



Port of Whitman County

2022 ECONOMIC CONTRIBUTIONS

of the entrepreneurial firms and organizations associated with the Port of Whitman County



*See page 11 for the economic impact of Boyer Park & Marina,
pictured above with new docks installed in 2023*

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ABOUT THE AUTHOR

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**This study represents the conclusions of the author and does not represent any other individuals or organizations.*

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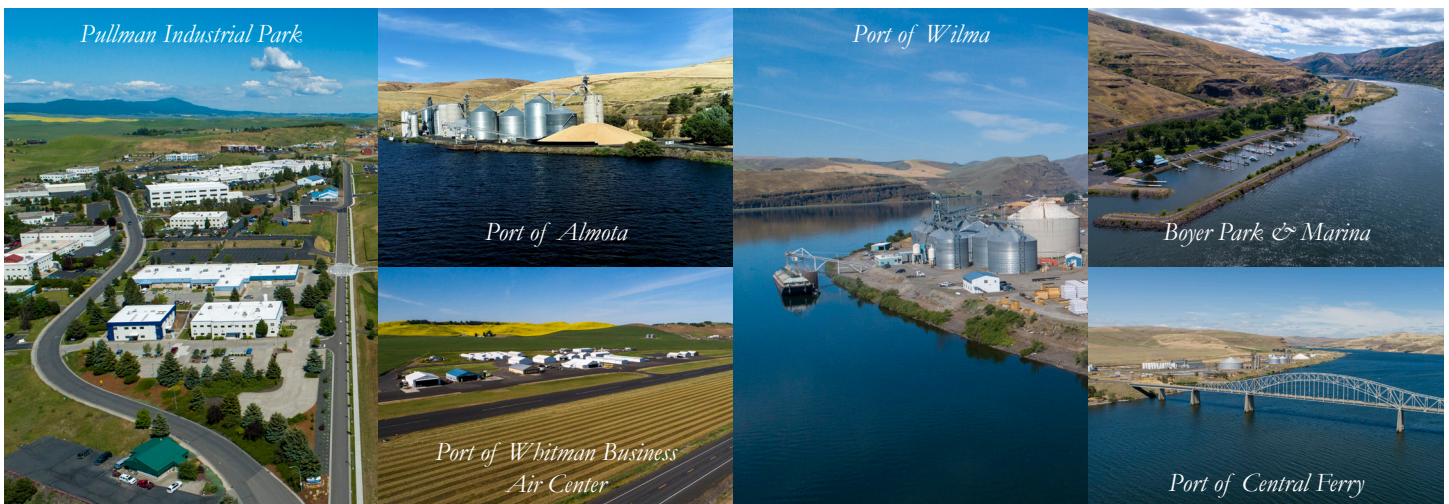
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KEY CONCLUSIONS

The Port of Whitman County is arguably the **most impactful** economic development agency in the region.

- In the last 20 years, Whitman County has become the engine of growth for the regional economy after decades of stagnation. Manufacturing growth has increased 262% from 2002 to 2022, versus -8% decline for Washington State, +9% for Idaho, and -18% for the U.S. From 2012 to 2022, Whitman County manufacturing increased by 23%. The average compensation package per job (including all benefits) is \$103,125.
- The key drivers of Whitman County growth have been the entrepreneurial firms associated with the Port of Whitman County's water-borne ports and industrial parks, increases in other manufacturing and service industries, and rising student enrollments at Washington State University.
- Schweitzer Engineering Laboratories (SEL) alone has increased its Pullman employment by more than 2,100 employees in the two decades.
- The Port of Whitman County (PWC) is a leading economic development agency in land and infrastructure development (water, wastewater, electrical, gas and fiber optic cable), transportation (water, railroad, airports, highways and telecommunications) and land development consisting of six commercial, recreational, industrial and technology parks. These include three inland water ports: Wilma, Almota, and Central Ferry. In addition, the PWC has two inland industrial parks: Pullman Industrial Park and the Port of Whitman Business Air Center in Colfax. The PWC also has an important recreation site at Boyer Park & Marina.
- The PWC is a leading agency in programs for business attraction, retention and expansion, promotion of business, incubator and entrepreneurial development programs, and collaboration with others.



