

Port of Morrow



Economic Impact Analysis

REPORT
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Section I. EXECUTIVE SUMMARY

This report provides an analysis of the economic and fiscal impacts generated by the Port of Morrow (Port), along with the private businesses that depend upon the port for its land, buildings, facilities and infrastructure. Overall findings include:

- The Port of Morrow (Port) is the second largest Port (behind the Port of Portland), and is likely the largest single owner of vacant industrial land within the State of Oregon.
- The Port of Morrow contributes to the economic competitiveness of Oregon and the United States, by serving as the main point for freight distribution, export and value-added production of agricultural products (grains, root vegetables, cattle, and milk/dairy products) that are primarily grown in Oregon, Washington, Idaho, Montana and Wyoming.
- Over the past several years, the Port of Morrow succeeded in diversifying the local/regional economy by accommodating state-of-the-art clean energy production facilities as well as high technology data centers. Economic sectors served by the Port of Morrow now include agriculture, food processing, livestock, transportation, warehousing and freight distribution, information, advanced communications, energy, waste management, and recreation.
- Land and capital infrastructure investments by the Port of Morrow have leveraged billions of private investment, which in-turn has created thousands of jobs and funding used to help pay for new community recreation, workforce training and early childhood education facilities.

The **permanent annual economic impact** of the Port of Morrow and Port-related businesses includes the following:

- Total “permanent” employment of over 6,700 jobs
- Annual economic output of \$2.5+ billion
- Annual gross domestic product (GDP) of over \$900 million
- Over \$400 million in labor income
- Local/state tax revenue/payments of over \$104 million (includes in lieu payments)
- Federal tax revenue/payments of nearly \$88 million

In comparison to the prior economic impact analyses conducted for the Port of Morrow, it is apparent the economic impact of the Port of Morrow continues to be significant. Comparative findings between 2017 and 2020 indicate the following:

- The share of direct employment that is considered to be Port-related accounts for nearly half of all jobs in Morrow.
- While business payrolls at Port-related businesses have declined slightly between 2017 and 2020 (according to Oregon Employment Department), public and private construction activity has been increasing measurably. The resulting net impact on the local and regional economy has been very positive.
- Currently, over half of the top 20 taxpayers in Morrow County are Port-related. According to Morrow County Assessor records, Port-related businesses added over \$3 billion in private investment between 2016 and 2020.

- The increase in private investment by Port-related businesses since 2016 has resulted in \$214 million in additional assessed value for county tax rolls. Annual property tax contributions by Port-related businesses are up \$5 million from 2016, and now generate over \$21 million annually for Morrow County and now governments/special districts.
- In addition to supporting private investment, the Port is making \$211 million in public infrastructure investments by leveraging state and federal grants.

In addition to supporting construction businesses, the indirect and induced (secondary) benefits of the direct port-related business and construction spending generates approximately \$540 million in average annual sales within Morrow County. This supports job creation in sectors such as: wholesale trade, health care, truck transportation, retail, restaurants, child care, real estate, and architectural/engineering design companies.

The Columbia River Enterprise Zone II (CREZ) provides locational incentives to businesses that meet minimum hiring (and wage) targets. **Over the past few years, CREZ has provided several million dollars in annual distribution for a wide variety of community benefits** including:

- Housing
- Education
- Public Safety
- Local Enhancements

Section I. INTRODUCTION

This report provides an analysis of the economic and fiscal impacts generated by the Port of Morrow (Port), along with the private businesses that depend upon the port for its land, buildings, facilities and infrastructure. Report findings focus on Port-related business activity as measured by annual spending, value added (gross domestic product), employment, income, and tax revenues. In addition to quantifying the economic impacts of the Port of Morrow, other community-wide benefits attributed to the Port are discussed.

I.A. ROLE OF PORT WITHIN THE REGION AND STATE

The Port of Morrow was established in 1959 as a municipal district within the State of Oregon. The Port began acquiring industrial and harbor land in the early 1960s and the first tenants arrived at the Port in the late 1960s. In the 1980s, construction of a new Interstate 84 (I-84) Port interchange in Boardman alleviated heavy traffic volumes and provided easy access to the Boardman Industrial Park⁵. The Port is strategically located in Northeast Oregon at the confluence of primary trucking routes (I-84 and U.S. 395) and is served by two mainline railroads (Union Pacific Railroad and Burlington Northern Santa Fe Railroad), the Columbia River (barge transport), and a Port-owned airport near Boardman. (Location map provided as **Exhibit 1**).

The Port contributes to the economic competitiveness of Oregon and the United States by serving as the main point for distribution, export and value-added production of agricultural products (forest products, grains, root vegetables, cattle, and milk/dairy products) that are primarily grown in Oregon, Washington, Idaho, Montana, and Wyoming. The Port includes a diverse mix of tenants and industries, including power plants, food processing facilities, agricultural industries, data centers, shipping companies, warehouse facilities, educational and tourism facilities, and energy businesses.

Exhibit 1: Location Map



The 12,000 mile Columbia-Snake River System (CSR) provides direct links between the Port of Morrow and the Port of Portland and Port of Vancouver for global access. This waterway system is a gateway for nearly 40% of the U.S. wheat exports, 70% of the U.S. barley exports, and most of the West Coast's forest/paper products and bulk material product exports.

I.A.1. Port's Infrastructure Assets

The Port of Morrow is likely the largest owner of vacant industrial land in Oregon. The Port owns roughly 8,200 acres of land, much of which is undeveloped or underdeveloped. Most of Port-owned land is zoned for industrial development. Port properties are classified in four major facility locations: Airport Industrial Park, Boardman Industrial Park, East Beach Industrial Park, and the South Morrow Industrial Park. Unique features of each of these areas are listed below.

Airport Industrial Park

- 2,700 acre airport industrial area located approximately 4-miles from the City of Boardman.
- This airport is primarily utilized by corporate businesses, such as Portland General Electric and Lamb Weston.
- The Port owns four vacant industrial-zoned properties north of I-84, totaling roughly 1,200 acres.
- The Port finalized an agreement to lease roughly 800 acres of the Airport Industrial Park for solar energy development and is in the process of building a new deep water well.
- One of the top future infrastructure projects identified by the Port is building out the utilities at the Airport Industrial Park to attract and capture development opportunities

Boardman Industrial Park

- Comprises 1,700 acres of industrial area located near the City of Boardman along Interstate 84 (I-84). The port owns roughly 1,000 acres at the park.
- Union Pacific Railroad (UPRR) mainline passes along the northern border of the park, which is served by the 12,000 linear foot spur.
- Port recycles food processing wastewater to irrigate Port-owned land for farm use.
- Port provides adequate transportation, water, sewer and recreational facilities.
- Port provides piped steam (energy recovery system) from co-gen power production facility.
- Sustainable Agriculture and Energy (SAGE) Center (opened in 2013) provides meeting, conference, communication and education/training facilities for local businesses and residents.
- Blue Mountain Community College Workforce Training Center (opened in 2017)
- Neal Early Childhood Education Center (opened in 2017)
- Boardman Aquatic and Recreation Center (opened in 2017)
- Tenants include food processing and distribution export facilities, as well as energy development, waste management, and information processing.

East Beach Industrial Park

- The UPRR mainline includes approximately 8 miles of rail that separates the Boardman Industrial Park from the East Beach Industrial Park.

