145	0.25%
Retail Services - Gasoline stations	2,194,823	0.19%
Amusement parks, arcades, and gambling recreation	1,938,396	0.17%
Truck transportation services	1,479,894	0.13%
Rest of the world adjustment	1,115,528	0.10%
Personal and household goods repairs and maintenance	1,022,840	0.09%
Newly constructed residential permanent site single- and multi-family structures	755,104	0.07%
Performing arts	744,406	0.06%
Civic, social, and professional services	640,739	0.06%
Other newly constructed residential structures	633,093	0.05%
All other petroleum and coal products	615,649	0.05%
Waste management and remediation services	610,347	0.05%
Retail Services - Food and beverage	569,930	0.05%
Newspapers	542,236	0.05%
Insurance agencies, brokerages, and related services	526,005	0.05%
Scrap	483,579	0.04%
Agriculture and forestry support services	424,685	0.04%
Telecommunications	392,895	0.03%
Natural stone	364,132	0.03%
Animal products, except cattle, poultry and eggs	359,228	0.03%
Newly constructed nonresidential manufacturing structures	307,342	0.03%
Support services for oil and gas operations	291,611	0.03%
Rail transportation services	265,597	0.02%
Leasing of nonfinancial intangible assets	201,127	0.02%
Air transportation services	175,214	0.02%

<b>Commodity Sector</b>	<b>Exports</b>	<b>Percent of Total Exports</b>
Monetary authorities and depository credit intermediation services	162,282	0.01%
Warehousing and storage services	123,215	0.01%
Couriers and messengers services	107,675	0.01%
Education from private junior colleges, colleges, universities, & prof. schools	66,450	0.01%
Other accommodation services	54,841	0.00%
Private hospital services	52,656	0.00%
Water transportation services	46,216	0.00%
Securities, commodity contracts, investments, and related services	45,168	0.00%
Restaurant, bar, and drinking place services	40,711	0.00%
Water, sewage treatment, and other utility services	37,558	0.00%
Advertising and related services	34,019	0.00%
Electricity, and distribution services	24,342	0.00%
Oilseeds	19,592	0.00%
Commercial and industrial machinery and equipment rental and leasing services	19,137	0.00%
Products and services of State & Local Govt enterprises (except electric utilities)	14,840	0.00%
Oil and gas wells	13,185	0.00%
Data processing- hosting- ISP- web search portals	8,506	0.00%
Architectural, engineering, and related services	8,176	0.00%
Forest, timber, and forest nursery products	7,737	0.00%
Real estate buying and selling, leasing, managing, and related services	7,217	0.00%
Custom computer programming services	7,110	0.00%
Natural gas, and distribution services	5,906	0.00%
Management, scientific, and technical consulting services	5,447	0.00%
Other information services	4,860	0.00%
US Postal delivery services	4,549	0.00%
Employment services	4,035	0.00%
Other support services	3,455	0.00%
Retail Services - Motor vehicle and parts	3,440	0.00%
Machined products	3,321	0.00%
Elementary and secondary education from private schools	3,035	0.00%
Retail Services - Clothing and clothing accessories	2,838	0.00%
Retail Services - Health and personal care	2,837	0.00%
Retail Services - Building material and garden supply	2,597	0.00%
Home health care services	2,294	0.00%
Business support services	2,293	0.00%
Other newly constructed nonresidential structures	1,775	0.00%
Retail Services - General merchandise	1,738	0.00%
Wild game products, pelts, and furs	1,619	0.00%
Other computer related services, including facilities management	1,191	0.00%
Medical and diagnostic labs and outpatient and other ambulatory care services	1,059	0.00%

<b>Commodity Sector</b>	<b>Exports</b>	<b>Percent of Total Exports</b>
Newly constructed nonresidential commercial and health care structures	995	0.00%
Maintained and repaired residential structures	897	0.00%
Maintained and repaired nonresidential structures	776	0.00%
Community food, housing, and other relief services, including rehabilitation	753	0.00%
Automotive equipment rental and leasing services	640	0.00%
Nondepository credit intermediation and related services	619	0.00%
Promotional services for performing arts and sports and public figures	574	0.00%
Electronic and precision equipment repairs and maintenance	523	0.00%
Bowling activities	492	0.00%
Employment and payroll only (state & local govt, education)	486	0.00%
Accounting, tax preparation, bookkeeping, and payroll services	442	0.00%
Retail Services - Nonstore, direct and electronic sales	377	0.00%
Other amusements and recreation	285	0.00%
Employment and payroll only (state & local govt, non-education)	262	0.00%
Imputed rental services of owner-occupied dwellings	225	0.00%
Office administrative services	217	0.00%
Services to buildings and dwellings	182	0.00%
Individual and family services	126	0.00%
Retail Services - Miscellaneous	120	0.00%
Offices of physicians, dentists, and other health practitioners	117	0.00%
Computer systems design services	104	0.00%
Other private educational services	92	0.00%
Museum, heritage, zoo, and recreational services	90	0.00%
Retail Services - Sporting goods, hobby, book and music	84	0.00%
Personal care services	77	0.00%
Other personal services	30	0.00%
Environmental and other technical consulting services	30	0.00%
Fitness and recreational sports center services	28	0.00%
Employment and payroll only (federal govt, military)	26	0.00%
Specialized design services	17	0.00%
Retail Services - Furniture and home furnishings	17	0.00%
Child day care services	11	0.00%
Nursing and residential care services	4	0.00%
<b>Total</b>	<b>\$1,159,839,848</b>	<b>100.00%</b>

**APPENDIX G:**  
**VALUE OF COMMODITY IMPORTS IN LANDER COUNTY**

**Appendix G: Value of Commodity Imports in Lander County.**

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Gold, silver, and other metal ore	153,036,270	21.20%
Electricity, and distribution services	41,610,294	5.76%
Support services for other mining	34,201,653	4.74%
Natural gas, and distribution services	25,615,599	3.55%
Management of companies and enterprises	22,589,321	3.13%
Wholesale trade distribution services	19,557,800	2.71%
Refined petroleum products	17,617,310	2.44%
Real estate buying and selling, leasing, managing, and related services	16,494,392	2.28%
Offices of physicians, dentists, and other health practitioners	12,002,588	1.66%
Iron and steel and ferroalloy products	11,868,730	1.64%
Tires	10,874,949	1.51%
Other newly constructed nonresidential structures	10,730,796	1.49%
Lime and gypsum products	10,717,125	1.48%
Insurance	10,237,410	1.42%
Architectural, engineering, and related services	10,134,067	1.40%
Restaurant, bar, and drinking place services	9,331,958	1.29%
Employment and payroll only (federal govt, non-military)	9,257,843	1.28%
Used and secondhand goods	9,228,498	1.28%
Legal services	9,160,276	1.27%
Private hospital services	8,768,867	1.21%
Material handling equipment	8,688,538	1.20%
Monetary authorities and depository credit intermediation services	8,278,375	1.15%
Truck transportation services	7,413,192	1.03%
Newly constructed nonresidential commercial and health care structures	7,336,021	1.02%
Securities, commodity contracts, investments, and related services	7,043,098	0.98%
Pharmaceutical preparations	6,600,288	0.91%
Nondepository credit intermediation and related services	6,112,811	0.85%
Telecommunications	5,985,790	0.83%
Fertilizer	5,917,803	0.82%
Construction machinery	5,643,268	0.78%
Motor vehicle parts	5,466,347	0.76%
Other plastics products	5,395,025	0.75%
Commercial and industrial machinery and equipment rental and leasing services	4,487,540	0.62%
Industrial gas	4,431,404	0.61%
Nursing and residential care services	4,106,562	0.57%
Rail transportation services	4,102,509	0.57%
Leasing of nonfinancial intangible assets	3,978,099	0.55%
All other crop farming products	3,674,182	0.51%
Newly constructed residential permanent site single- and multi-family structures	3,395,564	0.47%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Services to buildings and dwellings	3,351,601	0.46%
Accounting, tax preparation, bookkeeping, and payroll services	3,126,817	0.43%
Management, scientific, and technical consulting services	3,058,837	0.42%
Maintained and repaired nonresidential structures	2,672,357	0.37%
Funds, trusts, and other financial services	2,632,499	0.36%
Medical and diagnostic labs and outpatient and other ambulatory care services	2,561,957	0.35%
Employment services	2,461,810	0.34%
Data processing- hosting- ISP- web search portals	2,438,316	0.34%
Automotive equipment rental and leasing services	2,410,096	0.33%
Petroleum lubricating oils and greases	2,394,199	0.33%
Scientific research and development services	2,350,450	0.33%
Other computer related services, including facilities management	2,336,925	0.32%
Other basic organic chemicals	2,190,259	0.30%
Air transportation services	2,154,255	0.30%
Retail Services - General merchandise	2,117,747	0.29%
Hotels and motel services, including casino hotels	2,074,607	0.29%
Other nonmetallic minerals	1,972,574	0.27%
Rest of the world adjustment	1,942,393	0.27%
Automobiles	1,855,100	0.26%
Advertising and related services	1,850,281	0.26%
All other forged, stamped, and sintered metals	1,831,502	0.25%
Processed animal (except poultry) meat and rendered byproducts	1,754,176	0.24%
Electronic computers	1,719,983	0.24%
Retail Services - Nonstore, direct and electronic sales	1,708,426	0.24%
Automotive repair and maintenance services, except car washes	1,702,820	0.24%
Waste management and remediation services	1,665,466	0.23%
Coal	1,642,291	0.23%
Computer systems design services	1,562,834	0.22%
Soft drinks and manufactured ice	1,474,837	0.20%
Grantmaking, giving, and social advocacy services	1,457,442	0.20%
Petrochemicals	1,374,374	0.19%
Coated, engraved, heat treated products	1,361,044	0.19%
Services from religious organizations	1,335,165	0.18%
Ferrous metals	1,315,188	0.18%
Retail Services - Clothing and clothing accessories	1,308,664	0.18%
Machined products	1,299,895	0.18%
Copper, nickel, lead, and zinc	1,292,149	0.18%
Printed materials	1,285,996	0.18%
Light trucks and utility vehicles	1,253,868	0.17%
Other private educational services	1,237,935	0.17%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Other personal services	1,234,084	0.17%
Personal care services	1,213,865	0.17%
Couriers and messengers services	1,181,931	0.16%
Audio and video equipment	1,146,538	0.16%
Office administrative services	1,145,748	0.16%
Paper from pulp	1,103,835	0.15%
Women's and girls' cut and sewn apparel	1,099,539	0.15%
Individual and family services	1,036,767	0.14%
Other newly constructed residential structures	1,020,157	0.14%
Cigarettes, cigars, smoking and chewing tobacco, and reconstituted tobacco	1,013,273	0.14%
Environmental and other technical consulting services	979,557	0.14%
Investigation and security services	969,311	0.13%
Travel arrangement and reservation services	899,636	0.12%
Soaps and cleaning compounds	885,788	0.12%
Retail Services - Motor vehicle and parts	882,144	0.12%
US Postal delivery services	881,872	0.12%
Child day care services	850,643	0.12%
Electronic and precision equipment repairs and maintenance	847,768	0.12%
Education from private junior colleges, colleges, universities, & prof. schools	836,443	0.12%
All other miscellaneous professional, scientific, and technical services	821,946	0.11%
Software	817,756	0.11%
Canned, pickled and dried fruits and vegetables	813,306	0.11%
Other information services	811,565	0.11%
Processed poultry meat products	799,108	0.11%
Fluid milk and butter	796,971	0.11%
Water, sewage treatment, and other utility services	791,790	0.11%
Retail Services - Building material and garden supply	791,427	0.11%
Surgical appliances and supplies	763,325	0.11%
Bread and bakery products	761,931	0.11%
Toilet preparations	744,994	0.10%
Retail Services - Health and personal care	719,928	0.10%
Maintained and repaired residential structures	719,066	0.10%
Computer terminals and other computer peripheral equipment	716,842	0.10%
Snack foods including nuts, seeds and grains, and chips	701,421	0.10%
Motion pictures and videos	700,452	0.10%
Water transportation services	695,637	0.10%
Warehousing and storage services	694,071	0.10%
Beer, ale, malt liquor and nonalcoholic beer	683,598	0.09%
Other animal food	682,638	0.09%
All other chemical products and preparations	681,380	0.09%