DECISIVE CONTRIBUTIONS

The Port of Whitman County (PWC) Associated Firms and Entrepreneurs support over \$1.74 billion in output and \$801 million added gross regional product to the regional economy, as well as directly and indirectly supporting over 5,892 jobs annually with average annual salaries and benefits of \$77,089. These metrics include the multiplier effects.

Total PWC-related contributions as a percentage of the Whitman County and regional economies, respectively¹:

Whitman County	Regional Economy
23% jobs	7% jobs
36% output	12% output
25% total compensation	9% total compensation
29% gross regional product	11% gross regional product

¹ The regional economy includes Whitman County, Asotin County, Latah County and Nez Perce County. Because of trade flows, the economic contributions of the PWC related firms were calculated using a regional economic model and the results are presented as a percentage of both the Whitman County economy and the regional economy. Most of the contributions occur to Whitman County which is also a regional jobs exporter.



Figure 1: Total PWC-related contributions as a percentage of Whitman County's economy

DIRECT JOBS

The Port of Whitman County conducted a survey of all the entrepreneurial firms associated with the PWC and related operations. We estimate there are 3,484 direct jobs associated with the PWC firms and operations, which can be seen in Figure 2. Direct employment has increased 368% cumulatively from 1996 to 2022. This can be seen in Figure 2 and Table 1.

Figure 2: Direct jobs 1996-2022

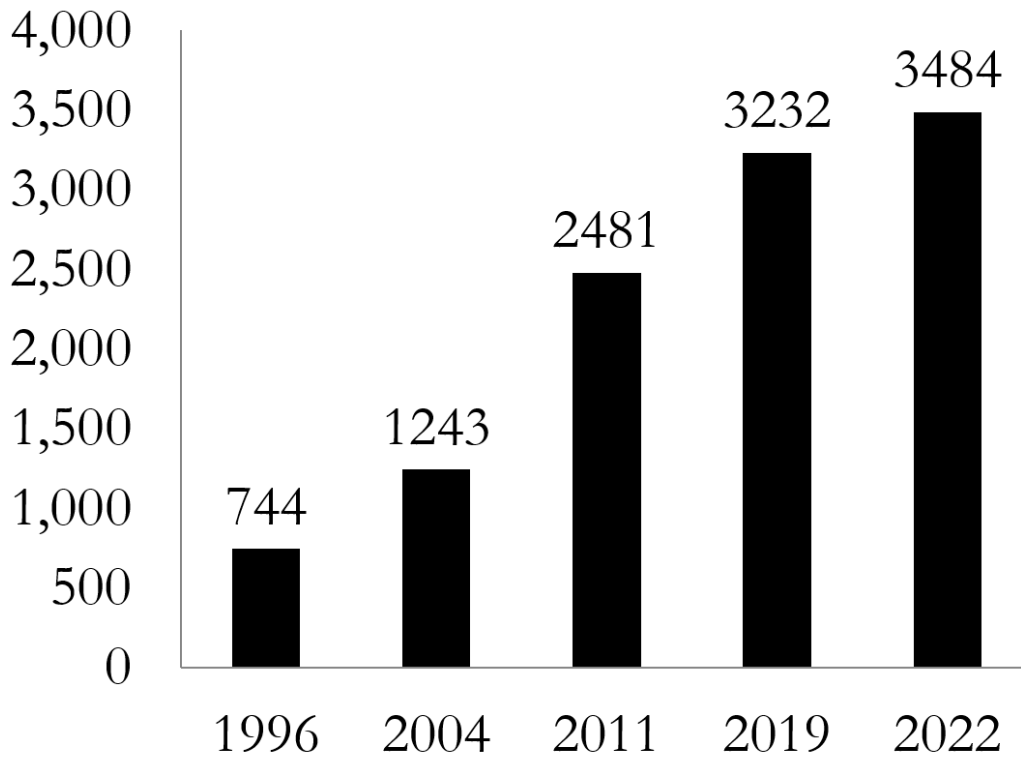


Table 1: Direct jobs by industry

Direct Employment	1996		2004		2011		2019		2022	
	Jobs	%	Jobs	%	Jobs	%	Jobs	%	Jobs	%
Grain Storage/Transp.	173	23%	120	10%	117	5%	131	4%	123	4%
Recreation	46	6%	33	3%	31	1%	28	1%	29	1%
Agriculture Services	35	5%	15	1%	31	1%	52	2%	52	1%
Basic Business Serv/Prod.	23	3%	13	1%	66	3%	98	3%	153	4%
Wood Products	183	25%	168	14%	101	4%	113	3%	122	4%
High Tech. Services/Manu.	245	33%	846	68%	2065	83%	2,693	83%	2,883	83%
Professional Services	36	5%	43	3%	25	1%	18	1%	24	1%
Port Infrastructure/Telecom.	3	0%	5	0%	45	2%	99	3%	98	3%
Total	744	100%	1243	100%	2481	100%	3232	100%	3484	100%

