

THE 2013 ECONOMIC IMPACT OF THE PORT OF GRAYS HARBOR



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I. OVERVIEW OF THE ANALYSIS

The Port of Grays Harbor retained the services of Martin Associates to evaluate the economic impacts generated by waterborne activity at the Port of Grays Harbor marine facilities and the economic impacts generated by the Port's non-maritime real estate tenants.

The measurement of the economic impacts of the Port of Grays Harbor marine facilities consists of the measurement of the impacts of three distinct types of waterborne activity that occurs at the Port of Grays Harbor. These three types of waterborne activities are:

- *Marine cargo activity*, which includes waterborne cargo moving via the Port of Grays Harbor facilities (i.e., facilities owned and operated by the Port of Grays Harbor and facilities leased to private operators).
- *Fishing activity at the Port of Grays Harbor Westport Marina*, which includes the impacts generated by purchases of supplies, shipyard services, equipment and fishing gear, insurance and legal services by fishing vessels using the Port of Grays Harbor Westport Marina.
- *Marina activity*, which includes recreational boats that are moored at Westport Marina, as well as transient recreational boating activity and charter fishing activity operated at Westport Marina.

A major emphasis of the study is its defensibility and realistic assessment of the impacts generated by activity at the Port of Grays Harbor. The study is based on interviews with 139 firms providing services to the Port of Grays Harbor marine operations and real estate tenants. A greater than 95 percent coverage of the firms in the Port of Grays Harbor marine operations and real estate tenants has been achieved, underscoring the defensibility of the study. The impacts can be traced back to the company level of detail.¹ The data collected from the interviews were then used to develop operational models of the Port of Grays Harbor marine cargo, commercial fishing operations, recreational boating and charter excursions, and Port real estate tenant's impacts.

The results of the analysis include a snapshot of the economic impact of the Port of Grays Harbor marine operations and real estate tenants in 2013, as well as the development of impact models for each business unit operated by the Port of Grays Harbor. These models provide the Port of Grays Harbor with tools to update the economic impacts on an annual basis, as well as to evaluate the sensitivity of the resulting local and regional impacts to changes in underlying factors and to assess the economic impacts of specific Port of Grays Harbor capital development projects.

¹ Individual firm data is collected by Martin Associates to develop the overall economic impact models. Company specific data is held strictly by Martin Associates and not provided to the Port or any other entity under the confidentiality agreement between Martin Associates and the individual companies.

With respect to marine operations, the impacts of changes in such factors as tonnage levels (by commodity and trade route), vessel call levels, labor productivity, inland modal distribution (rail vs. truck), and inland markets for waterborne cargo can be evaluated. The marina model can be used to assess the impacts of changes in the composition of the boats moored at Westport Marina, the expenditures of moored boats, the number of moored boats and transient boats and the characteristics of spending patterns associated with the passengers of transient boats and charter operations. For fishing activity at Westport Marina, the impact model can test the sensitivity of the impacts to changes in the number of fishing boats using the Port's facilities and changes in expenditure profiles by type of boat.