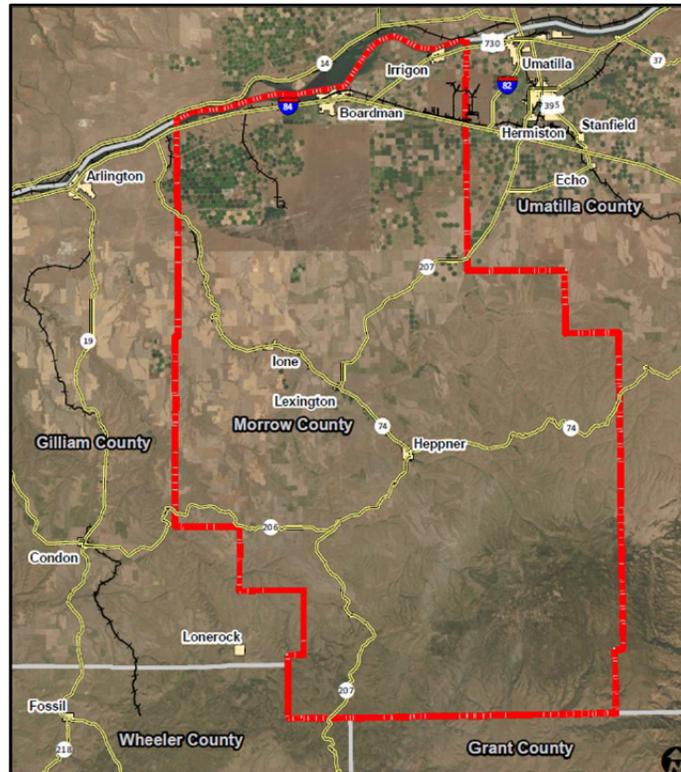
- The park comprises 2,000 acre industrial area located near the City of Boardman on north side of I-84. The Port owns roughly 1,800 acres of land at this park.
- Columbia River barge access with two existing marine terminals.
- Port recycles food processing wastewater to irrigate Port-owned land for farm use.
- Port provides adequate transportation, water, sewer and recreational facilities.
- Tenants are primarily agricultural-related with global food processing and distribution export facilities.
- In 2017, the Port was awarded a \$6.55 million Connect Oregon grant to expand rail access at the East Beach Industrial Park.

South Morrow Industrial Park

- Approximately 103-acre site of former lumber mill located 1-mile northwest of Heppner.
- Site provides a wide variety of vacant land and buildings.
- Port owns four properties at the park.
- Adequate water, sewer and power on site.

The Port of Morrow works closely with local communities and governments to provide targeted incentives to existing and new businesses that invest in the local community. Partnerships between the Port of Morrow, Business Oregon, Morrow County and the City of Boardman through the Columbia River Enterprise Zone II provides limited property tax abatement to qualified private investment and job creation within the Port District (**Exhibit 2**).

Exhibit 2: Port District



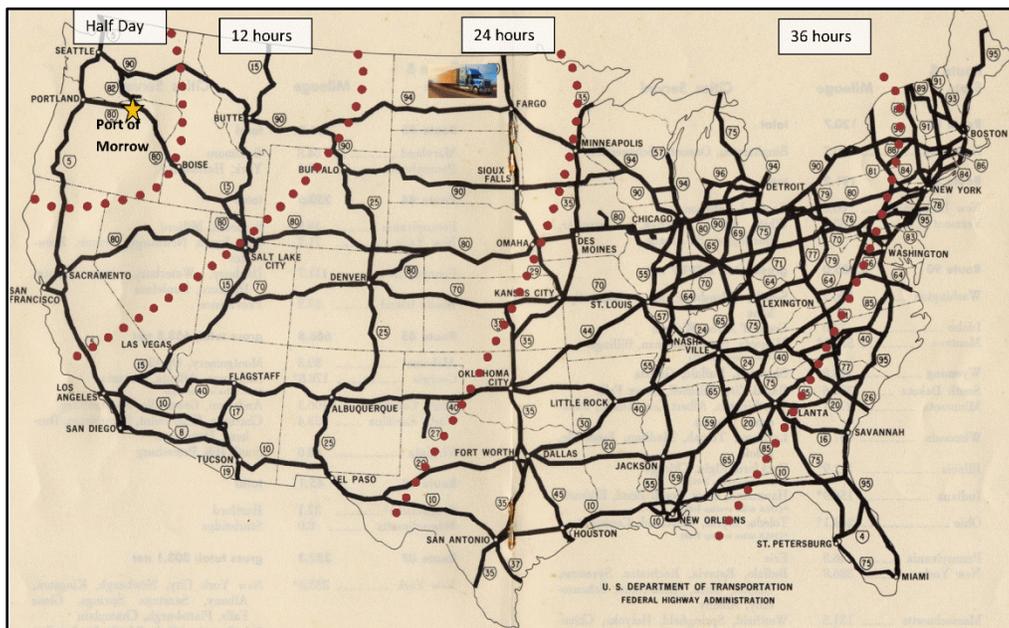
Source: 2020 Strategic Business Plan

I.A.2. Port's Competitive advantages for Attracting Economic Development

The Port's location along the Columbia River and key transportation routes allow it to serve as a gateway for the region. The Union Pacific Railroad (UPRR) mainline passes through a rail loop at the East Beach Industrial Park connecting the Port with regional railways. Incoming barges handling container shipments transfer to trucks at the Port at one of the various marine terminals. Terminal 3 (T-3), operated by Tidewater, is the largest container terminal upriver from Portland, handling approximately 11,000 containers from barge to truck annually. Outgoing barges traveling the Columbia River from the Port are within 12 hours of oceangoing ports: Portland, Vancouver, Olympia, Tacoma and Seattle.

I-84, which borders the Boardman Industrial Park to the south, gives the Port access to east-west corridors while I-82 east of Boardman provides north-south access. It is estimated that over 8 million people reside within a half-day drive to/from the Port of Morrow: including Seattle, Tacoma, Portland, Vancouver, Boise and other regions (**Exhibit 3**).

Exhibit 3: Truck Transportation Travel Times to/from Port of Morrow



I.B. PORT'S CONTRIBUTION TO OREGON

The Port of Morrow, along with local port-related businesses employ an estimated 3,714 direct workers (January 2020 estimate) which in-turn generate annual total economic output of \$2.5 billion for the Morrow-Umatilla county region. Several large tenants within the Port provide thousands of jobs to Oregon workers within a wide range of industrial sectors. Representative tenants include: Lamb Weston, Avista Corporation, and Portland General Electric Company.

The Port of Morrow is also a leader in sustainable agriculture and energy development, and provides state-of-the-art heat and wastewater recovery systems for various industrial, energy and food production methods.

Section II. REGIONAL OVERVIEW

II.A. LOCAL POPULATION AND INCOME LEVELS

Regional population continues to expand and reach new highs every year. As indicated in **Exhibit 4**, Morrow County population increased to 12,825 residents in 2020. Umatilla County population also reached a new record at 81,495 in 2020. The Oregon Office of Economic Analysis (OEA) expects the long-term population growth in Morrow and Umatilla counties to be on par with the state average, where cities such as Boardman are likely to grow the fastest.