DIRECT JOB GROWTH

The fastest growing industries are high technology services and manufacturing, most of which are situated in Pullman Industrial Park (East). The largest company in Pullman Industrial Park (East) is Schweitzer Engineering Laboratories, which provides a sizable majority of the total direct employment (about 2,637 jobs at the time of this study).

The other firms in the park provide more than 277 high-paying jobs, mostly from high-technology companies. They also have a significant impact on the regional economy.

Telecommunications and high-speed fiber installations by the PWC are fast growing and will provide an increasing number of jobs in the future. They will facilitate future home-based telecommuting from rural communities throughout Whitman County and encourage firms to locate in rural towns.

Grain storage and transportation has remained relatively constant since 1996 (after adjusting for methodological differences between the different studies). Agricultural service jobs increased modestly and there has been strong growth in overall basic series and products.

Many of the firms in the water-borne ports are mature agriculture-related product and service companies. Employment has been relatively stable over time and not likely to increase. Wood products manufacturing employment (Port of Wilma) has declined but that is likely due to increase in worker productivity as manufacturing processes have changed over time.

The PWC has been focused on assisting the development of value-added agriculture products and these efforts will likely increase job growth in the future. Joseph's Grainery situated in the Port of Whitman County Business Air Center is a good example of a new value-added company.



The Port of Whitman County partnered with the private sector to bring fiber to the home to five rural communities in Whitman County: Lamont, Rosalia, Tekoa, Oakesdale and Palouse.

LIVING WAGE JOBS

The PWC businesses and related operations provide living wage jobs. The average compensation package is about \$77,089 including total benefits. These results also include jobs created by multiplier effects.

Most of the employment opportunities offered by the firms and related operations of the PWC are desirable, relatively stable and living-wage jobs.

JOB CONTRIBUTIONS

Including the multiplier effects, the PWC firms and operations support 5,892 jobs. About 82.5% of the jobs are from Pullman Industrial Park, 8.7% from the Port of Wilma, 4.8% from fiber infrastructure and Port operations, 2.0% from the Port of Central Ferry, 0.8% from the Port of Whitman Business Air Center, 0.6% from tourism and 0.5% from the Port of Almota.

DIVERSITY OF FIRMS AND INDUSTRIES

The majority of the PWC jobs are from high technology manufacturing and service-related employment; however, there is an amazing diversity of firms and industries associated with the PWC. The firms include trucking companies, fertilizer mixing and supply, construction, grain storage, propane supplies, wood products manufacturing, air services, winery, value-added food products, water transportation, landscaping, fiber installation and services and many others. These industries are stable and recession resilient even in the COVID-19 recession.

HIGH SPEED FIBER INFRASTRUCTURE

The Port of Whitman County has installed 140 miles of fiber, running from Spokane, Washington to Clarkston, Washington, to enhance the telecommunications network throughout the county and the broader region. Modern communications are increasingly the transportation mode of choice for businesses, government and consumers. As an important form of transportation, fiber communication networks are a central component of the Port of Whitman County's mission. Fiber cable is essential to wireless communications, medical records and health care imaging services, emergency service communications, university research, governmental operations, high technology manufacturing facilities, general business operations, video streaming and telecommuting. By providing rural communities with access to high-speed internet and telecommunication services, the Port of Whitman County

CONTRIBUTIONS BY PORT LOCATION

Pullman Industrial Park
\$1.45 billion in output
4,859 jobs

Port of Wilma
\$136.2 million in output
513 jobs

Port of Central Ferry
\$68.3 million in output
119 jobs

Fiber Infrastructure/Port Operations
\$68.2 million in output
285 jobs

Tourism
\$4.3 million in output
38 jobs

All Others
\$15.3 million in output
78 jobs

**PWC-RELATED FIRMS
TOTAL CONTRIBUTIONS**
\$1.74 billion in output
5,892 jobs

is providing essential infrastructure for future rural community revitalization. Businesses can locate in rural regions and enjoy small town amenities yet compete in a global market via the fiber network. Annualized fiber construction in constant dollars is estimated at \$1.58 million since 2002. Gross revenues reached approximately \$2.4 million in 2022. The estimated economic contributions of the fiber infrastructure include construction, operations and business creation effects. The annual economic contributions of fiber are \$44.4 million in output and 124 jobs, including the multiplier effects.

