



**Kittitas County
Economic Impact Analysis**

*Prepared for:
Economic Development Group of Kittitas
County*

September 2010

Prepared by
Hebert Research, Inc.
13629 NE Bel-Red Road
Bellevue, WA 98005
Office: (425) 643-1337
Fax: (425) 746-8138

Table of Contents

RESEARCH GOALS AND OBJECTIVES	4
METHODOLOGY - IMPLAN ECONOMIC IMPACT MODELING SYSTEM	6
STUDY AREA AND REGIONS.....	9
ECONOMIC IMPACT OF CONSTRUCTIONS AND OPERATIONS	11
AGRICULTURE, FORESTRY, FISHING AND HUNTING.....	13
Operations.....	13
MINING.....	15
Operations.....	15
CONSTRUCTION	17
Operations.....	17
MANUFACTURING.....	19
Construction.....	19
Operations.....	19
WHOLESALE TRADE	21
Construction.....	21
Operations.....	21
RETAIL TRADE.....	23
Construction.....	23
Operations.....	23
TRANSPORTATION INFRASTRUCTURE	25
Construction.....	25
AIRPORT	26
Construction.....	26
Operations.....	26
INFORMATION.....	28
Construction.....	28
Operations.....	28
PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES	30
Construction.....	30
Operations.....	30
EDUCATIONAL SERVICES.....	32
Construction.....	32
Operations.....	32
HEALTH CARE AND SOCIAL ASSISTANCE	34
Construction.....	34
Operations.....	34
ACCOMMODATIONS	36
Construction.....	36
Operations.....	36
FOOD SERVICE.....	38
Construction.....	38
Operations.....	38
INDUSTRY COMPARISON	40
ECONOMIC IMPACT FORECAST – 1 TO 5 AND 10 YEARS – DIRECT OUTPUT.....	42
ECONOMIC IMPACT FORECAST – 1 TO 5 AND 10 YEARS – TOTAL OUTPUT.....	43
RETURN ON INVESTMENT	44

<i>Construction</i>	44
<i>Operations</i>	45
<i>EMPLOYMENT IMPACT</i>	46
<i>ECONOMIC IMPACT CALCULATOR SPREADSHEET</i>	47
<i>ELLENSBURG TAX AND FEE CALCULATOR SPREADSHEET</i>	49
RETAIL LEAKAGE ANALYSIS	51
KITITAS COUNTY	51
LOWER KITITAS COUNTY REGION	55
UPPER KITITAS COUNTY REGION	58
<i>PROFESSIONAL SERVICES DEMAND ANALYSIS</i>	62
<i>CONCLUSIONS</i>	65
THE FOLLOWING CONCLUSIONS ARE BASED ON THE RESEARCH FINDINGS DISCUSSED ABOVE, AS WELL AS STRATEGIC OBSERVATIONS THAT MAY HELP PUT THEM INTO CONTEXT.	65
<i>APPENDIX A: RESEARCH SOURCES</i>	67
DATA FOR CONSTRUCTION COST ESTIMATION	67
DATA FOR OPERATING REVENUE ESTIMATION.....	70

Research Goals and Objectives

Research Background and Goal

The Economic Development Group of Kittitas County is a non-profit organization dedicated to improving Kittitas County through new business investment and job creation. It has asked Hebert Research to provide an analysis of the expected economic impacts of development of several economic sectors on Kittitas County.

The major purpose of this study is to assess the value of the regional economic development and project the impact of growth in the following economic sectors on Kittitas County. By quantifying how a potential new economic development project will benefit the county both directly and indirectly, this research will help provide a context for negotiating and planning with business and government stakeholders.

Research Objectives

Specific objectives of the research include:

- For each of the following sectors, provide an estimate of revenues generated by both construction (short-term) and operations (long-term) of an example development project. Note: due to their physical and economic traits, some sectors involve only short-term or long-term revenues.
 - Agriculture, Forestry, Fishing and Hunting
 - Mining
 - Construction
 - Manufacturing
 - Wholesale Trade
 - Retail Trade
 - Transportation: Infrastructure Development
 - Transportation: Airport
 - Information
 - Professional, Scientific and Technical Services
 - Educational Services
 - Health Care and Social Assistance
 - Accommodations
 - Food Services
- Using the direct revenues as an input into an IMPLAN economic model, estimate the indirect, induced and total economic impact for each sector.
- Conduct the economic impact analysis described above for Kittitas County as a whole, as well as two sub-regions of the county:
 - Lower Kittitas County

- Upper Kittitas County
- Evaluate the return on public investment in the proposed construction and operations of each principal sector to the region, using criteria including tax revenue generated, job creation, and economic value added.
- Project the economic impact for 1 to 5 and 10 years.
- Provide an instrument to perform economic impact calculations for proposed development actions. This instrument allows the economic impact analysis to be adjusted for scale, expected revenues, life span of the development project, and other variables.
- Provide an additional instrument to calculate expected taxes and fees accruing to the City of Ellensburg for developments in each applicable industry sector.
- Conduct an analysis of retail leakage for Kittitas County and the two sub-regions. Retail leakage analysis identifies specific sub-sectors of the retail industry where business within the study area are not meeting local demand, which often indicates strong opportunities for development.
- Compare the development level of the professional services industry in Kittitas County with other counties in which this sector has developed more fully. Estimate the room for growth and expected square footage needed for development of these sectors in Kittitas County.

Methodology - IMPLAN Economic Impact Modeling System

IMPLAN Professional is a computer based economic impact assessment modeling system. Combined with the IMPLAN data file for a specific study area, it allows the user to develop local level input-output models that can estimate the economic impact of a new development and to assess the "ripple effects" caused by increasing or decreasing expenditures in various parts of an economy.

The input-output analysis used by IMPLAN employs a two-stage modeling process:

1. Descriptive modeling
2. Predictive modeling

Descriptive Model

The descriptive model is a representation of the existing interactions between economic sectors within Kittitas County and its sub-regions. This model uses a system called regional economic accounts to describe a local economy in terms of the flow of dollars from purchasers to producers within the region. A descriptive model presents a detailed picture of each of more than 400 industry sectors, including data on total employment, sales, inputs used in production, and interaction with economies outside the study area.

An additional layer of information called Social Accounting data is also added to the model, allowing analysts to examine non-commercial transactions, such as payment of taxes by businesses and households.

Predictive Model

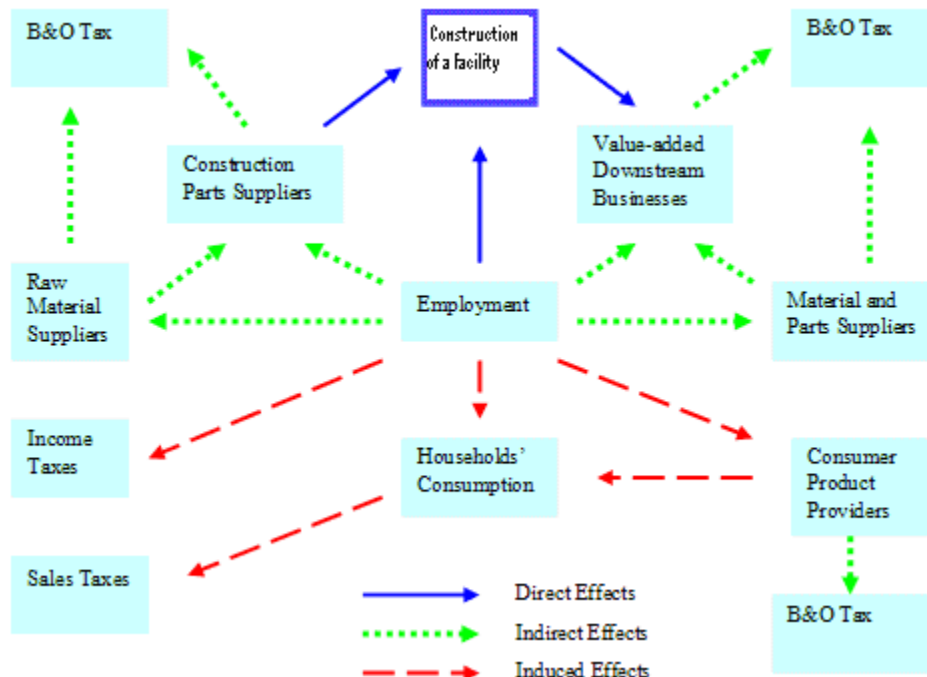
A Predictive Model assesses the total impact of an economic event on the overall economy of the area being studied. The key concept behind the Predictive Model is called a multiplier: using the descriptive model as a basis, the program calculates how each dollar of a selected economic event will affect all other industries in the area. Because of this linear nature of the multiplier, the economic impact can easily be scaled to account for inputs of different sizes.

The impact of an economic stimulus can be broken down into three components: direct effects, indirect effects, and induced effects. To illustrate each of these concepts, suppose that a company decides to invest in Kittitas County by constructing a new housing development.

- ***Direct effects*** represent the immediate impact of an economic change on the industry directly involved. In the housing construction example, direct effects would include gross revenues earned the contractors working on the project.
- ***Indirect effects*** represent the changes in inter-industry purchases as the economy responds to the new demands of the directly affected industries. Following the same example, local suppliers of construction materials would increase their economic activities in order to meet new demand by the contractors.

- **Induced effects** represent the changes in spending from households as income increases due to the changes in production. In the example, construction workers would receive additional wages by working on the new housing project. They would then spend a portion of those wages on consumer goods, such as food, clothing, and entertainment, from other Kittitas County businesses.

The effects stimulated by an example construction project in Upper or Lower Kittitas County are illustrated below:



Note: This diagram is for illustration purposes only, and is by no means an exclusive list of all economic effects.

Value Added

Value added is the difference between an industry's or establishment's total output and the cost of its intermediate inputs, such as raw materials. Value added may be distributed in the form of compensation of employees, tax revenues, and the surplus earned by the business (e.g. proprietor's income, shareholder's equity, etc). Hence, value added is a comprehensive measure of the economic benefit accruing to the community, and can be considered a one-time or annual return on community investment.

Key Model Parameters:

The input-output model is based on several parameters and algorithm attributes:

1. Constant Returns to Scale: return on production is linear. If additional inputs increase, outputs increase proportionately.

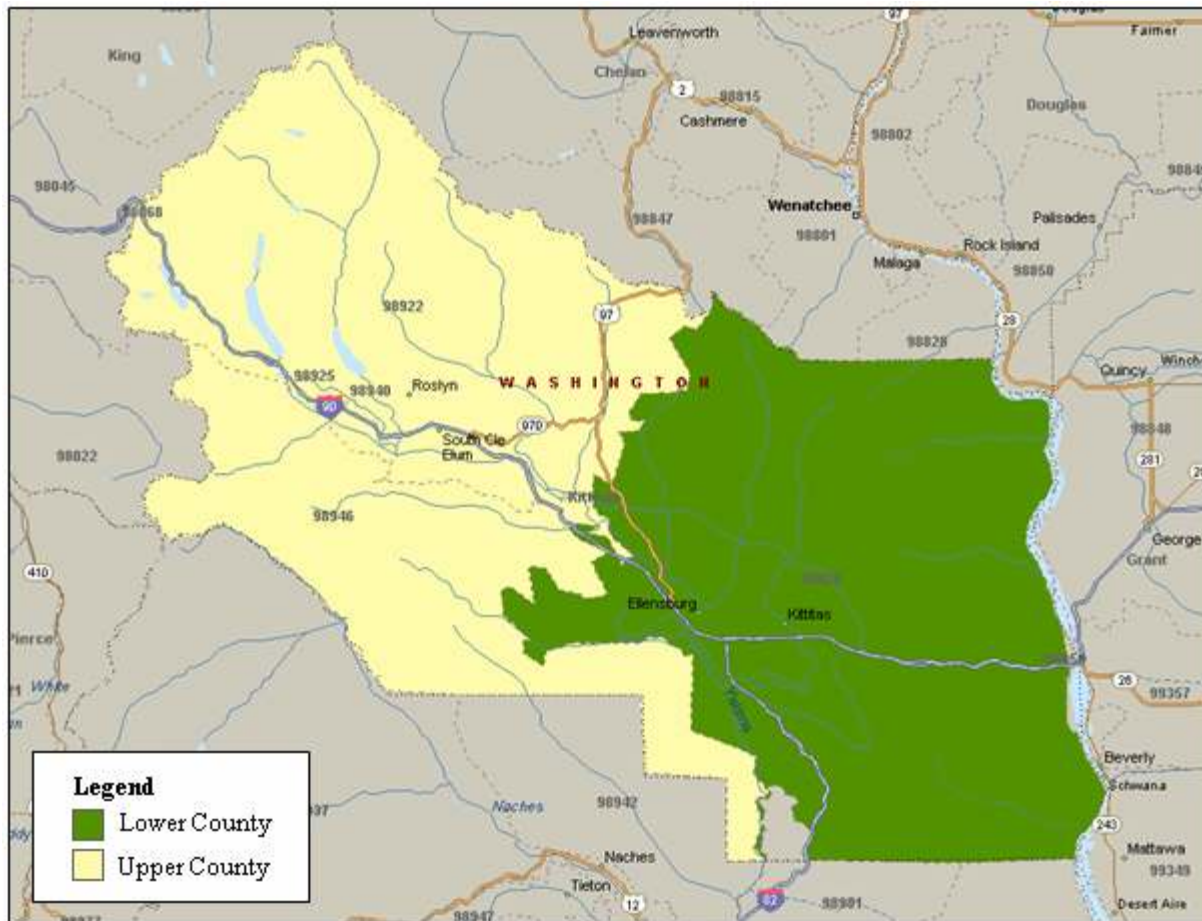
2. No Supply Constraints: supplies are unlimited. Industries have unlimited access to raw materials.
3. Fixed Commodity Input Structure: this structure assumes that changes in the economy will affect the industry's output, but not the mix of commodities and services it requires to make its products. Thus, price changes do not cause a firm to buy substitute goods for use in production.
4. Homogenous Sector Output: the proportions of all commodities produced by a given sector remain the same, regardless of total output. An industry won't increase the output of one product without proportionately increasing the output of all its other products.
5. Industry Technology Assumption: an industry uses the same mix of input (labor, materials, etc.) to produce all its products.

Study Area and Regions

In addition to aggregate data for all of Kittitas County, analysis has been conducted for two sub-regions: Lower Kittitas County (i.e., the Ellensburg area), and Upper Kittitas County. Together, these two regions comprise the entire county. The regions consist of the zip codes listed in the following table, and are shown in the accompanying map.

Zip Code Composition of Sub-regions	
Lower Kittitas County	Upper Kittitas County
98926 (Ellensburg)	98068 (Keechelus Lake Area)
98934 (Kittitas)	98922 (Cle Elum)
98950 (Vantage)	98925 (Kachess Lake Area)
	98940 (Ronald)
	98941 (Roslyn)
	98943 (South Cle Elum)
	98946 (Thorp, southern border of county)

Map of Study Area Regions



The table below presents an overview of the population and economic output (Gross Regional Product) of each region. Population figures are as measured by the census, and do not include non-permanent residents such as college students, second-home owners, and visitors.