Exhibit 4: Population Trends, Selected Morrow and Umatilla County Population Centers

					Compound Annual Growth Rate (CAGR)	
	2000	2010	2016	2020	2000-2010	2010-2020
Morrow County	10,995	11,173	11,745	12,825	0.16%	2.32%
Boardman	2,855	3,220	3,555	4,580	1.21%	6.05%
Heppner	1,395	1,291	1,295	1,295	-0.77%	0.05%
Irrigon	1,702	1,826	1,900	2,040	0.71%	1.86%
Umatilla County	70,548	75,889	79,880	81,495	0.73%	1.19%
Hermiston	13,154	16,745	17,730	18,775	2.44%	1.93%
Milton-Freewater	6,470	7,050	7,070	7,210	0.86%	0.37%
Pendleton	16,354	16,612	16,880	17,145	0.16%	0.53%
Umatilla	4,978	6,906	7,220	7,605	3.33%	1.62%
Oregon	3,421,436	3,831,074	4,076,350	4,268,055	1.14%	1.82%

Source: U.S. Census (2000, 2010), PSU College of Urban and Public Affairs, annual pop. estimates (2020)

Over the 20-year period from 1999 to 2019, income levels in Morrow and Umatilla County roughly stayed in line with the state of Oregon as a whole. As indicated in **Exhibit 5**, the median household income in Morrow County was approximately \$54,269 in 2019 and the average per capita income level was \$23,682.

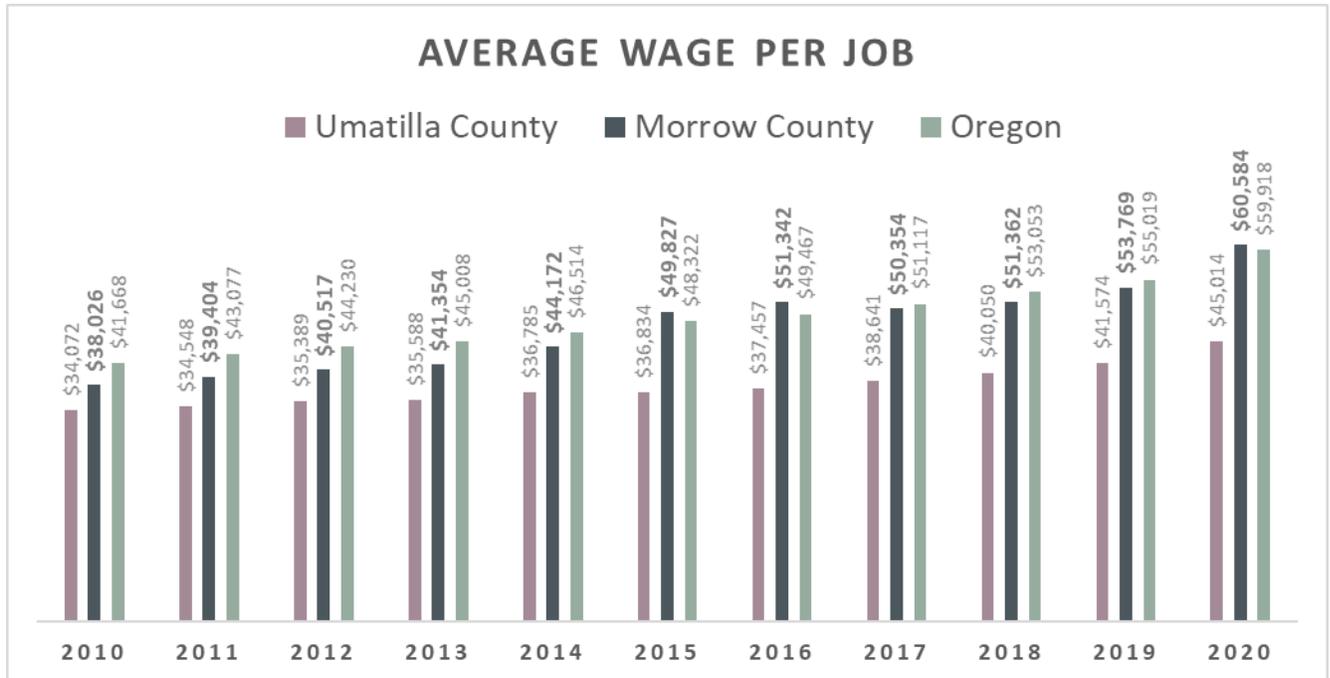
Exhibit 5: Income Trends

		1999	2010	2019	CAGR
Median Household Income	Morrow County	\$37,521	\$43,902	\$54,269	1.86%
	Umatilla County	\$36,249	\$45,861	\$54,699	2.08%
	Oregon	\$40,916	\$49,260	\$62,818	2.17%
	Washington	\$45,776	\$57,244	\$73,775	2.41%
	U.S.A.	\$41,994	\$51,914	\$62,843	2.04%
Per Capita Income	Morrow County	\$15,802	\$20,201	\$23,682	2.04%
	Umatilla County	\$16,410	\$20,035	\$24,444	2.01%
	Oregon	\$20,940	\$26,171	\$33,763	2.42%
	Washington	\$22,973	\$29,733	\$41,556	3.01%
	U.S.A.	\$21,587	\$27,334	\$34,103	2.31%

Source: U.S. Census, American Community Survey. 1999 in nominal dollars. 2010-19 in inflation-adjusted dollars.

According to Oregon Employment Department, average wages in Morrow County began to exceed the Oregon statewide average beginning in the 2015-16 period. This trend has continued into 2020, as average wages in Morrow County were \$60,584, compared with the Oregon average of \$59,918 (**Exhibit 6**).

Exhibit 6: Average Wage Per Job



Source: Oregon Employment Department, compiled by FCS GROUP.

II.B. EMPLOYMENT

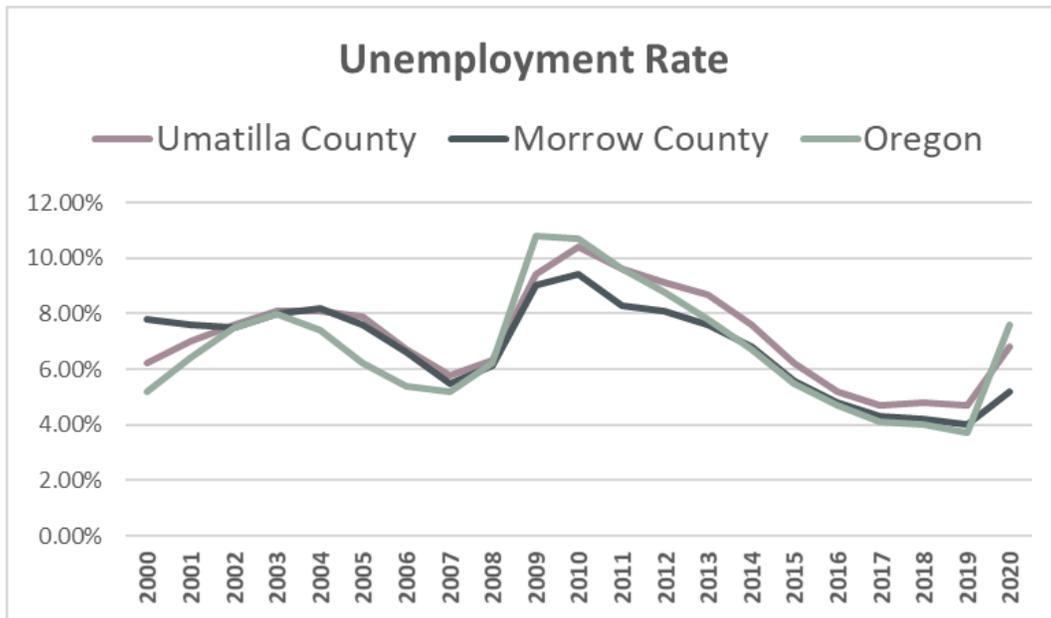
The Port of Morrow is located within the Pendleton-Hermiston Metropolitan Statistical Area (MSA) and is adjacent to the Kennewick-Richland-Pasco MSA (Tri-Cities area) in Washington. There are approximately 176,300 people within the Port of Morrow’s civilian labor force (less than 1-hour commute).

