

**AN ASSESSMENT OF THE EMPLOYMENT AND INCOME
IMPACTS OF THE PRIMARY METALS INDUSTRY IN WASCO
AND KLICKITAT COUNTIES**

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for:

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ATTACHMENTS

- A-1: WASCO COUNTY OUTPUT IMPACT (\$)
- A-2: KLICKITAT COUNTY OUTPUT IMPACT (\$)

- B-1: WASCO COUNTY EMPLOYMENT IMPACT (NO.)
- B-2: KLICKITAT COUNTY EMPLOYMENT IMPACT (NO.)

- C-1: WASCO COUNTY TOTAL VALUE ADDED IMPACT (\$)
- C-2: KLICKITAT COUNTY TOTAL VALUE ADDED IMPACT (\$)

- D-1: WASCO COUNTY EMPLOYEE COMPENSATION IMPACT (\$)
- D-2: KLICKITAT COUNTY EMPLOYEE COMPENSATION IMPACT (\$)

- E-1: WASCO COUNTY OTHER VALUE ADDED IMPACT (\$)
- E-2: KLICKITAT COUNTY OTHER VALUE ADDED IMPACT (\$)

1. INTRODUCTION

The Northern Wasco County People's Utility District (PUD) asked Mid-Columbia Economic Development District (MCEDD) to analyze the potential impacts of aluminum plant(s) closures in the Klickitat and Wasco Counties, specifically focusing on the employment and value-added effects. This report summarizes our findings.

This report begins with an overview of the types and definition of the data that have been compiled and the method of analysis for assessing countywide impacts of potential plant closures. The basic employment and wage and salary data for the analysis have been provided by the two aluminum plants, with additional data extracted from County Business Patterns, Bureau of Economic Analysis, Bureau of Labor Statistics, Oregon and Washington Employment Departments and IMPLAN.

Government data made available to the public is subject to non-disclosure rules. This applies when data reported may disclose the operations of a single firm and is most likely at the county level. Estimates of employment and value-added figures for all industries, except for the aluminum industries have relied on published data made available through state and federal organizations. Published data covering the period between 1990 and 1997 have been used to interpolate employment and wage and salary and other value added figures for 1999. The employment and wage and salary figures for 1999 for the two aluminum plants have been provided by the plants themselves. Data other than employment and wage and salaries associated with the aluminum industry have been estimated by MCEDD.

The study has applied the input-output analysis (IMPLAN) as a means of examining relationships within an economy both between businesses and between businesses and final consumers. It captures all monetary market transactions for consumption in a given time period. The resulting mathematical formulae allow one to examine the effects of a change in one or several economic activities on an entire economy (impact analysis).

1.1 Executive Summary

Northwest Aluminum Company (Northwest) in The Dalles, Oregon and Goldendale Aluminum Company (Goldendale) near Goldendale, Washington have indicated that proposed changes in the supply and rates for electricity from the Bonneville Power Administration could force them to close all or part of their operations the next time aluminum prices are low. This independent study was prepared by the Mid-Columbia Economic Development District (MCEDD) for Northern Wasco County People's Utility District to assess the employment and income impacts of the Northwest and Goldendale aluminum plants on Wasco and Klickitat counties.

Goldendale and Northwest play critical roles in the economic health of the mid-Columbia region. The companies are the largest employers in both Klickitat and Wasco counties. Both are highly productive industries that produce far more than their share (in proportion to their percentage of the total workforce) of output sales, wages and salaries, and total value added in the counties. Because of this, they also have a very large indirect impact on other jobs and income in the counties.

MCEDD's study shows that the aluminum industry has the following significant direct impacts:

- The two plants employ a total of 1,225 highly paid workers --700 in Klickitat County and 525 in Wasco County. This represents 7.7% of Klickitat's and 4.3% of Wasco County's total employment.
- The employees of Northwest and Goldendale are highly paid. They earn an average of \$61,633 in wages, salaries and benefits. This is more than 240% of the average employee compensation of \$25,669 in the two counties. This is 203% of the average employee compensation in the state of Oregon and 189% of the average in Washington.
- The two plants represent a disproportionately large share of the total output in the region. The direct value of their production of \$351.5 million is 17.5% of the total industrial production in the region, 21.0% in Klickitat County and 14.4% in Wasco County.

MCEDD's analysis also shows that Northwest and Goldendale Aluminum Companies have very significant indirect impacts on the counties:

- The direct employment at the two plants of 1,225 generates additional indirect employment for 1,826 other people in retail trade, health services, wholesale trade, state and local governments, transportation, construction, and other industries in the two counties. This means that 3,051 employees in Klickitat and Wasco Counties are dependent upon the two aluminum plants --1,225 directly and another 1,826 indirectly.
- The "employment multiplier" within just Klickitat and Wasco Counties is 2.5 total jobs for every 1 direct job. Since some of the economic benefits of the aluminum plants are shared

outside our region, the total employment multiplier for Oregon and Washington is in excess of 3.2, or over 3,920 total jobs dependent upon Northwest Aluminum and Goldendale Aluminum.

- The indirect additional output generated in supportive economic activities to service the needs of the aluminum plants and their employees is \$142.2 million per year --\$80.4 million in Klickitat and \$61.8 million in Wasco County.

The importance of the aluminum industry in Klickitat and Wasco Counties becomes apparent when the direct, indirect and induced economic impacts are combined. A loss of just one aluminum plant job results in:

- 2.5 total jobs lost.
- \$402,974 of total output (production) lost.
- \$91,976 total wages and salary lost.
- \$173,953 total value-added lost.

Because of the dominant role of Northwest and Goldendale Aluminum Companies in the mid-Columbia region, full or even partial closure of the plants would have a devastating impact on Wasco and Klickitat Counties:

| Impacts | County | Partial Plant Closure | | Full Plant Closure | |
|-----------------------------------|-----------|-----------------------|-------|--------------------|-------|
| | | Direct | Total | Direct | Total |
| Employment (No.) | Klickitat | 350 | 848 | 700 | 1,697 |
| | Wasco | 263 | 677 | 525 | 1,354 |
| | Both | 613 | 1,525 | 1,225 | 3,051 |
| Employee Compensation (\$million) | Klickitat | 22.0 | 32.4 | 44.0 | 64.9 |
| | Wasco | 15.5 | 23.9 | 31.0 | 47.9 |
| | Both | 37.5 | 56.3 | 75.0 | 112.8 |
| Total Value Added (\$million) | Klickitat | 40.1 | 61.8 | 80.2 | 123.4 |
| | Wasco | 28.5 | 45.5 | 57.0 | 90.1 |
| | Both | 68.6 | 107.3 | 137.2 | 213.5 |
| Output (\$million) | Klickitat | 100.4 | 140.6 | 200.9 | 281.3 |
| | Wasco | 75.4 | 106.3 | 150.7 | 212.5 |
| | Both | 175.8 | 246.9 | 351.6 | 493.8 |

Representative short- and medium-term effects of full plant closure in Wasco County would include the following:

- The unemployment rate would immediately jump from its current rate of 7.8% to 12.1%, and eventually increase to 19.0% as indirect jobs are lost. Estimates of job losses in other industries include 215 jobs in retail trade, 101 in health services, 73 in wholesale trade, 66 in state and local government other than education, 30 in transportation, 28 in construction, etc.
- Total wages, salaries and benefits would immediately decrease by \$31 million, and eventually by \$47.9 million. This represents a 16.1% loss in the total employee compensation in the county.

Representative short- and medium-term effects of full plant closure in Klickitat County would include the following:

- The unemployment rate would immediately jump from its current rate of 10.8% to 18.9%, and eventually increase to 30.3% as indirect jobs are lost. Estimates of job losses in other industries include 183 jobs in retail trade, 76 jobs in health services, 146 jobs in wholesale trade, 94 jobs in state and local government other than education, 59 in transportation, 47 in construction, etc.
- Total wages, salaries and benefits would immediately decrease by \$44 million, and eventually by \$64.9 million. This represents a 26.5% loss in the total employee compensation in the county.

These impacts of potential plant closure are especially serious because Klickitat and Wasco Counties already have much higher unemployment rates and much lower wages, salaries and family incomes than other parts of Washington and Oregon. The unemployment rate in Wasco County is 152% of the average unemployment rate in the Pacific Northwest. In Klickitat County it is 210%. The median family income in Wasco County is \$36,400 as compared to a median family income of \$45,100 in Oregon as a whole. The median family income in Klickitat County is \$36,840 as compared to a median family income of \$51,600 in Washington State. Corrected for inflation, real incomes in terms of buying power have declined significantly in both Wasco and Klickitat Counties over the last ten years. These counties clearly have not shared in the recent economic prosperity enjoyed in most of the Pacific Northwest. The notable positive exceptions in Klickitat and Wasco have been generated by Goldendale and Northwest Aluminum Companies.

Goldendale Aluminum and Northwest Aluminum have been excellent corporate citizens in the mid-Columbia. Their stable employment, much higher than average wages and benefits, high production output, and high value-added contributions have been the economic mainstays of Klickitat and Wasco Counties. The potential loss of these two critical employers because of changes in the supply and rates for electricity from the Bonneville Power Administration would have a devastating impact on our mid-Columbia economy and region.

2. COUNTY LEVEL DATABASE COMPONENTS

The local economic data in an IMPLAN database can be divided into three main categories or components. These components are:

- A. Industry Output,
- B. Employment, and
- C. Value Added.

2.1 Industry Output and Employment

Industry output is a single number in dollars or millions of dollars for each industry. The dollars represent the value of an industry's total production or sales. The original source data used by IMPLAN are derived from a number of sources, such as the Census of Manufactures and Census of Wholesale Trade and state and trade publications.

Employment is listed as a single number of jobs for each industry. Data comes from the aluminum plants in Wasco and Klickitat Counties, ES202 employment security data supplemented by county business patterns and REIS data. All IMPLAN databases include both full-time and part-time workers and self-employed persons in employment estimates.

2.2 Value Added

There are four sub-components for value added. These are:

- A. Employee Compensation,
- B. Proprietary Income,
- C. Other Property Type Income, and
- D. Indirect Business Taxes.

Total Value Added is the sum of these four components (A+B+C+D).

In this study the estimates will focus on Employee Compensation (A), Other Value Added (B+C+D) and Total Value Added.