<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Home health care services	673,607	0.09%
Men's and boys' cut and sewn apparel	670,205	0.09%
Retail Services - Electronics and appliances	665,266	0.09%
Retail Services - Miscellaneous	646,078	0.09%
Veterinary services	639,415	0.09%
Community food, housing, and other relief services, including rehabilitation	639,176	0.09%
Custom computer programming services	615,910	0.09%
Business support services	611,630	0.08%
Retail Services - Furniture and home furnishings	584,286	0.08%
Grains	568,572	0.08%
Plates and fabricated structural products	568,493	0.08%
Dry-cleaning and laundry services	568,447	0.08%
Dolls, toys, and games	566,270	0.08%
Frozen foods	557,540	0.08%
Dog and cat food	550,981	0.08%
All other basic inorganic chemicals	541,577	0.08%
Paperboard containers	531,739	0.07%
Books	521,073	0.07%
Footwear	512,438	0.07%
Heavy duty trucks	497,543	0.07%
Aircraft	497,280	0.07%
Cheese	496,530	0.07%
Jewelry and silverware	491,897	0.07%
Newly constructed nonresidential manufacturing structures	489,374	0.07%
Search, detection, and navigation instruments	489,235	0.07%
Cookies, crackers, and pasta	474,459	0.07%
Turned products and screws, nuts, and bolts	472,506	0.07%
Paperboard from pulp	470,934	0.07%
Death care services	470,816	0.07%
Mining and oil and gas field machinery	459,301	0.06%
Vegetables and melons	459,193	0.06%
General and consumer goods rental services except video tapes and discs	452,816	0.06%
Products and services of State & Local Govt enterprises (except electric utilities)	445,722	0.06%
Other fabricated metals	434,252	0.06%
Cattle from ranches and farms	430,569	0.06%
Coated and laminated paper, packaging paper and plastics film	417,187	0.06%
All other manufactured food products	397,976	0.06%
Promotional services for performing arts and sports and public figures	377,715	0.05%
Sanitary paper products	370,152	0.05%
Paper and paperboard stationary products	367,665	0.05%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Wine and brandies	363,213	0.05%
Periodicals	361,671	0.05%
Sporting and athletic goods	352,778	0.05%
Independent artists, writers, and performers	343,380	0.05%
Nonupholstered wood household furniture	341,085	0.05%
Cooking, housecleaning, gardening, and other services to private households	339,831	0.05%
Dimension lumber and preserved wood products	338,500	0.05%
Transit and ground passenger transportation services	333,587	0.05%
Fruit	333,174	0.05%
Ships	331,348	0.05%
Alkalies and chlorine	331,316	0.05%
Other accommodation services	322,418	0.04%
Semiconductor and related devices	317,989	0.04%
Air conditioning, refrigeration, and warm air heating equipment	315,399	0.04%
Sound recordings	308,110	0.04%
Spectator sports	305,508	0.04%
Cutting tools and machine tool accessories	305,150	0.04%
Agriculture and forestry support services	297,836	0.04%
Surgical and medical instrument, laboratory and medical instruments	297,459	0.04%
Retail Services - Sporting goods, hobby, book and music	286,489	0.04%
All other miscellaneous manufactured products	286,076	0.04%
Curtains and linens	280,635	0.04%
Dry, condensed, and evaporated dairy products	277,760	0.04%
Specialized design services	277,483	0.04%
Chocolate confectioneries from purchased chocolate	273,579	0.04%
Seasonings and dressings	272,235	0.04%
Telephone apparatus	266,527	0.04%
Handtools	264,891	0.04%
Fitness and recreational sports center services	255,807	0.04%
Pesticides and other agricultural chemicals	255,528	0.04%
Broadcast and wireless communications equipment	255,500	0.04%
Other engine equipment	252,755	0.04%
Small electrical appliances	250,511	0.03%
Ophthalmic goods	250,294	0.03%
Breakfast cereal products	248,146	0.03%
Elementary and secondary education from private schools	240,696	0.03%
Motorcycles, bicycles, and parts	239,326	0.03%
Other rubber products	229,762	0.03%
Greenhouse, nursery, and floriculture products	229,455	0.03%
Facilities support services	227,247	0.03%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Other aircraft parts and auxiliary equipment	219,122	0.03%
Coffee and tea	216,496	0.03%
Motor and generators	214,872	0.03%
Distilled liquors except brandies	211,139	0.03%
Asphalt paving mixtures and blocks	209,301	0.03%
Scenic & sightseeing transportation services & support activities for transportation	206,809	0.03%
Other general purpose machinery	203,462	0.03%
Cable and other subscription services	200,553	0.03%
Other amusements and recreation	198,729	0.03%
Seafood products	195,842	0.03%
Guided missiles and space vehicles	194,846	0.03%
Ornamental and architectural metal products	194,795	0.03%
Office furniture and custom architectural woodwork and millwork	189,740	0.03%
Electromedical and electrotherapeutic apparatus	188,801	0.03%
Household laundry equipment	188,355	0.03%
Nonchocolate confectioneries	187,134	0.03%
Photographic services	184,694	0.03%
Pipeline transportation services	184,660	0.03%
Wood kitchen cabinets and countertops	177,875	0.02%
Oil and natural gas	177,489	0.02%
Museum, heritage, zoo, and recreational services	176,640	0.02%
Plastics packaging materials and unlaminated films and sheets	175,823	0.02%
Household refrigerators and home freezers	169,392	0.02%
Shortening and margarine and other fats and oils products	169,184	0.02%
Military armored vehicles, tanks, and tank components	166,547	0.02%
All other paper bag and coated and treated paper	161,442	0.02%
Upholstered household furniture	160,864	0.02%
Carpets and rugs	158,672	0.02%
Valves and fittings other than plumbing	158,067	0.02%
Apparel accessories and other apparel	154,255	0.02%
Lighting fixtures	153,826	0.02%
Household cooking appliances	152,777	0.02%
Ready-mix concrete	152,256	0.02%
Flour and malt	152,220	0.02%
Mattresses	144,582	0.02%
Other support services	144,572	0.02%
Directories and mailing lists	144,528	0.02%
Watches, clocks, and other measuring and controlling devices	144,259	0.02%
Office supplies (except paper)	142,310	0.02%
Wood containers and pallets	139,627	0.02%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Paints and coatings	138,589	0.02%
Computer storage devices	137,412	0.02%
Bowling activities	136,825	0.02%
Fish	135,895	0.02%
Video tape and disc rental services	133,689	0.02%
Ice cream and frozen desserts	132,564	0.02%
All other miscellaneous wood products	131,907	0.02%
Metal and other household furniture (except wood)	130,686	0.02%
Internet publishing and broadcasting services	130,548	0.02%
Car wash services	127,503	0.02%
Wood windows and doors and millwork	126,352	0.02%
Gaskets, packing and sealing devices	125,126	0.02%
Products and services of Fed Govt enterprises (except electric utilities)	123,574	0.02%
All other textile products	122,623	0.02%
Electric lamp bulbs and parts	122,435	0.02%
Vending, commercial, industrial, and office machinery	121,196	0.02%
Other leather and allied products	120,679	0.02%
Boats	115,556	0.02%
Arms, ordnance, and accessories	115,083	0.02%
Animal products, except cattle, poultry and eggs	114,781	0.02%
All other transportation equipment	113,750	0.02%
Carbon black	113,722	0.02%
Primary batteries	110,929	0.02%
Ground or treated mineral and earth products	108,188	0.01%
Natural stone	107,950	0.01%
Relay and industrial controls	107,570	0.01%
Cutlery, utensils, pots, and pans	106,655	0.01%
Other cut and sew apparel	106,108	0.01%
Printed circuit assemblies (electronic assemblies)	99,230	0.01%
Reconstituted wood products	97,294	0.01%
Poultry and egg products	96,960	0.01%
All other converted paper products	89,357	0.01%
Other commercial and service industry machinery	89,091	0.01%
Railroad rolling stock	88,307	0.01%
Iron ore	88,114	0.01%
Other pressed and blown glass and glassware	85,648	0.01%
Photographic and photocopying equipment	85,239	0.01%
Showcases, partitions, shelving, and lockers	84,842	0.01%
Other major household appliances	81,421	0.01%
Pumps and pumping equipment	81,279	0.01%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Propulsion units and parts for space vehicles and guided missiles	80,691	0.01%
Polystyrene foam products	80,595	0.01%
Steel products from purchased steel	78,277	0.01%
Spring and wire products	78,169	0.01%
Travel trailers and campers	78,151	0.01%
Institutional furniture	77,957	0.01%
Storage batteries	74,567	0.01%
Farm machinery and equipment	73,873	0.01%
Plastics pipes and pipe fittings	72,878	0.01%
Automatic environmental controls	71,906	0.01%
Biological products (except diagnostic)	70,502	0.01%
Brooms, brushes, and mops	68,605	0.01%
Other concrete products	68,396	0.01%
Electricity and signal testing instruments	67,853	0.01%
Pottery, ceramics, and plumbing fixtures	67,722	0.01%
Personal and household goods repairs and maintenance	67,477	0.01%
Other communications equipment	65,916	0.01%
Printing support services	65,162	0.01%
Asphalt shingles and coating materials	64,114	0.01%
Magnetic and optical recording media	63,318	0.01%
Cut stone and stone products	61,745	0.01%
Radio and television entertainment	61,346	0.01%
Speed changers, industrial high-speed drives, and gears	61,168	0.01%
Communication and energy wires and cables	61,161	0.01%
Support services for oil and gas operations	58,939	0.01%
Motor homes	58,771	0.01%
Cut and sewn apparel from contractors	58,727	0.01%
Blinds and shades	58,635	0.01%
Knit apparel	58,393	0.01%
Ammunition	58,004	0.01%
Other electronic components	57,938	0.01%
Wiring devices	57,311	0.01%
Switchgear and switchboard apparatus	56,949	0.01%
Balls and roller bearings	56,440	0.01%
Musical instruments	56,094	0.01%
All other miscellaneous electrical equipment and components	55,280	0.01%
Heating equipment (except warm air furnaces)	52,621	0.01%
Soybean oil and cakes and other oilseed products	52,470	0.01%
Rubber and plastics hoses and belts	51,979	0.01%
Synthetic dyes and pigments	51,714	0.01%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Urethane and other foam products (except polystyrene)	50,714	0.01%
Abrasive products	50,104	0.01%
Tortillas	49,447	0.01%
Cement	47,605	0.01%
Hardware	46,874	0.01%
Textile bags and canvas	46,761	0.01%
Turbines and turbine generator set units	46,660	0.01%
Aircraft engines and engine parts	46,522	0.01%
Broadwoven fabrics and felts	46,013	0.01%
Industrial process variable instruments	43,441	0.01%
Adhesives	43,386	0.01%
Totalizing fluid meters and counting devices	42,569	0.01%
Other industrial machinery	42,132	0.01%
Raw and refined sugar from sugar cane	42,122	0.01%
Fluid power process machinery	40,785	0.01%
Concrete pipes, bricks, and blocks	40,685	0.01%
Power, distribution, and specialty transformers	40,600	0.01%
Metal cutting and forming machine tools	40,423	0.01%
Laminated plastics plates, sheets (except packaging), and shapes	38,058	0.01%
Plumbing fixture fittings and trims	35,278	0.00%
Crowned and stamped metals	35,084	0.00%
Glass products made of purchased glass	33,636	0.00%
Power boilers and heat exchangers	33,109	0.00%
Air purification and ventilation equipment	33,093	0.00%
Fabricated pipes and pipe fittings	30,939	0.00%
Unlaminated plastics profile shapes	30,905	0.00%
Chocolate cacao products and chocolate confectioneries	30,893	0.00%
Engineered wood members and trusses	30,029	0.00%
Power-driven handtools	29,299	0.00%
Wild game products, pelts, and furs	28,553	0.00%
Analytical laboratory instruments	27,222	0.00%
Tree nuts	26,640	0.00%
Mineral wool	25,887	0.00%
Finished textiles and fabrics	25,734	0.00%
Flavoring syrups and concentrates	25,565	0.00%
Bricks, tiles, and other structural clay products	25,440	0.00%
Lawn and garden equipment	24,954	0.00%
Sand, gravel, clay, and ceramic and refractory minerals	23,504	0.00%
Metal tanks (heavy gauge)	23,351	0.00%
Nonferrous metals (except copper and aluminum)	23,091	0.00%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Refined sugar from sugar beets	22,878	0.00%
Veneer and plywood	20,525	0.00%
Irradiation apparatus	18,464	0.00%
Coated fabric coating	17,502	0.00%
Electronic connectors	16,925	0.00%
Software, blank audio and video media, mass reproduction	15,720	0.00%
Dental equipment and supplies	14,802	0.00%
Corn sweeteners, corn oils, and corn starches	14,751	0.00%
Bare printed circuit boards	13,198	0.00%
Nonferrous metals	13,033	0.00%
Miscellaneous nonmetallic mineral products	12,306	0.00%
Dairy cattle and milk products	11,102	0.00%
Prefabricated wood buildings	10,730	0.00%
Rolled, drawn, extruded & alloyed nonferrous metals (except copper & aluminum)	10,687	0.00%
Metal cans, boxes, and other metal containers (light gauge)	10,514	0.00%
Optical instruments and lens	10,159	0.00%
Semiconductor machinery	9,716	0.00%
Rolled, drawn, extruded and alloyed copper	9,708	0.00%
Electronic capacitors, resistors, coils, transformers, and other inductors	9,250	0.00%
All other petroleum and coal products	8,670	0.00%
Electron tubes	8,170	0.00%
Carbon and graphite products	8,108	0.00%
Aluminum products	7,952	0.00%
Signs	7,427	0.00%
Nonwoven fabrics and felts	7,339	0.00%
Dental laboratories	7,219	0.00%
Copper	6,714	0.00%
Truck trailers	6,669	0.00%
Air and gas compressors	6,408	0.00%
Plastics materials and resins	5,983	0.00%
Woven and embroidered fabrics	5,884	0.00%
Civic, social, and professional services	5,836	0.00%
In-vitro diagnostic substances	5,445	0.00%
Industrial molds	5,322	0.00%
Glass containers	5,205	0.00%
Printing inks	5,118	0.00%
Motor vehicle bodies	4,741	0.00%
Fiber filaments, yarn, and thread	4,645	0.00%
Clay and nonclay refractory products	4,644	0.00%
Mechanical power transmission equipment	4,430	0.00%