The Oregon Employment Department (OED) expects an annual employment growth rate of 0.9 percent in the eastern Oregon job base from 2017 to 2027 (this base is defined as Baker, Grant, Harney, Morrow, Umatilla, Union, and Wallowa counties). A net increase of 7,700 jobs is forecasted for this region over the 10-year period. The largest increase in job growth is expected in manufacturing, government (tribal, local, state, and federal), transportation/warehousing/utilities, leisure and hospitality, and retail trades.

II.B.1. Unemployment Rate

Unemployment rates in Morrow and Umatilla counties have generally been declining for the past several years. As of May 2021, the local unemployment rate for Morrow County was 5.3%, which is slightly lower than the State of Oregon average (6.0%). Beginning in the 2009-10 period, Morrow County Unemployment has trended closely in line with the rate observed statewide. Through the onset of the COVID-19 pandemic, Morrow County has experienced a lower unemployment rate than the state, as indicated in **Exhibit 7**.

Exhibit 7: Unemployment Rate (seasonally adjusted)



Source: Oregon Employment Department, compiled by FCS GROUP.

II.B.2. Morrow County Economic Drivers

The total estimated value added (GDP) from all public and private workers and establishments within Morrow County increased from \$851 million in 2017 to \$989.4 million in 2019 (inflation adjusted dollars).

As shown in **Exhibit 8**, the leading sectors that are driving the regional economy (based on annual GDP) include:

- frozen food manufacturing,
- electric power generation,
- state and local government,
- data centers,
- vegetable and melon farming,
- support activities for agriculture,
- cattle and milk production, and
- grain farming.

Exhibit 8: Morrow County Employment, Output and GDP: 2019 (ranked by GDP)

Description	Total Employment	Total Output	Total Value Added
Frozen fruits, juices and vegetables manufacturing	1,559	\$716,223,054	\$155,677,093
Electric power generation - Fossil fuel	129	\$213,096,573	\$103,797,841
Electric power generation - Wind	60	\$152,367,448	\$85,776,662
Data processing, hosting, and related services	228	\$138,409,943	\$68,089,393
Vegetable and melon farming	492	\$86,212,487	\$47,303,481
Local govt education	511	\$46,630,114	\$46,630,114
Support activities for agriculture and forestry	1,044	\$40,547,022	\$31,656,752
Dairy cattle and milk production	215	\$183,840,752	\$30,977,832
Grain farming	107	\$61,042,846	\$26,948,138
Beef cattle ranching	128	\$89,995,432	\$25,701,061
Management of companies and enterprises	115	\$32,833,371	\$22,327,942
Electric power transmission and distribution	29	\$41,091,745	\$19,266,389
All other crop farming	455	\$32,356,905	\$18,840,377
Wired telecommunications carriers	89	\$36,489,975	\$17,451,259
Local govt other services	199	\$16,799,164	\$16,799,164
Cheese manufacturing	186	\$161,816,022	\$15,542,611
Wholesale - Other nondurable goods	83	\$24,573,882	\$13,185,277
Local govt hospitals and health services	94	\$10,980,744	\$10,980,744
Other real estate	135	\$25,374,839	\$9,536,721
Scientific research and development services	55	\$13,883,355	\$7,992,716
Subtotal: Top 25 Sectors	5,915	\$2,124,565,674	\$774,481,566
Other County Industries	2,682	\$463,453,736	\$214,875,411
Total: Morrow County	8,597	\$2,588,019,410	\$989,356,978

Source: Implan model for Morrow County

II.B.3. Port-Related Business Activity

There are nearly 50 “direct port-related” businesses that operate within Port of Morrow industrial lands or are dependent upon transportation and infrastructure facilities provided by the Port. Please refer to **Appendix A** for a list of port-related businesses.

As indicated in **Exhibit 9**, the largest port-related sectors based on current job estimates represent nearly 3,700 direct jobs. Major sectors include:

- » Food & beverage manufacturing
- » Wholesalers
- » Crop and animal production
- » Utilities
- » Animal production and aquaculture
- » Administrative and Support Services
- » Chemical manufacturing
- » Accommodation services
- » Data processing
- » Support activities for agriculture
- » Telecommunications
- » Warehousing and storage

Exhibit 9: Port-Related Business Sectors

NAICS Code	Description	Jobs*
311	Food Manufacturing	1,292
424	Merchant Wholesalers, Nondurable Goods	875
111	Crop Production	380
221	Utilities	308
112	Animal Production and Aquaculture	276
561	Administrative and Support Services	88
325	Chemical Manufacturing	59
721	Accommodation	57
518	Data Processing, Hosting and Related Services	55
115	Support Activities for Agriculture and Forestry	49
517	Telecommunications	46
484	Truck Transportation	35
493	Warehousing and Storage	30
423	Merchant Wholesalers, Durable Goods	21
562	Waste Management and Remediation Services	15
441	Motor Vehicle and Parts Dealers	15
611	Educational Services	14
321	Wood Product Manufacturing	11
483	Water Transportation	7
488	Support Activities for Transportation	7
238	Specialty Trade Contractors	6
327	Nonmetallic Mineral Product Manufacturing	4
813	Religious, Grantmaking, Civic, Professional and Similar Organizations	4
811	Repair and Maintenance	1
Total		3,654

*Source: Estimates by FCS GROUP and Port of Morrow.
Job estimates reflect full and part-time workers.

II.C. MAJOR INVESTMENTS AT THE PORT OF MORROW

In addition to Port operations and related-businesses, the level of public and private construction investment that is underway or planned at Port of Morrow generates considerable economic benefits for the region and the state of Oregon.

Over the 2016 to 2020 (4-year time frame) it is estimated that over \$3.8 billion in private capital investments were made by Port-related businesses. According to the Morrow County Assessor, the largest investments included new data centers, food processing facilities, warehousing/storage facilities and apartment developments.

The Port continues to make and leverage significant infrastructure investments. The current adopted Capital Improvement Plan for the Port includes \$211.5 million in public infrastructure investments to be made over the next several years. The economic impact of these major investments has been included in this study, as described in the next section. Recent developments and investments made in the Port District include the following:

- Capacity improvements for water, sewer, and cold storage in 2019. The Port has also added its first new well in 15 years, adding 2,300 gallons per minute to its water capacity and added an additional 5 miles of pipeline to its wastewater system and a lift station.