Employee compensation describes the total payroll costs, including benefits, of each industry in a region. It includes the wages and salaries of workers who are paid by employers, as well as benefits such as health and life insurance, retirement payments, and non-cash compensation. Employee compensation is derived from each industry from the aluminum plants in Wasco and

Klickitat Counties for primary metals, and ES202 and REIS for all other industries data. The IMPLAN data which forms the basis of this study are corrected for employees not covered by the ES202.

Other Value Added consists of three components.

1. **Proprietary Income** consists of payments received by self-employed individuals as income. Any income a person receives for payments of self-employed work reported on Federal Tax Form is counted here. This includes income received by private business owners, doctors, lawyers and so forth. Any income a person receives for payment of self-employed work is counted here.
2. **Other Property Type Income** consists of income from rents, royalties, and dividends. Payments to individuals in the form of rents received on property, royalties from contracts, and dividends paid by corporations are included here as well as corporate profits earned by corporations. Other property type income numbers are derived from U.S. Bureau of Economic Analysis Gross State Product data. This also includes corporate profits earned by corporations.
3. **Indirect Business Taxes** consists primarily of excise taxes and/or sales taxes paid by individuals to businesses. These taxes occur during the normal operation of businesses but do not include taxes on profits or income. Indirect business tax numbers are derived from U.S. Bureau of Economic Analysis Gross State Product.

3. IMPACT ANALYSIS

Economic impact analysis involves an assessment of change in overall economic activity as a result of some change in one or several economic activities. The current impact analysis involves changes in the employment numbers in the primary metals industries in Klickitat and Wasco Counties and the direct, indirect and induced effects of those changes on each of the other industries, individually and cumulatively.

Direct effect represents the first round changes in output, employment and value added (e.g. change in output which directly affects employment and value added) for a given industry as a consequence in change in final demand.

Indirect effects are the output, employment and value-added changes in inter-industry purchases as they respond to the new demands of the directly affected industries.

Induced effects represent the response by all local industries caused by the expenditures of new household income generated by direct and indirect effects due to the changes in final demand for a given industry.

4. REGIONAL POPULATION, EMPLOYMENT, WAGES AND SALARIES AND FAMILY INCOMES

Population and economic trends in the region have been influenced greatly by the development of its natural resource wealth. This is a trend that continues today, although the types of development undertaken in the region have changed.

The region's numerous public infrastructure projects, which include hydroelectric projects and Interstate 84, provided employment opportunities that were a new and important source of income, fueling the development of residential housing and a wide variety of commercial endeavors. While the population changes in each county tell differing stories, each has endured at least one decade with a population loss since the 1950's.

Since the 1980's the population growth of the region has been lower than the PNW but stable. MCEDD's population, comprising Hood River, Sherman and Wasco Counties in Oregon and Skamania and Klickitat in Washington, has increased from 63,480 in 1980 to 73,000 in 1998. This is an increase of 9,520 or an annual average growth rate of 0.78%. The comparative population growth rate for Oregon and Washington have been 1.21% and 1.79%, respectively.

The corresponding growth in Wasco and Klickitat Counties have been slightly higher than the other MCEDD counties but lower than the PNW at 0.22% and 1.05%, respectively.

POPULATION

| County | 1980 | 1998 | Annual Growth Rate (%) |
|--|-----------|-----------|------------------------|
| Wasco, OR | 21,732 | 22,600 | 0.22 |
| Klickitat, WA | 15,822 | 19,100 | 1.05 |
| MCEDD (Hood River, Sherman, Wasco, Klickitat and Skamania) | 63,480 | 73,000 | 0.78 |
| OREGON | 2,633,156 | 3,267,550 | 1.21 |
| WASHINGTON | 4,132,353 | 5,685,300 | 1.79 |

* Source: U.S. Census. PSU and WOFM, 1999. Compiled by MCEDD.

Despite this growth in population, growth in **employment opportunities** in relation to the workforce has not kept pace. Although the regional unemployment rate has decreased from 10.4 percent in 1980 to 9.2 percent in 1998, the disparity between the region and the surrounding Pacific Northwest has worsened. In 1980 this difference was 2.3 percent and in 1998 it was recorded at 4.1 percent.

Median income for families in the Mid-Columbia counties in 1999 was estimated as \$36,840. An assessment of this figure over a nine-year span shows a decline. The buying power of this \$36,840 is significantly lower than the \$29,220 of the 1990 median family income. Corrected for inflation MCEDD counties on the average lost \$2,151 dollars of buying power. Wasco and Klickitat Counties reflect these regional trends well. Median family incomes in these two counties are similar to this level with \$36,400 for Wasco and \$38,200 for Klickitat. However, when these figures are compared to the PNW states, they are 20%-30% lower than the levels of the respective states they are part of.

Corrected for inflation the median family income in Wasco County has decreased from \$41,766 in 1990 to \$36,400 in 1999, a decrease of \$5,366. In Klickitat County the median family income fared slightly better with inflation adjusted income increasing from \$37,363 in 1990 to \$38,200 in 1999, or an increase of \$837.

Regional wage and salary growth levels for covered employment, ES202, in comparison to that of the Pacific Northwest (PNW) and the nation have been much lower. Klickitat and Wasco Counties along with the other MCEDD counties have average wage and salary levels 20%-30% lower than the PNW and the disparity between each of the MCEDD counties and the PNW appears to be widening. The average regional wage and salary in 1990 was 80.7 percent of the PNW and it has decreased to 70.8 percent of the PNW in 1998.

LABOR FORCE AND EMPLOYMENT / UNEMPLOYMENT

| Location/County | 1980 | 1990 | 1995 | 1998 |
|--|-----------|-----------|-----------|-----------|
| Wasco, OR | | | | |
| Labor Force | 10,473 | 10,790 | 11,340 | 12,060 |
| Unemployed | 765 | 820 | 790 | 940 |
| Unemployment Rate (%) | 7.3 | 7.6 | 7.0 | 7.8 |
| Klickitat, WA | | | | |
| Labor Force | 7,360 | 7,880 | 9,710 | 8,710 |
| Unemployed | 1,070 | 920 | 1,010 | 940 |
| Unemployment Rate (%) | 14.5 | 11.7 | 10.4 | 10.8 |
| MCEDD (Hood River, Sherman, Wasco, Klickitat and Skamania Counties) | | | | |
| Labor Force | 31,323 | 32,690 | 36,274 | 37,220 |
| Unemployed | 3,251 | 2,940 | 3,130 | 3,430 |
| Unemployment Rate (%) | 10.4 | 9.0 | 8.6 | 9.2 |
| OREGON | | | | |
| Labor Force | 1,295,000 | 1,491,000 | 1,656,000 | 1,727,600 |
| Unemployed | 107,485 | 82,000 | 80,000 | 100,600 |
| Unemployment Rate (%) | 8.3 | 5.5 | 4.8 | 5.8 |
| WASHINGTON | | | | |
| Labor Force | 1,984,000 | 2,533,000 | 2,805,100 | 3,039,200 |
| Unemployed | 156,736 | 124,117 | 178,700 | 144,600 |
| Unemployment Rate (%) | 7.9 | 4.9 | 6.4 | 4.8 |
| PACIFIC NORTHWEST (PNW) | | | | |
| Labor Force | 3,279,000 | 4,024,000 | 4,461,100 | 4,766,800 |
| Unemployed | 264,221 | 206,117 | 258,700 | 245,200 |
| Unemployment Rate (%) | 8.1 | 5.1 | 5.8 | 5.1 |
| U.S.A. | | | | |
| Unemployment Rate (%) | 7.1 | 5.5 | 5.6 | 4.5 |
| Unemployment Rate | | | | |
| UNEMPLOYMENT RATE COMPARISONS | | | | |
| Wasco County as ratio (%) of PNW | 91 | 148 | 120 | 152 |
| Klickitat County as ratio (%) of PNW | 180 | 228 | 179 | 210 |

Source: Oregon and Washington Employment Dept., 1999. Compiled by MCEDD.

MEDIAN FAMILY INCOMES, 1999

(Current \$)

| Year | Wasco | Klickitat | MCEDD | Oregon | Washington | USA |
|------|--------|-----------|--------|--------|------------|--------|
| 1999 | 36,400 | 38,200 | 36,840 | 45,100 | 51,600 | 47,800 |
| 1998 | 35,400 | 34,800 | 35,320 | 43,200 | 49,000 | 45,300 |
| 1997 | 33,200 | 32,500 | 33,820 | 40,700 | 46,100 | 43,500 |
| 1996 | 32,900 | 31,700 | 33,240 | 38,700 | 44,100 | 41,600 |
| 1995 | 32,900 | 31,700 | 33,200 | 37,300 | 43,200 | 40,200 |
| 1994 | 32,900 | 31,700 | 33,200 | 37,200 | 42,500 | 39,900 |
| 1993 | 32,900 | 29,900 | 32,460 | 35,600 | 40,500 | 39,700 |
| 1992 | 33,500 | 28,500 | 30,620 | 34,300 | 37,500 | 38,600 |
| 1991 | 33,400 | 28,500 | 30,540 | 34,100 | 37,300 | 38,000 |
| 1990 | 31,300 | 28,000 | 29,220 | 32,400 | 35,400 | 35,700 |

(Constant \$, 1999)

| Year | Wasco | Klickitat | MCEDD | Oregon | Washington | USA |
|------|--------|-----------|--------|--------|------------|--------|
| 1999 | 36,400 | 38,200 | 36,840 | 45,100 | 51,600 | 47,800 |
| 1998 | 35,886 | 35,277 | 35,804 | 43,792 | 49,672 | 46,412 |
| 1997 | 34,415 | 33,689 | 35,057 | 42,189 | 47,787 | 45,262 |
| 1996 | 35,265 | 33,979 | 35,629 | 41,482 | 47,270 | 44,278 |
| 1995 | 36,508 | 35,176 | 36,841 | 41,390 | 47,937 | 44,051 |
| 1994 | 37,562 | 36,192 | 37,905 | 42,471 | 48,522 | 44,962 |
| 1993 | 38,652 | 35,128 | 38,135 | 41,824 | 47,581 | 45,882 |
| 1992 | 40,737 | 34,657 | 37,235 | 41,710 | 45,601 | 45,946 |
| 1991 | 42,405 | 36,184 | 38,774 | 43,294 | 47,356 | 46,593 |
| 1990 | 41,766 | 37,363 | 38,991 | 43,234 | 47,237 | 45,615 |

Source: HUD, 1999. CPI adjusted and compiled by MCEDD

AVERAGE WAGE AND SALARY*, 1990-1998

| State/County | 1990 | 1998 | Change 1990-98 (%) |
|--------------------------------|---------------|---------------|-------------------------------|
| Washington | 22,815 | 33,071 | 45.0 |
| Oregon | 21,321 | 29,548 | 38.6 |
| PNW | 22,269 | 31,753 | 42.6 |
| US | 23,430 | 31,908 | 36.2 |
| MCEDD Counties: | | | |
| Klickitat | 20,851 | 25,512 | 22.4 |
| Skamania | 17,740 | 23,076 | 30.1 |
| Hood River | 16,336 | 20,325 | 24.4 |
| Sherman | 17,112 | 20,352 | 18.9 |
| Wasco | 17,815 | 22,933 | 28.7 |
| MCEDD AVERAGE | 17,984 | 22,479 | 25.0 |
| MCEDD as percent of PNW | 80.7% | 70.8% | |

* Composed only of covered employment, wages & salaries.