<b>Commodity Sector</b>	<b>Imports</b>	<b>Percent of Total Imports</b>
Aluminum products from purchased aluminum	3,761	0.00%
Flat glass	2,654	0.00%
Plastics bottles	2,046	0.00%
Tanned and finished leather and hides	2,033	0.00%
Retail Services - Food and beverage	1,960	0.00%
Medicines and botanicals	1,677	0.00%
Custom roll formed metals	1,581	0.00%
Retail Services - Gasoline stations	1,477	0.00%
Cotton	1,375	0.00%
Wood television, radio, and sewing machine cabinets	1,294	0.00%
Amusement parks, arcades, and gambling recreation	1,187	0.00%
Performing arts	1,046	0.00%
Insurance agencies, brokerages, and related services	770	0.00%
Aluminum alloys	657	0.00%
Plastics and rubber industry machinery	629	0.00%
Special tools, dies, jigs, and fixtures	614	0.00%
Employment and payroll only (state & local govt, education)	484	0.00%
Synthetic rubber	365	0.00%
Newspapers	323	0.00%
Forest, timber, and forest nursery products	297	0.00%
Packaging machinery	296	0.00%
Manufactured homes (mobile homes)	270	0.00%
Employment and payroll only (state & local govt, non-education)	264	0.00%
Imputed rental services of owner-occupied dwellings	227	0.00%
Knitted fabrics	143	0.00%
Commercial and industrial machinery and equipment repairs and maintenance	88	0.00%
Wood pulp	44	0.00%
Oilseeds	33	0.00%
Employment and payroll only (federal govt, military)	26	0.00%
Artificial and synthetic fibers and filaments	12	0.00%
Rolling mills and other metalworking machinery	2	0.00%
<b>Total</b>	<b>\$721,925,314</b>	<b>100.00%</b>



**APPENDIX H:**  
**BEST MATCH SECTOR DESCRIPTION**

**APPENDIX H: BEST MATCH SECTOR DESCRIPTION**

The following appendix provides a description for only the best match NAICS sectors that were identified in Lander County using the CBM procedure. Industrial community best match sectors are also included. For each NAICS sector, the following information is presented:

- 1) Sector description.
- 2) Sector top 10 producing states and western states performance using the most current economic census reports for 1997 or 2002, whichever is most current.
- 3) Actual business sector responses that factor into relocation or expansion decisions (primary data) are available for NAICS sectors 5416, 6214, and 6215.