Demographics Used in Model (2008 Data)			
Indicator	Kittitas County	Lower Kittitas County	Upper Kittitas County
Population	38,951	29,734	9,217
Gross Regional Product	\$1,027,394,165	\$738,224,498	\$289,169,655

Although the two regions are comparable in geographic size, the Lower Kittitas County Region is approximately three times as populous as the Upper Kittitas County Region, and also produces nearly three times the economic output.

Economic Effect of Region Size

Generally, the smaller the region being examined, the lower the net economic impact will be for a given project. This is primarily because more goods and services must be “imported” from outside the study area. In the current study, economic impacts are generally highest for the entire county, slightly lower for Lower Kittitas County, and substantially lower for the less populous upper region of the county. Results throughout the study confirm that the Upper Kittitas County region has a higher rate of leakage than Ellensburg, which results in lower multipliers for indirect and induced economic activity.

Region Size and Modeling Issues

As discussed above the IMPLAN model is based on assumptions that economic activity can scale at a constant rate. While these assumptions are functionally accurate within a large study area, they tend to be less robust when a very small area is considered. For example, if a very large economic stimulus occurred in a small area, the demand for labor and resources might exceed what the area can currently provide, which would affect the rate of importation from surrounding areas.

Additionally, for IMPLAN to estimate the change of an effect within a given study area, the descriptive model must include data on the nature of the industry within the study area. This means that the package cannot estimate economic effects for sectors that do not already exist within the region. Again, this tends to be a factor only when small and/or economically underdeveloped areas are being considered. When this effect occurs, comparable economic sectors must be substituted, resulting in a slightly different input mix.

Thus, while the sub-regional data should still be predictive, the county level data can be considered more robust.

Economic Impact of Constructions and Operations

The economic sectors being analyzed have been split into two categories:

- 1) Sectors where construction cost and expected business activity can be scaled according the square footage of the facility.
- 2) Sectors that do not scale to square footage.

For the nine sectors where square footage is an appropriate measurement, production costs and operating revenues have been estimated on a per square foot basis. See Appendix 1: Data Sources for descriptions of the data used for cost and production/sales estimates. Throughout this report, 10,000 square feet has been used as a reference point, but the data can be scaled linearly for a facility of a different size. The table below also summarizes the estimates for operations, production, and sales output for these nine sectors.

Industries Scalable by Square Footage (10,000 sq ft Facility)				
Sector	Construction Cost per sq ft	Cost for a 10,000 sq ft facility	Production and Sales Estimates per sq ft	Production and Sales of a 10,000 sq ft facility
Manufacturing	\$105	\$1,000,000	\$100	\$1,000,000
Wholesale Trade	\$85	\$850,000	\$85	\$850,000
Retail Trade	\$100	\$1,000,000	\$210	\$2,100,000
Information	\$160	\$1,600,000	\$270	\$2,700,000
Professional, Scientific and Technical Services	\$160	\$1,600,000	\$255	\$2,550,000
Educational Services	\$155	\$1,550,000	\$50	\$500,000
Health Care and Social Assistance	\$220	\$2,200,000	\$325	\$3,250,000
Accommodations	\$145	\$1,450,000	\$50	\$500,000
Food Service	\$180	\$1,800,000	\$390	\$3,900,000

For the remaining five sectors, a 10,000 square foot building was not determined to be an appropriate reference point. Agriculture, Mining and Construction are all industries which make intensive use of land and equipment rather than permanent building space as inputs. For these industries, the scaling unit is \$1 million of operations, rather than a fixed building size. Transportation infrastructure is assumed to be a one-time expenditure, so this sector includes no long-term operations revenue. Finally, while the airport sector is dependent on a physical facility, square footage is not an accurate measure of operating scale. Construction costs and operating revenues have been estimated for a potential enhanced facility providing small scale scheduled commercial flights as well as general aviation. The table below summarizes short- and long-term revenues for these sectors.

Industries not Scalable by Square Footage		
Sector	Total Short-Term Cost	Total Long-Term Production and Sales
Agriculture, Forestry, Fishing and Hunting	N/A	\$1,000,000
Mining	N/A	\$1,000,000
Construction	N/A	\$1,000,000
Transportation Infrastructure	\$1,000,000	N/A
Airport	\$22,000,000	\$13,622,543

Agriculture, Forestry, Fishing and Hunting

The agriculture industry of Kittitas County is predominated by hay farming and cattle ranching. Other major activities that fall into the agriculture sector include support activities for agriculture, and fruit and vegetable farming. Commercial logging activity is present but only accounts for about one-tenth the output of agriculture, and moreover the industry is expected to decline in the future. Although fishing and hunting activities help drive tourism in the county, the direct contributions of these industries on a commercial scale are virtually negligible. The model below assumes \$1 million of new activity in line with the county's existing distribution of agriculture, forestry, fishing and hunting revenues.

Operations

In Kittitas County as a whole, an agricultural/forestry operation with annual revenue of \$1 million would generate indirect spending of \$374,305. Induced effects are estimated at \$212,541. Total annual economic output, which includes direct, indirect and induced effects, would total \$1,598,284. The total value added effect to the community is projected to be \$668,305.

A \$1 million agricultural/forestry development would directly employ 11.9 full-time equivalencies, and would support an additional 5.9 jobs in other industries. Annual direct labor income from the construction project is estimated to reach \$280,149. Total labor income impact, which includes direct labor income as well as indirect and induced labor income, will reach \$464,121.

Outside of the agricultural sector, the industries most affected by this development would be wholesale trade (\$45,275), imputed rental activity for owner-occupied dwellings (\$38,564), real estate establishments (\$31,626), monetary authorities and depository credit intermediation activities (\$26,658), and food services and drinking places (\$16,660).

For the Lower Kittitas County region, a \$1 million agriculture, forestry, fishing or hunting development would contribute a total of \$1,586,846 in output, of which \$678,326 is value added. 18.1 total jobs would be created, with \$471,304 in total labor income.

For the Upper Kittitas County region, the same project would generate \$1,339,014 in output, including \$451,657 in value added. The operation would also create 12.3 total jobs and \$223,608 in total labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Long (Operations)	Kittitas County	\$1,000,000	\$374,305	\$212,541	\$1,586,846	\$668,053
	Lower Kittitas County Region	\$1,000,000	\$375,133	\$223,151	\$1,598,274	\$678,326
	Upper Kittitas County Region	\$1,000,000	\$273,429	\$65,585	\$1,339,014	\$451,657

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Long (Operations)	Kittitas County	11.9	17.8	\$280,149	\$464,121
	Lower Kittitas County Region	11.9	18.1	\$280,149	\$471,304
	Upper Kittitas County Region	9.7	12.3	\$115,068	\$223,608

Mining

Although mining played a significant role in Kittitas County's historical development, the industry is currently small and focuses on non-metallic mineral extraction, particularly rock and gravel quarrying. Current revenues county-wide are estimated at \$6.5 million a year. The model described below assumes an expansion of the non-metallic mining sector, along with a small quantity of oil and gas well drilling.

Operations

Again, this analysis uses \$1 million in operating revenue as a benchmark. Within the entire county, a mining operation of this size would produce \$154,263 in indirect output, \$197,741 in induced output. Thus the total output effect would be \$1,352,004, including \$669,183 in value added. This activity is expected to generate 7.2 direct employees working for the new facility and 2.8 indirect and induced employees, for total of 10.0 jobs created. Total labor income resulting from the project would equal \$427,664.

This mining activity will have the most overall impact on the following sectors: food services and drinking places (\$16,005), wholesale trade (\$25,670), transport by truck (\$20,366), architectural, engineering and related services (\$12,701), and offices of physicians, dentists and other health practitioners (\$9,963).

Looking exclusively at the Lower Kittitas County region, the same project would generate \$1,177,353 in total output, including \$672,842 in value added. Job creation would be 11.7 in total, and labor earnings would be \$435,402. Note: the only mining industry for which IMPLAN has data in the Lower Kittitas County Region is drilling oil and gas wells. Thus the output numbers for this region are considerably different than the other areas being studied.

For the Upper Kittitas County region, the totals would be: \$1,259,877 in output, \$612,501 in value added, 9.1 total jobs created, and \$398,126 in labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Long (Operations)	Kittitas County	\$1,000,000	\$154,263	\$197,741	\$1,352,004	\$669,183
	Lower Kittitas County Region	\$1,000,000	\$108,497	\$68,856	\$1,177,353	\$672,842
	Upper Kittitas County Region	\$1,000,000	\$139,708	\$120,169	\$1,259,877	\$612,501

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Long (Operations)	Kittitas County	7.2	10.0	\$327,565	\$427,664
	Lower Kittitas County Region	10.2	11.7	\$90,214	\$135,402
	Upper Kittitas County Region	7.2	9.1	\$327,565	\$398,126

Construction

The county's construction industry includes construction of residential, commercial, public and other facilities, as well as maintenance-construction of existing structures.

Operations

As with the previous two sectors, operating revenue for a hypothetical construction business has been set at \$1 million per year.

Considering Kittitas County as a whole, construction activity of \$1 million would contribute a total of \$1,414,970 to the economy. Indirect output would reach \$187,985, while induced output would reach \$226,985. Of the total output, \$632,900 is value added.

This operation would employ 6.9 employees directly, and 3.9 more in supporting industries, for a total of 10.8 jobs created. Labor income earned by households in the county would total \$494,710.

The other economic sectors that would receive the largest benefit from construction include: wholesale trade (\$45,165), imputed rental activity for owner-occupied dwellings (\$41,464), architectural, engineering and related services (\$25,651), food services and drinking places (\$19,857), and real estate establishments (\$14,384).

Within Lower Kittitas County, the project would generate \$1,414,037 in total output, of which \$624,995 is value added. Labor effects would include 11.1 total jobs and \$483,996 in labor income.

For the Upper Kittitas County sub-region, the total output would be \$1,278,695 with \$547,763 in value added. Employment would increase by 9.5 in all industries, and labor income would increase by \$448,690.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Long (Operations)	Kittitas County	\$1,000,000	\$187,985	\$226,985	\$1,414,970	\$632,900
	Lower Kittitas County Region	\$1,000,000	\$184,821	\$229,216	\$1,414,037	\$624,995
	Upper Kittitas County Region	\$1,000,000	\$147,232	\$131,463	\$1,278,695	\$547,763

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Long (Operations)	Kittitas County	6.9	10.8	\$363,725	\$494,710
	Lower Kittitas County Region	7.0	11.1	\$351,815	\$483,996
	Upper Kittitas County Region	6.9	9.5	\$363,879	\$448,690

Manufacturing

Kittitas County's manufacturing industry is relatively diverse. Major components include food processing and structural component manufacturing. High-technology products are not yet a major component of the county's manufacturing base.

Construction

Construction of a 10,000 square foot manufacturing facility is expected to cost approximately \$1,000,000.

At the county level, including indirect and induced effects, the total impact of the initial development is estimated at \$1,342,331, of which \$583,200 is value added. This construction activity will create 8.8 total jobs and generate a total labor income of \$428,469.

For the Lower Kittitas County region, construction of the same facility would generate a total economic output of \$1,340,219, including \$585,143 in value added. Construction would directly employ 5.9 people, and create 3.0 additional jobs through secondary effects. Labor income received would be \$428,503.

An identical facility in the Upper Kittitas County region would generate \$1,216,416 total output for that region, including \$504,578 in value added. The project would create 6 direct and 2 indirect/induced short-term jobs, and \$386,608 in labor income.

Operations

For all of Kittitas County, the operations of a 10,000 square foot manufacturing facility would generate approximately \$1 million directly, and have a total economic output of \$1,568,539, of which \$427,673 is value added.

The facility is expected to directly employ 3 people, and create 5 additional supporting jobs in other sectors. The total labor income will reach \$280,157.

The industries that will most benefit from the manufacturing facility operations include wholesale trade (\$79,625), cattle ranching and farming (\$76,814), transport by truck (\$26,225), imputed rental activity for owner-occupied dwellings (\$23,080), and "all other" crop farming (\$14,164).

Within the Lower Kittitas County, overall economic output would reach \$1,577,387 including \$434,225 in value added. Job creation would total 8.2, and labor income would comprise \$283,360.

For the Upper Kittitas County region, the manufacturing facility would generate \$1,380,947 in total output and \$307,001 in value added. Including indirect and induced effects, it would employ 5.6 people and create \$206,885 in labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,000,000	\$145,572	\$196,759	\$1,342,331	\$583,200
	Lower Kittitas County Region	\$1,000,000	\$137,247	\$202,972	\$1,340,219	\$585,143
	Upper Kittitas County Region	\$1,000,000	\$102,774	\$113,642	\$1,216,416	\$504,578
Long (Operations)	Kittitas County	\$1,000,000	\$440,472	\$128,067	\$1,568,539	\$427,673
	Lower Kittitas County Region	\$1,000,000	\$443,257	\$134,130	\$1,577,387	\$434,225
	Upper Kittitas County Region	\$1,000,000	\$321,345	\$59,602	\$1,380,947	\$307,001

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	5.9	8.8	\$324,194	\$428,469
	Lower Kittitas County Region	5.9	8.9	\$324,194	\$428,503
	Upper Kittitas County Region	5.9	7.7	\$324,194	\$386,608
Long (Operations)	Kittitas County	3.0	8.0	\$139,248	\$280,157
	Lower Kittitas County Region	3.0	8.2	\$138,567	\$283,360
	Upper Kittitas County Region	2.6	5.6	\$128,437	\$206,885

Wholesale Trade

The IMPLAN model consolidates all wholesale trade activities into a single sector for analysis.

Construction

Of the sectors examined in this study, a wholesale trade facility (i.e., a warehouse) is estimated to be the least expensive to develop on a per-square foot basis. The direct output from constructing a 10,000 sq ft wholesale trade facility will be approximately \$850,000. Including indirect and induced effects, the total economic impact on Kittitas County will be \$1,172,605. Value added for the construction project would total \$505,477. It would also generate 5.2 direct and 8.1 total employees in the county, increasing total labor income by \$387,975.

With respect to the Lower Kittitas County, the construction project would lead to a total economic output of \$1,159,425 including \$501,773 in value added. Employment effects would include a total of 8.0 jobs created, 5.2 of them working directly on the construction project, and \$383,558 in labor income.

For the Upper Kittitas County region, the total economic effect would be slightly smaller, totaling \$1,076,559, with \$444,416 in value added. 5.2 jobs would be created for the construction project itself, as well as 2.0 indirect/induced jobs, for a total of 7.2. Workers would earn a total of \$356,872 in labor income.

Operations

A wholesale facility of this size is expected to generate about \$850,000 in annual sales for Kittitas County as a whole. The indirect and induced effects will create \$347,203 from indirect and induced output equaling a total economic output of \$1,197,204, of which \$751,097 is value added. The wholesale facility will create 5.9 full time jobs directly and an additional 3.0 supporting jobs, generating a total labor impact of \$428,592.