5. ALUMINUM - PRIMARY METALS INDUSTRY IN WASCO AND KLUCKITAT COUNTIES

The industry in 1999 employed a total of 1,225 wage and salary workers in the Columbia Gorge and produced total outputs valued at \$351.5 million. In producing this output the industry generated \$137.1 million of value added (VA) comprising employee compensation, proprietor income, other property type income and indirect business taxes.

In comparison to the share of total employment in the overall county economies primary metals sector (5.8% of total) has produced more than three times its share of the total output (17.5% of total) and created more than twice its share (13.1%) of the total value added. These performance figures have been similar in both Wasco and Klickitat Counties.

At county levels output per worker appears to be similar at approximately \$287,000 per worker. Value-added estimates differ slightly. The plant in Klickitat generates \$114,514 per worker while the Wasco plant generates a slightly lower value of \$108,522 per worker.

Employee compensation, making up the wages and salaries and benefits, as in total output and the total value added is proportionately higher for the primary metals industry than the other sectors of the county economies.

INDUSTRY IN THE COLUMBIA GORGE, 1999

| County/Industry | Employment | (%) | Output* | (%) | Value Added* | (%) |
|------------------|---------------|--------------|------------------|--------------|------------------|--------------|
| KLUCKITAT | | | | | | |
| Primary Metals | 700 | 7.7 | 200.871 | 21.0 | 80.160 | 16.4 |
| Other | 8,359 | 92.3 | 756.408 | 79.0 | 409.466 | 83.6 |
| Total | 9,059 | 100.0 | 957.279 | 100.0 | 489.626 | 100.0 |
| WASCO | | | | | | |
| Primary Metals | 525 | 4.3 | 150.653 | 14.4 | 56.974 | 10.2 |
| Other | 11,560 | 95.7 | 897.072 | 85.6 | 502.531 | 89.8 |
| Total | 12,085 | 100.0 | 1,047.725 | 100.0 | 559.504 | 100.0 |
| REGION | | | | | | |
| Primary Metals | 1,225 | 5.8 | 351.524 | 17.5 | 137.133 | 13.1 |
| Other | 19,919 | 94.2 | 1,653.481 | 82.5 | 911.997 | 86.9 |
| Total | 21,144 | 100.0 | 2,005.004 | 100.0 | 1,049.130 | 100.0 |

* Million dollars.

INDUSTRY VALUE-ADDED, 1999

| County/Industry | Employee Compensation* | (%) | Other Value Added* | (%) | Total Value Added* | (%) |
|------------------|------------------------|--------------|--------------------|--------------|--------------------|--------------|
| KLICKITAT | | | | | | |
| Primary Metals | 44.000 | 17.9 | 36.160 | 14.8 | 80.160 | 16.4 |
| Other | 201.296 | 82.1 | 208.170 | 85.2 | 409.466 | 83.6 |
| Total | 245.296 | 100.0 | 244.330 | 100.0 | 489.626 | 100.0 |
| WASCO | | | | | | |
| Primary Metals | 31.500 | 10.6 | 25.474 | 9.7 | 56.974 | 10.2 |
| Other | 265.956 | 89.4 | 236.575 | 90.3 | 502.531 | 89.8 |
| Total | 297.456 | 100.0 | 262.049 | 100.0 | 559.504 | 100.0 |
| REGION | | | | | | |
| Primary Metals | 75.500 | 13.9 | 61.633 | 12.2 | 137.133 | 13.1 |
| Other | 467.252 | 86.1 | 444.745 | 87.8 | 911.997 | 86.9 |
| Total | 542.752 | 100.0 | 506.379 | 100.0 | 1,049.130 | 100.0 |

* Million dollars

Wages and salaries including benefits generated by the IMPLAN model, adjusted to 1999, show that the average aluminum plant worker in the Mid-Columbia region earned \$61,633 compared to the regional average earnings of \$25,669. At the county level the aluminum plant workers in Klickitat County had a slightly higher average figure of \$62,857 compared to Wasco County's \$60,000. These are average employee compensation figures at approximately 240 percent of the total county industry averages. At the state levels primary metal industry average wage and salary including benefits in comparison to the overall statewide industry averages are approximately twice as large, 203 percent in Oregon and 189 percent in Washington.

WAGE & SALARY AND VALUE ADDED PER EMPLOYEE, 1999

| County/Industry | Employee Compensation | (%) | Other Value Added | (%) | Total Value Added | (%) |
|------------------|-----------------------|--------------|-------------------|--------------|-------------------|--------------|
| KLICKITAT | | | | | | |
| Primary Metals | 62,857 | 232.1 | 51,656 | 191.5 | 114,514 | 211.9 |
| Other | 24,081 | 88.9 | 24,904 | 92.3 | 48,985 | 90.6 |
| Total | 27,078 | 100.0 | 26,971 | 100.0 | 54,049 | 100.0 |
| WASCO | | | | | | |
| Primary Metals | 60,000 | 243.8 | 48,521 | 223.8 | 108,521 | 234.4 |
| Other | 23,007 | 93.5 | 20,465 | 94.4 | 43,472 | 93.9 |
| Total | 24,614 | 100.0 | 21,684 | 100.0 | 46,297 | 100.0 |
| REGION | | | | | | |
| Primary Metals | 61,633 | 240.1 | 50,313 | 210.1 | 111,945 | 225.6 |
| Other | 23,458 | 86.1 | 22,328 | 86.1 | 45,785 | 86.1 |
| Total | 25,669 | 100.0 | 23,949 | 100.0 | 49,618 | 100.0 |

6. INDUSTRY IMPACTS

Impact analysis of potential plant closures in Wasco and Klickitat Counties have used the 1994 IMPLAN *inter industry technical coefficients* but the actual employment and value-added figures were adjusted to reflect the more current 1999 information received from the aluminum plants and sectoral wage and a salary and employment figures from the employment departments and industry estimates of the Mid-Columbia Economic Development District.

The simulations to test the impact of potential closures were developed separately for each of the plants in the two counties covering output, employment and detailed value-added data.

6.1 Impact Matrix of Auminum Plant Downsizing

Klickitat and Wasco Counties:

- A. Full Plant Closure
- B. Partial Closure: 50% Downsizing

The following two tables, each corresponding to "A" and "B" covering two different downsizing scenarios provide summaries of impacts for employment, output, employee compensation (wages and salaries and benefits) and total value added. Details of the impacts to each existing industry in the counties have also been analyzed and they are provided in the attachments.

Partial plant closure estimates will reflect the percentage production reductions of total plant output and consequent employment losses at each of the plants. Each county's production functions are linear but unique to each county. County-specific simulations can be conducted for each of the plants and the relevant county by varying the assumed downsizing ratios. Partial closure of 50 percent, "B", is provided as an example of one such downsizing scenario.

A. FULL PLANT CLOSURE

| IMPACTS | County | Direct | Indirect | Induced | Total |
|-------------------------------------|-----------|--------|----------|---------|-------|
| EMPLOYMENT (NO.) | KLICKITAT | 700 | 487 | 510 | 1,697 |
| | WASCO | 525 | 303 | 526 | 1,354 |
| OUTPUT (MILL. \$) | KLICKITAT | 200.9 | 47.6 | 32.8 | 281.3 |
| | WASCO | 150.7 | 28.8 | 33.0 | 212.5 |
| EMPLOYEE COMPENSATION (MILL. \$) | KLICKITAT | 44.0 | 12.3 | 8.6 | 64.9 |
| | WASCO | 31.0 | 7.4 | 9.5 | 47.9 |
| TOTAL VALUE ADDED (MILL. \$) | KLICKITAT | 80.2 | 23.3 | 19.9 | 123.4 |
| | WASCO | 57.0 | 14.0 | 19.1 | 90.1 |

B. PARTIAL PLANT CLOSURE: 50% DOWNSIZING

| IMPACTS | County | Direct | Indirect | Induced | Total |
|-------------------------------------|-----------|--------|----------|---------|-------|
| EMPLOYMENT (NO.) | KLICKITAT | 350 | 243 | 255 | 848 |
| | WASCO | 263 | 151 | 263 | 677 |
| OUTPUT (MILL. \$) | KLICKITAT | 100.4 | 23.8 | 16.4 | 140.6 |
| | WASCO | 75.4 | 14.4 | 16.5 | 106.3 |
| EMPLOYEE COMPENSATION (MILL. \$) | KLICKITAT | 22.0 | 6.1 | 4.3 | 32.4 |
| | WASCO | 15.5 | 3.7 | 4.8 | 23.9 |
| TOTAL VALUE ADDED (MILL. \$) | KLICKITAT | 40.1 | 11.7 | 10.0 | 61.8 |
| | WASCO | 28.5 | 7.0 | 9.5 | 45.5 |

6.2 Full Closure - Maximum Impact

This alternative provides an extreme option where all of the employment at the two plants are eliminated. The IMPLAN simulation provides an estimate of the direct, indirect and the induced impacts of this full impact scenario.