ECONOMIC CONTRIBUTIONS

The total 2022 economic contributions from the entrepreneurial firms associated with the Port of Whitman County and all related operations are \$1.74 billion in output (sales), \$801 million in gross regional product (a subset of sales), \$454 million in total compensation (a subset of gross regional product) and 5,892 jobs. These contributions occur in the four-county regional economy with the epicenter in Whitman County. These contributions include the multiplier impacts from backward linkages to the local economy and from the impact of resulting employee and consumer spending (Table 2).

Table 2: 2022 Economic Contributions by Industrial Park / Operation

	Jobs	Output	GRP	Labor Income
Pullman Industrial Park	4,859	1,449,741,881	636,975,173	390,502,498
Port of Wilma	513	136,203,042	74,394,435	36,637,625
Port of Central Ferry	119	68,314,236	53,435,830	7,034,460
Port of Almota	30	7,481,990	3,919,459	1,735,027
Port of WC Business Air Center	47	7,775,565	3,362,590	2,317,963
Tourism (Boyer Park)	38	4,286,979	2,343,297	1,409,730
Fiber Construction/Operations	124	44,206,452	15,316,753	6,628,976
Port Infrastructure/Operations	161	24,008,207	11,023,197	7,952,042
Grand Total	5,892	1,742,018,352	800,770,734	454,218,321

Table 3 reports the economic contributions by industry which provides interesting detail on specific impacted sectors of the economy. Table 4 reports the impacts by model composition – direct, indirect and induced contributions. The direct effects are measured from the actual base expenditures by the PWC firms and operations. Indirect effects measure the backward linkages as PWC firms and operations purchase goods and services from other firms in the regional economy. Induced impacts report the linkages related to employee and consumer spending. The table also reports the average multipliers: Jobs 1.73, total compensation 1.38, GRP 1.43, and output 1.38. To interpret the jobs multiplier: For every direct (base) job, a total of 1.73 jobs are created in the regional economy.

Table 3: 2022 Economic Contributions by Industry (Including the Multiplier Effects)

Industry	Sales (Output)	Gross Regional Product	Total Compensation	Jobs
Plant Agriculture	\$1,342,177	\$481,569	\$809,686	18
Animal Agriculture	\$170,294	\$79,628	\$113,631	1
Logging and Forest Services	\$8,790,305	\$5,718,405	\$5,513,806	90
Mining	\$366,713	\$90,172	\$45,683	1
Utilities	\$8,273,943	\$3,236,138	\$647,981	7
Construction	\$4,836,899	\$1,652,433	\$1,259,461	21
Food Processing	\$9,156,820	\$3,247,911	\$1,990,619	52
Wood and Paper Manufacturing	\$51,146,219	\$20,913,305	\$16,395,108	120
Manufacturing	\$1,063,455,627	\$443,847,635	\$290,957,485	2,887
Wholesale Trade	\$217,609,640	\$130,192,339	\$32,773,937	452
Retail Trade	\$30,745,607	\$17,391,050	\$10,968,543	284
Transportation	\$43,386,081	\$17,054,002	\$13,754,686	355
Publishing and Communication	\$52,430,211	\$13,274,453	\$3,816,609	67
Finance, Ins., Real Estate	\$99,275,437	\$56,711,059	\$11,971,357	233
Professional Services	\$44,556,536	\$23,013,054	\$17,538,964	340
Other (Net)	\$19,866,185	\$14,941,411	\$7,793,976	143
Private Education	\$1,198,827	\$569,959	\$531,545	26
Offices of Physicians, Dentists	\$12,841,820	\$8,705,453	\$8,222,859	115
Home Health Care Services	\$2,441,179	\$1,683,049	\$1,659,649	36
Medical and Diagnostic Labs	\$834,551	\$697,362	\$435,106	5
Private hospitals	\$12,359,213	\$7,238,366	\$6,233,237	58
Nursing and Residential Care	\$3,467,583	\$2,220,320	\$2,013,695	47
Social Services	\$11,302,966	\$6,056,519	\$4,403,464	123
Recreation/ Arts	\$3,128,840	\$1,190,803	\$704,486	55
Lodging, Food, and Drink	\$20,943,074	\$10,723,689	\$6,503,311	246
State and Local Government	\$14,276,312	\$6,391,843	\$3,717,952	48
Federal Government	\$3,815,293	\$3,448,807	\$3,441,486	62
Total	\$1,742,018,352	\$800,770,734	\$454,218,321	5,892