The businesses that will most benefit from the additional wholesale output include imputed rental activity for owner-occupied dwellings (\$35,496), food services and drinking establishments (\$18,114), real estate establishments (\$17,379), newspaper publishers (\$11,654), and offices of physicians, dentists and other health care practitioners (\$10,105).

Looking specifically at the Lower Kittitas County region, a 10,000 square foot wholesale facility would provide \$1,201,574 in total economic output, including \$715,531 in value added. This would also generate 9.0 total jobs and \$431,617 in total labor income.

For the Upper Kittitas County region, the facility would generate: \$1,056,531 total output, \$667,837 value added, 7.7 jobs, and \$381,766 labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$850,000	\$144,447	\$178,157	\$1,172,605	\$505,477
	Lower Kittitas County Region	\$850,000	\$127,744	\$181,681	\$1,159,425	\$501,733
	Upper Kittitas County Region	\$850,000	\$121,653	\$104,906	\$1,076,559	\$444,416
Long (Operations)	Kittitas County	\$850,000	\$151,071	\$196,132	\$1,197,204	\$751,097
	Lower Kittitas County Region	\$850,000	\$147,247	\$204,327	\$1,201,574	\$715,531
	Upper Kittitas County Region	\$850,000	\$95,964	\$110,567	\$1,056,531	\$667,837

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	5.2	8.1	\$287,459	\$387,975
	Lower Kittitas County Region	5.2	8.0	\$287,459	\$383,558
	Upper Kittitas County Region	5.2	7.2	\$287,459	\$356,872
Long (Operations)	Kittitas County	5.9	8.9	\$322,989	\$428,592
	Lower Kittitas County Region	5.9	9.0	\$322,989	\$431,617
	Upper Kittitas County Region	5.9	7.7	\$322,989	\$381,766

Retail Trade

The Retail Trade sector provides consumers with goods including food, clothing, household goods, and many other types. The model was constructed assuming a blend of store sizes (both small stores and larger department or big box stores) and categories of goods offered.

Construction

On a county-wide basis, the construction of a 10,000 square foot retail trade facility will have a direct output of \$1 million and a total output of \$1,379,535. Value added for this endeavor would total \$594,687. The construction project will create 6.1 direct jobs, or 9.5 jobs including indirect and induced effects, and would generate a total labor income of \$456,441.

In the Lower Kittitas County region, the project would generate \$1,364,030 in total output, \$590,274 in value added, 6.1 direct jobs, 3.3 indirect/induced jobs, and \$451,245 in labor income.

In the Upper Kittitas County region, the totals would be \$1,266,540 in total output, \$522,842 in value added, 6.1 direct jobs, 2.3 indirect/induced jobs, and \$419,849 in labor income.

Operations

A 10,000 sq ft retail trade building is expected to generate \$2,100,000 million in direct revenue, with a total output impact of \$2,949,049, of which \$1,802,978 is value added output. The business activity will create 30.2 jobs directly and 7.4 more indirectly, generating a total annual labor income of \$1,092,229.

Indirect and induced effects will provide the most economic benefit for the following five industries: imputed rental activity for owner-occupied dwellings (\$90,737), real estate establishments (\$70,310), wholesale trade businesses (\$60,465), food services and drinking places (\$46,024), and newspaper publishers (\$31,758).

In the Lower Kittitas County rRegion, the effects of the retail facility would include \$2,971,580 in total output, \$1,737,808 in value added, 42.0 total jobs, and \$1,127,702 in total labor income.

With the same facility, the Upper Kittitas County region would experience \$2,650,563 in additional economic output, \$1,714,837 in value added, 39.9 jobs created, and \$1,015,340 in total labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,000,000	\$169,938	\$209,597	\$1,379,535	\$594,678
	Lower Kittitas County Region	\$1,000,000	\$150,278	\$213,742	\$1,364,030	\$590,274
	Upper Kittitas County Region	\$1,000,000	\$143,121	\$123,419	\$1,266,540	\$522,842
Long (Operations)	Kittitas County	\$2,100,000	\$348,886	\$500,163	\$2,949,049	\$1,802,978
	Lower Kittitas County Region	\$2,100,000	\$337,642	\$533,938	\$2,971,580	\$1,737,808
	Upper Kittitas County Region	\$2,100,000	\$255,110	\$295,453	\$2,650,563	\$1,714,837

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	6.1	9.5	\$338,187	\$456,441
	Lower Kittitas County Region	6.1	9.4	\$338,187	\$451,245
	Upper Kittitas County Region	6.1	8.4	\$338,187	\$419,849
Long (Operations)	Kittitas County	30.2	37.6	\$850,991	\$1,092,229
	Lower Kittitas County Region	34.2	42.0	\$875,412	\$1,127,702
	Upper Kittitas County Region	34.7	39.9	\$870,047	\$1,015,340

Transportation Infrastructure

The following section models an investment in “passive” transportation infrastructure, such as road construction. This investment is assumed to be a one-time construction expense with no long-term operating revenue.

Construction

A \$1 million expenditure on road construction or a similar project would contribute a total of \$1,409,025 to the Kittitas County economy, including \$621,428 in value added. The construction activity is estimated to create 6.7 jobs directly, as well as and an additional 3.8 jobs in supporting sectors of the local economy, generating a total labor income of \$499,307.

Within the Lower Kittitas County region, \$1 million spent on transportation infrastructure would produce a total economic impact of \$1,392,301. The value added in this scenario would total \$616,453. Short term job creation would include 6.7 people working directly on the construction, and 3.7 additional jobs created through secondary effects. Labor income earned would total \$493,583.

The same project would generate \$1,293,476 within the Upper Kittitas County region, including \$546,345 in value added. 6.7 direct jobs, as well as 1.6 indirect/induced jobs, would be created during the span of construction. Labor income would also be increased by \$461,657.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,000,000	\$179,716	\$229,309	\$1,409,025	\$621,428
	Lower Kittitas County Region	\$1,000,000	\$158,499	\$233,802	\$1,392,301	\$616,453
	Upper Kittitas County Region	\$1,000,000	\$157,728	\$135,748	\$1,293,476	\$546,345

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	6.7	10.5	\$370,708	\$499,307
	Lower Kittitas County Region	6.7	10.4	\$370,708	\$493,583
	Upper Kittitas County Region	6.7	9.3	\$370,708	\$461,657

Airport

As an alternative form of transportation investment, the following section models the construction of an enhanced airport facility. Such an airport facility would accommodate light commercial traffic (i.e. commuter airplanes) as well as general aviation. The expected passenger volume is set at 19,800 emplacements per year.

Due to the inherently regional nature of such a facility, and the lack of an air transport industry in the Upper County region, the economic impact analysis for an airport has only been performed with respect to Kittitas County as a whole.

Construction

Construction of the airport facility is estimated to cost approximately \$22 million. Including indirect and induced effects, the total short-term output resulting from the construction project would equal \$30,792,119. If the total output, \$13,481,176 would consist of value added. This project would directly employ a construction staff of 144, and generate a total of 223.6 jobs in all industries. Total labor earnings for the construction and resulting effects would reach \$10,684,698.

Operations

Economic impacts from operations of an enhanced airport would take two primary forms: revenues from air transportation itself (earned by airlines, airport facilities, etc), and local spending by visitors using the airport (earned by hotels, restaurants, stores, entertainment facilities and other local businesses).

Including both forms of revenue, the total direct impact of the airport's operations is projected at \$13,622,543. Once indirect and induced effects are accounted for, the total annual output caused by the airport facility totals \$19,107,984. Of this sum, value added comprises \$10,240,640.

Operations and the airport and in industries serving visitors would employ 225.4 people. Counting secondary effects, total employment rises to 273.4, with a total labor income of \$6,390,984 per year.

Including direct, indirect and induced effects in all sectors, the industries most affected by the airport are: hotels and motels (\$4,116,882), transport by air (\$2,007,517), food services and drinking places (\$1,856,416), transit and ground passenger transport (\$1,841,681), retail stores (\$1,554,930), and scenic and sightseeing transportation and support activities for transportation (\$1,381,509).

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$22,000,000	\$3,885,304	\$4,906,815	\$30,792,119	\$13,484,176
Long (Operations)	Kittitas County	\$13,622,543	\$2,542,300	\$2,943,141	\$19,107,984	\$10,240,640

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	144.0	223.6	\$7,927,932	\$10,684,698
Long (Operations)	Kittitas County	225.4	273.4	\$4,796,624	\$6,390,984

Information

The information sector includes business such as publishers, producers of computer software, producers of video and sound content, and telecommunications companies. This sector is expected to primarily use commercial office space.

Construction

For all of Kittitas County, construction of a 10,000 square office building for the information industry would cost approximately \$1.6 million, and would generate a total economic output of \$2,207,256 including indirect and induced effects. The value added to the community would total \$951,485. Such a construction project would create 9.8 direct construction jobs, and 5.4 more in other supporting sectors for a total employment gain of 15.2. Labor income from the construction and secondary effects would total \$730,306.

Within the Lower Kittitas County region, an identical development would produce a total economic impact of \$2,182,447, including \$944,438 in value added. The project would generate 15.1 short-term total jobs and contribute \$721,992 in total labor income.

For the Upper Kittitas County region, total economic impact would be \$2,026,464, of which \$836,547 is value added. The project would employ 13.4 people either directly or secondarily, and would produce \$671,578 in total labor income.

Operations

Annual operating revenue of a 10,000 square foot information facility is estimated at \$2,700,000. With this level of operating revenue, the facility would cause a total economic impact of \$3,879,924 per year within all of Kittitas County, including \$1,474,937 in value added. The information facility would employ 13.0 people directly and 22.7 in total, and would generate \$782,941 in total labor income.

Other industries that would most benefit from the operations of an information facility include: imputed rental activity for owner-occupied homes (\$66,590), wholesale trade businesses (\$64,500), real estate establishments (\$56,162), food services and drinking places (\$49,991), and monetary authorities and depository credit intermediation activities (\$44,353).

Considering the Lower Kittitas County region, a 10,000 square foot information facility would contribute \$3,792,536 to the local economy, including \$1,327,774 in value added. It would also create 22.7 total jobs and \$701,842 in labor income.

Totals for the Upper Kittitas County region differ somewhat because the region lacks several of the information business types found elsewhere in the county. In this region, an information facility would produce \$3,530,134 in total economic output, which includes \$1,401,062 in value added. Total employment resulting from the facility would be 14.6, and labor income would equal \$665,245.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,600,000	\$271,901	\$335,355	\$2,207,256	\$951,485
	Lower Kittitas County Region	\$1,600,000	\$240,459	\$341,988	\$2,182,447	\$944,438
	Upper Kittitas County Region	\$1,600,000	\$228,994	\$197,470	\$2,026,464	\$836,547
Long (Operations)	Kittitas County	\$2,700,000	\$819,523	\$360,401	\$3,879,924	\$1,474,937
	Lower Kittitas County Region	\$2,700,000	\$760,247	\$332,289	\$3,792,536	\$1,327,774
	Upper Kittitas County Region	\$2,700,000	\$633,258	\$196,876	\$3,530,134	\$1,401,062

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	9.8	15.2	\$541,099	\$730,306
	Lower Kittitas County Region	9.8	15.1	\$541,099	\$721,992
	Upper Kittitas County Region	9.8	13.4	\$541,099	\$671,758
Long (Operations)	Kittitas County	13.0	22.7	\$462,788	\$782,941
	Lower Kittitas County Region	14.0	22.7	\$410,252	\$701,842
	Upper Kittitas County Region	8.4	14.6	\$441,804	\$665,245

Professional, Scientific and Technical Services

Members of the Professional, Scientific and Technical Services sector include attorneys, accountants, advertising and public relations specialists, business consultants, architects, veterinarians, and research scientists. It is assumed that this sector primarily uses commercial office space.

Construction

The construction costs and economic effects for a 10,000 square foot building for the professional sector would be identical to that of the information sector described above.

Operations

Annual operating revenue for a 10,000 square foot professional, scientific and technical services facility is estimated at \$2,550,000. For the county as a whole, such a facility would lead to \$3,750,216 in total economic activity, of which \$1,957,156 is value added. The development would create 25.2 jobs directly, and 36.2 in total, with a total labor income of \$1,494,545.

The other industries most affected by a professional, scientific and technical services development include: imputed rental activity for owner-occupied dwellings (\$127,334), food services and drinking places (\$94,439), real estate establishments (\$81,187), wholesale trade businesses (\$72,746), and monetary authorities and depository credit intermediaries (\$47,231).

For the Lower Kittitas County region, the total economic output resulting from the same facility would be \$3,730,772 including \$1,943,661 in value added. Total job creation would reach 36.7 full time equivalencies, and \$1,481,922 in labor income would be earned.

Within the Upper Kittitas County region, the facility would create \$3,402,151 in total output, including \$1,808,511 in value added. Labor effects include 30.1 total jobs created and total labor income of \$1,430,027.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,600,000	\$271,901	\$335,355	\$2,207,256	\$951,485
	Lower Kittitas County Region	\$1,600,000	\$240,459	\$341,988	\$2,182,447	\$944,438
	Upper Kittitas County Region	\$1,600,000	\$228,994	\$197,470	\$2,026,464	\$836,547
Long (Operations)	Kittitas County	\$2,550,000	\$511,984	\$688,232	\$3,750,216	\$1,957,156
	Lower Kittitas County Region	\$2,550,000	\$478,497	\$702,275	\$3,730,772	\$1,943,661
	Upper Kittitas County Region	\$2,550,000	\$426,809	\$425,343	\$3,402,151	\$1,808,511

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	9.8	15.2	\$541,099	\$730,306
	Lower Kittitas County Region	9.8	15.1	\$541,099	\$721,992
	Upper Kittitas County Region	9.8	13.4	\$541,099	\$671,758
Long (Operations)	Kittitas County	25.2	36.2	\$1,142,270	\$1,494,545
	Lower Kittitas County Region	25.8	36.7	\$1,132,511	\$1,481,922
	Upper Kittitas County Region	22.7	30.1	\$1,184,807	\$1,430,027

Educational Services

Educational Services may include elementary, junior high and high schools, colleges and universities, and technical/vocational schools. The expected building mix for this sector includes college classrooms, labs and dorms as well as primary and secondary schools.

IMPLAN does not contain an explicit category for public educational services. Therefore, private educational services have been used as a proxy.

Construction

Construction of 10,000 square feet of education space would cost approximately \$1,550,000. This spending would lead to a total output effect of \$2,138,179 for the entire county. Value added would comprise \$921,752, slightly less than half of the total output. During construction, 9.5 people would be employed directly, and including secondary effects, short-term job creation would total 14.7. The total labor income earned would reach \$707,484.

Within the Lower Kittitas County region, construction of the same facility would produce a total economic impact of \$2,114,246, including \$914,925 in value added. The project would generate 14.6 short-term total jobs and contribute \$699,430 in total labor income.