The potential full impact of 700 job losses at the Klickitat plant will be 1,697 jobs. In Wasco County the corresponding figures will be 525 and 1,354 jobs, respectively. These losses will then have direct and indirect effects rippling through most of the other industries in each of the counties and impacting each of the counties' industrial output and value added composed of wages and salaries, proprietary income, other property income and tax revenue.

Aluminum plant closure affects most other industries in the two counties. Initially the direct effects of a plant closure may not appear to be of much significance. However, as the direct, indirect and induced effects for each industry accumulate, the full impact becomes more apparent.

6.3 Wasco County

In Wasco County the full impact of a plant closure would result in a total loss of 1,353 jobs, 525 at the aluminum plant and 828 jobs in other industries. The corresponding VA losses would be \$57.0 million directly and \$90.1 million indirectly. The top 10 industries most affected by the Wasco County plant closure ranked by respective VA impacts are as following:

| | <u>Loss of Jobs</u> | <u>Loss of VA</u> |
|---|---------------------|-------------------|
| 1. Retail Trade | 215 | \$ 4,816,035 |
| 2. Real Estate | 17 | \$ 4,660,417 |
| 3. Health Services | 101 | \$ 3,995,499 |
| 4. Wholesale Trade | 73 | \$ 3,392,165 |
| 5. State and Local Non-Educ. Gov. | 66 | \$ 2,099,430 |
| 6. Utilities | 11 | \$ 1,404,210 |
| 7. Motor Freight and Transport Services | 30 | \$ 1,294,195 |
| 8. Construction | 28 | \$ 1,288,876 |
| 9. Business Services | 39 | \$ 1,190,293 |
| 10. Banking | 12 | \$ 774,181 |

A full analysis of VA and employment impacts are provided in Attachments C1, D1 and E1.

6.2 Full Closure - Maximum Impact

This alternative provides an extreme option where all of the employment at the two plants are eliminated. The IMPLAN simulation provides an estimate of the direct, indirect and the induced impacts of this full impact scenario.

The potential full impact of 700 job losses at the Klickitat plant will be 1,697 jobs. In Wasco County the corresponding figures will be 525 and 1,354 jobs, respectively. These losses will then have direct and indirect effects rippling through most of the other industries in each of the counties and impacting each of the counties' industrial output and value added composed of wages and salaries, proprietary income, other property income and tax revenue.

Aluminum plant closure affects most other industries in the two counties. Initially the direct effects of a plant closure may not appear to be of much significance. However, as the direct, indirect and induced effects for each industry accumulate, the full impact becomes more apparent.

6.3 Wasco County

In Wasco County the full impact of a plant closure would result in a total loss of 1,353 jobs, 525 at the aluminum plant and 828 jobs in other industries. The corresponding VA losses would be \$57.0 million directly and \$90.1 million indirectly. The top 10 industries most affected by the Wasco County plant closure ranked by respective VA impacts are as following:

| | <u>Loss of Jobs</u> | <u>Loss of VA</u> |
|---|---------------------|-------------------|
| 1. Retail Trade | 215 | \$ 4,816,035 |
| 2. Real Estate | 17 | \$ 4,660,417 |
| 3. Health Services | 101 | \$ 3,995,499 |
| 4. Wholesale Trade | 73 | \$ 3,392,165 |
| 5. State and Local Non-Educ. Gov. | 66 | \$ 2,099,430 |
| 6. Utilities | 11 | \$ 1,404,210 |
| 7. Motor Freight and Transport Services | 30 | \$ 1,294,195 |
| 8. Construction | 28 | \$ 1,288,876 |
| 9. Business Services | 39 | \$ 1,190,293 |
| 10. Banking | 12 | \$ 774,181 |

A full analysis of VA and employment impacts are provided in Attachments C1, D1 and E1.

6.4 Klickitat County

In Klickitat County in addition to the 700 jobs lost at the aluminum plant there would be additional losses of 997 in all other industries. The corresponding total VA losses would be \$80.2 million due to the plant closure and additional losses of \$43.3 million due to indirect and induced effects. The top 10 most affected industries are as following:

| | <u>Loss of Jobs</u> | <u>Loss of VA</u> |
|-----------------------------------|---------------------|-------------------|
| Wholesale Trade | 146 | \$ 6,404,952 |
| Real Estate | 16 | \$ 6,027,439 |
| Retail Trade | 183 | \$ 4,069,734 |
| Utilities | 49 | \$ 3,812,315 |
| State and Local Non-Educ. Gov. | 94 | \$ 3,149,160 |
| Health Services | 76 | \$ 2,685,545 |
| Motor Freight Tr. and Warehousing | 59 | \$ 2,429,305 |
| Construction | 47 | \$ 2,325,538 |
| Banking | 14 | \$ 928,739 |
| Federal non-military | 23 | \$ 863,079 |

A full analysis of VA and employment impacts are provided in Attachments C2, D2 and E2..

7. DETAILED ANALYSIS

Respective spreadsheets for each of the IMPLAN model runs are provided in the Attachments. These spreadsheets cover the following IMPLAN model runs for each of the counties:

| Analysis | Wasco County | Klickitat County |
|------------------------------|---------------------|-------------------------|
| Output Impact | A-1 | A-2 |
| Employment Impact | B-1 | B-2 |
| Total Value Added Impact | C-1 | C-2 |
| Employee Compensation Impact | D-1 | D-2 |
| Other Value Added Impact | E-1 | E-2 |

ATTACHMENTS

A-1: WASCO COUNTY OUTPUT IMPACT (\$)
A-2: KLICKITAT COUNTY OUTPUT IMPACT (\$)

B-1: WASCO COUNTY EMPLOYMENT IMPACT (NO.)
B-2: KLICKITAT COUNTY EMPLOYMENT IMPACT (NO.)

C-1: WASCO COUNTY TOTAL VALUE ADDED IMPACT (\$)
C-2: KLICKITAT COUNTY TOTAL VALUE ADDED IMPACT (\$)

D-1: WASCO COUNTY EMPLOYEE COMPENSATION IMPACT (\$)
D-2: KLICKITAT COUNTY EMPLOYEE COMPENSATION IMPACT (\$)

E-1: WASCO COUNTY OTHER VALUE ADDED IMPACT (\$)
E-2: KLICKITAT COUNTY OTHER VALUE ADDED IMPACT (\$)

A-1- WASCO COUNTY OUTPUT IMPACT (\$)
 A-1- WASCO COUNTY OUTPUT IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|-------------|------------|------------|-------------|
| 254 | Primary metals | 150,652,961 | 2,899,967 | 89,169 | 153,642,097 |
| 448 | Retail Trade | 0 | 583,526 | 7,256,744 | 7,840,270 |
| 461 | Real estate | 0 | 813,019 | 6,234,259 | 7,047,277 |
| 447 | Wholesale Trade | 0 | 5,224,316 | 1,309,312 | 6,533,628 |
| 490 | Health services | 0 | 1,412 | 6,270,749 | 6,272,161 |
| 443 | Utilities | 0 | 2,941,100 | 670,560 | 3,611,660 |
| 435 | Motor Freight Transport and Warehousing | 0 | 2,736,887 | 364,508 | 3,101,395 |
| 510 | State & local non-ed government | 0 | 1,845,380 | 909,620 | 2,754,999 |
| 48 | Construction | 0 | 2,015,367 | 490,268 | 2,505,636 |
| 456 | Banking | 0 | 740,003 | 1,248,878 | 1,988,881 |
| 469 | Business services | 0 | 1,262,619 | 460,191 | 1,722,810 |
| 520 | Federal non-military | 0 | 933,616 | 654,636 | 1,588,252 |
| 480 | Repair services | 0 | 1,115,922 | 191,242 | 1,307,165 |
| 441 | Communications | 0 | 502,837 | 793,155 | 1,295,992 |
| 28 | Metal mining | 0 | 1,145,837 | 669 | 1,146,506 |
| 433 | Railroads and Related Services | 0 | 970,729 | 70,712 | 1,041,440 |
| 506 | Professional services | 0 | 644,123 | 349,371 | 993,494 |
| 464 | Personal services | 0 | 136,031 | 585,798 | 721,830 |
| 498 | Social services | 0 | 465 | 694,765 | 695,230 |
| 463 | Hotels and Lodging Places | 0 | 177,412 | 504,901 | 682,313 |
| 502 | Non-profit organizations | 0 | 103,772 | 544,556 | 648,328 |
| 477 | Automotive services | 0 | 222,508 | 418,378 | 640,886 |
| 133 | Wood products | 0 | 476,033 | 77,169 | 553,202 |
| 307 | Industrial machinery | 0 | 520,459 | 24,259 | 544,719 |
| 484 | Recreation services | 0 | 29,576 | 466,956 | 496,531 |
| 494 | Legal Services | 0 | 126,148 | 319,597 | 445,745 |
| 174 | Printing and publishing | 0 | 241,043 | 146,144 | 387,186 |
| 483 | Motion Pictures | 0 | 26,525 | 360,630 | 387,154 |
| 58 | Food processing | 0 | 31,029 | 310,487 | 341,516 |
| 459 | Insurance Carriers | 0 | 36,743 | 296,244 | 332,987 |
| 1 | Farms | 0 | 44,548 | 281,177 | 325,725 |
| 495 | Education services | 0 | 3,023 | 182,825 | 185,848 |
| 457 | Credit Agencies | 0 | 13,359 | 96,772 | 110,131 |
| 439 | Transportation Services | 0 | 74,140 | 26,334 | 99,474 |
| 273 | Fabricated metal | 0 | 74,855 | 8,465 | 83,321 |
| 460 | Insurance Agents and Brokers | 0 | 7,939 | 64,008 | 71,947 |
| 26 | Ag Services | 0 | 17,726 | 50,609 | 68,335 |
| 148 | Furniture | 0 | 12,514 | 54,177 | 66,692 |
| 458 | Security and Commodity Brokers | 0 | 14,882 | 36,413 | 51,295 |
| 215 | Rubber products | 0 | 25,326 | 6,677 | 32,003 |
| 25 | Commercial Fishing | 0 | 495 | 15,965 | 16,449 |
| 437 | Air Transportation | 0 | 5,095 | 7,464 | 12,560 |
| 415 | Miscellaneous mfg | 0 | 6,294 | 5,868 | 12,162 |
| 40 | Non-metal mining | 0 | 7,424 | 2,488 | 9,912 |
| 434 | Local, Interurban Passenger Transit | 0 | 906 | 2,589 | 3,495 |
| 230 | Stone, glass and clay | 0 | 1,277 | 504 | 1,781 |
| 24 | Forestry Products | 0 | 4 | 3 | 7 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 124 | Apparel | 0 | 0 | 0 | 0 |
| 161 | Pulp and paper | 0 | 0 | 0 | 0 |
| 186 | Chemicals and allied | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 436 | Water Transportation | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 150,652,961 | 28,814,211 | 32,955,259 | 212,422,431 |