Table 4: Direct, Indirect, and Induced Contributions and Average Multipliers

Contributions	Employment	Total Compensation	Gross Regional Product	Output
1 - Direct	3,414	\$328,611,124	\$560,263,740	\$1,265,186,454
2 - Indirect	1,109	\$62,761,801	\$108,534,192	\$247,334,746
3 - Induced	1,372	\$63,055,142	\$126,844,192	\$224,757,930
Total	5,892	\$454,218,321	\$800,770,734	\$1,742,018,352
Average Multipliers	1.73	1.38	1.43	1.38

BOYER PARK & MARINA

Boyer Park & Marina is arguably the largest and most important water-related recreation site in the broad regional economy. Nearly ½ million people visit the park annually, with a significant number of overnight visitors. These estimates are based on U.S. Army Corps of Engineers counters and records. We estimate there are about 2.5 people per auto. Boyer Park's annual visitors are about 11 times the population of Whitman County. Boyer Park operations support 9 jobs and \$0.84 million in output including the multiplier effects. Boyer Park tourism creates 29 jobs and \$3.45 million in output. Total contributions are 38 jobs and \$4.3 million in output.

Boyer Park's annual visitors are estimated to be greater than **11 times** the population of Whitman County.



Table 5: Boyer Park Auto Counts and Visitor Estimates

Fiscal Year	Day Use Total	Overnight Total	Sum of FY Totals	Total Visitors
2022	68,526	143,124	211,650	529,125
2021	79,159	135,536	214,695	536,738
2020	80,532	83,300	163,832	409,580
2019	67,238	144,096	211,334	528,335
2018	56,503	113,088	169,591	423,978

Source: U.S. Army Corps of Engineers and Author's Calculations


FISCAL CONTRIBUTIONS

The entrepreneurial businesses associated with the PWC increase the tax base of the local economy and protect the residents from higher tax rates than they would otherwise have to pay. The estimated collections from local governments sum over \$11.4 million annually from just indirect and induced taxes created by the multiplier effects. *They do not include direct business tax payments by the entrepreneurial firms associated with the PWC.* The PWC tax levy for FY22 was \$1,333,166. For every one dollar of local tax levy, an estimated \$8.56 are created by the entrepreneurial firms associated with the PWC .

For every **dollar** of local tax levy, an estimated

\$8.56

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associated with the PWC.



METHODOLOGY AND TECHNICAL NOTES

- Measuring the economic footprint of the Port of Whitman County on both the Whitman County and broader regional economies was the goal of this study. Economic development agencies (such as ports) can have lasting cumulative impacts on economies, especially in the role they play in attracting and retaining businesses and industries, and in the development of business clusters. This study measures that cumulative impact. The study differs from traditional economic impact and contribution analyses by looking at the collective economic activity in the region associated with or supported by the Port of Whitman County's economic development role in the local market. These contributions are not additive with any other type of industry or firm contributions analysis.
- The majority of the economic contributions identified in this study are created by the entrepreneurial and creativity of privately owned firms and enterprises. *This study is not claiming the Port of Whitman County is the primary causal factor in their success or their decision to locate within the county.* Rather, we are illustrating the fact that economic development agencies such as ports play an important role in facilitating economic activity and the development of regional clusters.