- Construction on the Wheatridge Renewable Energy Facility, a 350-megawatt wind and solar energy farm operated by Portland General Electric Co. (PGE) and NextEra Energy, began in January 2020. Wind components should be in service by the end of 2020, and the solar and battery portions are expected to be operational in 2021.
- An additional 42,000 square feet expansion of cold storage warehouse space to serve several food processing businesses that operate within a 10-mile radius, among other users. The expansion has added roughly 10,000 additional pallet positions at refrigeration temperatures — unique among Eastern Oregon’s dry storage and frozen storage options.
- In 2018, the Port was awarded a roughly \$19 million U.S. Department of Transportation’s (USDOT) Better Utilizing Investments to Leverage Developments (BUILD) grant to fund the Port’s future Columbia River Barge Terminal Rail Access Project, which will extend new rail lines from the UPRR mainline to Port marine terminals enabling rail-to-barge access for shipments along the Columbia River. The project is expected to be completed in 2023.
- The Port received a USDOT Maritime Administration (MARAD) Marine Highway Project Designation in 2019, which allows the Port to pursue federal funding for infrastructure improvements to the Port’s marine terminals. The Port leveraged this designation and was awarded roughly \$1.6 million in federal funding from USDOT to develop a breakbulk operation at Terminal 1.
- In 2017, the Port was awarded a \$6.55 million Connect Oregon grant to expand rail access at the East Beach Industrial Park.
- Finalization of an agreement for a solar project that will cover approximately 800 acres near the Boardman Airport.
- Participation in the Columbia Development Authority (CDA) on infrastructure planning for when the U.S. Army transfers the former Umatilla Chemical Depot to the CDA, which will then develop parts of the property for industrial use.
- The Neal Early Learning Center added an additional 9,600 square feet of classrooms and a multipurpose room allowing the center to serve additional children. The center is a collaborative effort between the Port, InterMountain Education Service District, the Morrow County School District, and Umatilla-Morrow Head Start.

Section III. ECONOMIC IMPACT

METHODOLOGY

The economic impact (as measured by jobs, compensation, output, value added GDP and tax revenues) of the Port of Morrow’s operations, land and facilities is measured using a regional input-output model named IMPLAN. The IMPLAN model is a useful tool for understanding the inputs and outputs of local and regional economies by measuring the direct and secondary benefits of changes in industrial output (sales), GDP (valued added), income, taxes, and employment.

The IMPLAN model takes into account national, regional and local economic trends and spending multipliers to estimate: direct impacts (income, sales, wages, profits associated directly with producing a good or service); indirect impacts (backward linkages including supplies/services needed as inputs for producing the good or service); and induced impacts (forward linkages that depict how the direct and indirect impacts cause a multiplier effect in the regional economy as income is spent and re-spent on various goods, services and investments). The IMPLAN model includes 535 specific industry sectors.

Exhibit 10: IMPLAN Model Flow Chart

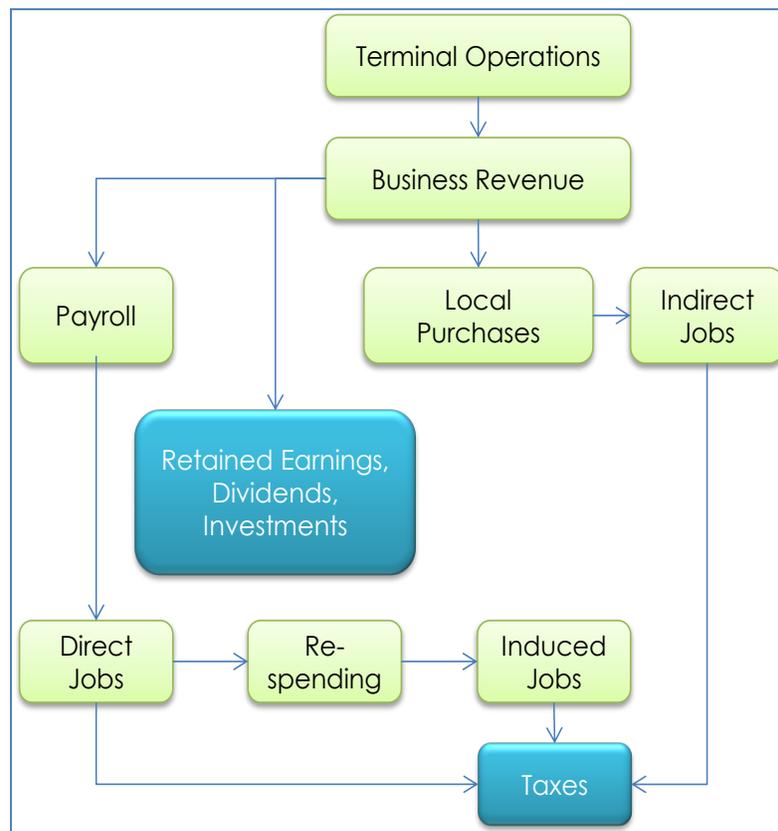
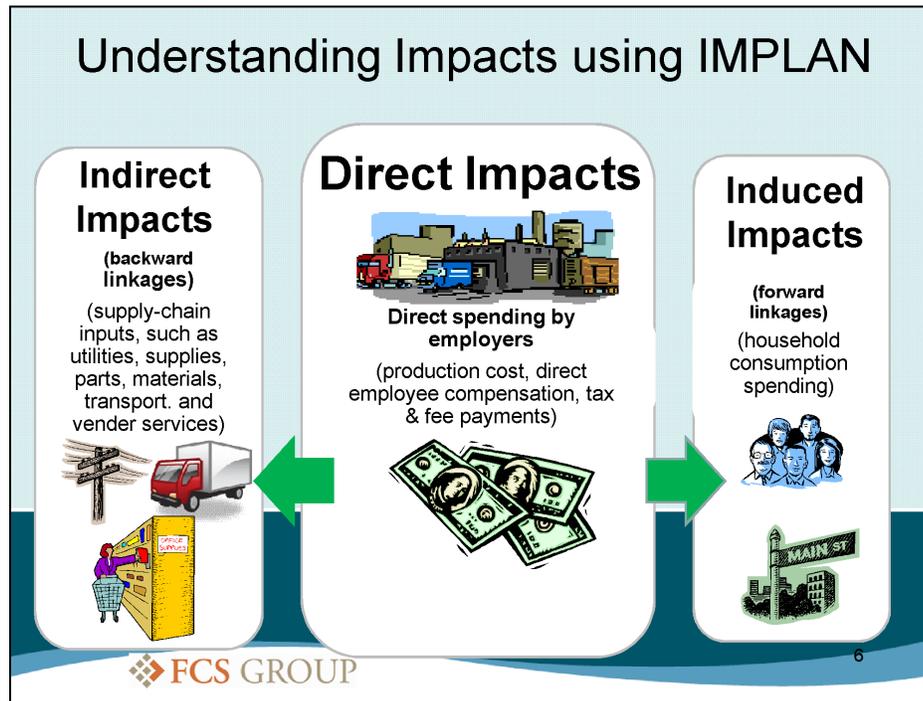


Exhibit 10 illustrates how Port-related spending (attributed to Port operations, land and facilities) generates business revenue that translates into local payroll and direct jobs; local purchases and indirect jobs; and induced impacts (household spending based on employee earnings). Please refer to www.implan.com for more detailed information regarding the IMPLAN model.

Exhibit 11 illustrates the three measures of direct, indirect and induced economic activity that are generated by Port-related business spending.