A-2: KLICKITAT COUNTY OUTPUT IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|--------------------|-------------------|-------------------|--------------------|
| 254 | Primary metals | 200,870,614 | 3,825,441 | 98,966 | 204,795,021 |
| 447 | Wholesale Trade | 0 | 9,644,014 | 2,186,625 | 11,830,639 |
| 443 | Utilities | 0 | 9,436,036 | 1,962,981 | 11,399,017 |
| 461 | Real estate | 0 | 1,102,198 | 7,131,690 | 8,233,887 |
| 448 | Retail Trade | 0 | 593,436 | 5,548,084 | 6,141,520 |
| 435 | Motor Freight Transport and Warehousing | 0 | 5,244,336 | 535,347 | 5,779,683 |
| 48 | Construction | 0 | 3,542,342 | 653,730 | 4,196,071 |
| 510 | State & local non-ed government | 0 | 2,650,849 | 1,320,256 | 3,971,104 |
| 490 | Health services | 0 | 854 | 3,871,479 | 3,872,334 |
| 456 | Banking | 0 | 929,066 | 1,297,773 | 2,226,859 |
| 28 | Metal mining | 0 | 1,647,478 | 838 | 1,648,316 |
| 433 | Railroads and Related Services | 0 | 1,383,358 | 89,240 | 1,472,597 |
| 441 | Communications | 0 | 547,400 | 732,456 | 1,279,856 |
| 480 | Repair services | 0 | 1,093,987 | 161,011 | 1,254,998 |
| 477 | Automotive services | 0 | 434,139 | 655,394 | 1,089,534 |
| 133 | Wood products | 0 | 882,763 | 165,407 | 1,048,170 |
| 506 | Professional services | 0 | 744,579 | 272,277 | 1,016,856 |
| 520 | Federal non-military | 0 | 489,581 | 473,997 | 963,578 |
| 469 | Business services | 0 | 697,267 | 176,644 | 873,910 |
| 498 | Social services | 0 | 574 | 864,619 | 865,193 |
| 502 | Non-profit organizations | 0 | 155,665 | 700,683 | 856,349 |
| 307 | Industrial machinery | 0 | 771,711 | 34,788 | 806,499 |
| 463 | Hotels and Lodging Places | 0 | 245,940 | 530,901 | 776,841 |
| 174 | Printing and publishing | 0 | 526,703 | 200,816 | 727,519 |
| 464 | Personal services | 0 | 130,943 | 488,608 | 619,551 |
| 124 | Apparel | 0 | 21,219 | 533,798 | 555,017 |
| 1 | Farms | 0 | 140,531 | 409,332 | 549,863 |
| 483 | Motion Pictures | 0 | 22,353 | 325,524 | 347,877 |
| 484 | Recreation services | 0 | 23,647 | 309,720 | 333,366 |
| 494 | Legal Services | 0 | 106,346 | 211,279 | 317,625 |
| 186 | Chemicals and allied | 0 | 155,846 | 43,788 | 199,634 |
| 459 | Insurance Carriers | 0 | 26,731 | 164,641 | 191,372 |
| 436 | Water Transportation | 0 | 133,982 | 32,175 | 166,157 |
| 437 | Air Transportation | 0 | 65,243 | 83,540 | 148,782 |
| 457 | Credit Agencies | 0 | 20,838 | 123,407 | 144,245 |
| 495 | Education services | 0 | 2,421 | 119,198 | 121,619 |
| 415 | Miscellaneous mfg. | 0 | 55,937 | 36,540 | 92,477 |
| 439 | Transportation Services | 0 | 67,550 | 19,305 | 86,855 |
| 25 | Commercial Fishing | 0 | 1,228 | 53,346 | 54,574 |
| 40 | Non-metal mining | 0 | 41,865 | 12,177 | 54,042 |
| 148 | Furniture | 0 | 9,879 | 42,262 | 52,141 |
| 460 | Insurance Agents and Brokers | 0 | 6,806 | 41,919 | 48,725 |
| 26 | Ag Services | 0 | 8,197 | 16,487 | 24,683 |
| 434 | Local, Interurban Passenger Transit | 0 | 5,195 | 12,271 | 17,466 |
| 58 | Food processing | 0 | 470 | 14,576 | 15,045 |
| 230 | Stone, glass and clay | 0 | 6,158 | 1,768 | 7,927 |
| 215 | Rubber products | 0 | 5,501 | 1,496 | 6,997 |
| 161 | Pulp and paper | 0 | 958 | 561 | 1,519 |
| 24 | Forestry Products | 0 | 23 | 14 | 38 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 273 | Fabricated metal | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 458 | Security and Commodity Brokers | 0 | 0 | 0 | 0 |
| 510 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 200,870,614 | 47,649,605 | 32,763,731 | 281,283,951 |

B-1: WASCO COUNTY EMPLOYMENT IMPACT (NO.)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|--------|----------|---------|-------|
| 254 | Primary metals | 525 | 10 | 0 | 535 |
| 448 | Retail Trade | 0 | 16 | 199 | 215 |
| 490 | Health services | 0 | 0 | 101 | 101 |
| 447 | Wholesale Trade | 0 | 59 | 15 | 73 |
| 510 | State & local non-ed government | 0 | 44 | 22 | 66 |
| 469 | Business services | 0 | 28 | 10 | 39 |
| 435 | Motor Freight Transport and Warehousing | 0 | 26 | 3 | 30 |
| 48 | Construction | 0 | 23 | 6 | 28 |
| 464 | Personal services | 0 | 4 | 19 | 24 |
| 498 | Social services | 0 | 0 | 22 | 22 |
| 480 | Repair services | 0 | 18 | 3 | 21 |
| 484 | Recreation services | 0 | 1 | 19 | 20 |
| 502 | Non-profit organizations | 0 | 3 | 15 | 18 |
| 461 | Real estate | 0 | 2 | 15 | 17 |
| 506 | Professional services | 0 | 11 | 6 | 17 |
| 463 | Hotels and Lodging Places | 0 | 4 | 11 | 15 |
| 456 | Banking | 0 | 5 | 8 | 12 |
| 443 | Utilities | 0 | 9 | 2 | 11 |
| 477 | Automotive services | 0 | 3 | 6 | 9 |
| 174 | Printing and publishing | 0 | 5 | 3 | 8 |
| 494 | Legal Services | 0 | 2 | 5 | 7 |
| 1 | Farms | 0 | 1 | 6 | 7 |
| 520 | Federal non-military | 0 | 4 | 3 | 7 |
| 441 | Communications | 0 | 3 | 4 | 7 |
| 433 | Railroads and Related Services | 0 | 6 | 0 | 6 |
| 28 | Metal mining | 0 | 5 | 0 | 5 |
| 495 | Education services | 0 | 0 | 5 | 5 |
| 483 | Motion Pictures | 0 | 0 | 4 | 4 |
| 26 | Ag Services | 0 | 1 | 3 | 4 |
| 307 | Industrial machinery | 0 | 3 | 0 | 4 |
| 133 | Wood products | 0 | 2 | 0 | 3 |
| 459 | Insurance Carriers | 0 | 0 | 2 | 3 |
| 439 | Transportation Services | 0 | 2 | 1 | 2 |
| 457 | Credit Agencies | 0 | 0 | 2 | 2 |
| 460 | Insurance Agents and Brokers | 0 | 0 | 2 | 2 |
| 58 | Food processing | 0 | 0 | 1 | 1 |
| 149 | Furniture | 0 | 0 | 0 | 1 |
| 273 | Fabricated metal | 0 | 0 | 0 | 1 |
| 458 | Security and Commodity Brokers | 0 | 0 | 0 | 0 |
| 25 | Commercial Fishing | 0 | 0 | 0 | 0 |
| 215 | Rubber products | 0 | 0 | 0 | 0 |
| 415 | Miscellaneous mfg | 0 | 0 | 0 | 0 |
| 434 | Local, Interurban Passenger Transit | 0 | 0 | 0 | 0 |
| 437 | Air Transportation | 0 | 0 | 0 | 0 |
| 40 | Non-metal mining | 0 | 0 | 0 | 0 |
| 230 | Stone, glass and clay | 0 | 0 | 0 | 0 |
| 24 | Forestry Products | 0 | 0 | 0 | 0 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 124 | Apparel | 0 | 0 | 0 | 0 |
| 161 | Pulp and paper | 0 | 0 | 0 | 0 |
| 186 | Chemicals and allied | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 436 | Water Transportation | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 525 | 303 | 526 | 1,353 |