- A four-county IMPLAN input-output economic model was created to measure the economic contributions of the PWC on the regional economy: Whitman County and Asotin County in Washington; Latah County and Nez Perce County in Idaho. The regional economy is highly integrated within the four counties, particularly with east-west trade and commuting flows. There are also important north-south trade and commuting flows. The contribution results were also measured using a Whitman County model separately, to validate and calibrate the results in the four-county model. Most of the contributions and results occur in Whitman County, although they benefit every county in the regional economy.
- There are fundamentally two steps to each impact component: 1) measuring the shock to the economic system, referred to as the direct effect, and 2) measuring the associated multiplier effects as the direct contributions or impacts ripple through the economic supply chains. The direct shocks are entered into an input-output model produced by IMPLAN to calculate the multiplier impacts. The multipliers are broken into two types: business-to-business transactions in the supply chain, referred to as “indirect contributions or impacts,” and household-to-business transactions, referred to as “induced contributions or impacts.” Total contributions are reported as the sum of the direct, indirect and induced impacts.
- Contributions or impacts are reported in five separate metrics: 1) output (sales), 2) gross regional product, 3) total compensation, 4) employment, and 5) tax contributions. Output is the broadest measure of contributions or impacts (i.e., a gross measure) but the most accurate is gross regional product (GRP) which is a net measure. GRP can be viewed as a subset of output. Total compensation includes wages, salaries, proprietor’s income and fringe-benefits and supplements and is a subset of GRP.
- The economic contributions are estimated using base expenditures arising from new monies coming into the regional economy. Since most of the revenues of the firms and operations of the PWC arise from products and services sold outside the regional economy, they represent base economic activity and are included in the economic contributions. A small number of firms sell products and services within the regional economy (i.e., non-base), and they are not included in the calculation of economic contributions. Some firms have a mix of both base and non-base revenues, and only a portion of their activity (i.e., base) was counted in their economic contributions.
- PWC operations have a nearly \$17 million annual budget. We counted only a portion of those activities (\$6.1 million) in the calculation of economic contributions, specifically funds arising from external grants and some port-related revenues that are classified as base. Expenditures arising from tax levies were excluded from the contribution calculations.
- Fiber construction investment dollars originate from out-of-region sources and are considered base activities. Fiber operations are more complicated. They are essential for a modern economy and part of the backbone of basic community infrastructure. The COVID-19 recession has highlighted the need for high-speed internet with considerable business and education activities going online through Zoom and other related programs. A portion of these expenditures is base activity and non-base, respectively. An analysis was conducted with the PWC to estimate the portion of firm operations that might not exist without the fiber provided by the PWC. The estimated base activity was included in the economic impacts.
- The tax impacts are reported from the Whitman County IMPLAN model instead of the four-county model, because the measurement of tax creation is focused on Whitman County (although the magnitudes were close in both models). These are conservative estimations because the direct business tax payments by the entrepreneurial firms were not included in the results. Only the indirect and induced taxes created by the multiplier effects were included. The interpretation of taxpayer rate of return should be viewed with caution. It is calculated by

taking the property indirect and induced tax payments created by the port firms and operations and dividing it by the Whitman County PWC tax levy. The levy for FY22 was \$1.33 million and we estimate the PWC firms and operations generate \$11.4 million in county and subcounty taxes. The return to taxpayers is \$8.56 for every PWC levy dollar invested. This assumes that all the indirect and induced property tax payments can be attributable to the PWC firms and operations... which may or may not be the case. Since we did not include the direct tax payments in the calculations (which would have increased the ratio of tax contributions to levy payments), the estimate is likely to be reasonable.

CAVEATS AND LIMITATIONS

- This study represents the analysis and conclusions of the author and does not represent the University of Idaho or any other organization or individual.
- The primary inputs to the analysis were direct employment taken from a survey of PWC firms, tenants and operations. The accuracy of the results is dependent on the surveyed data. Since this is an update of several previous studies of the PWC, the survey is consistent with previous surveys. Survey-level primary firm-level revenue and expenditure data were not available. Those were estimated by secondary data sources.

DATA SOURCES

Bureau of Economic Analysis
Local Area Personal Income and Employment (LPI)
National Income and Product Accounts (NIPA)
GDP by State

Bureau of Labor Statistics
Quarterly Census of Employment and Wages (QCEW)
Current Employment Statistics (CES)
Current Population Survey (CPS)

U.S. Census Bureau
Current Population Survey (CPS)
Population Estimates
U.S. National and State Population Projections
County Business Patterns (CBP)

IMPLAN (IMpact-PLANning) Data
Whitman and Asotin Counties, Washington 2021 Latah
and Nez Perce Counties, Idaho

Lightcast (Formerly Emsi)
Industry Employment 2023.1
Occupation Employment 2023.1

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**Port of
Whitman
County**