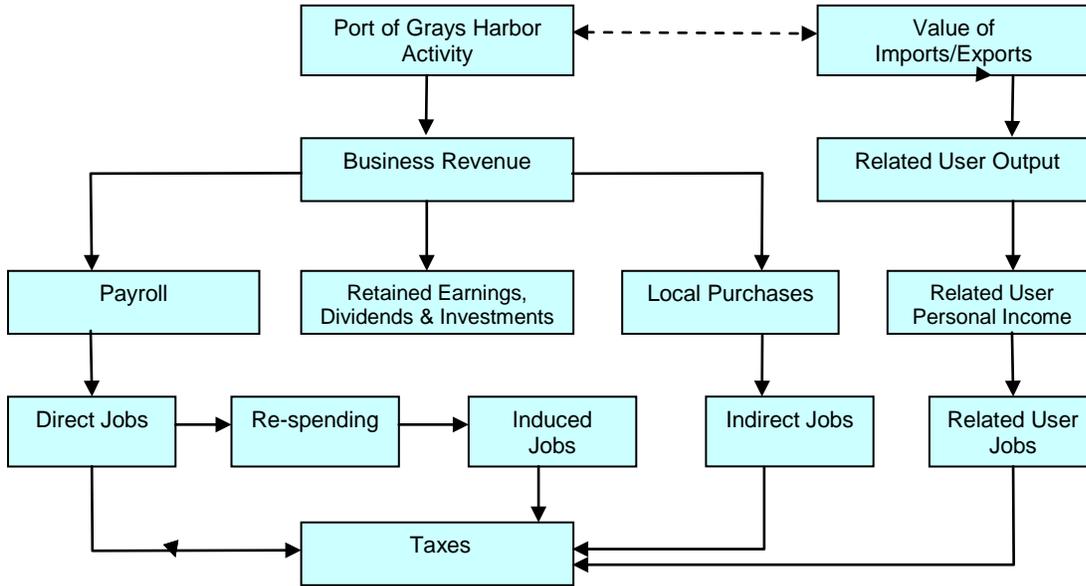
The real estate model can be used to assess the potential impacts of new tenants on the local and regional economy.

The remainder of this chapter presents an overview of the impact analysis and a summary of the results.

1. FLOW OF IMPACTS

Waterborne activity at a Port of Grays Harbor marine facilities and real estate activity contribute to the local and regional economy by generating business revenue to local and national firms providing services to these sectors. These firms, in turn, provide employment and income to individuals and pay taxes to state and local governments. Exhibit I-1, below, shows how waterborne activity at the Port of Grays Harbor marine facilities and real estate activity of the Port of Grays Harbor tenants generate impacts throughout the local, state and national economies. As this exhibit indicates, the impact of marine operations and real estate tenants, on a local, state or national economy cannot be reduced to a single number, but instead, they create several impacts. These are the revenue impact, employment impact, personal income impact and tax impact. ***These impacts are non-additive.*** For example, the income impact is a part of the revenue impact, and adding these impacts together would result in double counting. Exhibit I-1 shows graphically how activity at the Port of Grays Harbor generates the four impacts.

Exhibit I-1
Flow of Economic Impacts Generated by
The Port of Grays Harbor Activity



1.1 Business Revenue Impact

At the outset, activity at the Port’s marine facilities and real estate tenants generate business revenue for firms that provide services. This business revenue impact is dispersed throughout the economy in several ways. It is used to hire people to provide the services, to purchase goods and other services, to pay for the use of port facilities and to make federal, state and local tax payments. The remainder is used to pay stockholders, retire debt, make investments or is held as retained earnings. It is to be emphasized that the only portions of the revenue impact that can be definitely identified as remaining in the State of Washington are those portions paid out in salaries to Washington employees, for local purchases by individuals and businesses directly dependent on the marine operations, and in contributions to state and local taxes, as well as federal taxes. Terminal leases paid to the Port of Grays Harbor by terminal operators; wharfage and dockage fees paid by the steamship lines; and revenue from real estate leases, generate revenue to the Port of Grays Harbor.

1.2 Employment Impact

The employment impact of marine operations and real estate activity consists of four levels of job impacts.

- Direct employment impact - jobs directly generated by marine cargo, marina operations, commercial fishing activity and real estate tenants. Direct jobs generated by marine cargo include jobs with railroads and trucking companies moving cargo between inland origins and destinations and the marine terminals, longshoremen, steamship agents, stevedores, etc. Direct jobs generated by the fishing fleet using Port of Grays Harbor Westport Marina include crew, shipyard employees, local fishing gear suppliers, insurance brokers and marine attorneys, etc. Direct jobs supported by the marina activity include jobs directly involved with operating Westport Marina, jobs supported by the direct purchases by the boat owners including boat repair, equipment, nautical supplies, etc., as well as local hotels, restaurants, transportation firms and retail stores providing services to the anglers departing Westport Marina on recreational fishing charters. For transient boats calling the Port's marina, direct jobs are measured for the local restaurants and retail outlets. Finally, for the real estate tenants, the direct jobs include those individuals directly employed by the real estate tenants of the Port.