B-2: KLICKITAT COUNTY EMPLOYMENT IMPACT (NO.)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|------------|------------|--------------|
| 254 | Primary metals | 700 | 13 | 0 | 714 |
| 448 | Retail Trade | 0 | 18 | 165 | 183 |
| 447 | Wholesale Trade | 0 | 119 | 27 | 146 |
| 510 | State & local non-ed government | 0 | 63 | 31 | 94 |
| 490 | Health services | 0 | 0 | 76 | 76 |
| 435 | Motor Freight Transport and Warehousing | 0 | 53 | 5 | 59 |
| 443 | Utilities | 0 | 41 | 8 | 49 |
| 48 | Construction | 0 | 39 | 7 | 47 |
| 498 | Social services | 0 | 0 | 30 | 30 |
| 469 | Business services | 0 | 23 | 6 | 29 |
| 502 | Non-profit organizations | 0 | 5 | 20 | 25 |
| 520 | Federal non-military | 0 | 12 | 11 | 23 |
| 460 | Repair services | 0 | 18 | 3 | 21 |
| 463 | Hotels and Lodging Places | 0 | 6 | 13 | 19 |
| 464 | Personal services | 0 | 4 | 15 | 19 |
| 461 | Real estate | 0 | 2 | 14 | 16 |
| 506 | Professional services | 0 | 11 | 4 | 15 |
| 477 | Automotive services | 0 | 6 | 8 | 14 |
| 456 | Banking | 0 | 6 | 8 | 14 |
| 484 | Recreation services | 0 | 1 | 11 | 12 |
| 174 | Printing and publishing | 0 | 8 | 3 | 12 |
| 433 | Railroads and Related Services | 0 | 9 | 1 | 9 |
| 124 | Apparel | 0 | 0 | 8 | 8 |
| 1 | Farms | 0 | 2 | 6 | 8 |
| 28 | Metal mining | 0 | 7 | 0 | 7 |
| 494 | Legal Services | 0 | 2 | 4 | 7 |
| 441 | Communications | 0 | 3 | 4 | 6 |
| 457 | Credit Agencies | 0 | 1 | 5 | 6 |
| 133 | Wood products | 0 | 4 | 1 | 5 |
| 307 | Industrial machinery | 0 | 4 | 0 | 4 |
| 483 | Motion Pictures | 0 | 0 | 4 | 4 |
| 495 | Education services | 0 | 0 | 3 | 4 |
| 439 | Transportation Services | 0 | 1 | 0 | 2 |
| 459 | Insurance Carriers | 0 | 0 | 1 | 2 |
| 186 | Chemicals and allied | 0 | 1 | 0 | 1 |
| 437 | Air Transportation | 0 | 1 | 1 | 1 |
| 26 | Ag Services | 0 | 0 | 1 | 1 |
| 460 | Insurance Agents and Brokers | 0 | 0 | 1 | 1 |
| 415 | Miscellaneous mfg | 0 | 1 | 0 | 1 |
| 148 | Furniture | 0 | 0 | 1 | 1 |
| 40 | Non-metal mining | 0 | 1 | 0 | 1 |
| 436 | Water Transportation | 0 | 0 | 0 | 1 |
| 434 | Local, Interurban Passenger Transit | 0 | 0 | 0 | 0 |
| 25 | Commercial Fishing | 0 | 0 | 0 | 0 |
| 58 | Food processing | 0 | 0 | 0 | 0 |
| 230 | Stone, glass and clay | 0 | 0 | 0 | 0 |
| 215 | Rubber products | 0 | 0 | 0 | 0 |
| 161 | Pulp and paper | 0 | 0 | 0 | 0 |
| 24 | Forestry Products | 0 | 0 | 0 | 0 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 273 | Fabricated metal | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 458 | Security and Commodity Brokers | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 700 | 487 | 510 | 1,697 |

C-1: WASCO COUNTY TOTAL VALUE ADDED IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|------------|------------|------------|
| 254 | Primary metals | 56,973,705 | 1,096,705 | 33,722 | 58,104,132 |
| 448 | Retail Trade | 0 | 358,442 | 4,457,593 | 4,816,035 |
| 461 | Real estate | 0 | 537,655 | 4,122,761 | 4,660,417 |
| 490 | Health services | 0 | 900 | 3,994,599 | 3,995,499 |
| 447 | Wholesale Trade | 0 | 2,712,389 | 679,776 | 3,392,165 |
| 510 | State & local non-ed government | 0 | 1,406,260 | 693,170 | 2,099,430 |
| 443 | Utilities | 0 | 1,143,497 | 260,713 | 1,404,210 |
| 435 | Motor Freight Transport and Warehousing | 0 | 1,142,088 | 152,107 | 1,294,195 |
| 48 | Construction | 0 | 1,036,687 | 252,190 | 1,288,876 |
| 469 | Business services | 0 | 872,346 | 317,947 | 1,190,293 |
| 456 | Banking | 0 | 288,050 | 486,132 | 774,181 |
| 480 | Repair services | 0 | 613,823 | 105,195 | 719,018 |
| 520 | Federal non-military | 0 | 356,475 | 249,954 | 606,430 |
| 441 | Communications | 0 | 190,642 | 300,711 | 491,354 |
| 433 | Railroads and Related Services | 0 | 444,631 | 32,389 | 477,020 |
| 506 | Professional services | 0 | 291,152 | 157,920 | 449,072 |
| 494 | Legal Services | 0 | 110,385 | 279,661 | 390,046 |
| 464 | Personal services | 0 | 73,275 | 315,547 | 388,822 |
| 28 | Metal mining | 0 | 378,502 | 221 | 378,722 |
| 463 | Hotels and Lodging Places | 0 | 97,734 | 278,143 | 375,877 |
| 498 | Social services | 0 | 242 | 362,068 | 362,310 |
| 477 | Automotive services | 0 | 114,764 | 215,789 | 330,553 |
| 484 | Recreation services | 0 | 18,998 | 299,952 | 318,950 |
| 502 | Non-profit organizations | 0 | 48,722 | 255,677 | 304,400 |
| 1 | Farms | 0 | 34,617 | 218,491 | 253,107 |
| 307 | Industrial machinery | 0 | 188,264 | 8,775 | 197,039 |
| 174 | Printing and publishing | 0 | 119,459 | 72,428 | 191,886 |
| 133 | Wood products | 0 | 145,631 | 23,608 | 169,239 |
| 459 | Insurance Carriers | 0 | 13,306 | 107,281 | 120,587 |
| 483 | Motion Pictures | 0 | 5,497 | 74,731 | 80,227 |
| 58 | Food processing | 0 | 7,190 | 71,946 | 79,136 |
| 460 | Insurance Agents and Brokers | 0 | 6,118 | 49,327 | 55,445 |
| 457 | Credit Agencies | 0 | 6,305 | 45,674 | 51,979 |
| 495 | Education services | 0 | 807 | 48,836 | 49,643 |
| 439 | Transportation Services | 0 | 33,271 | 11,369 | 44,640 |
| 26 | Ag Services | 0 | 10,226 | 29,196 | 39,422 |
| 273 | Fabricated metal | 0 | 27,921 | 3,158 | 31,079 |
| 148 | Furniture | 0 | 4,405 | 19,069 | 23,474 |
| 458 | Security and Commodity Brokers | 0 | 5,207 | 12,740 | 17,946 |
| 25 | Commercial Fishing | 0 | 360 | 11,610 | 11,970 |
| 215 | Rubber products | 0 | 7,902 | 2,083 | 9,985 |
| 40 | Non-metal mining | 0 | 4,513 | 1,513 | 6,026 |
| 437 | Air Transportation | 0 | 1,651 | 2,418 | 4,069 |
| 415 | Miscellaneous mfg | 0 | 1,883 | 1,755 | 3,638 |
| 434 | Local, Interurban Passenger Transit | 0 | 473 | 1,353 | 1,826 |
| 230 | Stone, glass and clay | 0 | 432 | 171 | 603 |
| 24 | Forestry Products | 0 | 1 | 1 | 2 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 124 | Apparel | 0 | 0 | 0 | 0 |
| 161 | Pulp and paper | 0 | 0 | 0 | 0 |
| 166 | Chemicals and allied | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 436 | Water Transportation | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 56,973,705 | 13,959,801 | 19,121,470 | 90,054,977 |

C-2: KLIKITAT COUNTY TOTAL VALUE ADDED IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|------------|------------|-------------|
| 254 | Primary metals | 80,159,525 | 1,526,582 | 39,493 | 81,725,601 |
| 447 | Wholesale Trade | 0 | 5,221,142 | 1,183,810 | 6,404,952 |
| 461 | Real estate | 0 | 806,840 | 5,220,599 | 6,027,439 |
| 448 | Retail Trade | 0 | 393,246 | 3,676,488 | 4,069,734 |
| 443 | Utilities | 0 | 3,155,811 | 656,504 | 3,812,315 |
| 510 | State & local non-ed government | 0 | 2,102,173 | 1,046,987 | 3,149,160 |
| 490 | Health services | 0 | 593 | 2,684,952 | 2,685,545 |
| 435 | Motor Freight Transport and Warehousing | 0 | 2,204,289 | 225,016 | 2,429,305 |
| 48 | Construction | 0 | 1,963,229 | 362,309 | 2,325,538 |
| 456 | Banking | 0 | 387,487 | 541,252 | 928,739 |
| 520 | Federal non-military | 0 | 438,519 | 424,560 | 863,079 |
| 28 | Metal mining | 0 | 774,904 | 394 | 775,298 |
| 480 | Repair services | 0 | 666,898 | 98,153 | 765,051 |
| 433 | Railroads and Related Services | 0 | 639,659 | 41,264 | 680,923 |
| 469 | Business services | 0 | 534,046 | 135,294 | 669,340 |
| 506 | Professional services | 0 | 439,489 | 160,712 | 600,201 |
| 441 | Communications | 0 | 240,285 | 321,516 | 561,801 |
| 477 | Automotive services | 0 | 221,590 | 334,522 | 556,112 |
| 463 | Hotels and Lodging Places | 0 | 140,312 | 302,885 | 443,196 |
| 498 | Social services | 0 | 284 | 427,925 | 428,209 |
| 502 | Non-profit organizations | 0 | 77,195 | 347,470 | 424,665 |
| 133 | Wood products | 0 | 328,624 | 61,576 | 390,200 |
| 174 | Printing and publishing | 0 | 251,795 | 96,002 | 347,797 |
| 464 | Personal services | 0 | 69,285 | 258,460 | 327,726 |
| 1 | Farms | 0 | 79,714 | 232,187 | 311,900 |
| 307 | Industrial machinery | 0 | 286,863 | 12,932 | 299,795 |
| 494 | Legal Services | 0 | 98,952 | 196,589 | 295,541 |
| 124 | Apparel | 0 | 8,773 | 220,693 | 229,466 |
| 484 | Recreation services | 0 | 15,840 | 207,472 | 223,312 |
| 186 | Chemicals and allied | 0 | 90,408 | 25,402 | 115,810 |
| 459 | Insurance Carriers | 0 | 8,862 | 54,584 | 63,446 |
| 483 | Motion Pictures | 0 | 4,037 | 58,787 | 62,824 |
| 437 | Air Transportation | 0 | 22,941 | 29,375 | 52,316 |
| 436 | Water Transportation | 0 | 37,263 | 8,948 | 46,212 |
| 495 | Education services | 0 | 671 | 42,881 | 43,752 |
| 25 | Commercial Fishing | 0 | 950 | 41,278 | 42,228 |
| 460 | Insurance Agents and Brokers | 0 | 5,577 | 34,351 | 39,928 |
| 415 | Miscellaneous mfg | 0 | 23,820 | 15,560 | 39,380 |
| 40 | Non-metal mining | 0 | 25,757 | 7,492 | 33,249 |
| 439 | Transportation Services | 0 | 25,662 | 7,334 | 32,995 |
| 457 | Credit Agencies | 0 | 4,562 | 27,016 | 31,578 |
| 148 | Furniture | 0 | 4,018 | 17,189 | 21,207 |
| 26 | Ag Services | 0 | 5,273 | 10,607 | 15,880 |
| 434 | Local, Interurban Passenger Transit | 0 | 3,220 | 7,605 | 10,825 |
| 58 | Food processing | 0 | 235 | 7,284 | 7,518 |
| 230 | Stone, glass and clay | 0 | 2,461 | 707 | 3,168 |
| 215 | Rubber products | 0 | 2,116 | 575 | 2,691 |
| 161 | Pulp and paper | 0 | 410 | 240 | 649 |
| 24 | Forestry Products | 0 | 10 | 6 | 17 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 273 | Fabricated metal | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 458 | Security and Commodity Brokers | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 80,159,525 | 23,342,851 | 19,915,236 | 123,417,612 |