This information can further assist in identifying which sectors best fit the regional economy and be part of any economic development and implementation strategy plans.

**NAICS CODE 4211**

**4211 Motor Vehicle and Motor Vehicle Parts and Supply Wholesalers**

**4211 Description:** This NAICS industry group includes establishments classified in the following NAICS Industries: 42111, Automobile and other motor vehicle wholesalers; 42112 Motor vehicle supplies and new parts wholesalers; 42113, Tire and tube wholesalers; 42114, Motor vehicle parts (used) wholesalers.

**Economic Census Trends- Employer Only, 2002.**

<b>NAICS 4211</b>	<b>2002</b>
Number of Establishments	7671
Receipts/Revenues (\$1,000)	\$616,589,664.00
Annual Payroll (\$1,000)	\$6,000,672.00
Employees	171630.00
Average Payroll Per Job	\$34.96
Average Employment Per Establishment	22.37387564
Average Receipts/Revenue Per Establishment	\$80,379.31

**Top 10 States (NAICS 4211) – Employer Only, 1997.**

	Establishments	Revenues (\$1000)	Annual payroll (\$1000)	Paid Employees
<b>Total U.S.</b>	<b>29,328</b>	<b>\$ 533,352,124.00</b>	<b>\$ 11,458,634.00</b>	<b>375,731</b>
California	3,363	\$ 72,694,306.00	\$ 1,353,467.00	42,223
Florida	2,190	\$ 33,218,922.00	\$ 543,230.00	20,934
Texas	2,050	\$ 40,445,346.00	\$ 786,085.00	26,011
New York	1,602	\$ 15,350,686.00	\$ 474,909.00	17,274
Michigan	1,473	\$ 55,737,073.00	\$ 1,192,176.00	25,919
Ohio	1,330	\$ 26,227,964.00	\$ 553,999.00	18,361
Pennsylvania	1,222	\$ 24,805,075.00	\$ 442,882.00	17,215
Illinois	1,026	\$ 33,594,654.00	\$ 581,912.00	17,239
Georgia	946	\$ 29,116,242.00	\$ 438,741.00	13,448
New Jersey	930	\$ 31,944,151.00	\$ 442,323.00	12,813
<b>Total</b>	<b>16,132</b>	<b>\$ 363,134,419.00</b>	<b>\$ 6,809,724.00</b>	<b>211,437</b>
<b>% of U.S.</b>	<b>55.01%</b>	<b>68.09%</b>	<b>59.43%</b>	<b>56.27%</b>

**Western States (NAICS 4211) – Employer Only, 1997.**

	Establishments	Revenues (\$1000)	Annual Payroll (\$1000)	Paid Employees
<b>Total U.S.</b>	<b>29,328</b>	<b>533,352,124</b>	<b>11,458,634</b>	<b>375,731</b>
California	3,363	72,694,306	1,353,467	42,223
Washington	559	6,686,443	189,285	6,416
Colorado	495	11,489,838	172,414	5,976
Wyoming	491	5,678,317	118,390	4,651
Alaska	419	7,182,435	180,290	5,542
New Mexico	218	2,624,627	84,743	3,144
Nevada	157	607,632	33,088	1,403
Oregon	147	1,751,373	79,154	2,614
Utah	134	467,681	33,428	1,367
Hawaii	112	615,947	32,758	1,269
Idaho	59	299,862	18,818	738
Montana	45	102,280	11,185	420
Arizona	34	108,812	11,034	354
<b>Total</b>	<b>6,233</b>	<b>110,309,553</b>	<b>2,318,054</b>	<b>76,117</b>
<b>% of U.S.</b>	<b>21%</b>	<b>21%</b>	<b>20%</b>	<b>20%</b>

**NAICS CODE 5133****5133 Telecommunications**

**5133 Description:** This industry group comprises establishments primarily engaged in operating, maintaining or providing access to facilities for the transmission of voice, data, text, and full motion picture video between network termination points and telecommunications reselling. Transmission facilities may be based on a single technology or a combination of technologies.

**Economic Census Trends- Employer Only, 1997.**

<b>NAICS 5133</b>	<b>2002</b>
Number of Establishments	49055
Receipts/Revenues (\$1,000)	\$ 411,807,701
Annual Payroll (\$1,000)	\$71,486,038
Employees	1427997
Average Payroll Per Job	\$50.06
Average Employment Per Establishment	29
Average Receipts/Revenue Per Establishment	\$8,394.82

**Top 10 States (NAICS 5133) – Employer Only, 1997.**

	<b>Establishments</b>	<b>Revenues (\$1000)</b>	<b>Annual payroll (\$1000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>30,012</b>	<b>\$ 260,500,898.00</b>	<b>\$ 47,459,520.00</b>	<b>1,010,389</b>
California	2,423	\$ 30,655,260.00	\$ 5,146,045.00	116,253
Texas	2,347	\$ 22,553,860.00	\$ 3,782,563.00	84,676
New York	1,838	\$ 20,955,510.00	\$ 4,283,122.00	77,420
Florida	1,770	\$ 15,356,031.00	\$ 2,396,346.00	54,361
Illinois	1,447	\$ 11,597,879.00	\$ 2,063,916.00	43,107
Pennsylvania	1,142	\$ 8,890,902.00	\$ 1,388,262.00	36,721
Ohio	1,106	\$ 8,603,825.00	\$ 1,353,410.00	29,560
Michigan	997	\$ 8,168,338.00	\$ 1,046,383.00	23,019
New Jersey	960	\$ 10,316,165.00	\$ 4,178,224.00	69,643
Georgia	924	\$ 10,162,504.00	\$ 2,177,786.00	46,481
<b>Total</b>	<b>14,954</b>	<b>\$ 147,260,274.00</b>	<b>\$ 27,816,057.00</b>	<b>581,241</b>
<b>% of U.S.</b>	<b>49.83%</b>	<b>56.53%</b>	<b>58.61%</b>	<b>57.53%</b>

**Western States (NAICS 5133) – Employer Only, 1997.**

	Establishments	Revenues (\$1000)	Annual Payroll (\$1000)	Paid Employees
<b>Total U.S.</b>	<b>30,012</b>	<b>\$260,500,898</b>	<b>47,459,520</b>	<b>1,010,389</b>
California	3,363	\$72,694,306	\$1,353,467	42,223
Washington	672	\$5,231,062	\$1,207,955	22,776
Colorado	663	\$6,566,320	\$1,721,397	32,707
Wyoming	103	D	D	(500-999)
Alaska	128	\$766,441	\$128,928	2,234
New Mexico	216	\$1,135,021	\$128,909	3,298
Nevada	169	\$1,041,284	\$144,416	3,144
Oregon	408	\$2,877,271	\$386,378	8,916
Utah	230	\$1,725,342	\$276,069	7,301
Hawaii	129	\$766,475	\$131,563	3,243
Idaho	164	\$749,519	\$105,495	2,337
Montana	173	\$642,150	\$69,239	1,873
Arizona	483	\$3,663,047	\$638,434	16,276
<b>Total</b>	<b>6,901</b>	<b>\$97,858,238</b>	<b>\$6,292,250</b>	<b>146,328</b>
<b>% of U.S.</b>	<b>23%</b>	<b>38%</b>	<b>13%</b>	<b>14%</b>

D= Disclosed Data

Does not include all data

**NAICS CODE 4249**

**4249 Miscellaneous Non-Durable Goods Merchant Wholesalers**

**4249 Description:** This industry group comprises establishments primarily engaged in the merchant wholesale distribution of nondurable goods, such as farm supplies; books, periodicals and newspapers; flowers; nursery stock; paints; varnishes; tobacco and tobacco products; and other miscellaneous nondurable goods, such as cut Christmas trees and pet supplies.