Exhibit 11: IMPLAN Impacts



The first step in conducting the economic impact analysis included the identification of specific business enterprises that rely on Port of Morrow operations, land and facilities for their business to succeed. In addition to direct Port of Morrow spending on operations (Port staff and operational spending). The specific businesses entities that serve as the basis for the economic impact analysis are referred to as “Port-related” and are listed in **Appendix A**.

The second step in the economic impact analysis included working with the Oregon Employment Department to obtain “covered” worker payroll data for the Port-related tenants. These data reflect 2019 worker and payroll data that has been reported to the State of Oregon for calculating state unemployment and workers compensation insurance tax rates.

Because IMPLAN measures impacts using total employment or payroll as opposed to “covered” employment or payroll, **the third step** involved adjusting local employment and payroll estimates from the Oregon Employment Department (Quarterly Census of Earnings and Wages) to reflect total employment (full time and part time jobs). Since IMPLAN employment resembles Bureau of Economic Analysis data, the basis for this conversion was derived by comparing county employment

sector data obtained from IMPLAN with Morrow County Bureau of Economic Analysis (CA-25 reports).¹

The fourth step included identifying the applicable IMPLAN sectors that corresponds with each North American Industrial Classification System (NAICS) code that are on file with the Oregon Employment Department.

Steps 1-4 are used to compile the assumptions used as direct inputs for the Permanent Economic Impact Analysis of the Port of Morrow.

The final **fifth step** entailed running the IMPLAN Model for Morrow County to account for the capital investments and construction-related economic impacts resulting from Port and private business capital investments in infrastructure, buildings and equipment.

¹ Oregon Employment Department data only reflect wage and salary employment that is covered by unemployment insurance, and federal civilian jobs. Hence, that information tends to undercount some part-time workers, very small proprietors, railroads, and some private school employment.

Section IV. ECONOMIC IMPACTS

There are two types of economic impacts that are identified and quantified by this analysis: Permanent Annual Impacts, and Temporary Construction Impacts.

IV.A. PERMANENT ANNUAL ECONOMIC IMPACTS

The permanent annual economic impact of the Port of Morrow and the Port-related businesses is summarized in **Exhibit 12**. Key highlights from this analysis based on Jan. 2020 payroll estimates for Port-related businesses include the following:

Annual Port-Related Economic Impacts

- Total employment of 6,709 jobs (3,536 direct, 2,796 indirect, and 377 induced)
- Total output of \$2.49 billion (\$1.95B direct, \$0.48B indirect, \$0.06B induced)
- Total GDP of \$909 million (\$651M direct, \$222M indirect, \$36M induced)
- Over \$402 million in labor income (\$251M direct, \$137M indirect, \$14M induced)
- Annual local/state tax revenue/payments of over \$104.4 million (includes in lieu payments)
- Annual federal tax revenue/payments of nearly \$88 million

Exhibit 12: Summary of Annual Permanent Economic Impacts of the Port of Morrow, Jan. 2020 est.

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	3,536	\$251,244,842	\$650,855,323	\$1,951,719,989
Indirect Effect	2,796	\$137,341,978	\$221,765,975	\$480,824,672
Induced Effect	377	\$13,772,856	\$36,123,969	\$62,135,851
Total Effect	6,709	\$402,359,676	\$908,745,267	\$2,494,680,512

State/Local Tax	\$104,403,328
Federal Tax	\$88,007,211

Source: Implan model for Morrow

In comparison to the prior 2017 economic impact analyses conducted for the Port of Morrow (using similar IMPLAN input-output modeling methodology) it is apparent the direct employment at port-related businesses declined slightly between 2017 and January 2020. During 2020, the global COVID-19 pandemic hampered business investment further. However, as we enter the 2nd Quarter of 2021, private payrolls have been increasing in both Oregon and nationally. We expect to see Port-related business activity at or above 2017 levels by the end of 2021.

The top 10 business sectors that benefit from the Port of Morrow are listed in **Exhibit 13**. These sectors represent about 65% of the total economic impact of the Port (measured by GDP). Leading business sectors (sorted by GDP) include:

- » Electric power generation (180 direct jobs and \$157 million in GDP)
- » Grain farming (407 direct jobs and \$106 million in GDP)
- » Frozen food manufacturing (997 direct jobs and \$91 million in GDP)

- » Nondurable goods wholesale trade (485 direct jobs and \$88 million in GDP)
- » Dairy cattle and milk production (359 direct jobs and \$52 million in GDP)
- » Petroleum wholesale trade (37 direct jobs and \$33 million in GDP)

Exhibit 13: Top 10 Sectors for Permanent Economic Impacts (sorted by GDP), Jan. 2020 est.

Industry	Employment	Labor Income	Value Added	Output
40 - Electric power generation - Fossil fuel	180	\$39,801,168	\$157,043,650	\$324,181,658
2 - Grain farming	407	\$20,361,931	\$105,735,367	\$238,752,601
77 - Frozen fruits, juices and vegetables manufacturing	997	\$59,155,816	\$91,341,273	\$419,959,446
400 - Wholesale - Other nondurable goods merchant wholesalers	485	\$43,726,219	\$88,314,394	\$164,717,623
12 - Dairy cattle and milk production	359	\$16,218,906	\$52,988,594	\$321,611,876
399 - Wholesale - Petroleum and petroleum products	37	\$2,831,330	\$32,981,286	\$47,713,673
436 - Data processing, hosting, and related services	28	\$5,639,719	\$11,643,525	\$18,357,125
82 - Cheese manufacturing	106	\$7,664,993	\$9,910,842	\$93,057,643
433 - Wired telecommunications carriers	34	\$3,832,721	\$8,914,355	\$18,020,821
160 - Industrial gas manufacturing	30	\$4,364,600	\$8,911,233	\$29,734,005

Source: Implan model for Morrow County

IV.B.TEMPORARY CONSTRUCTION IMPACTS

In addition to the permanent annual economic impacts of Port operations and related-businesses, the public and private construction investments also generate measurable economic benefits.

Private-Sector Investments in Facilities and Equipment

Major investments in data centers, warehousing facilities and manufacturing centers at the Port of Morrow have generated over \$3.8 billion in private capital investment during the 2016 to 2020 time frame. The aggregate level of economic impact from this private investment is summarized in

Exhibit 14 and includes:

- Total construction-related employment of 33,150 jobs (measured by person-years of employment). This level of investment has supported over 8,200 jobs per year in a wide variety of sectors such as construction managers/laborers, wholesale material suppliers, truck drivers and various business service professions.
- Aggregate output (sales) of nearly \$4.8 billion
- Aggregate GDP (value added) of over \$2.4 billion
- Over \$2 billion in labor income
- Aggregate local/state tax revenue and in lieu payments of over \$152 million
- Aggregate federal tax revenue/payments of over \$330 million

Exhibit 14: Private-Sector Business Investment Spending

Private-sector Construction Impact: 2016 to 2020

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	29,549	\$1,741,247,511	\$1,963,147,919	\$3,832,500,000
Indirect Effect	1,571	\$117,087,129	\$188,905,228	\$365,142,856
Induced Effect	2,031	\$73,722,775	\$193,637,829	\$332,983,467
Total Effect	33,130	\$1,932,057,379	\$2,345,690,994	\$4,530,626,326

State/Local Tax	\$144,333,440
Federal Tax	\$313,281,196

Source: Implan model for Morrow County.