For the Upper Kittitas County region, total economic impact would be \$1,963,137, of which \$810,407 is value added. The project would employ 13.1 people either directly or secondarily, and would produce \$650,766 in total labor income.

Operations

Although “revenue” may not be an appropriate term for a publicly-funded educational institution, operational spending for this facility is estimated at \$500,000 per year. Accounting for indirect and induced effects, the total economic impact of operations would reach 732,003 for all of Kittitas County, including \$327,828 in value added. The educational facility would create 9.3 direct and 11.4 total jobs within the county, along with \$267,420 in labor income.

Outside of the educational sector, the industries that would receive the largest gains from this development include: imputed rental activity for owner-occupied dwellings (\$22,039), real estate establishments (\$21,284), wholesale trade businesses (\$12,756), food services and drinking places (\$11,372), and monetary authorities and depository credit intermediaries (\$10,621).

For the Lower Kittitas County region, the total economic impact would comprise \$727,603, including \$372,891 in value added. Job creation would reach 11.4 in total, with labor income of \$267,123.

In the Upper County region, the same facility would produce a total economic output of \$654,790, of which \$326,154 is value added. This developed would employ 9.4 people in total, generating \$238,599 in labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,550,000	\$263,404	\$324,875	\$2,138,279	\$921,752
	Lower Kittitas County Region	\$1,550,000	\$232,945	\$331,301	\$2,114,246	\$914,925
	Upper Kittitas County Region	\$1,550,000	\$221,838	\$191,299	\$1,963,137	\$810,407
Long (Operations)	Kittitas County	\$500,000	\$109,758	\$122,245	\$732,003	\$327,828
	Lower Kittitas County Region	\$500,000	\$101,173	\$126,430	\$727,603	\$372,891
	Upper Kittitas County Region	\$500,000	\$85,992	\$68,798	\$654,790	\$326,154

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	9.5	14.7	\$524,190	\$707,484
	Lower Kittitas County Region	9.5	14.6	\$524,190	\$699,430
	Upper Kittitas County Region	9.5	13.1	\$524,190	\$650,766
Long (Operations)	Kittitas County	9.3	11.4	\$200,398	\$267,420
	Lower Kittitas County Region	9.3	11.4	\$200,398	\$267,123
	Upper Kittitas County Region	8.1	9.4	\$195,334	\$238,599

Health Care and Social Assistance

The Health Care and Social Assistance sector includes a variety of facility types, such as hospitals, doctor and dentist offices, senior care facilities, and other miscellaneous medical facilities. Also included in the sector are social assistance organizations, which are expected to primarily use commercial office space. However, health care constitutes the vast majority of the spending in the sector for Kittitas County.

Construction

This sector has the highest per-square foot building cost of any in the study, driven by the high cost of hospital and surgical facilities. On average, a 10,000 square foot construction project in this sector would cost \$2.2 million. This construction spending would provide \$3,034,977 in total economic output for Kittitas County, including \$1,308,292 in value added. The construction would generate 13.5 direct and 20.9 total jobs, with a total labor income of \$1,004,171.

The total short-term economic impact for construction in the Lower Kittitas County region would be \$3,000,865, including \$1,298,603 in value added. The construction project would employ 13.5 people directly and 20.8 people in total, generating a total labor income of \$992,739.

Within the Upper Kittitas County region, the same construction project would generate \$2,786,387 in total economic activity, of which \$1,150,252 is value added. The labor effects would include 18.6 total jobs created and a total labor income of \$923,668.

Operations

A 10,000 square foot health care facility is expected to draw annual revenues of \$3,250,000. Within the county as a whole, these revenues would stimulate a total economic impact of \$4,709,578, including \$2,924,630 in value added. Including indirect and induced effects, a total of 61.1 people would be employed, earning labor income of \$2,162,820, the largest amount of labor income for any 10,000 square foot building considered in the study.

The indirect and induced effects of a health care facility would provide the most economic benefit to the following sectors: imputed rental activity for owner-occupied dwellings (\$180,820), wholesale trade businesses (\$109,963), food services and drinking places (\$101,777), real estate establishments (\$95,765), and monetary authorities and depository credit intermediaries (\$45,123).

For the Lower Kittitas County region the total effects of the facility would be: \$4,742,017 in total output, \$2,955,882 in value added, 61.8 total jobs created, and \$2,179,587 in total labor income.

For the Upper Kittitas County region, total output would be \$4,234,991, of which \$2,648,415 is labor income. The facility would drive the creation of 60.5 total jobs, which would earn a labor income of \$2,130,729.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$2,200,000	\$373,864	\$461,113	\$3,034,977	\$1,308,292
	Lower Kittitas County Region	\$2,200,000	\$330,632	\$470,233	\$3,000,865	\$1,298,603
	Upper Kittitas County Region	\$2,200,000	\$314,867	\$271,521	\$2,786,387	\$1,150,252
Long (Operations)	Kittitas County	\$3,250,000	\$467,779	\$991,799	\$4,709,578	\$2,924,630
	Lower Kittitas County Region	\$3,250,000	\$459,836	\$1,032,181	\$4,742,017	\$2,955,882
	Upper Kittitas County Region	\$3,250,000	\$363,444	\$621,546	\$4,234,991	\$2,648,415

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	13.5	20.9	\$744,012	\$1,004,171
	Lower Kittitas County Region	13.5	20.8	\$744,012	\$992,739
	Upper Kittitas County Region	13.5	18.6	\$744,012	\$923,668
Long (Operations)	Kittitas County	48.1	61.1	\$1,745,208	\$2,162,820
	Lower Kittitas County Region	48.1	61.8	\$1,745,208	\$2,179,587
	Upper Kittitas County Region	52.3	60.5	\$1,874,704	\$2,130,729

Accommodations

Accommodations in Kittitas County primarily consist of hotels and motels, with a smaller number of specialty lodgings such as Bed and Breakfasts.

Construction

A 10,000 square foot accommodation facility would require a cost of \$1,450,000 to construct. The development of this facility would generate a one-time economic output effect of \$2,000,326 within the entire county, including \$862,285 in value added. Additionally, during the duration of construction 13.8 people would be employed directly or secondarily, with labor income totaling \$661,839.

Within the Lower Kittitas County region, an accommodation facility of the same size and cost would drive \$1,977,842 in total economic activity, of which \$855,897 represents value added. The short-term job creation would total 13.6, and the labor income would total \$654,305.

For Upper Kittitas County, total economic output would reach \$1,836,483, including \$758,122 in value added. The project would lead to the creation of 12.2 short term jobs, providing \$608,781 in labor income.

Operations

An accommodation facility of this size would generate direct revenues of \$500,000 per year. On a county-wide basis, this facility would generate a total economic output of \$706,882, with \$410,639 of that sum representing value added. 6.7 people would be employed at the facility or because of indirect or induced effects, and \$225,823 in labor income would be earned.

The greatest economic effects from the accommodation development will be seen in the following industries: imputed rental activity for owner-occupied dwellings (\$18,628), food services and drinking places (\$17,867), wholesale trade businesses (\$9,996), newspaper publishers (\$9,916), and real estate establishments (\$8,444).

For the Lower Kittitas County region, the total economic output resulting from the same facility would be \$705,314, including \$394,101 in value added. Total job creation would equal 6.8 full time equivalencies, and \$226,404 in labor income would be earned.

For the Upper Kittitas County region, the facility would create \$644,067 in total output, including \$376,018 in value added. Labor effects include 6.1 total jobs created and total labor income of \$205,953.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,450,000	\$246,410	\$303,916	\$2,000,326	\$862,285
	Lower Kittitas County Region	\$1,450,000	\$217,916	\$309,926	\$1,977,842	\$855,897
	Upper Kittitas County Region	\$1,450,000	\$207,525	\$178,958	\$1,836,483	\$758,122
Long (Operations)	Kittitas County	\$500,000	\$103,631	\$103,251	\$706,882	\$410,639
	Lower Kittitas County Region	\$500,000	\$98,150	\$107,164	\$705,314	\$394,101
	Upper Kittitas County Region	\$500,000	\$84,658	\$59,409	\$644,067	\$376,018

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	8.8	13.8	\$490,371	\$661,839
	Lower Kittitas County Region	8.8	13.6	\$490,371	\$654,305
	Upper Kittitas County Region	8.8	12.2	\$490,371	\$608,781
Long (Operations)	Kittitas County	4.9	6.7	\$166,120	\$225,823
	Lower Kittitas County Region	4.9	6.8	\$166,120	\$226,404
	Upper Kittitas County Region	4.9	6.1	\$166,120	\$205,953

Food Service

In terms of revenue, the food service industry in Kittitas County is divided approximately equally between limited service establishments (i.e. fast food), and full-service establishments. Drinking places are also a significant part of the food service industry, but collect less than 10% of the total revenue of restaurants in the county.

Construction

A typical 10,000 food service establishment is expected to cost \$1.8 million to construct. This expenditure would boost total economic output in Kittitas County by \$2,483,163, including \$1,070,422 in value added.

Total employment would experience a short-term increase of 17.1 jobs as a result of construction, and county workers would earn \$821,594 in labor income.

For the Lower Kittitas County region, the total short-term economic impact of construction would equal \$2,455,252, of which \$1,062,493 is value added. A total of 16.9 jobs would be created during the construction process, with a total labor income of \$812,241.

Within the Upper Kittitas County region, the economic output effect would be \$2,279,722, including \$941,117 in value added. Short-term job creation would total 15.1 full-time equivalencies, which would earn labor income of \$755,728.

Operations

The food service industry is expected to earn the highest sales per square feet of any sector in this study, and would accordingly have the greatest impact on economic output and employment (however, due to higher average earnings, a 10,000 square foot health care facility would generate a higher level of total labor income).

A 10,000 square foot establishment would generate direct revenues of \$3.9 million per year. For all of Kittitas County, this revenue would drive a total increase in economic output of \$5,601,933, which includes \$2,736,302 in value added. Direct and secondary employment would total 83.9 jobs created, along with \$1,712,443 in labor income.

Other industries most affected by a food services development would include: wholesale trade businesses (\$181,591), imputed rental activity for owner-occupied dwellings (\$143,564), real estate establishments (\$121,618), animal (except poultry) slaughterers (\$75,849), and other state and local government enterprises (\$49,366).

For the Lower Kittitas County region, the total economic output resulting from a food services facility would be \$5,605,704, including \$2,754,707 in value added. The facility and supporting industries would create a total of 83.9 jobs, along with \$1,721,655 in labor income.

Within the Upper Kittitas County region, the total effects would include: \$5,015,291 in economic output, \$2,392,755 in value added, 78.4 jobs created, and \$1,524,725 in labor income.

Economic Output Effects

Term	Region	Direct	Indirect	Induced	Total Output	Total Value Added
Short (Construction)	Kittitas County	\$1,800,000	\$305,888	\$377,275	\$2,483,163	\$1,070,422
	Lower Kittitas County Region	\$1,800,000	\$270,517	\$384,736	\$2,455,252	\$1,062,493
	Upper Kittitas County Region	\$1,800,000	\$257,618	\$222,154	\$2,279,722	\$941,117
Long (Operations)	Kittitas County	\$3,900,000	\$919,796	\$782,137	\$5,601,933	\$2,736,302
	Lower Kittitas County Region	\$3,900,000	\$890,936	\$814,769	\$5,605,704	\$2,754,707
	Upper Kittitas County Region	\$3,900,000	\$677,336	\$437,954	\$5,015,291	\$2,392,755

Employment Effects

Term	Region	Direct Employment	Total Employment Impact	Direct Labor Income	Total Labor Income Impact
Short (Construction)	Kittitas County	11.0	17.1	\$608,737	\$821,594
	Lower Kittitas County Region	11.0	16.9	\$608,737	\$812,241
	Upper Kittitas County Region	11.0	15.1	\$608,737	\$755,728
Long (Operations)	Kittitas County	69.8	83.9	\$1,241,374	\$1,712,443
	Lower Kittitas County Region	69.8	83.9	\$1,241,374	\$1,721,655
	Upper Kittitas County Region	69.8	78.4	\$1,241,374	\$1,524,725

Industry Comparison

The following table compares the direct revenues of each sector and its impact on indirect and induced effects, as well as value added output and total labor income. The table does not include transportation infrastructure development, which is assumed not to include long-term operating revenues. The sectors are listed in order of total value added as a percent of direct revenues – in effect, this ratio represents the rate at which operations in a given sector provide economic benefits to the community.

Principal sectors which have the greatest indirect and induced output effect on Kittitas County for every dollar of revenues are Agriculture, Forestry, Fishing and Hunting (a 58.7% multiplier), Manufacturing (56.9%), Professional, Scientific and Technical Services (47.1%), and Educational Services (46.4%). The sector with the lowest ratio is mining (35.2%).

Value Added consists of compensation of employees, taxes on production, and gross operating surplus. The majority of the sectors analyzed have a high Value Added output multiplier with only one under 50%. Principal sectors which have the greatest Value Added output to the community or the greatest impact on the local GDP include Health Care and Social Assistance (90.0% multiplier), Wholesale Trade (88.4%), and Retail Trade (85.9%). Despite having the highest rate of indirect and induced output creation, Manufacturing has the lowest rate of total value added per dollar of revenue. This is presumably because wages are assumed to be low, and much of the revenues go to purchase intermediate inputs.

Sectors which have the largest effect on total labor income are the Health Care and Social Assistance (66.5% multiplier), Professional, Scientific and Technical Services (58.6%), Educational Services (53.5%), and Retail Trade (52.0%) sectors. Again, manufacturing has the lowest rate of total labor income generation, at 28.2%.

	Direct Output / Revenues	Indirect + Induced Output	Indirect + Induced Output (% of Direct Output)	Total Value Added Output to the Community	Value Added (% of Direct Output)	Total Labor Income Impact	Total Labor Income Impact (% of Direct Output)
Health Care and Social Assistance	\$3,250,000	\$1,459,578	44.9%	\$2,924,630	90.0%	\$2,162,820	66.5%
Wholesale Trade	\$850,000	\$347,204	40.8%	\$751,097	88.4%	\$428,592	50.4%
Retail Trade	\$2,100,000	\$849,049	40.4%	\$1,802,978	85.9%	\$1,092,229	52.0%
Accommodations	\$500,000	\$206,882	41.4%	\$410,639	82.1%	\$225,823	45.2%
Professional, Scientific and Technical Services	\$2,550,000	\$1,200,216	47.1%	\$1,957,156	76.8%	\$1,494,545	58.6%
Airport	\$13,622,543	\$5,485,441	40.3%	\$102,406,40	75.2%	\$6,390,984	46.9%
Educational Services	\$500,000	\$232,003	46.4%	\$372,828	74.6%	\$267,420	53.5%
Food Services	\$3,900,000	\$1,701,933	43.6%	\$2,736,302	70.2%	\$1,712,443	43.9%
Mining	\$1,000,000	\$352,004	35.2%	\$669,183	66.9%	\$427,664	42.8%
Agriculture, Forestry, Fishing and Hunting	\$1,000,000	\$586,846	58.7%	\$668,053	66.8%	\$464,121	46.4%
Construction	\$1,000,000	\$414,970	41.5%	\$632,900	63.3%	\$494,710	49.5%
Information	\$2,700,000	\$1,179,924	43.7%	\$1,474,937	54.6%	\$782,941	29.0%
Manufacturing	\$1,000,000	\$568,539	56.9%	\$427,673	42.8%	\$280,157	28.2%

Economic Impact Forecast – 1 to 5 and 10 Years – Direct Output

In order to project the total economic impact of investment in each of the principal sectors a 3% annual compound growth rate was used which includes inflation, population growth, and increased demand for each of the sectors.