D-1: WASCO COUNTY EMPLOYEE COMPENSATION IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|-----------|-----------|------------|
| 254 | Primary metals | 31,500,000 | 606,354 | 18,644 | 32,124,998 |
| 448 | Retail Trade | 0 | 243,200 | 3,024,439 | 3,267,639 |
| 490 | Health services | 0 | 599 | 2,658,969 | 2,659,568 |
| 447 | Wholesale Trade | 0 | 1,684,411 | 422,145 | 2,106,556 |
| 510 | State & local non-ed government | 0 | 1,252,663 | 617,459 | 1,870,122 |
| 435 | Motor Freight Transport and Warehousing | 0 | 586,719 | 78,141 | 664,860 |
| 48 | Construction | 0 | 523,958 | 127,461 | 651,418 |
| 469 | Business services | 0 | 424,226 | 154,619 | 578,845 |
| 443 | Utilities | 0 | 443,303 | 101,072 | 544,375 |
| 520 | Federal non-military | 0 | 234,414 | 164,367 | 398,781 |
| 456 | Banking | 0 | 132,491 | 223,600 | 356,091 |
| 498 | Social services | 0 | 234 | 350,111 | 350,345 |
| 502 | Non-profit organizations | 0 | 48,190 | 252,885 | 301,076 |
| 433 | Railroads and Related Services | 0 | 280,276 | 20,416 | 300,693 |
| 506 | Professional services | 0 | 179,274 | 97,238 | 276,512 |
| 480 | Repair services | 0 | 207,340 | 35,533 | 242,873 |
| 441 | Communications | 0 | 85,878 | 135,461 | 221,339 |
| 463 | Hotels and Lodging Places | 0 | 57,401 | 163,359 | 220,759 |
| 464 | Personal services | 0 | 33,498 | 144,254 | 177,751 |
| 494 | Legal Services | 0 | 41,449 | 105,011 | 146,460 |
| 477 | Automotive services | 0 | 47,869 | 90,008 | 137,877 |
| 461 | Real estate | 0 | 15,524 | 119,040 | 134,564 |
| 307 | Industrial machinery | 0 | 127,234 | 5,931 | 133,165 |
| 484 | Recreation services | 0 | 7,883 | 124,465 | 132,348 |
| 174 | Printing and publishing | 0 | 65,604 | 39,776 | 105,380 |
| 457 | Credit Agencies | 0 | 10,883 | 77,386 | 88,068 |
| 459 | Insurance Carriers | 0 | 9,327 | 75,198 | 84,524 |
| 133 | Wood products | 0 | 70,526 | 11,433 | 81,959 |
| 483 | Motion Pictures | 0 | 3,095 | 42,085 | 45,181 |
| 28 | Metal mining | 0 | 44,850 | 26 | 44,676 |
| 495 | Education services | 0 | 725 | 43,850 | 44,575 |
| 1 | Farms | 0 | 5,673 | 35,808 | 41,481 |
| 58 | Food processing | 0 | 2,937 | 29,386 | 32,323 |
| 460 | Insurance Agents and Brokers | 0 | 2,800 | 22,579 | 25,379 |
| 26 | Ag Services | 0 | 6,463 | 18,451 | 24,914 |
| 273 | Fabricated metal | 0 | 16,941 | 1,916 | 18,857 |
| 439 | Transportation Services | 0 | 12,720 | 4,346 | 17,066 |
| 458 | Security and Commodity Brokers | 0 | 4,260 | 10,422 | 14,682 |
| 148 | Furniture | 0 | 2,560 | 11,081 | 13,641 |
| 215 | Rubber products | 0 | 4,561 | 1,202 | 5,763 |
| 40 | Non-metal mining | 0 | 2,122 | 711 | 2,833 |
| 415 | Miscellaneous mfg | 0 | 1,012 | 943 | 1,955 |
| 25 | Commercial Fishing | 0 | 49 | 1,588 | 1,637 |
| 437 | Air Transportation | 0 | 657 | 963 | 1,621 |
| 434 | Local, Interurban Passenger Transit | 0 | 250 | 714 | 964 |
| 230 | Stone, glass and clay | 0 | 265 | 105 | 369 |
| 24 | Forestry Products | 0 | 0 | 0 | 0 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 124 | Apparel | 0 | 0 | 0 | 0 |
| 161 | Pulp and paper | 0 | 0 | 0 | 0 |
| 186 | Chemicals and allied | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 436 | Water Transportation | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 31,500,000 | 7,532,266 | 9,664,597 | 48,696,863 |

D-2: KLICKITAT COUNTY EMPLOYEE COMPENSATION IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|------------|-----------|------------|
| 254 | Primary metals | 44,000,000 | 837,949 | 21,678 | 44,859,628 |
| 447 | Wholesale Trade | 0 | 2,480,035 | 562,308 | 3,042,343 |
| 510 | State & local non-ed government | 0 | 1,815,311 | 904,116 | 2,719,428 |
| 448 | Retail Trade | 0 | 204,510 | 1,911,985 | 2,116,495 |
| 443 | Utilities | 0 | 1,748,820 | 363,808 | 2,112,628 |
| 490 | Health services | 0 | 376 | 1,704,149 | 1,704,525 |
| 435 | Motor Freight Transport and Warehousing | 0 | 1,087,983 | 111,062 | 1,199,046 |
| 48 | Construction | 0 | 1,007,726 | 185,973 | 1,193,699 |
| 520 | Federal non-military | 0 | 447,162 | 432,928 | 880,090 |
| 456 | Banking | 0 | 182,342 | 254,700 | 437,042 |
| 433 | Railroads and Related Services | 0 | 403,251 | 26,013 | 429,264 |
| 502 | Non-profit organizations | 0 | 75,394 | 339,364 | 414,758 |
| 498 | Social services | 0 | 254 | 382,710 | 382,964 |
| 469 | Business services | 0 | 276,808 | 70,126 | 346,933 |
| 28 | Metal mining | 0 | 343,109 | 175 | 343,283 |
| 480 | Repair services | 0 | 221,313 | 32,572 | 253,885 |
| 506 | Professional services | 0 | 183,366 | 67,053 | 250,419 |
| 477 | Automotive services | 0 | 94,424 | 142,547 | 236,971 |
| 174 | Printing and publishing | 0 | 163,435 | 62,313 | 225,748 |
| 307 | Industrial machinery | 0 | 186,252 | 8,396 | 194,648 |
| 441 | Communications | 0 | 80,770 | 108,075 | 188,845 |
| 463 | Hotels and Lodging Places | 0 | 57,404 | 123,916 | 181,321 |
| 133 | Wood products | 0 | 149,974 | 28,101 | 178,075 |
| 124 | Apparel | 0 | 5,608 | 141,082 | 146,691 |
| 464 | Personal services | 0 | 28,998 | 108,204 | 137,202 |
| 461 | Real estate | 0 | 14,802 | 95,774 | 110,575 |
| 494 | Legal Services | 0 | 32,184 | 63,940 | 96,124 |
| 484 | Recreation services | 0 | 5,351 | 70,091 | 75,442 |
| 1 | Farms | 0 | 16,113 | 46,933 | 63,046 |
| 457 | Credit Agencies | 0 | 6,863 | 40,642 | 47,505 |
| 459 | Insurance Carriers | 0 | 5,683 | 35,002 | 40,685 |
| 495 | Education services | 0 | 728 | 35,842 | 36,570 |
| 186 | Chemicals and allied | 0 | 28,124 | 7,902 | 36,026 |
| 483 | Motion Pictures | 0 | 1,896 | 27,607 | 29,503 |
| 436 | Water Transportation | 0 | 23,473 | 5,637 | 29,109 |
| 437 | Air Transportation | 0 | 9,592 | 12,282 | 21,874 |
| 460 | Insurance Agents and Brokers | 0 | 2,875 | 17,709 | 20,584 |
| 415 | Miscellaneous mfg | 0 | 10,707 | 6,994 | 17,701 |
| 439 | Transportation Services | 0 | 13,627 | 3,894 | 17,521 |
| 148 | Furniture | 0 | 2,337 | 9,997 | 12,334 |
| 40 | Non-metal mining | 0 | 9,400 | 2,734 | 12,134 |
| 26 | Ag Services | 0 | 3,893 | 7,830 | 11,722 |
| 434 | Local, Interurban Passenger Transit | 0 | 2,158 | 5,097 | 7,255 |
| 25 | Commercial Fishing | 0 | 150 | 6,527 | 6,677 |
| 230 | Stone, glass and clay | 0 | 1,453 | 417 | 1,870 |
| 215 | Rubber products | 0 | 1,220 | 332 | 1,552 |
| 58 | Food processing | 0 | 14 | 420 | 434 |
| 161 | Pulp and paper | 0 | 211 | 123 | 334 |
| 24 | Forestry Products | 0 | 1 | 1 | 2 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 273 | Fabricated metal | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 458 | Security and Commodity Brokers | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| | Total | 44,000,000 | 12,275,428 | 8,597,082 | 64,872,509 |