Infrastructure and Facility Investments by the Port of Morrow

The recently adopted Capital Improvement Plan for the Port of Morrow includes over \$211 million in facility improvements and infrastructure spending over the next several years. The aggregate level of economic impact from Port infrastructure and facility investment is summarized in **Exhibit 15** and includes:

- Total construction-related employment of 1,828 jobs (measured by person-years of employment).
- Aggregate output (sales) of over \$250 million.
- Aggregate GDP (value added) of over \$129 million
- Over \$106 million in labor income
- Aggregate local/state tax revenue and in lieu payments of nearly \$8 million
- Aggregate federal tax revenue/payments of over \$17 million

Exhibit 15: Private-Sector Business Investment Spending

Port of Morrow Construction Impact based on the adopted CIP

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,631	\$96,092,328	\$108,338,104	\$211,500,000
Indirect Effect	87	\$6,461,560	\$10,424,907	\$20,150,741
Induced Effect	112	\$4,068,458	\$10,686,080	\$18,375,996
Total Effect	1,828	\$106,622,345	\$129,449,092	\$250,026,737

State/Local Tax	\$7,965,172
Federal Tax	\$17,288,708

Source: Implan model for Morrow County.

As shown in **Exhibit 16**, the top 10 business sectors that benefit from regional construction spending account for 92% of the total employment-related impact. In addition to construction businesses, significant benefits are reaped by the following sectors: machinery rental, wholesale, concrete manufacturers, management of companies, data processing, and architectural, engineering and related services.

Exhibit 16: Top Businesses Impacted by Port Construction

Industry Display	Employment	Labor Income	Value Added
54 - Construction of new highways and streets	13,547	\$656,017,680	\$1,065,802,387
51 - Construction of new manufacturing structures	17,632	\$801,056,173	\$1,005,683,636
453 - Machinery and equipment rental and leasing	81	\$2,523,907	\$36,264,408
399 - Wholesale - Petroleum and petroleum products	-	\$1,940,588	\$23,435,951
204 - Ready-mix concrete manufacturing	202	\$11,831,340	\$20,965,269
469 - Management of companies and enterprises	81	\$13,309,591	\$15,439,224
436 - Data processing, hosting, and related services	40	\$7,071,640	\$15,091,804
457 - Architectural, engineering, and related services	243	\$8,760,950	\$13,817,297
29 - Sand and gravel mining	81	\$8,560,470	\$13,300,837
461 - Other computer related services, including facilities management	81	\$4,174,458	\$9,415,160

Source: Implan model for Morrow County

IV.C. COMMUNITY DEVELOPMENT BENEFITS

In addition to the economic benefits and tax payments that have been quantified and discussed above, other community wide benefits attributed to the Port of Morrow include:

- Participation in local/state governmental partnerships through the Columbia River Enterprise Zone that are providing flexible funds used for local community development, such as the recently completed Port View Apartments.
- Providing first-class meeting facilities for businesses and community groups and lodging facilities for overnight visitors;
- Providing community-based education and visitation facilities, including the SAGE Center and Neal Early Childhood Learning Center.
- Providing recreational opportunities such as the site for the Boardman Recreation Center.
- Maintaining a viable rail and barge transportation network that conserves fuel and improves air quality in comparison with truck transportation.
- Establishing sustainable heat and wastewater recovery systems that conserve energy and utilize less water.



The Port of Morrow contributed to the expansion of the Neal Early Learning Center in 2020. Constructed in 2017, the center provides care and education for children ages birth to five in Morrow County.

As previously mentioned, the Port of Morrow works closely with local communities and governments to form partnerships through the Columbia River Enterprise Zone II (CREZ), which provides limited property tax abatement to qualified private investment and job creation within the Port District.

Over the past few years, CREZ has provided several million dollars in annual distribution for a wide variety of community benefits including:

- Housing
- Education
- Public Safety
- Local Enhancements

In addition, the Port of Morrow provides meeting facilities for community activities, conferences and workshops for its stakeholders and businesses at its headquarters building and the SAGE Center. The Port also provides recreational opportunities for access to the Columbia River, and is working with the City of Boardman to provide new ball fields for residents and employees. The Port has also provided limited financing for housing and community development investments that promote fair housing and telecommunications throughout the Port District.

Section V. FISCAL IMPACTS

V.A. REVENUE FROM PROPERTY AND INCOME TAXES

To better understand the local benefit of the Port of Morrow and its related businesses, FCS GROUP analyzed Morrow County Assessor data to identify current levels of property taxes paid by major Port-related businesses. As indicated in **Exhibit 17**, over half of the top 20 taxpayers in Morrow County are considered to be port-related.

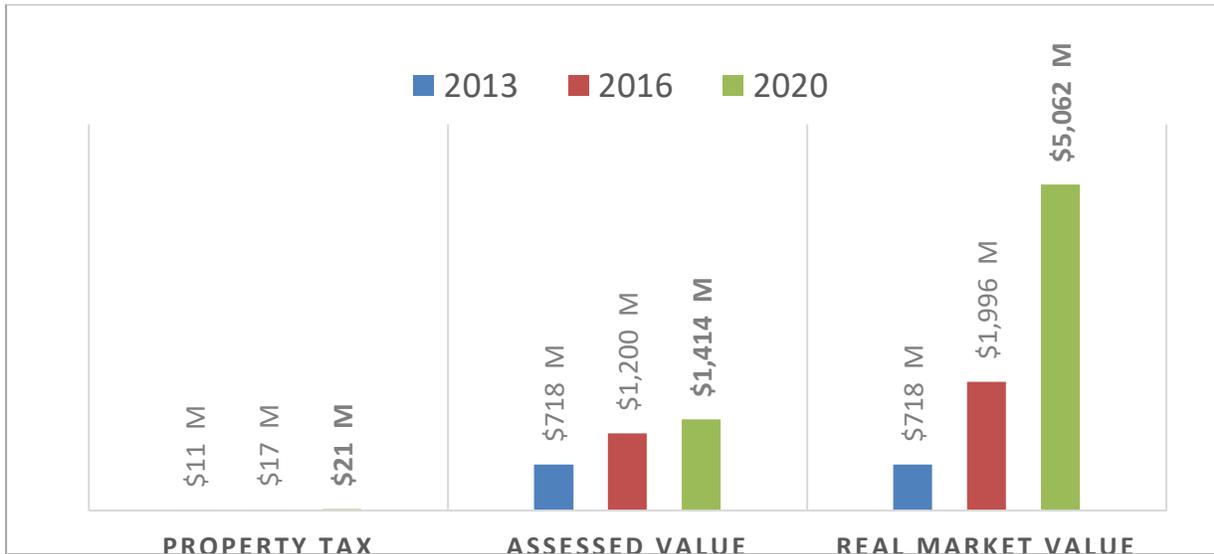
Exhibit 17: Top 20 Taxpayers in Morrow County, 2020

