



# A Preliminary Economic Forecast of the Touchet Valley Trail on the Regional Economy



## Overview of the Study

This is a preliminary economic forecast of the Touchet Valley Trail on the southeast Washington regional economy. This is a preliminary assessment that will be updated to a full report in October 2021. The study is part of a wider regional economic assessment of several existing and proposed trails and is cosponsored by the Port of Columbia and the Palouse Regional Transportation Planning Organization (PRTPO). The author is Steven Peterson, a regional economist who has conducted over 150 economic studies in the Pacific Northwest. A special thanks to Vandal Student Enterprises and especially William Fairbanks, for their assistance and contributions to this study.<sup>1</sup>

## Summary Results

The (temporary) *construction* economic footprint of the Touchet Valley Trail is approximately \$11.7 million, supporting 73 jobs (for one year) and \$462,740 in state and local taxes. The average compensation per job is \$57,354.

The *annual* economic footprint of the Touchet Valley Trail from new retail activity, tele-commuters, and visitor spending is approximately \$1.32 million, supporting 12 jobs and \$107,532 in state and local taxes. Average compensation per job is \$36,871.

The contributions include the multiplier impacts from backward linkages to the local economy and from the impact of resulting employee and consumer spending.

## Overview of the Touchet Valley Trail Region

The proposed 9.7-mile Touchet Valley Trail is situated in Washington State in Columbia County and Walla Walla County between the communities of Dayton (Columbia County), and Waitsburg (Walla Walla County). The region is very rural with small populations (2019): Columbia County (3,985), Asotin County (22,582), Garfield County (2,225), and Walla Walla County (60,760). Total regional population was 89,552. The city of Dayton Washington had a population of 2,565 people and Waitsburg 1,230 (U.S. Bureau of the Census 2019). In the future, the Touchet Valley Trail will be a component of broad regional trail system that will provide regional and statewide trail linkages.

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<sup>1</sup> The results and findings of this study are those of the author, Steven Peterson, and do not necessarily represent the University of Idaho or any of the aforementioned organizations or individuals.

# Overview of the Touchet Valley Trail Regional Economy

Columbia County had 1,690 jobs in 2020 with an average total compensation per job of \$58,845. The broader *regional economy* that includes Asotin County, Columbia County, Garfield County, and Walla Walla County, had a total employment of 42,486 workers and an average total compensation per job of \$55,551.

Total gross regional product (GRP) was \$3,845,036,948 (2020) in the broader regional economy. For Columbia County, GRP was \$178.0 million Total compensation including benefits was \$2,624,119,324 for the regional economy and \$119.4 million for Columbia County.

According to Emsi, about 17.0% of the regional population achieved a bachelor's degree (i.e., highest level of educational achievement) which is about 3.0% below the national average, and 12.7% have an associate's degree which is about 4.1% above the national average.

The broad regional economy is fairly diversified with agriculture and agricultural processing important leading industries. It has rich dry land farming (some irrigated agriculture) and substantial food manufacturing. Crops include wheat, onions, potatoes, wine grapes, and many others. The region has an important winery economic cluster centered around Walla Walla, with about 181 wineries. It has become a destination winery tourism center. Outdoor recreation is very important that includes Bluewood Ski Area, a popular day-use ski resort in Columbia County. Hiking, swimming, boating, and backpacking are important recreational activities. Other industries include higher education, a health care cluster, a strong service/retail trade center, Blue Mountain Station (a local food-hub), and many others (Table 1).



Columbia County has developed considerable renewable wind energy capacity in recent years:

- Portland General Electric Company added 116 turbines in its Tucannon River Wind Farm with an installed capacity of 267 megawatts ([df0d1c4b-1de3-40c4-87b8-4779cd35e7a6 \(portlandgeneral.com\)](https://www.portlandgeneral.com/energy/wind-solar.html)).
- Puget Sound Energy constructed the Hopkins Ridge Wind Facility with 87 turbines and an installed capacity of 156.7 megawatts ([PSE | Hopkins Ridge Wind Facility](https://www.pse.com/energy/wind-solar.html)).
- PacifiCorp constructed 117 wind turbines in the Marengo I and Marengo II Wind Farms with installed capacity of 234 megawatts.  
<https://www.pacificorp.com/energy/wind-solar.html>;  
<https://www.thewindpower.net/index.php>

Together these projects support about 50 full time living wage jobs. Utilities pay robust total compensation packages, often averaging over \$100,000 per year (see Table 1).