**Economic Census Trends- Employer Only, 2002.**

<b>NAICS 4249</b>	<b>2002</b>
Number of Establishments	33588
Receipts/Revenues (\$1,000)	\$221,514,304
Annual Payroll (\$1,000)	\$13,018,276
Employees	387567
Average Payroll Per Job	\$33.59
Average Employment Per Establishment	12
Average Receipts/Revenue Per Establishment	\$6,595.04

**Top 10 States (NAICS 4249) – Employer Only, 2002.**

	Establishments	Revenues (\$1000)	Annual payroll (\$1000)	Paid Employees
<b>Total U.S.</b>	<b>33,588</b>	<b>\$ 221,514,304.00</b>	<b>\$ 13,018,276.00</b>	<b>387,567</b>
California	5,044	\$ 22,323,892.00	\$ 1,847,104.00	54,000
Florida	2,905	\$ 11,568,416.00	\$ 691,939.00	23,358
New York	2,790	\$ 17,359,162.00	\$ 925,890.00	22,388
Texas	2,189	\$ 11,123,497.00	\$ 691,215.00	22,036
Illinois	1,535	\$ 16,870,449.00	\$ 985,953.00	28,806
New Jersey	1,200	D	D	(10k-24k)
Pennsylvania	1,096	\$ 7,979,873.00	\$ 484,505.00	15,541
Ohio	1,064	\$ 7,543,250.00	\$ 448,109.00	13,495
Georgia	1,058	D	D	(10k-24k)
North Carolina	852	\$ 7,736,163.00	\$ 427,170.00	10,504
<b>Total</b>	<b>19,733</b>	<b>102,504,702</b>	<b>6,501,885</b>	<b>190,128</b>
<b>% of U.S.</b>	<b>58.75%</b>	<b>46.27%</b>	<b>49.94%</b>	<b>49.06%</b>

D= Disclosed Data

Does not include all data

**Western States (NAICS 4249) – Employer Only, 2002.**

	Establishments	Revenues (\$1000)	Annual Payroll (\$1000)	Paid Employees
<b>Total U.S.</b>	<b>33,588</b>	<b>\$221,514,304</b>	<b>\$13,018,276</b>	<b>387,567</b>
California	5,044	\$22,323,892	\$1,847,104	54,000
Washington	822	D	D	(5000-9999)
Colorado	470	\$3,507,253	\$165,417	5,331
Wyoming	53	D	D	(250-499)
Alaska	33	D	D	(250-499)
New Mexico	146	D	D	(500-999)
Nevada	225	\$1,050,277	\$64,833	2,165
Oregon	461	\$2,470,834	\$167,941	5,584
Utah	220	D	D	(1000-2499)
Hawaii	191	D	D	(1000-2499)
Idaho	223	\$1,007,863	\$80,185	2,473
Montana	138	D	D	(1000-2499)
Arizona	482	D	D	(5000-9999)
<b>Total</b>	<b>8,508</b>	<b>\$30,360,119</b>	<b>\$2,325,480</b>	<b>69,553</b>
<b>% of U.S.</b>	<b>25%</b>	<b>14%</b>	<b>18%</b>	<b>18%</b>

D= Disclosed Data

Does not include all data

## NAICS CODE 2212

### **2212 Natural Gas Distribution**

**2212 Description:** This industry group comprises: (1) establishments primarily engaged in operating gas distribution systems (e.g., mains, meters); (2) establishments known as gas marketers that buy gas from the well and sell it to a distribution system; (3) establishments known as gas brokers or agents that arrange the sale of gas over gas distribution systems operated by others; and (4) establishments primarily engaged in transmitting and distributing gas to final consumers.

#### **Economic Census Trends- Employer Only, 2002.**

<b>NAICS 2212</b>	<b>2002</b>
Number of Establishments	2431
Receipts/Revenues (\$1,000)	\$71,827,233.00
Annual Payroll (\$1,000)	\$5,973,044.00
Employees	93068.00
Average Payroll Per Job	\$64.18
Average Employment Per Establishment	38
Average Receipts/Revenue Per Establishment	\$29,546.37

#### **Top 10 States (NAICS 2212) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1000)</b>	<b>Annual payroll (\$1000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>2,747</b>	<b>\$ 136,995,356.00</b>	<b>\$ 5,109,542.00</b>	<b>102,878</b>
Texas	451	\$ 50,459,390.00	\$ 1,003,564.00	18,386
Pennsylvania	152	\$ 24,904,114.00	\$ 333,149.00	6,820
Ohio	125	\$ 4,141,915.00	\$ 271,519.00	5,742
Nebraska	108	D	D	(1000-2499)
Colorado	95	\$ 2,353,037.00	\$ 104,378.00	2,027
Michigan	89	\$ 5,722,961.00	\$ 240,685.00	4,090
Louisiana	88	\$ 1,510,055.00	\$ 99,539.00	2,289
Illinois	86	\$ 3,775,567.00	\$ 289,289.00	5,590
North Carolina	79	\$ 1,046,389.00	\$ 117,858.00	2,898
Kentucky	77	\$ 2,664,003.00	\$ 54,596.00	1,183
<b>Total</b>	<b>1350</b>	<b>\$ 96,577,431.00</b>	<b>\$ 2,514,577.00</b>	<b>49025</b>
<b>% of U.S.</b>	<b>49.14%</b>	<b>70.50%</b>	<b>49.21%</b>	<b>47.65%</b>

D= Disclosed Data

Does not include all data

**Western States (NAICS 2122) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1000)</b>	<b>Annual Payroll (\$1000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>2,747</b>	<b>\$136,995,356</b>	<b>\$5,109,542</b>	<b>102,878</b>
California	3,363	\$72,694,306	\$1,353,467	42,223
Washington	19	\$276,402	\$21,470	443
Colorado	95	\$2,353,037	\$104,378	2,027
Wyoming	47	\$172,248	\$19,896	512
Alaska	7	D	D	(100-249)
New Mexico	18	\$120,597	\$17,093	380
Nevada	17	D	D	(1000-2499)
Oregon	21	D	D	(1000-2499)
Utah	13	D	D	(1000-2499)
Hawaii	NA	NA	NA	NA
Idaho	9	D	D	(250-499)
Montana	27	\$78,336	\$11,362	299
Arizona	41	D	D	(1000-2499)
<b>Total</b>	<b>3,677</b>	<b>\$75,694,926</b>	<b>\$1,527,666</b>	<b>45,884</b>
<b>% of U.S.</b>	<b>134%</b>	<b>55%</b>	<b>30%</b>	<b>45%</b>

D= Disclosed Data

Does not include all data

**NAICS CODE 5239**

**5239 Other Financial Investment Activities**

**5239 Description:** This industry group comprises establishments primarily engaged in one of the following: (1) acting as principals in buying or selling financial contracts (except investment bankers, securities dealers, and commodity contracts dealers); (2) acting as agents (i.e., brokers) (except securities brokerages and commodity contracts brokerages) in buying or selling financial contracts; or (3) providing other investment services (except securities and commodity exchanges), such as portfolio management; investment advice; and trust, fiduciary, and custody services.



**Economic Census Trends- Employer Only, 2002.**

<b>NAICS 5239</b>	<b>2002</b>
Number of Establishments	37118
Receipts/Revenues (\$1,000)	\$106,363,037.00
Annual Payroll (\$1,000)	\$35,034,255.00
Employees	336008.00
Average Payroll Per Job	\$104.27
Average Employment Per Establishment	9
Average Receipts/Revenue Per Establishment	\$2,865.54

**Top 10 States (NAICS 5239) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1000)</b>	<b>Annual payroll (\$1000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>37,510</b>		<b>D</b>	<b>(100,000+)</b>
California	5,493		D	(25k-49k)
New York	3,587		D	(50k-99k)
Texas	3,147		D	(10k-24k)
Florida	2,446		D	(10k-24k)
Illinois	1,785		D	(10k-24k)
Massachusetts	1,315		D	(25k-49k)
Pennsylvania	1,259		D	(25k-49k)
New Jersey	1,080		D	(10k-24k)
Colorado	994	\$ 613.37	\$ 590,819.00	6,711
Ohio	985	\$ 98.55	\$ 464,235.00	6,674
<b>Total</b>	<b>22,091</b>	<b>\$ 711.92</b>	<b>\$ 1,055,054.00</b>	<b>13,385</b>
<b>% of U.S.</b>	<b>58.89%</b>	<b>N.A.</b>	<b>N.A.</b>	<b>N.A.</b>

D= Disclosed Data Does not include all data  
N.A. = Information not available.

**Western States (NAICS 5239) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1000)</b>	<b>Annual Payroll (\$1000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>37,510</b>		<b>D</b>	<b>(100,000+)</b>
California	5,493		D	(25k-49k)
Washington	774	\$ 153.77	\$ 446,711.00	5,119
Colorado	994	\$ 613.37	\$ 590,819.00	6,711
Wyoming	79	\$ 265.01	\$ 16,041.00	262
Alaska	69		D	(250-499)
New Mexico	177		D	(500-999)
Nevada	963	\$ 157.01	\$ 81,102.00	1,740
Oregon	398	\$ 93.14	\$ 124,547.00	1,826
Utah	393		D	(1000-2499)
Hawaii	107		D	(250-499)
Idaho	171	\$ 57.57	\$ 13,539.00	328
Montana	106		D	(250-499)
Arizona	699		D	(2500-4999)
<b>Total</b>	<b>10,423</b>	<b>\$ 1,339.87</b>	<b>\$ 1,272,759.00</b>	<b>15,986</b>
<b>% of U.S.</b>	<b>28%</b>	N.A.	N.A.	N.A.

N.A. = Information not available.

**NAICS CODE 5419**

**5419 Other Professional, Scientific, and Technical Services**

**5419 Description:** This industry group comprises establishments engaged in professional, scientific, and technical services (except legal services; accounting, tax preparation, bookkeeping, and related services; architectural, engineering, and related services; specialized design services; computer systems design and related services; management, scientific, and technical consulting services; scientific research and development services; and advertising and related services).