Port-related	Owner Name	Property Tax	Assessed Value	Real Market Value
✓	AMAZON DATA SERVICES, INC	\$ 9,381,154	\$ 661,869,690	\$ 3,471,764,810
✓	AVISTA CORPORATION	3,625,850	208,550,000	208,550,000
✓	PORTLAND GENERAL ELECTRIC CO	3,330,251	220,435,180	726,272,000
	THREEMILE CANYON FARMS, LLC	2,952,009	220,618,821	272,083,022
✓	LAMB WESTON, INC	1,911,822	117,665,580	384,033,840
	GAS TRANSMISSION NORTHWEST CORP	1,327,473	94,959,000	94,959,000
✓	COLUMBIA RIVER PROCESSING, INC	768,005	53,945,490	54,035,460
✓	PORT OF MORROW	539,180	35,825,310	38,210,680
✓	RDO/CALBEE FOODS LLC	434,413	30,657,000	30,657,000
✓	UNION PACIFIC RAILROAD CO	378,061	27,069,290	88,707,544
✓	PACIFIC ETHANOL COLUMBIA, LLC	372,388	26,279,860	26,279,860
	CENTURYLINK PROPERTY TAX	370,325	24,065,000	24,065,000
	FARMLAND RESERVE, INC	355,780	25,567,914	48,004,554
✓	OREGON POTATO COMPANY	298,087	17,412,186	17,808,267
✓	PORT VIEW APARTMENTS, LLC	270,128	14,445,660	15,779,260
	WILLOW CREEK ENERGY LLC	228,759	15,870,840	43,750,000
	EASTERDAY FARMS DAIRY LLC	201,900	15,201,684	15,484,248
	PACIFICORP (PP&L)	199,740	15,084,000	15,084,000
	CLEAVER LAND, LLC	188,827	13,494,291	16,316,631
	ECHO PROJECT	167,133	12,830,410	22,787,000
	Total	27,301,285	1,851,847,206	5,614,632,176
	Port Related	21,309,340	1,414,155,246	5,062,098,721

Source: Morrow County Assessor.

Port-related businesses added over \$3.0 billion in Real Market Value and over \$214 million in Assessed Value to the Morrow County tax rolls between 2016 and 2020. This increase in assessed property value generated an additional \$5 million in annual tax receipts over this four-year time frame. As shown in **Exhibit 18**, the amount of annual property tax revenue generated by major Port-related businesses yields over \$21 million in annual tax revenue for Morrow County, local governments and special taxing districts.

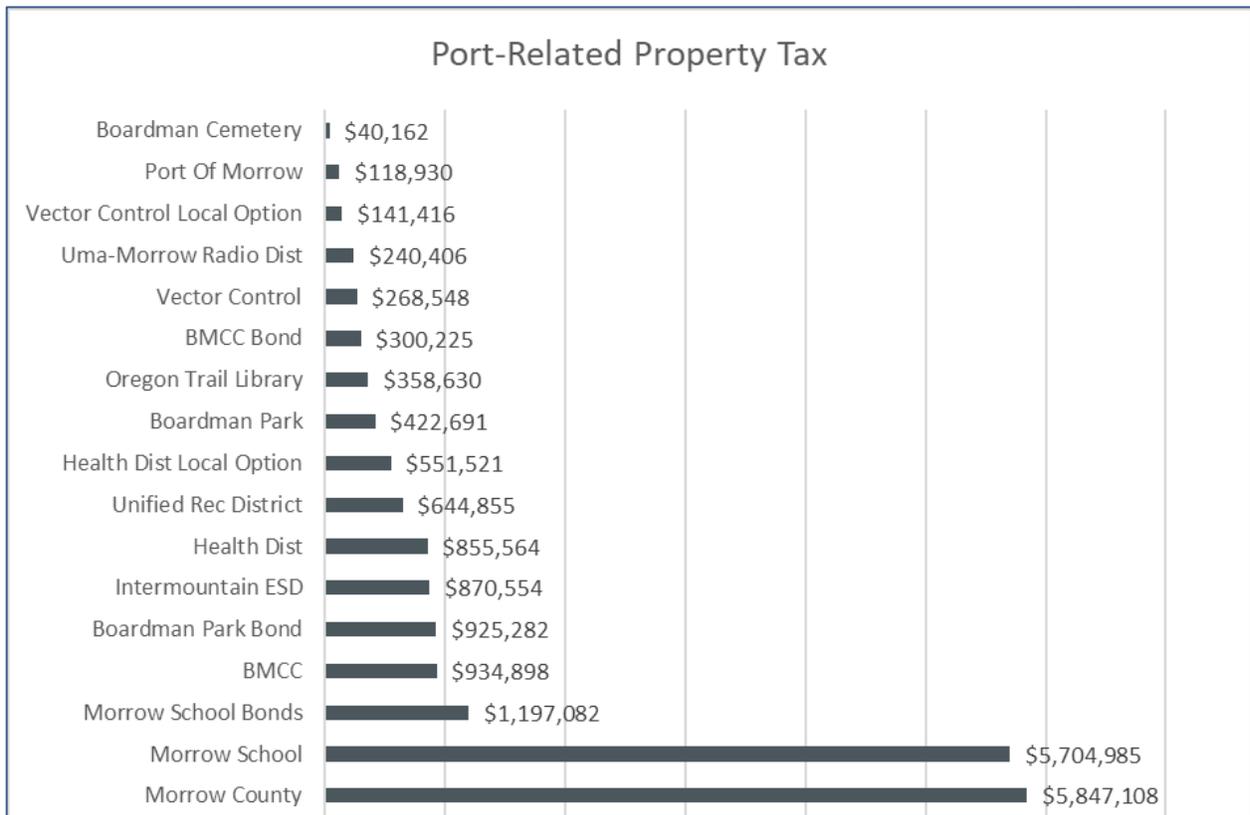
Exhibit 18: Annual Property Tax Revenue from Major Port-Related Businesses, 2016-2020



Source: Morrow County assessor data, FCS GROUP.

Annual tax payments to local districts (including Morrow County, cities, school districts, etc.) amounted to over \$21.3 million in FY 2020/21. Tax recipients ranged from \$40,162 (Boardman Cemetery District) to \$5.8 million (Morrow County government). Detail provided in **Exhibit 19**.

Exhibit 19: Annual Local Tax Payments by Port-Related Businesses in Morrow County, 2020



APPENDIX A: PORT-RELATED BUSINESSES

- Port of Morrow
- Tidewater Terminal Co.
- Oregon Pump Works
- Columbia Improvement District
- Boardman Foods Inc
- Cascade Specialties Inc
- Mid Columbia Excavation Inc
- Boardman Chip Co Inc
- Oregon Potato Co
- Columbia River Proc. (Tillamook Cheese)
- Frederickson Farming LLC
- ITC Services
- Oregon Hay Products Inc
- Portland General Electric
- LTI Inc
- Cemex Inc
- Lamb Weston
- Pacific Ethanol Inc
- Calbee North America, Llc
- River Lodge
- Columbia River Dairy LLC
- Castle Rock Farming LLC
- Collins Management Corporation
- Willow Creek Dairy
- JVB Dairy
- Taylor Transfer Inc
- Devin Oil Co Inc
- Tredit Tire & Wheel Co Inc
- Finley Buttes Landfill
- Les Schwab Tire Center
- Finley Bioenergy LLC
- Baker Produce Inc
- Windwave Technologies
- VADATA INC
- Barenbrug USA
- Morrow Cold Storage
- Lamb Weston / Watts Brothers

- Barrett Business Services Inc.
- Acts On Staffing
- American Rock Products
- Tidewater Barge Terminals
- Ordnance Brewing
- Morrow County Grain Growers
- JSH Mint
- NW Container
- Workforce Training Center