Principal Economic Sectors	Direct Input	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
Manufacturing	\$1,000,000	\$1,030,000	\$1,060,900	\$1,092,727	\$1,125,509	\$1,159,274	\$1,343,916
Wholesale Trade	\$850,000	\$875,500	\$901,765	\$928,818	\$956,682	\$985,383	\$1,142,329
Retail Trade	\$2,100,000	\$2,163,000	\$2,227,890	\$2,294,727	\$2,363,569	\$2,434,476	\$2,822,224
Information	\$2,700,000	\$2,781,000	\$2,864,430	\$2,950,363	\$3,038,874	\$3,130,040	\$3,628,574
Professional, Scientific and Technical Services	\$2,550,000	\$2,626,500	\$2,705,295	\$2,786,454	\$2,870,047	\$2,956,149	\$3,426,987
Educational Services	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$671,958
Health Care and Social Assistance	\$3,250,000	\$3,347,500	\$3,447,925	\$3,551,363	\$3,657,904	\$3,767,641	\$4,367,728
Accommodations	\$500,000	\$515,000	\$530,450	\$546,364	\$562,754	\$579,637	\$671,958
Food Services	\$3,900,000	\$4,017,000	\$4,137,510	\$4,261,635	\$4,389,484	\$4,521,169	\$5,241,274
Agriculture, Forestry, Fishing and Hunting	\$1,000,000	\$1,030,000	\$1,060,900	\$1,092,727	\$1,125,509	\$1,159,274	\$1,343,916
Mining	\$1,000,000	\$1,030,000	\$1,060,900	\$1,092,727	\$1,125,509	\$1,159,274	\$1,343,916
Construction	\$1,000,000	\$1,030,000	\$1,060,900	\$1,092,727	\$1,125,509	\$1,159,274	\$1,343,916
Airport	\$13,622,543	\$14,031,219	\$14,452,156	\$14,885,721	\$15,332,292	\$15,792,261	\$18,307,559

Economic Impact Forecast – 1 to 5 and 10 Years – Total Output

Principal Economic Sectors	Total Output	Year 1	Year 2	Year 3	Year 4	Year 5	Year 10
Manufacturing	\$1,568,539	\$1,615,595	\$1,664,063	\$1,713,985	\$1,765,404	\$1,818,367	\$2,107,985
Wholesale Trade	\$1,197,204	\$1,233,120	\$1,270,114	\$1,308,217	\$1,347,464	\$1,387,888	\$1,608,942
Retail Trade	\$2,949,049	\$3,037,520	\$3,128,646	\$3,222,505	\$3,319,181	\$3,418,756	\$3,963,275
Information	\$3,879,924	\$3,996,322	\$4,116,211	\$4,239,698	\$4,366,889	\$4,497,895	\$5,214,293
Professional, Scientific and Technical Services	\$3,750,216	\$3,862,722	\$3,978,604	\$4,097,962	\$4,220,901	\$4,347,528	\$5,039,977
Educational Services	\$732,003	\$753,963	\$776,582	\$799,879	\$823,876	\$848,592	\$983,751
Health Care and Social Assistance	\$4,709,578	\$4,850,865	\$4,996,391	\$5,146,283	\$5,300,672	\$5,459,692	\$6,329,279
Accommodations	\$706,882	\$728,088	\$749,931	\$772,429	\$795,602	\$819,470	\$949,990
Food Services	\$5,601,933	\$5,769,991	\$5,943,091	\$6,121,383	\$6,305,025	\$6,494,176	\$7,528,530
Agriculture, Forestry, Fishing and Hunting	\$1,586,846	\$1,634,451	\$1,683,485	\$1,733,989	\$1,786,009	\$1,839,589	\$2,132,588
Mining	\$1,352,004	\$1,392,564	\$1,434,341	\$1,477,371	\$1,521,692	\$1,567,343	\$1,816,980
Construction	\$1,414,970	\$1,457,419	\$1,501,142	\$1,546,176	\$1,592,561	\$1,640,338	\$1,901,601
Airport	\$19,107,984	\$19,681,224	\$20,271,660	\$20,879,810	\$21,506,204	\$22,151,390	\$25,679,533

Return on Investment

The Investment Model was designed in the analysis to assess the economic benefits of construction and operations of each principal sector. The Investment Model primarily focuses on evaluating the return on investment to help predict whether the total economic benefits that the sectors would generate in future outweigh the costs to build the facility.

According to the IMPLAN investment model, tax revenues have a direct linear correlation to the direct revenues and total economic output of a given operation. The following tables can thus be used to extrapolate the tax revenue estimates to any scale of the investment project planned in Kittitas County.

Construction

Where applicable, additional input of \$500,000 in construction costs was used for each sector to evaluate the short-term tax revenue from the initial development. As shown in the table below, many industries are classified under IMPLAN as commercial building construction, and have the same rate of tax revenue per construction dollar.

The highest tax impact for construction, for both state/local and total tax, belongs to the Transportation Infrastructure. Construction of an airport facility provides the next highest tax revenues, followed by manufacturing facilities. Commercial buildings generate the lowest construction tax impact.

Principal Economic Clusters - Construction and Development	Total Economic Output	Sales Tax	Property Tax	Other Tax	Total State/Local Tax	Total Federal Tax	Total Tax
Construction: Transportation Infrastructure	\$704,513	\$8,579	\$4,201	\$4,376	\$17,156	\$48,401	\$65,556
Construction: Airport	\$699,821	\$8,488	\$4,155	\$4,360	\$17,002	\$47,294	\$64,295
Construction: Manufacturing	\$671,116	\$7,161	\$3,509	\$4,148	\$14,817	\$42,678	\$57,495
Construction: Commercial Buildings Wholesale Trade Retail Trade Information Professional, Scientific and Technical services Education Health Care and Social Assistance Accommodation Food Services	\$689,768	\$7,048	\$3,447	\$3,678	\$14,172	\$38,184	\$52,356

Operations

Similarly, to show the rate at which industries generate taxes through operating revenue, an initial input of \$500,000 in operations was used for each sectors. The exception is transportation infrastructure, which is not presumed to involve any long-term operating revenue and was thus omitted.

The highest rates of tax revenue are generated by the Wholesale Trade sector (\$138,102), followed closely by the Retail Trade sector (\$136,608). In both cases, large increases in sales and property taxes are the main reasons for the high overall revenue. The sectors with the next highest tax impact per dollar of revenue are Accommodations (\$107,796), and Airport (\$95,259). The sector with the lowest tax output per dollar of revenue is Manufacturing (\$45,965).

Principal Economic Clusters - Operations	Total Economic Output	Sales Tax	Property Tax	Other Tax	Total State/Local Tax	Total Federal Tax	Total Tax
Wholesale Trade	\$704,238	\$44,260	\$21,229	\$14,141	\$79,629	\$58,473	\$138,102
Retail Trade	\$702,155	\$43,432	\$20,838	\$13,652	\$77,922	\$58,686	\$136,608
Accommodations	\$706,881	\$29,842	\$14,337	\$10,888	\$55,066	\$52,730	\$107,796
Airport* (including traveler spending)	\$701,337	\$24,910	\$11,988	\$9,057	\$45,956	\$49,304	\$95,259
Health Care and Social Assistance*	\$724,551	\$10,786	\$5,290	\$6,348	\$22,423	\$66,904	\$89,327
Food Service	\$714,939	\$20,893	\$10,064	\$8,058	\$39,015	\$48,927	\$87,942
Agriculture, Forestry, Fishing and Hunting	\$793,424	\$15,675	\$7,580	\$6,502	\$29,756	\$48,627	\$78,383
Professional, Scientific and Technical Services	\$735,337	\$9,880	\$4,841	\$5,382	\$20,102	\$56,349	\$76,451
Construction	\$707,485	\$9,124	\$4,460	\$4,628	\$18,212	\$48,767	\$66,979
Mining	\$676,002	\$9,729	\$4,736	\$5,352	\$19,817	\$42,298	\$62,115
Information	\$718,505	\$12,451	\$6,005	\$5,696	\$24,151	\$32,225	\$56,376
Educational Services*	\$732,003	\$8,762	\$4,295	\$5,365	\$18,422	\$28,081	\$46,503
Manufacturing	\$784,270	\$7,998	\$3,876	\$3,847	\$15,721	\$30,244	\$45,965

*Computed in model as a private enterprise. Operating activity of public educational institutions may not be taxable or may be taxed at a reduced rate.

Employment Impact

The following table compares the employment impact for each of the principal sectors except for the Transportation Infrastructure Development sectors, which is not expected to have a long term employment impact.

The highest job multiplier belongs to the Manufacturing sector with 2.67, meaning that every job created in the manufacturing sector will create an additional 1.67 jobs in supporting industries. Other sectors with high multipliers include Information (1.77) and Construction (1.57).

The lowest multiplier belongs to the Food Service sector (1.20), and the second-lowest multiplier is for the Airport (1.21).

Sector	Direct Employment	Indirect Employment	Total Employment Impact	Job Multiplier
Manufacturing	3	5	8	2.67
Information	13	10	23	1.77
Construction	7	4	11	1.57
Agriculture, Forestry, Fishing and Hunting	12	6	18	1.50
Wholesale Trade	6	3	9	1.50
Professional, Scientific and Technical Services	25	11	36	1.44
Mining	7	3	10	1.43
Accommodations	5	2	7	1.40
Retail Trade	30	8	38	1.27
Health Care and Social Assistance	48	13	61	1.27
Educational Services	9	2	11	1.22
Airport (including traveler spending)	225	48	273	1.21
Food Service	70	14	84	1.20

Economic Impact Calculator Spreadsheet

Along with this report, Hebert Research has submitted a set of Microsoft Excel spreadsheets for calculating the economic impact of a development project. Separate worksheets are provided for each industry, incorporating the multipliers derived from the IMPLAN models discussed above. Separate calculators are provided for each of the three regions.

Shown below is an example of a worksheet from the calculator for the Manufacturing Sector in Kittitas County. The yellow-colored cells are designed to accept user inputs. To calculate the impact of a manufacturing development, first enter a square footage. The calculator will default to the construction costs and operating revenues used in this report, but custom values may also be entered into the respective “Override” cells. For non-square footage industries, enter the desired construction and/or operating revenues into the appropriate cells.

Additionally, the spreadsheet allows for calculation of the present value of the stream of economic impacts over the lifetime of the development project. To do so, enter an expected lifetime, as well as a discount rate and growth rate for operating revenues.

Manufacturing Sector

Square Footage	10,000	sf.
Standard Construction Cost	\$1,000,000	
OVERRIDE Construction Cost		
Standard Annual Operating Revenue	\$1,000,000	per year
OVERRIDE Annual Op. Revenue		per year
Life Span of Development	10	years
Growth Rate of Operating Revenue	3.00%	
Discount Rate	5.00%	

Economic impacts from construction (one-time)

	Direct	Indirect	Induced	Total
Total Output	\$1,000,000	\$145,572	\$196,759	\$1,342,331
Value Added	\$391,352	\$77,159	\$114,690	\$583,201
Labor Income	\$324,194	\$49,008	\$55,267	\$428,469
Jobs Created	5.9	1.1	1.9	8.9

Economic impacts from operating revenue (annual)

	Direct	Indirect	Induced	Total
Output	\$1,000,000	\$440,472	\$128,067	\$1,568,539
Value Added	\$182,748	\$170,360	\$74,565	\$427,673
Labor Income	\$139,248	\$104,874	\$36,035	\$280,157
Jobs Created	3.0	3.8	1.2	8.0

Present value of operating revenue over lifetime of development

	Direct	Indirect	Induced	Total
Output	\$8,982,585	\$3,956,577	\$1,150,373	\$14,089,535
Value Added	\$1,641,549	\$1,530,273	\$669,786	\$3,841,609
Labor Income	\$1,250,807	\$942,040	\$323,687	\$2,516,534

Total present value (construction and operating revenue)

	Direct	Indirect	Induced	Total
Output	\$9,982,585	\$4,102,149	\$1,347,132	\$15,431,866
Value Added	\$2,032,901	\$1,607,432	\$784,476	\$4,424,810
Labor Income	\$1,575,001	\$991,048	\$378,954	\$2,945,003

Ellensburg Tax and Fee Calculator Spreadsheet

Also included is a spreadsheet that calculates the expected taxes and fees that a given project will generate for the City of Ellensburg. As with the previous calculator, separate worksheets provide calculations for each industry sector. The inputs for square footage, construction cost and expected operating revenue are all similar to those discussed above.

As has been seen throughout the report, the results account for both direct and indirect/induced effects. The taxes and fees have also been split into one-time collections (such as building permits), and long-term collections based on operations (such as B&O and sales taxes). All long-term taxes and fees are reported in terms of annual revenue.

The calculators return taxes and fees collected at three government levels: State, County and City. For state and county receipts, an estimation is provided for the amount that would be spent within Ellensburg, based on relative populations. Note that federal tax revenues are not included as the portion spent within the city would be negligible.

As an example, shown on the following page is the tax and fee output section for the Manufacturing Sector.

Direct Tax and Fee Impacts		State	Share of State Spent in Ellensburg	County	Share of County Spent in Ellensburg	City	Total Spent In Ellensburg
Construction (One-Time)	Building Permit Fee					16,822	16,822
	Public Works Fee: Inspection					16,000	16,000
	Public Works Fee: Water / Sewer					26637	26,637
	PRO Fee						0
	Community Development Fees					1000	1,000
	Traffic Impact Fee					13,480	13,480
	Construction Sales Tax	1,494	3				3
Operations (Annual)	B&O Tax	4,840	11				11
	Sales Tax						
	Property Tax	3,433	8	6,451	2,419	819	3,246
	Business License Fees					30	30
	Stormwater Etc. Fees					263	263

Indirect and Induced Tax Impacts		State	Share of State Spent in Ellensburg	County	Share of County Spent in Ellensburg	City	Total Spent In Ellensburg
Construction (One-Time)	Sales Tax	10,142	23	2,340	878		900
	Property Tax	1,934	4	3,569	1,339		1,343
Operations (Annual)	Sales Tax	11,823	27	2,728	1,023		1,050
	Property Tax	2,254	5	4,160	1,560		1,565

Retail Leakage Analysis

Retail leakage is defined as the difference between the value of goods sold in a given area and the value of goods in the same sector purchased by consumers within that area. When local spending exceed local sales, it means that consumers are going out of the study area for their purchases, and a *net leakage* is said to exist. On the other hand, if local sales exceed local supply, then the study area is drawing in consumers from other areas, which is referred to as *net capture*.