**Economic Census Trends- Employer Only, 2002**

<b>NAICS 5419</b>	<b>2002</b>
Number of Establishments	67,198
Receipts/Revenues (\$1,000)	\$44,747,684
Annual Payroll (\$1,000)	\$14,738,247
Employees	530,003
Average Payroll Per Job	\$27,808
Average Employment Per Establishment	7.89
Average Receipts/Revenue Per Establishment	\$665,908

**Top 10 States (NAICS 5419) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>66,525</b>	<b>\$ 41,693,231</b>	<b>\$ 13,779,163</b>	<b>508,389</b>
California	7,601	\$ 5,596,411	\$ 1,752,675	58,439
New York	4,791	\$ 3,813,200	\$ 1,215,808	34,503
Florida	4,677	\$ 2,310,691	\$ 762,384	31,864
Texas	4,590	\$ 2,675,661	\$ 794,505	32,839
Illinois	3,106	\$ 2,442,694	\$ 866,568	27,102
Pennsylvania	2,425	\$ 1,970,572	\$ 633,674	21,487
Ohio	2,349	\$ 1,446,073	\$ 539,722	20,563
Michigan	2,072	\$ 1,095,848	\$ 367,526	14,502
New Jersey	1,992	\$ 1,705,134	\$ 632,387	17,280
Georgia	1,970	\$ 1,062,317	\$ 356,140	13,383
<b>Total</b>	<b>35,573</b>	<b>\$ 24,118,601</b>	<b>\$ 7,921,389</b>	<b>271,962</b>
<b>% of U.S.</b>	<b>53.47%</b>	<b>57.85%</b>	<b>57.49%</b>	<b>53.49%</b>

**Western States (NAICS 5419) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>66,525</b>	<b>\$41,693,231</b>	<b>\$13,779,163</b>	<b>508,389</b>
California	7,601	\$5,596,411	\$1,752,675	58,439
Washington	1,587	\$777,681	\$249,461	10,942
Colorado	1,554	\$679,128	\$231,848	9,460
New Mexico	352	\$165,634	\$53,227	2,408
Nevada	545	\$267,580	\$97,671	5,022
Oregon	990	\$517,353	\$180,570	7,887
Utah	540	\$218,403	\$77,259	5,588
Hawaii	250	\$112,994	\$36,206	1,918
Idaho	383	\$223,814	\$90,886	7,479
Montana	321	\$91,475	\$26,978	1,635
Alaska	117	\$52,451	\$19,052	851
Wyoming	178	\$56,425	\$15,614	934
Arizona	1,135	D	D	(5000-9999)
<b>Total</b>	<b>15,553</b>	<b>\$8,759,349</b>	<b>\$2,831,447</b>	<b>112,563</b>
<b>% of U.S.</b>	<b>23.38%</b>	<b>21.01%</b>	<b>20.55%</b>	<b>22.14%</b>

D= Disclosed Data

Does not include all data

**NAICS CODE 1112****1112 Vegetable and Melon Farming**

**1112 Description:** Vegetable and melon farming (1112). Comprises establishments primarily engaged in one or more of the following: (1) growing vegetables and/or melon crops, (2) producing vegetable and melon seeds, and (3) growing vegetable and/or melon bedding plants.

**Economic Census Trends- Employer Only, 2002.**

<b>NAICS 1112</b>	<b>2002</b>
Number of Farms U.S.	34,624

**NAICS CODE 5416****5416 Management, scientific, & technical consulting services**

**5416 Description:** This industry group includes establishments classified in the following industries: 54161, Management Consulting Services, 54162, Environmental Consulting Services, and 54169, Other Scientific and Technical Consulting Services.

**Economic Census Trends- Employer Only, 2002.**

<b>NAICS 5416</b>	<b>2002</b>
Number of Establishments	115,683
Receipts/Revenues (\$1,000)	\$103,554,137
Annual Payroll (\$1,000)	\$42,059,359
Employees	731,521
Average Payroll Per Job	\$57,496
Average Employment Per Establishment	6.32
Average Receipts/Revenue Per Establishment	\$895,154

**Top 10 States (NAICS 5416) - Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>116,159</b>	<b>\$ 104,451,814</b>	<b>\$ 42,824,709</b>	<b>738,675</b>
California	14,876	\$ 13,884,306	\$ 5,536,610	93,130
Florida	9,500	\$ 5,136,399	\$ 1,864,386	41,423
New York	8,263	\$ 8,585,667	\$ 3,730,703	56,033
Texas	7,722	\$ 7,324,174	\$ 3,015,281	51,494
Illinois	6,242	\$ 8,146,285	\$ 3,702,804	54,249
New Jersey	4,848	\$ 5,018,573	\$ 2,007,191	33,374
Pennsylvania	4,364	\$ 4,833,581	\$ 2,022,331	33,854
Virginia	4,078	\$ 5,511,424	\$ 2,586,431	41,410
Georgia	3,928	\$ 4,868,394	\$ 1,699,929	26,458
Ohio	3,665	\$ 2,971,187	\$ 1,200,397	22,934
<b>Total</b>	<b>67,486</b>	<b>\$ 66,279,990</b>	<b>\$ 27,366,063</b>	<b>454,359</b>
<b>% of U.S.</b>	<b>58.10%</b>	<b>63.46%</b>	<b>63.90%</b>	<b>61.51%</b>

**Western States (NAICS 5416) – Employer Only 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>116,159</b>	<b>\$105,451,814</b>	<b>\$42,824,709</b>	<b>738,675</b>
California	14,876	\$13,884,306	\$5,536,610	93,130
Washington	2,531	\$1,550,583	\$636,119	11,016
Colorado	3,197	\$2,143,282	\$862,414	16,728
New Mexico	520	\$273,453	\$110,790	2,416
Nevada	1,407	\$731,692	\$256,677	5,421
Oregon	1,324	\$685,869	\$272,558	5,290
Utah	1,143	\$615,357	\$239,635	6,308
Hawaii	307	\$151,165	\$53,741	1,317
Idaho	433	\$175,344	\$75,667	1,816
Montana	351	\$109,614	\$44,193	1,181
Alaska	190	\$120,287	\$47,607	897
Wyoming	214	\$70,361	\$23,260	689
Arizona	2,416	\$1,457,423	\$492,252	10,285
<b>Total</b>	<b>28,909</b>	<b>\$21,968,736</b>	<b>\$8,651,523</b>	<b>156,494</b>
<b>% of U.S.</b>	<b>24.89%</b>	<b>20.83%</b>	<b>20.20%</b>	<b>21.19%</b>

<b>NAICS 5416: Management, Scientific, and Technical Consulting Service; Relocation/Expansion Decision Factors.</b>				
	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
<b>Physical Infrastructure</b>				
Access within 30 minutes to an interstate highway	27.91%	20.93%	13.95%	37.21%
Access within 30 minutes to package freight services	30.23%	16.28%	18.60%	34.88%
Immediate access to railhead or rail spur	0.00%	4.76%	2.38%	92.86%
Access within 30 minutes to rail freight	0.00%	4.65%	2.33%	93.02%
Access within 30 minutes to passenger air services	34.88%	18.60%	16.28%	30.23%
Access within 30 minutes to port or harbor facilities	0.00%	4.65%	2.33%	93.02%
Access within one day, at a reasonable cost, to the supplies you need	37.21%	27.91%	13.95%	20.93%
Access within one day, at a reasonable cost, to your customers	43.90%	21.95%	2.44%	31.71%
Access to 3-phase electric power	18.60%	16.28%	13.95%	51.16%
Access to natural gas pipeline	9.30%	4.65%	16.28%	69.77%
Access within 30 minutes to an international trade port	0.00%	6.98%	6.98%	86.05%
Access to fiber optic lines	30.23%	13.95%	23.26%	32.56%
Availability of high-volume water supply	6.98%	9.30%	13.95%	69.77%
Availability of high-volume wastewater disposal	2.33%	6.98%	6.98%	83.72%
Availability of solid waste disposal	4.76%	9.52%	9.52%	76.19%
Availability of satellite transmission**	12.20%	19.51%	14.63%	53.66%
Availability of high speed internet access	78.05%	12.20%	7.32%	2.44%
Availability of local public transportation	11.63%	30.23%	11.63%	46.51%
Access to ponds and streams	4.88%	0.00%	7.32%	87.80%
Possibility for future expansion at site	13.95%	32.56%	25.58%	27.91%
	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
<b>Economic Infrastructure</b>				
Availability of a managerial workforce	11.63%	34.88%	27.91%	25.58%
Availability of a skilled workforce	30.23%	39.53%	16.28%	13.95%
Availability of a technical workforce	30.23%	34.88%	16.28%	18.60%
Availability of an unskilled workforce	0.00%	6.98%	16.28%	76.74%
Favorable local labor costs	16.67%	42.86%	16.67%	23.81%
Favorable workers compensation tax rate	20.93%	30.23%	23.26%	25.58%
Favorable local business tax rates	23.26%	48.84%	18.60%	9.30%
Availability of specialized job training programs	9.30%	18.60%	20.93%	51.16%
Availability of short- and long-term financing	11.63%	25.58%	30.23%	32.56%
	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
<b>Quality of Life</b>				
Low crime rate	41.86%	44.19%	9.30%	4.65%
Availability of affordable housing	32.56%	44.19%	11.63%	11.63%
High environmental quality	30.95%	45.24%	14.29%	9.52%
Outdoor recreational opportunities	21.43%	42.86%	16.67%	19.05%
Social and cultural opportunities	20.93%	41.86%	25.58%	11.63%
Retail shopping opportunities	13.95%	34.88%	30.23%	20.93%
Quality of educational system (K-12)	55.81%	25.58%	6.98%	11.63%
Access within 30 minutes to college or university	23.26%	37.21%	20.93%	18.60%
Availability of quality health care	39.53%	46.51%	9.30%	4.65%
Availability of public safety services (e.g. police, fire station)	37.21%	41.86%	13.95%	6.98%
Ease of attracting skilled workers	24.39%	46.34%	17.07%	12.20%