It is to be emphasized that these are classified as directly generated in the sense that these jobs would experience near term dislocation if the Port of Grays Harbor marine facilities were to be closed to marine cargo, commercial fishing and marina activity and the Port of Grays Harbor real estate tenants were not able to relocate to non-port property, and as a result leave the area. These jobs are, for the most part, local jobs and are held by residents of Grays Harbor County.

- Induced employment impact - jobs created throughout the local economy because individuals directly employed due to port activity spend their wages locally on goods and services such as food, housing and clothing. These jobs are held by residents located throughout the region and state, since they are estimated based on local and regional statewide purchases.
- Indirect Jobs - jobs created in the State of Washington due to purchases of goods and services by firms, not individuals. These jobs are estimated directly from local purchases data supplied to Martin Associates by the 139 companies interviewed as part of this study, and include jobs with local office supply firms, maintenance and repair firms, parts and equipment suppliers, etc. It is to be emphasized that special care was taken to avoid double counting, since the current study counts certain jobs as direct, which are often classified as indirect by other approaches.

- Related user employment impact - jobs with firms using the cargo facilities to ship and receive cargo and with firms whose employees are regular users of the Port of Grays Harbor. These jobs are not entirely dependent upon the marine cargo operations, but reflect the importance of the Port of Grays Harbor to local and national firms. While the facilities and services provided by the Port of Grays Harbor are a crucial part of the infrastructure allowing these jobs to exist, they would not necessarily be immediately displaced if marine cargo activity were to cease. These include shippers of logs and chips forested in the region, agricultural products grown in the Midwest United States, as well as exporters of Midwest manufactured automobiles.

1.3 Personal Earnings Impact

The personal earnings impact is the measure of employee wages and salaries (excluding benefits) received by individuals directly employed due to marine activity and real estate tenants. Re-spending of these earnings throughout the State of Washington for purchases of goods and services is also estimated. This, in turn, generates additional jobs -- the induced employment impact. This re-spending throughout the state is estimated using a state personal earnings multiplier, which reflects the percentage of purchases by individuals that are made within a state. The re-spending effect varies by state: a larger re-spending effect occurs in states that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with states that import a relatively large share of consumer goods and services (since personal earnings "leak out" of the state for these out-of-state purchases). The direct earnings are a measure of the local impact since those directly employed by marine activity and real estate tenants receive the wages and salaries. The re-spending effect is regional.

1.4 Tax Impact

Federal, state and local tax impacts are tax payments to the state and local governments by firms and by individuals whose jobs are directly dependent upon and supported (induced and indirect jobs) by activity at the Port of Grays Harbor marine facilities and Port real estate tenants. The tax impacts include state and local taxes collected from all sources, both personal and business taxes. State and local taxes are based on income indices developed by the Tax Foundation and these indices are applied to the direct, induced and indirect personal income impacts.²

2. SUMMARY OF METHODOLOGY

The purpose of this section is to provide a summary of the methodological approach used to estimate the economic impacts of the Port of Grays Harbor. The methodological approach to this study is designed to provide highly defensible, as well as accurate results. In addition to the Port of

² The Tax Foundation publishes similar tax indices for state and local tax burdens for each state in the United States.

Grays Harbor, this same methodology has been used by Martin Associates in the last 28 years to assess the economic impacts of activity at more than 500 ports including:

<i>Los Angeles</i>	<i>Houston</i>	<i>Virginia Port Authority</i>
<i>Long Beach</i>	<i>Corpus Christi</i>	<i>Baltimore</i>
<i>San Diego</i>	<i>Freeport, TX</i>	<i>Philadelphia</i>
<i>Port of Hueneme</i>	<i>Texas City</i>	<i>Wilmington, DE Brunswick, GA</i>
<i>Oakland</i>	<i>Victoria, TX</i>	<i>Richmond, VA</i>
<i>Portland</i>	<i>Baton Rouge</i>	<i>Providence, RI</i>
<i>Longview</i>	<i>New Orleans</i>	<i>Boston</i>
<i>Vancouver</i>	<i>Miami</i>	<i>Montreal</i>
<i>Grays Harbor</i>	<i>Port Everglades</i>	<i>Quebec City</i>
<i>Everett</i>	<i>Palm Beach</i>	<i>Prince Rupert, BC</i>
<i>Tacoma</i>	<i>Port Canaveral</i>	<i>Halifax</i>
<i>Bellingham</i>	<i>Jacksonville</i>	<i>Saint John, NB</i>
<i>Sacramento</i>	<i>Tampa</i>	<i>36 U.S. and Canadian Great Lakes</i>
<i>San Francisco</i>	<i>Port Manatee</i>	<i>Ports</i>
<i>Vancouver, BC</i>	<i>Wilmington/Morehead City, NC</i>	