In order to quantify the amount of retail leakage, a capture leakage analysis was conducted using the available data on spending and retail sales for the local trade area. The list contains several levels of detail: general categories are shown in bold, mid level sectors in standard type, and specific business types in italic. Sectors with net leakage are shown in black, while sectors with net capture are shown in blue.

Kittitas County

Most of the categories show net leakage, meaning the amount of local retail sales is smaller than the amount of local resident spending. The last column indicates how large the leakage amount is compared to total consumer spending in that category. Overall, 16.9% of spending in all these areas is leaking from the trade area. Total leakage equals \$102.7 million, out of \$607.5 million local spending.

The mid-level retail sectors with the largest dollar value net leakage are automotive dealers (\$49,057,803), other general merchandise stores (\$36,685,985), pharmacies and drug stores (\$18,256,085), grocery stores (\$17,923,812), clothing stores (\$17,781,193), non-store retailers (\$14,432,417), and appliance, TV and electronic stores (\$10,893,339). Generally, these high-leakage sectors indicate that demand for goods is not being met locally, meaning that a retailer in these industries would have a high probability of capturing demand.

The mid-level retail sectors with the largest dollar value net capture are gasoline stations (\$81,152,673), department stores (\$9,290,216), lawn, garden and equipment supply stores (\$7,152,590), automotive parts, accessories and tire stores (\$5,533,485), and full-service restaurants (\$2,550,037). These high net capture sectors represent areas where local businesses are already successfully tapping into local demand, but this means that new retailers will face more extensive competition for consumer demand.

Category of Retail Store	Total Spending (\$)	Total Local Sales (\$)	Net Leakage / (Capture)	Leakage as % of Local Buying Power
Total Retail Sales Incl Eating and Drinking Places	607,548,719	504,809,682	102,739,037	16.9%

Motor Vehicle and Parts Dealers-441	105,422,977	61,530,243	43,892,734	41.6%
Automotive Dealers-4411	88,096,806	39,039,003	49,057,803	55.7%
Other Motor Vehicle Dealers-4412	7,988,484	7,620,095	368,389	4.6%
<i>Automotive Parts/Accsrs, Tire Stores-4413</i>	<i>9,337,687</i>	<i>14,871,145</i>	<i>(5,533,458)</i>	
Furniture and Home Furnishings Stores-442	11,594,773	7,171,435	4,423,338	38.1%
Furniture Stores-4421	6,169,542	5,823,458	346,084	5.6%
Home Furnishing Stores-4422	5,425,231	1,347,977	4,077,254	75.2%
Electronics and Appliance Stores-443	15,076,509	624,396	14,452,113	95.9%
Appliances, TVs, Electronics Stores-44311	11,353,736	460,397	10,893,339	95.9%
<i>Household Appliances Stores-443111</i>	<i>2,414,663</i>	<i>48,977</i>	<i>2,365,686</i>	<i>98.0%</i>
<i>Radio, Television, Electronics Stores-443112</i>	<i>8,939,073</i>	<i>411,420</i>	<i>8,527,653</i>	<i>95.4%</i>
Computer and Software Stores-44312	3,141,841	163,999	2,977,842	94.8%
Camera and Photographic Equipment Stores-44313	580,932	0	580,932	100.0%
Building Material, Garden Equip Stores -444	57,704,243	55,143,480	2,560,763	4.4%
Building Material and Supply Dealers-4441	53,151,819	43,438,466	9,713,353	18.3%
<i>Home Centers-44411</i>	<i>22,084,440</i>	<i>8,400,284</i>	<i>13,684,156</i>	<i>62.0%</i>
<i>Paint and Wallpaper Stores-44412</i>	<i>1,163,984</i>	<i>492,001</i>	<i>671,983</i>	<i>57.7%</i>
<i>Hardware Stores-44413</i>	<i>4,768,220</i>	<i>4,286,760</i>	<i>481,460</i>	<i>10.1%</i>
<i>Other Building Materials Dealers-44419</i>	<i>25,135,175</i>	<i>30,259,421</i>	<i>(5,124,246)</i>	
<i>Building Materials, Lumberyards-444191</i>	<i>9,683,923</i>	<i>11,837,947</i>	<i>(2,154,024)</i>	
Lawn, Garden Equipment, Supplies Stores-4442	4,552,424	11,705,014	(7,152,590)	
<i>Outdoor Power Equipment Stores-44421</i>	<i>686,223</i>	<i>426,002</i>	<i>260,221</i>	<i>37.9%</i>
<i>Nursery and Garden Centers-44422</i>	<i>3,866,201</i>	<i>11,279,012</i>	<i>(7,412,811)</i>	
Food and Beverage Stores-445	83,416,019	62,029,532	21,386,487	25.6%
Grocery Stores-4451	75,235,348	57,311,536	17,923,812	23.8%
<i>Supermarkets, Grocery (Ex Conv) Stores-44511</i>	<i>71,352,274</i>	<i>56,283,855</i>	<i>15,068,419</i>	<i>21.1%</i>
<i>Convenience Stores-44512</i>	<i>3,883,074</i>	<i>1,027,681</i>	<i>2,855,393</i>	<i>73.5%</i>
<i>Specialty Food Stores-4452</i>	<i>2,264,668</i>	<i>2,432,507</i>	<i>(167,839)</i>	
Beer, Wine and Liquor Stores-4453	5,916,003	2,285,489	3,630,514	61.4%
	0	0	0	
Health and Personal Care Stores-446	29,008,783	7,544,889	21,463,894	74.0%
Pharmacies and Drug Stores-44611	24,993,444	6,737,359	18,256,085	73.0%
Cosmetics, Beauty Supplies, Perfume Stores-44612	1,015,738	51,017	964,721	95.0%
Optical Goods Stores-44613	1,124,861	0	1,124,861	100.0%
Other Health and Personal Care Stores-	1,874,740	756,513	1,118,227	59.6%

44619				
Gasoline Stations-447	73,375,785	154,528,458	(81,152,673)	
Gasoline Stations With Conv. Stores-44711	55,195,985	64,322,775	(9,126,790)	
Other Gasoline Stations-44719	18,179,800	90,205,683	(72,025,883)	
Clothing and Clothing Accessories Stores-448	25,857,079	2,457,401	23,399,678	90.5%
Clothing Stores-4481	18,465,593	684,400	17,781,193	96.3%
Men's Clothing Stores-44811	1,201,515	6,999	1,194,516	99.4%
Women's Clothing Stores-44812	4,669,186	22,250	4,646,936	99.5%
Children's, Infants' Clothing Stores-44813	913,362	0	913,362	100.0%
Family Clothing Stores-44814	9,991,057	624,897	9,366,160	93.7%
Clothing Accessories Stores-44815	451,377	10,403	440,974	97.7%
Other Clothing Stores-44819	1,239,096	19,851	1,219,245	98.4%
Shoe Stores-4482	3,613,083	1,475,001	2,138,082	59.2%
Jewelry, Luggage, Leather Goods Stores-4483	3,778,403	298,000	3,480,403	92.1%
Jewelry Stores-44831	3,466,832	298,000	3,168,832	91.4%
Luggage and Leather Goods Stores-44832	311,571	0	311,571	100.0%
Sporting Goods, Hobby, Book, Music Stores-451	12,738,835	6,889,228	5,849,607	45.9%
Sportng Goods, Hobby, Musical Inst Stores-4511	7,900,541	2,895,027	5,005,514	63.4%
Sporting Goods Stores-45111	3,939,982	1,766,978	2,173,004	55.2%
Hobby, Toys and Games Stores-45112	2,498,310	158,005	2,340,305	93.7%
Sew/Needlework/Piece Goods Stores-45113	608,984	349,042	259,942	42.7%
Musical Instrument and Supplies Stores-45114	853,265	621,002	232,263	27.2%
Book, Periodical and Music Stores-4512	4,838,294	3,994,201	844,093	17.4%
Book Stores and News Dealers-45121	3,565,017	1,599,201	1,965,816	55.1%
Book Stores-451211	3,427,611	1,599,201	1,828,410	53.3%
News Dealers and Newsstands-451212	137,406	0	137,406	100.0%
Prerecorded Tapes, CDs, Record Stores-45122	1,273,277	2,395,000	(1,121,723)	

General Merchandise Stores-452	78,405,764	51,009,995	27,395,769	34.9%
Department Stores Excl Leased Depts-4521	37,054,782	46,344,998	(9,290,216)	
Other General Merchandise Stores-4529	41,350,982	4,664,997	36,685,985	88.7%
Miscellaneous Store Retailers-453	13,998,994	8,756,841	5,242,153	37.4%
Florists-4531	974,544	336,096	638,448	65.5%
Office Supplies, Stationery, Gift Stores-4532	6,114,368	2,800,140	3,314,228	54.2%
Office Supplies and Stationery Stores-45321	3,461,755	1,837,999	1,623,756	46.9%
Gift, Novelty and Souvenir Stores-45322	2,652,613	962,141	1,690,472	63.7%
Used Merchandise Stores-4533	1,334,503	2,988,001	(1,653,498)	
Other Miscellaneous Store Retailers-4539	5,575,579	2,632,604	2,942,975	52.8%
Non-Store Retailers-454	37,613,413	23,180,996	14,432,417	38.4%
Foodservice and Drinking Places-722	63,335,545	63,942,788	(607,243)	
Full-Service Restaurants-7221	28,490,411	31,040,448	(2,550,037)	
Limited-Service Eating Places-7222	26,336,943	27,913,252	(1,576,309)	
Special Foodservices-7223	5,316,679	486,002	4,830,677	90.9%
Drinking Places -Alcoholic Beverages-7224	3,191,512	4,503,086	(1,311,574)	
Gen. Merchandise, Apparel, Furniture and Other	149,787,328	70,952,595	78,834,733	52.6%
General Merchandise Stores-452	78,405,764	51,009,995	27,395,769	34.9%
Clothing and Clothing Accessories Stores-448	25,857,079	2,457,401	23,399,678	90.5%
Furniture and Home Furnishings Stores-442	11,594,773	7,171,435	4,423,338	38.1%
Electronics and Appliance Stores-443	15,076,509	624,396	14,452,113	95.9%
Sporting Goods, Hobby, Book, Music Stores-451	12,738,835	6,889,228	5,849,607	45.9%
Office Supplies, Stationery, Gift Stores-4532	6,114,368	2,800,140	3,314,228	54.2%

Lower Kittitas County Region

The overall retail leakage for the Lower Kittitas County region is 7.6%, smaller than the figure for Kittitas County as a whole (16.9%).

The mid-level retail sectors with the largest dollar value net leakage are automotive dealers (\$25,612,096), other general merchandise stores (\$25,093,374), clothing and accessory stores (\$16,361,262), non-store retailers (\$15,275,038), pharmacies and drug stores (\$13,070,458), grocery stores (\$10,635,459), and electronics and appliance stores (\$10,365,940).

The mid-level retail sectors with the largest dollar value net capture are gasoline stations (\$65,524,327), department stores (\$56,589,623), automotive parts, accessories and tire stores (\$7,165,298), lawn, garden equipment and supplies stores (\$3,937,508), and full service restaurants (\$2,209,504).

Category of Retail Store	Total Spending (\$)	Total Local Sales (\$)	Net Leakage / (Capture)	Leakage as % of Local Buying Power
Total Retail Sales Incl Eating and Drinking Places	437,163,499	404,113,376	33,050,123	7.6%
Motor Vehicle and Parts Dealers-441	76,550,494	59,429,814	17,120,680	22.4%
Automotive Dealers-4411	64,235,790	38,623,694	25,612,096	39.9%
Other Motor Vehicle Dealers-4412	5,538,157	6,864,275	(1,326,118)	
Automotive Parts/Accsrs, Tire Stores-4413	6,776,547	13,941,845	(7,165,298)	
Furniture and Home Furnishings Stores-442	7,883,428	6,482,669	1,400,759	17.8%
Furniture Stores-4421	4,203,393	5,463,863	(1,260,470)	
Home Furnishing Stores-4422	3,680,035	1,018,806	2,661,229	72.3%
Electronics and Appliance Stores-443	10,955,941	590,001	10,365,940	94.6%
Appliances, TVs, Electronics Stores-44311	8,232,912	426,002	7,806,910	94.8%
Household Appliances Stores-443111	1,683,706	48,977	1,634,729	97.1%
Radio, Television, Electronics Stores-443112	6,549,206	377,025	6,172,181	94.2%
Computer and Software Stores-44312	2,309,784	163,999	2,145,785	92.9%
Camera and Photographic Equipment Stores-44313	413,245	0	413,245	100.0%
Building Material, Garden Equip Stores -444	38,688,276	41,415,043	(2,726,767)	
Building Material and Supply Dealers-4441	35,637,891	34,427,150	1,210,741	3.4%
Home Centers-44411	14,871,352	7,228,537	7,642,815	51.4%
Paint and Wallpaper Stores-44412	761,581	492,001	269,580	35.4%

<i>Hardware Stores-44413</i>	3,255,873	2,261,725	994,148	30.5%
<i>Other Building Materials Dealers-44419</i>	16,749,085	24,444,887	(7,695,802)	
<i>Building Materials, Lumberyards-444191</i>	6,401,435	9,563,210	(3,161,775)	
<i>Lawn, Garden Equipment, Supplies Stores-4442</i>	3,050,385	6,987,893	(3,937,508)	
<i>Outdoor Power Equipment Stores-44421</i>	458,537	0	458,537	100.0%
<i>Nursery and Garden Centers-44422</i>	2,591,848	6,987,893	(4,396,045)	
Food and Beverage Stores-445	60,918,472	47,593,783	13,324,689	21.9%
Grocery Stores-4451	54,828,536	44,193,077	10,635,459	19.4%
<i>Supermarkets, Grocery (Ex Conv) Stores-44511</i>	51,978,110	43,218,308	8,759,802	16.9%
<i>Convenience Stores-44512</i>	2,850,426	974,769	1,875,657	65.8%
<i>Specialty Food Stores-4452</i>	1,658,794	2,102,001	(443,207)	
Beer, Wine and Liquor Stores-4453	4,431,142	1,298,705	3,132,437	70.7%
Health and Personal Care Stores-446	20,057,573	5,003,217	15,054,356	75.1%
Pharmacies and Drug Stores-44611	17,289,482	4,219,024	13,070,458	75.6%
Cosmetics, Beauty Supplies, Perfume Stores-44612	695,947	45,718	650,229	93.4%
Optical Goods Stores-44613	777,189	0	777,189	100.0%
Other Health and Personal Care Stores-44619	1,294,955	738,475	556,480	43.0%
Gasoline Stations-447	53,645,196	119,169,523	(65,524,327)	
Gasoline Stations With Conv Stores-44711	40,387,000	49,321,704	(8,934,704)	
Other Gasoline Stations-44719	13,258,196	69,847,819	(56,589,623)	
Clothing and Clothing Accessories Stores-448	18,768,162	2,406,900	16,361,262	87.2%
Clothing Stores-4481	13,442,188	663,699	12,778,489	95.1%
<i>Men's Clothing Stores-44811</i>	873,161	6,999	866,162	99.2%
<i>Women's Clothing Stores-44812</i>	3,423,055	7,749	3,415,306	99.8%
<i>Children's, Infants' Clothing Stores-44813</i>	652,658	0	652,658	100.0%
<i>Family Clothing Stores-44814</i>	7,261,854	624,897	6,636,957	91.4%
<i>Clothing Accessories Stores-44815</i>	328,709	9,274	319,435	97.2%
<i>Other Clothing Stores-44819</i>	902,751	14,780	887,971	98.4%
Shoe Stores-4482	2,675,535	1,475,001	1,200,534	44.9%
Jewelry, Luggage, Leather Goods Stores-4483	2,650,439	268,200	2,382,239	89.9%