<b>NAICS 5416: Management, Scientific, and Technical Consulting Service; Sources Used to Find Locations.</b>		
	<b>Yes</b>	<b>No</b>
Radio	33.33%	66.67%
Newspapers	77.78%	22.22%
Trade publications	77.78%	22.22%
Chamber of Commerce	83.33%	16.67%
Economic development agencies	66.67%	33.33%
Real estate agent	66.67%	33.33%
Internet	94.44%	5.56%
Word of mouth	100.00%	0.00%
Experience from previous travel	66.67%	33.33%

<b>NAICS 5416: Management, Scientific, and Technical Consulting Service; Sources Used to Find Locations.</b>		
	<b>Not Provided</b>	<b>Provided</b>
Health Insurance	30.23%	69.77%
Paid Vacation	16.28%	83.72%
Job-related training programs	11.63%	88.37%
A retirement plan with employer contributions	51.16%	48.84%
	<b>Yes</b>	<b>No</b>
Has your company relocated or expanded in the last 5 years?	46.51%	53.49%
If your company were to relocate or expand to an additional location in the next five years, what is your best estimate of the <b>total acres</b> of property you would need in the new location?		
Less than 1 acre		72.22%
1-3 Acres		16.67%
4-5 Acres		5.56%
Over 5 Acres		5.56%
Don't Know		0.00%
If your company were to relocate or expand to an additional location in the next 5 years, what is your best estimate of the <b>total amount of building space</b> in square feet you would need?		
Less than 10,000 sq. ft.		61.11%
10,001-25,000 sq. ft.		27.78%
25,001-50,000 sq. ft.		5.56%
50,001-75,000 sq. ft.		0.00%
75,001-100,000 sq. ft.		0.00%
Over 100,000 sq. ft.		5.56%
Don't Know		0.00%
In your best estimate, what would be the total annual sales or revenue at this location when things are fully operational?		
Less than 1 million dollars per year		22.22%
1 million to 2 million dollars per year		33.33%
2 million to 3 million dollars per year		0.00%
3 million to 5 million dollars per year		22.22%
5 million to 10 million dollars per year		5.56%
Over 10 million dollars per year		11.11%
Don't Know		5.56%

## **NAICS CODE 6214**

### **6214 Outpatient Care Centers**

**6214 Description:** This NAICS industry group includes establishments classified in the following NAICS industries: 62141, Family Planning Centers; 62142, Outpatient Mental Health and Substance Abuse Centers; and 62149, Other Outpatient Care Centers.

#### **Economic Census Trends- Employer Only, 2002.**

<b>NAICS 6214</b>	<b>2002</b>
Number of Establishments	25,556
Receipts/Revenues (\$1,000)	\$55,905,403
Annual Payroll (\$1,000)	\$20,491,279
Employees	584,152
Average Payroll Per Job	\$35,079
Average Employment Per Establishment	22.86
Average Receipts/Revenue Per Establishment	\$2,187,565

#### **Top 10 States (NAICS 6214) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>25,750</b>	<b>54,818,719</b>	<b>20,810,601</b>	<b>590,144</b>
California	2,843	6,098,258	1,990,173	56,712
Florida	1,704	3,313,767	1,033,838	32,139
Texas	1,677	3,314,119	1,067,444	31,093
New York	1,441	3,336,929	1,457,918	39,309
Pennsylvania	1,206	2,395,036	1,021,897	30,672
Ohio	992	1,972,924	733,482	23,072
Illinois	944	1,851,316	662,660	20,476
Michigan	830	1,385,655	595,549	16,408
New Jersey	685	1,227,044	488,015	13,555
Georgia	680	1,709,927	667,692	17,085
<b>Total</b>	<b>13,002</b>	<b>\$ 26,604,975</b>	<b>\$ 9,718,668</b>	<b>280,521</b>
<b>% of U.S.</b>	<b>50.49%</b>	<b>48.53%</b>	<b>46.70%</b>	<b>47.53%</b>



**Western States (NAICS 6214) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>25,750</b>	<b>54,818,719</b>	<b>20,810,601</b>	<b>590,144</b>
California	2,843	6,098,258	1,990,173	56,712
Washington	654	1,948,593	704,804	19,855
Colorado	556	1,302,008	418,994	12,413
New Mexico	205	289,894	120,910	3,971
Nevada	182	269,274	92,922	2,451
Oregon	339	765,943	310,081	9,270
Utah	174	221,362	82,580	2,876
Hawaii	106	393,909	162,261	4,166
Idaho	125	146,573	51,837	1,613
Montana	143	147,710	65,769	2,223
Alaska	79	346,298	125,138	3,697
Wyoming	71	45,082	20,289	823
Arizona	514	1,191,899	474,771	11,545
<b>Total</b>	<b>5,991</b>	<b>13,166,803</b>	<b>4,620,529</b>	<b>131,615</b>
<b>% of U.S.</b>	<b>23.27%</b>	<b>24.02%</b>	<b>22.20%</b>	<b>22.30%</b>

<b>NAICS 6214: Outpatient Care Center, Relocation/Expansion Decision Factors.</b>				
	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
<b>Physical Infrastructure</b>				
Access within 30 minutes to an interstate highway	40.54%	10.81%	10.81%	37.84%
Access within 30 minutes to package freight services	10.81%	18.92%	18.92%	51.35%
Immediate access to railhead or rail spur	0.00%	2.70%	2.70%	94.59%
Access within 30 minutes to rail freight	0.00%	0.00%	0.00%	100.00%
Access within 30 minutes to passenger air services	10.81%	2.70%	21.62%	64.86%
Access within 30 minutes to port or harbor facilities	2.70%	0.00%	0.00%	97.30%
Access within one day, at a reasonable cost, to the supplies you need	21.62%	29.73%	29.73%	18.92%
Access within one day, at a reasonable cost, to your customers	27.03%	29.73%	16.22%	27.03%
Access to 3-phase electric power	27.03%	24.32%	8.11%	40.54%
Access to natural gas pipeline	2.70%	8.11%	13.51%	75.68%
Access within 30 minutes to an international trade port	0.00%	0.00%	0.00%	100.00%
Access to fiber optic lines	37.84%	21.62%	8.11%	32.43%
Availability of high-volume water supply	13.51%	10.81%	16.22%	59.46%
Availability of high-volume wastewater disposal	10.81%	8.11%	16.22%	64.86%
Availability of solid waste disposal	18.92%	8.11%	8.11%	64.86%
Availability of satellite transmission**	13.51%	2.70%	10.81%	72.97%
Availability of high speed internet access	70.27%	18.92%	2.70%	8.11%
Availability of local public transportation	35.14%	29.73%	13.51%	21.62%
Access to ponds and streams	2.70%	0.00%	2.70%	94.59%
Possibility for future expansion at site	16.22%	35.14%	32.43%	16.22%
<b>Economic Infrastructure</b>				
Availability of a managerial workforce	18.92%	37.84%	21.62%	21.62%
Availability of a skilled workforce	45.95%	29.73%	10.81%	13.51%
Availability of a technical workforce	37.84%	24.32%	13.51%	24.32%
Availability of an unskilled workforce	5.41%	10.81%	18.92%	64.86%
Favorable local labor costs	29.73%	29.73%	18.92%	21.62%
Favorable workers compensation tax rate	32.43%	45.95%	16.22%	5.41%
Favorable local business tax rates	24.32%	37.84%	21.62%	16.22%
Availability of specialized job training programs	18.92%	18.92%	27.03%	35.14%
Availability of short- and long-term financing	16.22%	24.32%	29.73%	29.73%
<b>Quality of Life</b>				
Low crime rate	48.65%	32.43%	16.22%	2.70%
Availability of affordable housing	35.14%	32.43%	13.51%	18.92%
High environmental quality	37.84%	27.03%	21.62%	13.51%
Outdoor recreational opportunities	27.03%	27.03%	16.22%	29.73%
Social and cultural opportunities	13.51%	29.73%	29.73%	27.03%
Retail shopping opportunities	8.11%	21.62%	29.73%	40.54%
Quality of educational system (K-12)	48.65%	16.22%	16.22%	18.92%
Access within 30 minutes to college or university	35.14%	24.32%	10.81%	29.73%
Availability of quality health care	67.57%	18.92%	8.11%	5.41%
Availability of public safety services (e.g. police, fire station)	48.65%	37.84%	13.51%	0.00%
Ease of attracting skilled workers	45.95%	32.43%	13.51%	8.11%

<b>NAICS 6214: Outpatient Care Center, Sources Used to Find Locations.</b>		
	<b>Yes</b>	<b>No</b>
Radio	33.33%	66.67%
Newspapers	73.33%	26.67%
Trade publications	46.67%	53.33%
Chamber of Commerce	86.67%	13.33%
Economic development agencies	80.00%	20.00%
Real estate agent	73.33%	26.67%
Internet	86.67%	13.33%
Word of mouth	100.00%	0.00%
Experience from previous travel	33.33%	66.67%

<b>NAICS 6214: Outpatient Care Center, Sources Used to Find Locations.</b>		
	<b>Not Provided</b>	<b>Provided</b>
Health Insurance	89.19%	10.81%
Paid Vacation	97.30%	2.70%
Job-related training programs	81.08%	18.92%
A retirement plan with employer contributions	64.86%	35.14%
	<b>Yes</b>	<b>No</b>
Has your company relocated or expanded in the last 5 years?	67.57%	32.43%
If your company were to relocate or expand to an additional location in the next five years, what is your best estimate of the <b>total acres</b> of property you would need in the new location?		
Less than 1 acre		40.00%
1-3 Acres		33.33%
4-5 Acres		13.33%
Over 5 Acres		13.33%
Don't Know		0.00%
If your company were to relocate or expand to an additional location in the next 5 years, what is your best estimate of the <b>total amount of building space</b> in square feet you would need?		
Less than 10,000 sq. ft.		20.00%
10,001-25,000 sq. ft.		33.33%
25,001-50,000 sq. ft.		6.67%
50,001-75,000 sq. ft.		6.67%
75,001-100,000 sq. ft.		0.00%
Over 100,000 sq. ft.		0.00%
Don't Know		33.33%
In your best estimate, what would be the total annual sales or revenue at this location when things are fully operational?		
Less than 1 million dollars per year		46.67%
1 million to 2 million dollars per year		26.67%
2 million to 3 million dollars per year		0.00%
3 million to 5 million dollars per year		6.67%
5 million to 10 million dollars per year		0.00%
Over 10 million dollars per year		0.00%
Don't Know		20.00%

**NAICS CODE 6215****6215 Medical & diagnostic laboratories**

**6215 Description:** This industry comprises establishments known as medical and diagnostic laboratories primarily engaged in providing analytic or diagnostic services, including body fluid analysis and diagnostic imaging, generally to the medical profession or to the patient on referral from a health practitioner.