E-1: WASCO COUNTY OTHER VALUE ADDED IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|-----------|-----------|------------|
| 254 | Primary metals | 25,473,705 | 490,362 | 15,077 | 25,979,134 |
| 461 | Real estate | 0 | 522,131 | 4,003,721 | 4,525,853 |
| 448 | Retail Trade | 0 | 115,242 | 1,433,154 | 1,548,396 |
| 490 | Health services | 0 | 301 | 1,335,630 | 1,335,931 |
| 447 | Wholesale Trade | 0 | 1,027,979 | 257,631 | 1,285,610 |
| 443 | Utilities | 0 | 700,194 | 159,642 | 859,835 |
| 48 | Construction | 0 | 512,729 | 124,729 | 637,458 |
| 435 | Motor Freight Transport and Warehousing | 0 | 555,369 | 73,966 | 629,335 |
| 469 | Business services | 0 | 448,120 | 163,328 | 611,448 |
| 480 | Repair services | 0 | 406,483 | 69,661 | 476,144 |
| 456 | Banking | 0 | 155,559 | 262,532 | 418,091 |
| 28 | Metal mining | 0 | 333,851 | 195 | 334,046 |
| 441 | Communications | 0 | 104,764 | 165,251 | 270,015 |
| 494 | Legal Services | 0 | 68,936 | 174,650 | 243,586 |
| 510 | State & local non-ed government | 0 | 153,598 | 75,711 | 229,308 |
| 1 | Farms | 0 | 28,943 | 182,683 | 211,627 |
| 464 | Personal services | 0 | 39,777 | 171,293 | 211,070 |
| 520 | Federal non-military | 0 | 122,062 | 85,587 | 207,649 |
| 477 | Automotive services | 0 | 66,895 | 125,781 | 192,676 |
| 484 | Recreation services | 0 | 11,115 | 175,487 | 186,602 |
| 433 | Railroads and Related Services | 0 | 164,355 | 11,972 | 176,327 |
| 506 | Professional services | 0 | 111,877 | 60,682 | 172,559 |
| 463 | Hotels and Lodging Places | 0 | 40,333 | 114,785 | 155,117 |
| 133 | Wood products | 0 | 75,105 | 12,175 | 87,280 |
| 174 | Printing and publishing | 0 | 53,854 | 32,652 | 86,506 |
| 307 | Industrial machinery | 0 | 61,029 | 2,845 | 63,874 |
| 58 | Food processing | 0 | 4,253 | 42,560 | 46,813 |
| 459 | Insurance Carriers | 0 | 3,979 | 32,084 | 36,063 |
| 483 | Motion Pictures | 0 | 2,401 | 32,645 | 35,047 |
| 460 | Insurance Agents and Brokers | 0 | 3,318 | 26,749 | 30,066 |
| 439 | Transportation Services | 0 | 20,551 | 7,023 | 27,574 |
| 26 | Ag Services | 0 | 3,753 | 10,745 | 14,509 |
| 273 | Fabricated metal | 0 | 10,980 | 1,242 | 12,222 |
| 498 | Social services | 0 | 8 | 11,957 | 11,965 |
| 25 | Commercial Fishing | 0 | 311 | 10,022 | 10,333 |
| 148 | Furniture | 0 | 1,845 | 7,988 | 9,834 |
| 495 | Education services | 0 | 82 | 4,985 | 5,068 |
| 215 | Rubber products | 0 | 3,341 | 881 | 4,221 |
| 502 | Non-profit organizations | 0 | 532 | 2,792 | 3,324 |
| 458 | Security and Commodity Brokers | 0 | 947 | 2,317 | 3,264 |
| 40 | Non-metal mining | 0 | 2,392 | 802 | 3,193 |
| 437 | Air Transportation | 0 | 993 | 1,455 | 2,448 |
| 415 | Miscellaneous mfg | 0 | 871 | 812 | 1,684 |
| 434 | Local, Interurban Passenger Transit | 0 | 223 | 639 | 862 |
| 230 | Stone, glass and clay | 0 | 168 | 66 | 234 |
| 24 | Forestry Products | 0 | 1 | 1 | 1 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 124 | Apparel | 0 | 0 | 0 | 0 |
| 161 | Pulp and paper | 0 | 0 | 0 | 0 |
| 186 | Chemicals and allied | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 436 | Water Transportation | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| 457 | Credit Agencies | 0 | (4,378) | (31,712) | (36,089) |
| | Total | 25,473,705 | 6,427,535 | 9,456,873 | 41,358,114 |

E-2: KLIKITAT COUNTY OTHER VALUE ADDED IMPACT (\$)

| IMPLAN # | INDUSTRY | Direct | Indirect | Induced | Total |
|----------|---|------------|------------|------------|------------|
| 254 | Primary metals | 36,159,525 | 688,633 | 17,815 | 36,865,973 |
| 461 | Real estate | 0 | 792,038 | 5,124,825 | 5,916,864 |
| 447 | Wholesale Trade | 0 | 2,741,107 | 621,502 | 3,362,609 |
| 448 | Retail Trade | 0 | 188,735 | 1,764,504 | 1,953,239 |
| 443 | Utilities | 0 | 1,406,991 | 292,697 | 1,699,687 |
| 435 | Motor Freight Transport and Warehousing | 0 | 1,116,305 | 113,954 | 1,230,259 |
| 48 | Construction | 0 | 955,503 | 176,336 | 1,131,839 |
| 490 | Health services | 0 | 216 | 980,803 | 981,020 |
| 480 | Repair services | 0 | 445,585 | 65,580 | 511,166 |
| 456 | Banking | 0 | 205,145 | 286,552 | 491,697 |
| 28 | Metal mining | 0 | 431,795 | 220 | 432,015 |
| 510 | State & local non-ed government | 0 | 286,861 | 142,871 | 429,732 |
| 441 | Communications | 0 | 159,515 | 213,441 | 372,956 |
| 506 | Professional services | 0 | 256,123 | 93,659 | 349,781 |
| 469 | Business services | 0 | 257,238 | 65,168 | 322,407 |
| 477 | Automotive services | 0 | 127,166 | 191,975 | 319,141 |
| 463 | Hotels and Lodging Places | 0 | 82,907 | 178,968 | 261,876 |
| 433 | Railroads and Related Services | 0 | 236,408 | 15,251 | 251,658 |
| 1 | Farms | 0 | 63,601 | 185,254 | 248,854 |
| 133 | Wood products | 0 | 178,651 | 33,475 | 212,125 |
| 494 | Legal Services | 0 | 66,768 | 132,649 | 199,417 |
| 464 | Personal services | 0 | 40,268 | 150,266 | 190,524 |
| 484 | Recreation services | 0 | 10,489 | 137,382 | 147,870 |
| 174 | Printing and publishing | 0 | 88,360 | 33,689 | 122,049 |
| 307 | Industrial machinery | 0 | 100,611 | 4,535 | 105,147 |
| 124 | Apparel | 0 | 3,165 | 79,610 | 82,775 |
| 186 | Chemicals and allied | 0 | 62,285 | 17,500 | 79,784 |
| 498 | Social services | 0 | 30 | 45,215 | 45,245 |
| 25 | Commercial Fishing | 0 | 800 | 34,751 | 35,551 |
| 483 | Motion Pictures | 0 | 2,141 | 31,180 | 33,321 |
| 437 | Air Transportation | 0 | 13,349 | 17,093 | 30,442 |
| 459 | Insurance Carriers | 0 | 3,179 | 19,582 | 22,762 |
| 415 | Miscellaneous mfg | 0 | 13,113 | 8,566 | 21,679 |
| 40 | Non-metal mining | 0 | 16,357 | 4,758 | 21,115 |
| 460 | Insurance Agents and Brokers | 0 | 2,702 | 16,642 | 19,344 |
| 436 | Water Transportation | 0 | 13,791 | 3,312 | 17,102 |
| 439 | Transportation Services | 0 | 12,035 | 3,439 | 15,474 |
| 502 | Non-profit organizations | 0 | 1,801 | 8,106 | 9,907 |
| 148 | Furniture | 0 | 1,681 | 7,191 | 8,872 |
| 495 | Education services | 0 | 143 | 7,039 | 7,182 |
| 58 | Food processing | 0 | 221 | 6,863 | 7,084 |
| 26 | Ag Services | 0 | 1,381 | 2,777 | 4,158 |
| 434 | Local, Interurban Passenger Transit | 0 | 1,062 | 2,508 | 3,570 |
| 230 | Stone, glass and clay | 0 | 1,008 | 289 | 1,298 |
| 215 | Rubber products | 0 | 896 | 244 | 1,139 |
| 161 | Pulp and paper | 0 | 199 | 116 | 315 |
| 24 | Forestry Products | 0 | 9 | 5 | 14 |
| 37 | Coal Mining | 0 | 0 | 0 | 0 |
| 38 | Oil mining | 0 | 0 | 0 | 0 |
| 104 | Tobacco mfg | 0 | 0 | 0 | 0 |
| 108 | Textiles | 0 | 0 | 0 | 0 |
| 210 | Petroleum products | 0 | 0 | 0 | 0 |
| 221 | Leather products | 0 | 0 | 0 | 0 |
| 273 | Fabricated metal | 0 | 0 | 0 | 0 |
| 383 | Electrical equipment | 0 | 0 | 0 | 0 |
| 384 | Transportation equipment | 0 | 0 | 0 | 0 |
| 400 | Scientific instruments | 0 | 0 | 0 | 0 |
| 438 | Pipe Lines, Except Natural Gas | 0 | 0 | 0 | 0 |
| 458 | Security and Commodity Brokers | 0 | 0 | 0 | 0 |
| 516 | Special sectors | 0 | 0 | 0 | 0 |
| 519 | Federal Government - Military | 0 | 0 | 0 | 0 |
| 522 | State & Local Government - Education | 0 | 0 | 0 | 0 |
| 525 | Domestic Services | 0 | 0 | 0 | 0 |
| 457 | Credit Agencies | 0 | (2,301) | (13,626) | (15,927) |
| 520 | Federal non-military | 0 | (8,643) | (8,368) | (17,011) |
| | Total | 36,159,525 | 11,067,423 | 11,318,154 | 58,545,103 |