Jewelry Stores-44831	2,427,202	268,200	2,159,002	89.0%
Luggage and Leather Goods Stores-44832	223,237	0	223,237	100.0%
Sporting Goods, Hobby, Book, Music Stores-451	9,420,307	6,449,877	2,970,430	31.5%
Sporting Goods, Hobby, Musical Inst Stores-4511	5,603,700	2,538,504	3,065,196	54.7%
<i>Sporting Goods Stores-45111</i>	<i>2,768,939</i>	<i>1,528,830</i>	<i>1,240,109</i>	<i>44.8%</i>
<i>Hobby, Toys and Games Stores-45112</i>	<i>1,783,827</i>	<i>52,672</i>	<i>1,731,155</i>	<i>97.0%</i>
<i>Sew/Needlework/Piece Goods Stores-45113</i>	<i>425,157</i>	<i>336,000</i>	<i>89,157</i>	<i>21.0%</i>
<i>Musical Instrument and Supplies Stores-45114</i>	<i>625,777</i>	<i>621,002</i>	<i>4,775</i>	<i>0.8%</i>
Book, Periodical and Music Stores-4512	3,816,607	3,911,373	(94,766)	
<i>Book Stores and News Dealers-45121</i>	<i>2,875,954</i>	<i>1,516,373</i>	<i>1,359,581</i>	<i>47.3%</i>
<i>Book Stores-451211</i>	<i>2,775,494</i>	<i>1,516,373</i>	<i>1,259,121</i>	<i>45.4%</i>
<i>News Dealers and Newsstands-451212</i>	<i>100,460</i>	<i>0</i>	<i>100,460</i>	<i>100.0%</i>
<i>Prerecorded Tapes, CDs, Record Stores-45122</i>	<i>940,653</i>	<i>2,395,000</i>	<i>(1,454,347)</i>	
General Merchandise Stores-452	56,204,382	51,009,995	5,194,387	9.2%
Department Stores Excl Leased Depts-4521	26,446,011	46,344,998	(19,898,987)	
Other General Merchandise Stores-4529	29,758,371	4,664,997	25,093,374	84.3%
Miscellaneous Store Retailers-453	9,947,894	7,012,357	2,935,537	29.5%
Florists-4531	652,011	235,103	416,908	63.9%
Office Supplies, Stationery, Gift Stores-4532	4,372,296	2,400,378	1,971,918	45.1%
<i>Office Supplies and Stationery Stores-45321</i>	<i>2,475,889</i>	<i>1,555,230</i>	<i>920,659</i>	<i>37.2%</i>
<i>Gift, Novelty and Souvenir Stores-45322</i>	<i>1,896,407</i>	<i>845,148</i>	<i>1,051,259</i>	<i>55.4%</i>
Used Merchandise Stores-4533	967,553	2,422,412	(1,454,859)	
Other Miscellaneous Store Retailers-4539	3,956,034	1,954,464	2,001,570	50.6%
Non-Store Retailers-454	26,865,536	11,590,498	15,275,038	56.9%
Foodservice and Drinking Places-722	47,257,838	45,959,699	1,298,139	2.7%
Full-Service Restaurants-7221	21,291,179	23,500,683	(2,209,504)	
Limited-Service Eating Places-7222	19,587,796	18,549,826	1,037,970	5.3%
Special Foodservices-7223	3,954,543	319,374	3,635,169	91.9%
Drinking Places -Alcoholic Beverages-7224	2,424,320	3,589,816	(1,165,496)	
Gen. Merchandise, Apparel, Furniture and Other	107,604,516	69,339,820	38,264,696	35.6%
General Merchandise Stores-452	56,204,382	51,009,995	5,194,387	9.2%
Clothing and Clothing Accessories Stores-	18,768,162	2,406,900	16,361,262	87.2%

448				
Furniture and Home Furnishings Stores-442	7,883,428	6,482,669	1,400,759	17.8%
Electronics and Appliance Stores-443	10,955,941	590,001	10,365,940	94.6%
Sporting Goods, Hobby, Book, Music Stores-451	9,420,307	6,449,877	2,970,430	31.5%
Office Supplies, Stationery, Gift Stores-4532	4,372,296	2,400,378	1,971,918	45.1%

Upper Kittitas County Region

The overall rate of retail leakage for Upper Kittitas County is 40.9%, a much higher figure than the county as a whole (16.9%).

The mid-level retail sectors with the largest dollar value net leakage are automotive dealers (\$23,445,707), other general merchandise stores (\$11,592,611), department stores (\$10,608,771), building material and supply dealers (\$8,502,612), grocery stores (\$7,228,353), clothing and accessory stores (\$7,038,416), and pharmacies and drug stores (\$5,185,627).

The mid-level retail sectors with the largest dollar value net capture are gasoline stations (\$15,628,346), lawn, garden equipment and supplies stores (\$3,215,082), limited-service eating places (\$2,614,279), nonstore retailers (\$842,621), and full-service restaurants (\$340,533).

Category of Retail Store	Total Spending (\$)	Total Local Sales (\$)	Net Leakage / (Capture)	Leakage as % of Local Buying Power
Total Retail Sales Incl Eating and Drinking Places	170,385,220	100,696,306	69,688,914	40.9%
Motor Vehicle and Parts Dealers-441	28,872,483	2,100,429	26,772,054	92.7%
Automotive Dealers-4411	23,861,016	415,309	23,445,707	98.3%
Other Motor Vehicle Dealers-4412	2,450,327	755,820	1,694,507	69.2%
Automotive Parts/Accsrs, Tire Stores-4413	2,561,140	929,300	1,631,840	63.7%
Furniture and Home Furnishings Stores-442	3,711,345	688,766	3,022,579	81.4%
Furniture Stores-4421	1,966,149	359,595	1,606,554	81.7%
Home Furnishing Stores-4422	1,745,196	329,171	1,416,025	81.1%
Electronics and Appliance Stores-443	4,120,568	34,395	4,086,173	99.2%
Appliances, TVs, Electronics Stores-44311	3,120,824	34,395	3,086,429	98.9%
<i>Household Appliances Stores-443111</i>	<i>730,957</i>	<i>0</i>	<i>730,957</i>	<i>100.0%</i>
<i>Radio, Television, Electronics Stores-443112</i>	<i>2,389,867</i>	<i>34,395</i>	<i>2,355,472</i>	<i>98.6%</i>
Computer and Software Stores-44312	832,057	0	832,057	100.0%

Camera and Photographic Equipment Stores-44313	167,687	0	167,687	100.0%
Building Material, Garden Equip Stores -444	19,015,967	13,728,437	5,287,530	27.8%
Building Material and Supply Dealers-4441	17,513,928	9,011,316	8,502,612	48.5%
<i>Home Centers-44411</i>	<i>7,213,088</i>	<i>1,171,747</i>	<i>6,041,341</i>	<i>83.8%</i>
<i>Paint and Wallpaper Stores-44412</i>	<i>402,403</i>	<i>0</i>	<i>402,403</i>	<i>100.0%</i>
<i>Hardware Stores-44413</i>	<i>1,512,347</i>	<i>2,025,035</i>	<i>(512,688)</i>	
<i>Other Building Materials Dealers-44419</i>	<i>8,386,090</i>	<i>5,814,534</i>	<i>2,571,556</i>	<i>30.7%</i>
<i>Building Materials, Lumberyards-444191</i>	<i>3,282,488</i>	<i>2,274,737</i>	<i>1,007,751</i>	<i>30.7%</i>
Lawn, Garden Equipment, Supplies Stores-4442	1,502,039	4,717,121	(3,215,082)	
<i>Outdoor Power Equipment Stores-44421</i>	<i>227,686</i>	<i>426,002</i>	<i>(198,316)</i>	
<i>Nursery and Garden Centers-44422</i>	<i>1,274,353</i>	<i>4,291,119</i>	<i>(3,016,766)</i>	
Food and Beverage Stores-445	22,497,547	14,435,749	8,061,798	35.8%
Grocery Stores-4451	20,406,812	13,118,459	7,288,353	35.7%
<i>Supermarkets, Grocery (Ex Conv) Stores-44511</i>	<i>19,374,164</i>	<i>13,065,547</i>	<i>6,308,617</i>	<i>32.6%</i>
<i>Convenience Stores-44512</i>	<i>1,032,648</i>	<i>52,912</i>	<i>979,736</i>	<i>94.9%</i>
Specialty Food Stores-4452	605,874	330,506	275,368	45.4%
Beer, Wine and Liquor Stores-4453	1,484,861	986,784	498,077	33.5%
Health and Personal Care Stores-446	8,951,210	2,541,672	6,409,538	71.6%
Pharmacies and Drug Stores-44611	7,703,962	2,518,335	5,185,627	67.3%
Cosmetics, Beauty Supplies, Perfume Stores-44612	319,791	5,299	314,492	98.3%
Optical Goods Stores-44613	347,672	0	347,672	100.0%
Other Health and Personal Care Stores-44619	579,785	18,038	561,747	96.9%
Gasoline Stations-447	19,730,589	35,358,935	(15,628,346)	
Gasoline Stations With Conv Stores-44711	14,808,985	15,001,071	(192,086)	
Other Gasoline Stations-44719	4,921,604	20,357,864	(15,436,260)	
Clothing and Clothing Accessories Stores-448	7,088,917	50,501	7,038,416	99.3%
Clothing Stores-4481	5,023,405	20,701	5,002,704	99.6%
<i>Men's Clothing Stores-44811</i>	<i>328,354</i>	<i>0</i>	<i>328,354</i>	<i>100.0%</i>
<i>Women's Clothing Stores-44812</i>	<i>1,246,131</i>	<i>14,501</i>	<i>1,231,630</i>	<i>98.8%</i>
<i>Children's, Infants' Clothing Stores-44813</i>	<i>260,704</i>	<i>0</i>	<i>260,704</i>	<i>100.0%</i>
<i>Family Clothing Stores-44814</i>	<i>2,729,203</i>	<i>0</i>	<i>2,729,203</i>	<i>100.0%</i>

<i>Clothing Accessories Stores-44815</i>	122,668	1,129	121,539	99.1%
<i>Other Clothing Stores-44819</i>	336,345	5,071	331,274	98.5%
Shoe Stores-4482	937,548	0	937,548	100.0%
Jewelry, Luggage, Leather Goods Stores-4483	1,127,964	29,800	1,098,164	97.4%
<i>Jewelry Stores-44831</i>	1,039,630	29,800	1,009,830	97.1%
<i>Luggage and Leather Goods Stores-44832</i>	88,334	0	88,334	100.0%
Sporting Goods, Hobby, Book, Music Stores-451	3,318,528	439,351	2,879,177	86.8%
Sporting Goods, Hobby, Musical Inst Stores-4511	2,296,841	356,523	1,940,318	84.5%
<i>Sporting Goods Stores-45111</i>	1,171,043	238,148	932,895	79.7%
<i>Hobby, Toys and Games Stores-45112</i>	714,483	105,333	609,150	85.3%
<i>Sew/Needlework/Piece Goods Stores-45113</i>	183,827	13,042	170,785	92.9%
<i>Musical Instrument and Supplies Stores-45114</i>	227,488	0	227,488	100.0%
Book, Periodical and Music Stores-4512	1,021,687	82,828	938,859	91.9%
<i>Book Stores and News Dealers-45121</i>	689,063	82,828	606,235	88.0%
<i>Book Stores-451211</i>	652,117	82,828	569,289	87.3%
<i>News Dealers and Newsstands-451212</i>	36,946	0	36,946	100.0%
<i>Prerecorded Tapes, CDs, Record Stores-45122</i>	332,624	0	332,624	100.0%
General Merchandise Stores-452	22,201,382	0	22,201,382	100.0%
Department Stores Excl Leased Depts-4521	10,608,771	0	10,608,771	100.0%
Other General Merchandise Stores-4529	11,592,611	0	11,592,611	100.0%
Miscellaneous Store Retailers-453	4,051,100	1,744,484	2,306,616	56.9%
Florists-4531	322,533	100,993	221,540	68.7%
Office Supplies, Stationery, Gift Stores-4532	1,742,072	399,762	1,342,310	77.1%
<i>Office Supplies and Stationery Stores-45321</i>	985,866	282,769	703,097	71.3%
<i>Gift, Novelty and Souvenir Stores-45322</i>	756,206	116,993	639,213	84.5%
Used Merchandise Stores-4533	366,950	565,589	(198,639)	
Other Miscellaneous Store Retailers-4539	1,619,545	678,140	941,405	58.1%
Non-Store Retailers-454	10,747,877	11,590,498	(842,621)	
Foodservice and Drinking Places-722	16,077,707	17,983,089	(1,905,382)	
Full-Service Restaurants-7221	7,199,232	7,539,765	(340,533)	

Limited-Service Eating Places-7222	6,749,147	9,363,426	(2,614,279)	
Special Foodservices-7223	1,362,136	166,628	1,195,508	87.8%
Drinking Places -Alcoholic Beverages-7224	767,192	913,270	(146,078)	
Gen. Merchandise, Apparel, Furniture and Other	42,182,812	1,612,775	40,570,037	96.2%
General Merchandise Stores-452	22,201,382	0	22,201,382	100.0%
Clothing and Clothing Accessories Stores-448	7,088,917	50,501	7,038,416	99.3%
Furniture and Home Furnishings Stores-442	3,711,345	688,766	3,022,579	81.4%
Electronics and Appliance Stores-443	4,120,568	34,395	4,086,173	99.2%
Sporting Goods, Hobby, Book, Music Stores-451	3,318,528	439,351	2,879,177	86.8%
Office Supplies, Stationery, Gift Stores-4532	1,742,072	399,762	1,342,310	77.1%

Professional Services Demand Analysis

The following analysis explores the potential for an increase in the professional services industry in Kittitas County.