Table 1: 2020 Employment by Industry Asotin, Garfield, Columbia, and Walla Walla Counties

Industry	Jobs	Avg. Compensation
Agriculture, Forestry, Fishing and Hunting	4,141	\$44,009
Mining, Quarrying, and Oil and Gas Extraction	18	\$48,161
Utilities	161	\$159,340
Construction	2,168	\$63,451
Manufacturing	4,694	\$72,702
Wholesale Trade	1,016	\$63,852
Retail Trade	3,850	\$38,376
Transportation and Warehousing	715	\$63,468
Information	331	\$54,104
Finance and Insurance	848	\$77,995
Real Estate and Rental and Leasing	400	\$54,214
Professional, Scientific, and Technical Services	975	\$59,679
Management of Companies and Enterprises	44	\$93,862
Administrative and Support and Waste Management	831	\$32,433
Educational Services	2,679	\$32,206
Health Care and Social Assistance	6,413	\$59,637
Arts, Entertainment, and Recreation	659	\$27,219
Accommodation and Food Services	2,606	\$24,890
Other Services (except Public Administration)	1,494	\$27,003
Government	8,444	\$74,347
Total/Average	42,486	\$55,551

Source: Emsi

# Methodology

## Economic Models

An IMPLAN (IMpacts-for-PLANning) input/output model of the regional economy was constructed to estimate the economic contributions of the Touchet Valley Trail on the regional economy ([Economic Impact Analysis for Planning | IMPLAN](#)). The broader model was chosen to capture regional employment and trade flows, especially for the construction of the trail. IMPLAN is the most widely utilized software and database for input-output analysis in the U.S. The model year was 2019. An Emsi (Economic Modeling Specialists, International) model was constructed for comparison and validation of the multipliers used in this analysis ([Emsi: Labor Market Analytics \(economicmodeling.com\)](#)). The data available for the study was provided by the sponsors and other entities.

## Construction Estimates

Engineering estimate for construction was provided by the sponsors of the study. Total estimated construction costs were \$10,380,000. We assumed that *direct* local labor consisted of 53 job-years with total compensation of \$3,293,974. Adjustments were made for out-of-region purchases and labor. Net construction expenditures were entered into the economic model in the IMPLAN *Sector 54 Construction of Streets and Highways*.

## Trail Visitor Estimates

We estimate the annual Touchet Valley Trail counts will be between about 75,000 and 125,000 per year, an estimate that will be updated and refined over the summer of 2021. A trail count analysis is currently being conducted on several similar trails: 1) Latah Trail that ranges from Moscow, Idaho to Troy, Idaho, 2) Chipman Trail that runs from Pullman, Washington to Moscow, Idaho, and 3) Clarkston, Washington trail that runs from Clarkston, Washington to Asotin, Washington. Additional data as these visitor counts will be measured and analyzed. Population and demographics are similar. Columbia and Walla Walla Counties have about 64,745 people. Asotin County has 22,582 people, Latah County has about 40,108 people, and Whitman County, Washington has 50,104. All these regions have mixes of urban and rural areas related to trail use. Additional trails will be analyzed if data become available.

EcoNorthwest conducted a comprehensive trail analysis for Washington State in 2019. They reported approximately 200 miles of trails in Columbia County (mostly nonpaved) and 11 trailheads. Estimated user-days were 1,364,000, of which 24% were from residents and 76% nonresidents. This demonstrates the extensive use of existing trails in Columbia

County by residents and nonresidents alike

[https://econw.shinyapps.io/econ\\_wa\\_rec\\_trails/](https://econw.shinyapps.io/econ_wa_rec_trails/)). Approximately 73% of the trail user-days were walkers and bikers

#### (Preliminary) Study Assumptions (Visitor Counts and Spending)

We are assuming a Touchet Valley Trail visitor count of 100,000, of which 8,961 visitor parties (average size is 2.5) will be from outside the four-county regional economy (about 22% of total visitors). Each visitor party will spend about \$72.66 (proportionally) on eating and drinking (24%), groceries (16%), fuel (42%), and other expenditures (19%). The spending estimates were obtained from daily nonlocal spending utilized in the EcoNorthwest study and originated from E.M. White (2017), updated to 2019 dollars ([ECONW-WA\\_Trails-Technical+Appendices\\_101119.pdf \(squarespace.com\)](#)) Total direct visitor spending is estimated at \$370,566, supporting direct labor income of \$142,403.

#### Study Assumptions (Quality of Life Estimations)

We estimate there will be an enhancement of the regional quality of life assisted by the trail development. It will attract at least two tele-commuters who establish professional businesses in Columbia County. We entered the change in IMPLAN Sector 464 *Scientific research and development services*. The region is increasingly becoming a wine destination cluster (Emsi, 2011, [REVISITING THE ECONOMIC IMPACTS OF THE WALLA WALLA WINE CLUSTER \(wwcc.edu\)](#)). The region is also becoming an outdoor recreation destination, attracting quality of life migrants. COVID-19 may accelerate this movement out of the cities to rural regions ([Coronavirus Moving Study Shows More Than 15.9 Million People Moved During COVID-19 | MYMOVE.](#)).