**Economic Census Trends – Employer Only, 2002.**

<b>NAICS 6215</b>	<b>2002</b>
Number of Establishments	11,090
Receipts/Revenues (\$1,000)	\$28,860,583
Annual Payroll (\$1,000)	\$9,083,198
Employees	205,631
Average Payroll Per Job	\$44,172
Average Employment Per Establishment	18.54
Average Receipts/Revenue Per Establishment	\$2,602,397

**Top 10 States (NAICS 6215) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>11,079</b>	<b>\$ 28,409,347</b>	<b>\$ 8,967,166</b>	<b>203,261</b>
California	1,903	\$ 3,943,177	\$ 1,283,519	28,945
Florida	1,036	\$ 2,141,422	\$ 607,220	13,583
New York	839	\$ 2,190,323	\$ 712,981	14,397
Texas	812	\$ 2,098,670	\$ 619,436	15,467
Pennsylvania	478	\$ 1,400,226	\$ 426,114	10,099
New Jersey	414	\$ 1,798,018	\$ 482,755	9,856
Ohio	377	\$ 751,381	\$ 236,864	5,620
Illinois	352	\$ 924,759	\$ 313,011	7,136
Maryland	272	\$ 846,124	\$ 221,386	5,487
North Carolina	272	\$ 598,397	\$ 208,578	4,153
<b>Total</b>	<b>6,755</b>	<b>\$ 16,692,497</b>	<b>\$ 5,111,864</b>	<b>114,743</b>
<b>% of U.S.</b>	<b>60.97%</b>	<b>58.76%</b>	<b>57.01%</b>	<b>56.45%</b>

**Western States (NAICS 6215) – Employer Only, 2002.**

	<b>Establishments</b>	<b>Revenues (\$1,000)</b>	<b>Annual Payroll (\$1,000)</b>	<b>Paid Employees</b>
<b>Total U.S.</b>	<b>11,079</b>	<b>28,409,347</b>	<b>8,967,166</b>	<b>203,261</b>
California	1,903	3,943,177	1,283,519	28,945
Washington	220	773,653	281,439	6,058
Colorado	134	368,229	101,191	2,534
New Mexico	73	174,117	52,553	1,287
Nevada	100	406,246	133,268	3,422
Oregon	104	247,760	96,125	2,075
Utah	58	273,497	97,553	2,451
Hawaii	36	151,388	58,821	1,459
Idaho	46	85,736	23,498	606
Montana	22	9,897	3,698	97
Alaska	20	28,083	7,967	148
Wyoming	32	36,170	16,978	465
Arizona	262	652,663	200,302	4,966
<b>Total</b>	<b>3,010</b>	<b>7,150,616</b>	<b>2,356,912</b>	<b>54,513</b>
<b>% of U.S.</b>	<b>27.17%</b>	<b>25.17%</b>	<b>26.28%</b>	<b>26.82%</b>

<b>NAICS 6215: Medical and Diagnostic Laboratories, Relocation/Expansion Decision Factors.</b>				
	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
<b>Physical Infrastructure</b>				
Access within 30 minutes to an interstate highway	42.42%	21.21%	18.18%	18.18%
Access within 30 minutes to package freight services	48.48%	21.21%	9.09%	21.21%
Immediate access to railhead or rail spur	0.00%	3.13%	6.25%	90.63%
Access within 30 minutes to rail freight	0.00%	3.03%	3.03%	93.94%
Access within 30 minutes to passenger air services	27.27%	9.09%	21.21%	42.42%
Access within 30 minutes to port or harbor facilities	3.03%	0.00%	3.03%	93.94%
Access within one day, at a reasonable cost, to the supplies you need	39.39%	30.30%	6.06%	24.24%
Access within one day, at a reasonable cost, to your customers	33.33%	39.39%	6.06%	21.21%
Access to 3-phase electric power	54.55%	18.18%	0.00%	27.27%
Access to natural gas pipeline	18.18%	15.15%	12.12%	54.55%
Access within 30 minutes to an international trade port	0.00%	0.00%	9.09%	90.91%
Access to fiber optic lines	30.30%	24.24%	21.21%	24.24%
Availability of high-volume water supply	9.09%	15.15%	9.09%	66.67%
Availability of high-volume wastewater disposal	0.00%	15.15%	12.12%	72.73%
Availability of solid waste disposal	18.18%	21.21%	9.09%	51.52%
Availability of satellite transmission**	9.09%	18.18%	24.24%	48.48%
Availability of high speed internet access	78.79%	15.15%	6.06%	0.00%
Availability of local public transportation	12.12%	27.27%	18.18%	42.42%
Access to ponds and streams	0.00%	0.00%	3.03%	96.97%
Possibility for future expansion at site	18.18%	45.45%	18.18%	18.18%
<b>Economic Infrastructure</b>				
Availability of a managerial workforce	18.18%	45.45%	15.15%	21.21%
Availability of a skilled workforce	39.39%	48.48%	12.12%	0.00%
Availability of a technical workforce	54.55%	27.27%	9.09%	9.09%
Availability of an unskilled workforce	6.06%	6.06%	21.21%	66.67%
Favorable local labor costs	39.39%	24.24%	15.15%	21.21%
Favorable workers compensation tax rate	39.39%	39.39%	6.06%	15.15%
Favorable local business tax rates	36.36%	36.36%	6.06%	21.21%
Availability of specialized job training programs	15.15%	18.18%	12.12%	54.55%
Availability of short- and long-term financing	18.18%	24.24%	27.27%	30.30%
<b>Quality of Life</b>				
Low crime rate	39.39%	45.45%	15.15%	0.00%
Availability of affordable housing	24.24%	48.48%	18.18%	9.09%
High environmental quality	30.30%	48.48%	12.12%	9.09%
Outdoor recreational opportunities	12.12%	39.39%	18.18%	30.30%
Social and cultural opportunities	9.09%	36.36%	30.30%	24.24%
Retail shopping opportunities	15.15%	30.30%	21.21%	33.33%
Quality of educational system (K-12)	51.52%	24.24%	9.09%	15.15%
Access within 30 minutes to college or university	18.18%	39.39%	21.21%	21.21%
Availability of quality health care	66.67%	33.33%	0.00%	0.00%
Availability of public safety services (e.g. police, fire station)	60.61%	30.30%	6.06%	3.03%
Ease of attracting skilled workers	51.52%	36.36%	3.03%	9.09%

<b>NAICS 6215: Medical and Diagnostic Laboratories, Sources Used to Find Locations.</b>		
	<b>Yes</b>	<b>No</b>
Radio	20.00%	80.00%
Newspapers	80.00%	20.00%
Trade publications	86.67%	13.33%
Chamber of Commerce	66.67%	33.33%
Economic development agencies	66.67%	33.33%
Real estate agent	66.67%	33.33%
Internet	93.33%	6.67%
Word of mouth	100.00%	0.00%
Experience from previous travel	33.33%	66.67%

<b>NAICS 6215: Medical and Diagnostic Laboratories, Miscellaneous Industry Information.</b>		
	<b>Not Provided</b>	<b>Provided</b>
Health Insurance	93.94%	6.06%
Paid Vacation	96.88%	3.13%
Job-related training programs	84.85%	15.15%
A retirement plan with employer contributions	78.79%	21.21%
	<b>Yes</b>	<b>No</b>
Has your company relocated or expanded in the last 5 years?	72.73%	27.27%
If your company were to relocate or expand to an additional location in the next five years, what is your best estimate of the <b>total acres</b> of property you would need in the new location?		
Less than 1 acre	40.00%	
1-3 Acres	33.33%	
4-5 Acres	0.00%	
Over 5 Acres	13.33%	
Don't Know	13.33%	
If your company were to relocate or expand to an additional location in the next 5 years, what is your best estimate of the <b>total amount of building space</b> in square feet you would need?		
Less than 10,000 sq. ft.	53.33%	
10,001-25,000 sq. ft.	13.33%	
25,001-50,000 sq. ft.	0.00%	
50,001-75,000 sq. ft.	6.67%	
75,001-100,000 sq. ft.	0.00%	
Over 100,000 sq. ft.	6.67%	
Don't Know	20.00%	
In your best estimate, what would be the total annual sales or revenue at this location when things are fully operational?		
Less than 1 million dollars per year	20.00%	
1 million to 2 million dollars per year	33.33%	
2 million to 3 million dollars per year	6.67%	
3 million to 5 million dollars per year	20.00%	
5 million to 10 million dollars per year	6.67%	
Over 10 million dollars per year	0.00%	
Don't Know	13.33%	