To evaluate the room for growth in the county's professional services industries, Kittitas County was compared to three other counties in the state: Chelan, Skagit, and Thurston Counties. Each of these counties has a higher rate of per capita employment in professional services than that of Kittitas County, but all are at least partially rural and removed from the greater Seattle-Tacoma-Everett Metropolitan area. The table below presents a summary of employment data for Kittitas County and each comparison county.

Indicator	Kittitas County	Chelan County	Skagit County	Thurston County
Population	39,400	72,100	117,500	245,300
Total Employment	15,641	43,978	51,869	119,911
Employment: Agriculture	1,051	3,059	1,947	1,431
Employment: Manufacturing	1,162	2,159	5,698	4,260
Employment: Retail	3,353	8,966	12,668	23,163
Employment: Other	7,223	22,459	22,253	64,409
Employment: Professional Services	2,852	7,335	9,303	26,648
Prof. Services Jobs per Capita	0.072	0.102	0.079	0.109

The next table shows employment figures for selected professional services industries in Kittitas County and each comparison county, as well as a population-weighted average of the three comparison counties. To correct for differences in population, employment numbers in the comparison counties have been scaled to simulate a county with the same population as Kittitas. Listed below the employment number for each comparison county is the ratio between that jobs in that county and those in Kittitas. For example, a percentage of 50% means that employment in Kittitas is half of that in the other county.

Industries where Kittitas County employment exceeds the comparative county are shown in blue.

Industry Sector	Kittitas County	Comparison Counties, Scaled to Kittitas County Population			
		Chelan County	Skagit County	Thurston County	Average of Comp. Counties
Depository Institutions	131	312	199	331	292
<i>Kittitas as percentage of:</i>		42%	66%	40%	45%
Non-Depository Credit Institutions	25	58	51	67	61
<i>Kittitas as percentage of:</i>		43%	49%	37%	41%
Security and Commodity Brokers and Service	26	46	44	48	46
<i>Kittitas as percentage of:</i>		57%	59%	54%	57%
Insurance Carriers	28	8	45	5	16
<i>Kittitas as percentage of:</i>		366%	62%	528%	175%
Insurance Agents, Brokers and Service	66	104	92	91	93
<i>Kittitas as percentage of:</i>		64%	72%	72%	71%
Real Estate	471	360	355	418	391
<i>Kittitas as percentage of:</i>		131%	133%	113%	120%
Holding and Other Investment Offices	0	19	5	42	28
<i>Kittitas as percentage of:</i>		0%	0%	0%	0%
Business Services	286	557	451	596	551
<i>Kittitas as percentage of:</i>		51%	63%	48%	52%
Legal Services	112	184	86	123	123
<i>Kittitas as percentage of:</i>		61%	130%	91%	91%
Educational Services	1048	1414	932	1319	1230
<i>Kittitas as percentage of:</i>		74%	112%	79%	85%
Social Services	491	672	584	835	740
<i>Kittitas as percentage of:</i>		73%	84%	59%	66%
Eng, Acct, Research and Mgmt Related Services	166	275	255	398	339
<i>Kittitas as percentage of:</i>		60%	65%	42%	49%
Miscellaneous Services	2	1	21	7	10
<i>Kittitas as percentage of:</i>		183%	10%	29%	20%
Total Professional Services	2852	4008	3119	4280	3922
<i>Kittitas as percentage of:</i>		71%	91%	67%	73%

The next table shows the difference between employment in Kittitas County and the average of the comparison counties. This is a basic estimate of the potential for job growth in each professional services industry, if Kittitas County were to develop these industries to a level comparable with the other counties. For those sectors where Kittitas County exceeds the average of the other counties, the potential new jobs figure is set to zero rather than a negative number.

Additionally, an estimate is included for the office space needed to fill the potential for new jobs. This analysis uses the standard estimation of 250 square feet per employee for commercial office space.

Industry Sector	Current Employment	Potential Employment (Comp. Avg.)	Potential New Jobs	Potential for New Office Space (250 sf per Employee)
Depository Institutions	131	292	161	40,293
Non-Depository Credit Institutions	25	61	36	9,038
Security and Commodity Brokers and Service	26	46	20	5,119
Insurance Carriers	28	16	0	0
Insurance Agents, Brokers and Service	66	93	27	6,874
Real Estate	471	391	0	0
Holding and Other Investment Offices	0	28	28	7,066
Business Services	286	551	265	66,137
Legal Services	112	123	11	2,712
Educational Services	1,048	1,230	182	45,572
Social Services	491	740	249	62,269
Eng, Acct, Research and Mgmt Related Services	166	339	173	43,252
Miscellaneous Services	2	10	8	1,923
Total Professional Services	2,852	3,922	1,161	290,255

Conclusions

The following conclusions are based on the research findings discussed above, as well as strategic observations that may help put them into context.

1. The agricultural sector is well-poised to expand in size. As the population of the Puget Sound region continues to grow and Western Washington farmland is converted to other uses, demand for agricultural products from outside the region will increase. Kittitas County's proximity provides a strong competitive advantage in meeting this demand. The future may provide strong opportunities to diversify beyond a hay and cattle-based agricultural sector to include more high-value products.
2. The greatest prospect for growth in the manufacturing sector appears to be the burgeoning alternative industry sector. The Teanaway Solar Reserve is expected to contain 40,000 photovoltaic panels, and Kittitas County would be well-positioned to supply manufactured components such as inverters and panel surface materials. Other alternative energy technologies such as solar and geothermal may take root in the county, providing other prospects for a high-tech manufacturing base. Outside of alternative energy, growth in the agricultural sector suggests room for expansion in the county's already-strong food processing industry.
3. As the retail leakage analysis demonstrates, the county is experiencing high leakage in most retail sectors. This means that the county is losing potential retail dollars to neighboring counties with more extensive shopping facilities. In particular, the large gap for retail lines such as general merchandise, food and electronics implies that a "big box" store with wide product offerings could likely be successful.
4. On the other hand, the large net captures seen for retail sectors such as gasoline and restaurant services indicate that Kittitas County is taking advantage of its position along two key transportation corridors (I-90 and I-82), by bringing in dollars from non-residents driving through the county. If this approach could be adopted to retail sectors beyond gasoline and restaurants, it could provide an opportunity for additional capture.
5. The professional services analysis suggests that Kittitas County's professional service sector lags in the level of development, even compared to other counties outside the core Puget Sound metropolitan region. While growth may be possible, it will be necessary to develop an infrastructure of "quality of life" factors, such as additional high-end big box and full-line retail, to attract and retain professional employees and businesses. New business growth will create demand and opportunities for professional services but will be limited until the lifestyle and support services issues are addressed.

6. The models do not unambiguously identify a “best” or “worst” sector to invest in. Additionally, it is important to consider effects not captured in the models, such as the societal benefits from health care and education. However, some generalizations can be drawn regarding the relative contributions of the sectors:
- Manufacturing has the highest job multiplier, meaning that manufacturing jobs lead to the highest gains in employment for the rest of the community. However, each dollar of output generates relatively low levels of labor income and value added, largely because raw materials (many imported from outside the county) comprise a large portion of the industry’s costs. The ability to attract new manufacturing firms to the county will continue to be impacted by the limited retail and lifestyle resources compared to those offered by other areas, both inside and outside of the state of Washington.
 - Industries like retail and food service provide high levels of operating income, tax revenue and employment. However, these jobs tend to be on the lower end of the income scale, as is reflected in the sector’s low labor income multiplier.
 - Health care performs well in most categories, with a high number of direct jobs created, as well as strong multipliers for output and value added.

Appendix A: Research Sources

The following sources were utilized for this research.

- Hebert Research library database
- IMPLAN 2008 economic data for Kittitas County and component zip code areas
- Nielsen Claritas
- Washington Regional Economic Analysis Project
- Washington State Office of Financial Management
- Washington State Department of Transportation
- United States Bureau of Economic Analysis
- United States Census Bureau
- United States Department of Agriculture
- United States Department of Transportation
- Federal Aviation Administration
- *RS Means Square Foot Costs, 2010 Edition*
- Other published academic and commercial research

Data for Construction Cost Estimation

For airport construction, requirements for runway and taxiway length, terminal size and other factors were estimated based on a comparison with three airports similar to a potential Kittitas County facility: Walla Walla, Pulman-Moscow, and Wenatchee (Pangborn Memorial). The construction cost was then estimated using a construction cost guide published by the Florida Department of Transportation.

For other sectors, data on construction cost per square foot was obtained from *RS Means Square Foot Costs, 2010 Edition*. For each industry sector, cost per square foot data has been reported for the building type(s) expected to be used. For sectors with multiple building types, the costs have been averaged using the weights indicated in the table. For example, for the Retail Trade sector, 75% of construction is assumed to follow the Retail Store type, and 25% to follow the Department Store type.

Listed costs vary based on total building square footage, building methods and other factors. To obtain an average cost for each type of building, the standard square footage for each type was used (as indicated in the table). The least expensive, standard and most expensive types were then averaged, using 25%, 50% and 25% weights, respectively. Finally, costs are adjusted for local conditions, using a multiplier of 0.95 of the national construction cost (the 0.95 multiplier is an average of reported multipliers for nearby locations such as Yakima and Wenatchee).

Construction costs for selected economic sectors (\$ per square foot)

Weight	<u>Principal economic clusters/sectors</u>	Low	Standard	High	Mean	Adj. for Locality
Manufacturing						
100%	Factory 1 Story (30,000 sf)	\$111.65	\$114.05	\$126.05	\$116.45	\$104.81
Wholesale Trade						
100%	Warehouse (30,000 sf)	\$87.05	\$88.00	\$97.70	\$90.19	\$85.68
Retail Trade						
75%	Store, Retail (8,000 sf)	\$106.55	\$112.95	\$124.90	\$114.34	\$102.90
25%	Store, Department (110,000 sf)	\$89.75	\$111.30	\$111.30	\$105.91	\$95.32
	Sector Average					\$101.01
Information						
45%	Office, 1 story (7,000 sf)	\$127.70	\$167.55	\$189.10	\$162.98	\$146.68
45%	Office, 2-4 story (20,000 sf)	\$143.15	\$172.10	\$192.20	\$169.89	\$152.90
10%	Computer Data Center (22,500 sf)	\$287.65	\$295.50	\$310.55	\$297.30	\$267.57
	Sector Average					\$161.57
Professional, Scientific and Technical Services						
45%	Office, 1 story (7,000 sf)	\$127.70	\$167.55	\$189.10	\$162.98	\$146.68
45%	Office, 2-4 story (20,000 sf)	\$143.15	\$172.10	\$192.20	\$169.89	\$152.90
10%	Computer Data Center (22,500 sf)	\$287.65	\$295.50	\$310.55	\$297.30	\$267.57
	Sector Average					\$161.57
Educational Services						
25%	Elementary School (45,000 sf)	\$153.70	\$159.90	\$166.10	\$159.90	\$143.91
25%	High School (130,000 sf)	\$147.45	\$158.15	\$178.45	\$160.55	\$144.50
25%	College Classroom (50,000 sf)	\$169.15	\$169.40	\$179.40	\$171.84	\$154.65
10%	College Lab (45,000 sf)	\$177.50	\$181.50	\$186.50	\$181.75	\$163.58
15%	College Dorm (25,000 sf)	\$179.20	\$189.00	\$202.75	\$189.99	\$170.99
	Sector Average					\$152.77
Health Care and Social Assistance						
25%	Hospital (55,000 sf)	\$295.10	\$308.85	\$312.05	\$306.21	\$275.59
20%	Medical Office, 1 story (7000 sf)	\$180.50	\$197.20	\$197.70	\$193.15	\$173.84
20%	Medical Office, 2 story (7000 sf)	\$214.95	\$214.95	\$228.95	\$218.45	\$196.61
15%	Nursing Home (25,000 sf)	\$145.65	\$157.60	\$161.55	\$155.60	\$140.04
10%	Outpatient Surgery Center	\$673.50	\$379.10	\$384.95	\$454.16	\$408.75
10%	Office, 1 story (7,000 sf)	\$127.70	\$167.55	\$189.10	\$162.98	\$146.68
	Sector Average					\$219.53
Accommodations						

50%	Hotel, 4-7 story (135,000 sf)	\$157.90	\$161.35	\$171.45	\$163.01	\$146.71
50%	Motel, 2-3 story (49,000 sf)	\$143.25	\$157.35	\$157.85	\$153.95	\$138.56
	Sector Average					\$142.63
Food Service						
60%	Restaurant (5,000 sf)	\$187.25	\$197.75	\$210.85	\$198.40	\$178.56
40%	Restaurant, Fast Food (4,000 sf)	\$188.40	\$200.30	\$203.00	\$198.00	\$178.20
	Sector Average					\$178.42

Data for Operating Revenue Estimation

Where applicable, national average cost figures have been adjusted for the personal income and/or cost of living in Kittitas County.

Agriculture

Data on acreage, production and revenue was collected from the 2007 USDA Census of Agriculture for Kittitas County

Manufacturing

Revenue and employment figures for Kittitas County were provided by Nielsen Claritas.

The square foot per employee ratio was derived from a previous Hebert Research survey of manufacturing facilities, and from a consultation with the head of a local advanced manufacturing alliance.

Wholesale Trade

Revenue and employment figures for Kittitas County were provided by Nielsen Claritas.

The square foot per employee ratio was derived from information on the Ace Hardware distribution facility in Moxee, Washington, an example of a modern Eastern Washington warehousing and distribution center.

Retail Trade

Sales per square foot figures for a variety of retail sectors were published by The HDL Companies.

Data on Kittitas County retail sales by sector categories, used to weight the average sales per square foot calculation, were provided by Nielsen Claritas.

Airport

Estimation for airport traffic and revenue was developed based on a size-adjusted comparison with three airports similar to a potential Kittitas County facility: Walla Walla, Pulman-Moscow, and Wenatchee (Pangborn Memorial). The estimation relied on economic impact statements for each airport prepared for the WSDOT, as well as statistics published by the FAA, WSDOT, and United States Department of Transportation.

Information

Revenue and employment figures for Kittitas County were provided by the United States Bureau of Economic Analysis.

The square foot per employee ratio was set at 250, a commonly accepted average for office space.

Professional, Scientific and Technical Services.

Revenue and employment figures for Kittitas County were provided by the United States Bureau of Economic Analysis.

The square foot per employee ratio was set at 250, a commonly accepted average for office space.

Educational Services

Data on total budget and square footage of campus buildings was provided by Central Washington University.

Health Care and Social Assistance

The average revenue per square figure was obtained from a Stroudwater Associates study of 72 hospitals throughout the United States.

Accommodations

Sales per square foot figures for the accommodation industry were obtained from Hebert Research library database research.

Data on Kittitas County accommodation and food service revenues, used to weight the average sales per square foot calculation, were provided by Nielsen Claritas.

Food Service

Sales per square foot figures for the food service industry were published by The HDL Companies.