Trails also lead to new business creation that could include a bicycle shop, boutique craft store, or specialized services. We estimate that about two direct jobs will be created from nonresident spending as a result of the trail. We entered the change in IMPLAN Sector 412 *Retail - Miscellaneous store retailers*.

#### Economic Base Assessment

This analysis is founded on economic base theory. A local or regional economy has two types of industries: base industries and non-base industries. Any economic activity that brings money into the local economy from the outside is considered a base industry. A base industry is sometimes identified as an export industry, which is defined as any economic activity that brings new monies into the community from outside. For example, base industries can include high-technology companies, federal government operations, and other manufacturing and service firms. Firms providing services to individuals living outside the region's trade center, such as medical and legal services, are included in the region's economic base. Payments from state and federal governments (including Social

Security, Medicare, state or federal university funding, retirement accounts, and welfare payments) are sources of outside income to businesses and residents. These are counted as part of the economic base.

Non-base industries are defined as economic activity within a region that support local consumers and businesses within the base sector. They re-circulate incomes generated within the region from the base industries. Such activities include, but are not limited to, shopping malls that serve the local population, business and personal services consumed locally, barbers, medical services consumed locally, and local construction contracts. Non-base industries support the base industries.

Base industries are sometimes confused with non-base industries. For example, some county economies have large retail trade sectors that produce a paradox: they employ a substantial percentage of the workforce but actually contribute little to the local economy because most of the retail sales are local. They bring little new money into the community. Thus, it appears from the size effect that the retail trade sector contributes a large amount of employment and earnings to the economy. Most of this employment and earning activity is allocated or attributed to other local “export” industries that bring revenues into the community from outside sales. From an economic base perspective, which determines the economic “drivers” of the economy, the retail trade sector is much smaller. Only the retail trade activities serving visitors from outside the area can be counted as economic base activity.

Economic base analysis is important for identifying the vital export industries of a region. Non-base industries, on the other hand, are important for keeping money within a region and stimulating local economic activity for residents. In this respect, non-base industries are said to deepen the economy while export industries are said to broaden it. For example, suppose a Washington patient elects surgery at a local hospital instead of traveling to a medical center in Salt Lake City, Utah for specialized treatment. The substitution of local services for an imported service represents an increase in the demand for local business services. Keeping income in the community enhances the multiplier effects of the export industries. The overall effect of import substitution can be viewed as an analogous increase in demand for an export industry. Our economic model in this section is founded on economic base theory.

### Defining and Explaining Economic Impacts

Economic impacts measure the magnitude or importance of the expenditures of basic (export) industries. Our economic model estimates multipliers for each industrial and service sector. Suppose you have a (hypothetical) multiplier of 1.45. Every dollar of direct expenditures creates \$1.45 dollars of total new spending in the community’s economy.

Impacts are apportioned into two levels: the direct impact and the multiplier effects. The first level is the direct impact of value-added expenditures on the regional economy (i.e.,



the jobs, payroll and earnings, value added, and sales that are directly created by the industry of study through their exports). The second is comprised of two parts: a) the impacts on other regional businesses that provide goods or services in support of the industry of study (i.e., the indirect impacts), and b) the effect of employee and related consumer spending on the economy (i.e., the induced impacts). The indirect and induced impacts are the so-called “ripple” or multiplier effects of value-added expenditures in the regional economy. The direct effects are driven by exports whereas the multiplier effects are driven by local expenditures and the deepening of an economy. Exports, the new money coming into an economy, set off a web of transactions as each business seeks to fulfill the demands of their customers.

A manufacturer’s impact upon the economy is thus comprised of the magnitude of the exports and magnitude of the multiplier(s). The sum of the direct, indirect, and induced effects measures the total impact of an industry to an economy.

#### Terminology: Results are Reported in Several Different Measures:

- Sales (Output): the total transactions in dollars from direct and indirect trail’s economic activity. This gross measure of economic activity is considered less accurate than gross regional product or job creation.
- Gross regional product GRP (value-added): This is a local measure of Gross Domestic Product (at the county level) and a subset of sales (output). GRP includes employee compensation, proprietary income, other property income, and indirect business taxes. GRP is a measure of economic activity. It is distinguished from sales in that double-counting has been eliminated. Some products are utilized by other products in the manufacturing process. When adding them up in sales, they get counted twice or more. Some steel is used in automobile manufacturing, for example, and gets counted both as steel production and in the cost of the automobile. Value added eliminates any double counting. The steel utilized in autos is netted out when tallying total steel production.
- Total Compensation (wages and salaries): The wage/salary and proprietor’s income to individuals including employer contributions and fringe benefits. This is a subset of gross regional product.
- Jobs: The total employment resulting from operations, firms, and entities associated with the trail.
- Indirect Taxes: All taxes generated from trail’s economic activity excluding personal and corporate income taxes. These consist of mostly sales taxes and property taxes.

#### Other measures or terminology

- Direct spending (effects): This represents the actual sales, income, and jobs from the trail’s operations and enterprises.

- Indirect effects: These are the downstream economic effects on sales, income, jobs, and indirect taxes in the regional economy from direct spending. For example, the trail and associated firms and operations purchase goods and services in the community. This supports other area businesses, which in turn, purchase even more goods and services as the effects ripple through the economy. These are part of the multiplier effects of direct spending.
- Induced effects: These are downstream effects of employee and consumer spending on the economy. They are part of the multiplier effects.

## Results

Table 2 and Table 3 outlines of the summary economic contributions of the Touchet Valley Trail by industry/activity type. The results include the direct, indirect, and induced contributions.

The (temporary) *construction* economic footprint of the Touchet Valley Trail is approximately \$11.7 million supporting 73 job-years and \$462,740 in state and local taxes. The average compensation per job is \$57,354.

The *annual* economic footprint of the Touchet Valley Trail from new retail activity, tele-commuters, and visitor spending is approximately \$1.32 million, supporting 12 jobs and \$107,532 in state and local taxes. Average compensation per job is \$36,871.

The contributions include the multiplier impacts from backward linkages to the local economy and from the impact of resulting employee and consumer spending.

Table 2: Projected Economic Contributions of the Touchet Valley Trail (Includes the Direct, Indirect, and Induced Impacts)

Industry	Direct Jobs	Direct Expenditures (Net)	Sales Transactions	Gross Regional Product	Total Compensation	Total Jobs	Average Compensation/Job
			Including the Multiplier Effects				
Construction (Temporary)	53	\$ 8,304,000	\$ 11,692,436	\$ 6,406,443	\$ 4,184,544	73	\$ 57,354
Annual (Permanent)							
Retail Boutique	2	\$ 97,472	\$ 162,407	\$ 117,832	\$ 83,791	2	\$ 39,900
Tele-Commuters	2	\$ 393,538	\$ 608,632	\$ 279,906	\$ 161,840	3	\$ 47,600
Visitor Spending	5	\$ 370,566	\$ 547,797	\$ 312,008	\$ 188,707	6	\$ 30,049
Total (Annual)	9	\$ 861,576	\$ 1,318,836	\$ 709,746	\$ 434,338	12	\$ 36,871

Table 3: Projected Tax Contributions of the Touchet Valley Trail (Includes the Direct, Indirect, and Induced Impacts)

Industry	Taxes	State	Other Taxes		Total
	Local	Sales			
Including the Multiplier Effects					
Construction (Temporary)	\$ 161,489	\$ 258,399	\$ 42,852	\$	462,740
Annual (Permanent)					
Retail Boutique	\$ 8,595	\$ 13,752	\$ 673	\$	23,020
Tele-Commuters	\$ 6,911	\$ 11,058	\$ 1,860	\$	19,829
Visitor Spending	\$ 24,076	\$ 38,524	\$ 2,093	\$	64,693
Total (Annual)	\$ 39,582	\$ 63,334	\$ 4,626	\$	107,542

### Summary Multipliers

The average one-time *construction* overall sales/output multiplier was 1.41 (i.e., for every dollar of direct expenditures, 1.41 dollars of total output are created in the community). The value-added (GRP) multiplier was 1.39, the labor income (total compensation) multiplier was 1.27, and the jobs multiplier was 1.37.

The average *annual* overall sales/output multiplier was 1.53 (i.e., for every dollar of direct expenditures, 1.53 dollars of total output are created in the community). The value-added (GRP) multiplier was 1.49, the labor income (total compensation) multiplier was 1.38, and the jobs multiplier was 1.30.

### Caveat and Limitations

The results and findings of this study are those of the author, Steven Peterson, and do not necessarily represent the University of Idaho or any of the afore mentioned organizations or individuals.

This is a preliminary study, so the results will change and be refined in the next five months. A final report will be issued in October 2021.

The study is a forecast of the future with uncertainty. Ultimately, the actual measurements of contributions of the Touchet Trail will depend on accuracy of the forecasted inputs.

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