2.1 Data Collection

The cornerstone of the Martin Associates approach is the collection of detailed baseline impact data from firms providing services at the marine and real estate tenants. To ensure accuracy and defensibility, the baseline impact data was collected from personal and telephone interviews with 139 firms in the Port's customer and tenant community. These firms represent the universe of firms providing services at the Grays Harbor marine operations (including marine terminals and Westport Marina) and non-maritime tenants, as identified by the following sources:

- Pacific Northwest Ports Handbook, 2014;
- "The Journal of Commerce", Transportation Telephone Tickler;
- The Port of Grays Harbor Tenant and Customer Directory;

These 139 firms represent greater than 98 percent coverage of all firms identified in the maritime and real estate community. In some instances, multiple interviews were conducted with several persons in each firm.

2.2 Direct Jobs, Income and Revenue Impacts

The results of these interviews were then used to develop the baseline direct job, revenue and income impacts for the marine and real estate activity, and for the economic sectors and job categories associated with the maritime and real estate tenants.

This baseline survey data was also used to develop operational models that can be used to update the impacts of the Port of Grays Harbor marine cargo, marina activity, the Port's commercial fishing operations, and real estate tenants on an annual basis and to evaluate the impacts of changes in:

- Marine cargo tonnage, by commodity;
- Port labor productivity, and work rules;
- Modal distribution of marine cargo (what percent of the inland transportation of a commodity is truck versus rail), as well as the geographical distribution of each commodity;
- Vessel calls;
- Number of recreational boats, by type of boat, moored at Westport Marina, as well as transient calls at Westport Marina;
- Local purchases made by recreational boats moored at Westport Marina, as well as transient recreational boating activity at the marina;
- Number of fishing boats, by type of fishing fleet, using the Ports' facilities;
- Local purchases made by fishing boat operators based at Westport Marina; and
- New real estate tenants of the Port, by type of business activity (office versus warehouse and distribution versus manufacturing).

Also, the operational models can be used to evaluate alternative facilities expansion projects and new construction, such as a new or expanded marine cargo terminal or real estate development projects.

2.3 Induced Impacts

Induced impacts are those generated by the purchases of the individuals employed as a result of marine activity and real estate tenants. For example, a portion of the personal earnings received by those directly employed due to activity at the Port of Grays Harbor is used for purchases of goods and services, both in-state, as well as out-of-state. These purchases, in turn, create additional jobs in the State of Washington, which are classified as induced. To estimate these induced jobs, a personal earnings multiplier for the State of Washington was developed from data provided by the Bureau of Economic Analysis, Regional Input-Output Modeling System. This income multiplier is used to estimate the total personal earnings generated in the State of Washington, primarily defined as Grays Harbor County. A portion of this total personal earnings impact is next allocated to specific local purchases (as determined from consumption data for Seattle-Tacoma-Bremerton MSA, as developed from the U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, 2011-2012). These purchases are next converted into retail and wholesale induced jobs in the regional economy.

Induced jobs are not estimated at lower levels of purchasing rounds (after the wholesale round) since it is not possible to trace with a sufficient degree of accuracy, geographically, where purchases at the remaining levels occur. However, about 80 percent

of the consumption will likely occur at the first two rounds of purchases, which are most likely local retail and wholesale purchases.

2.4 Indirect Jobs

Indirect jobs are generated in the local economy as the result of purchases by firms that are directly dependent upon activity at the Port of Grays Harbor marine cargo terminals, Westport Marina operations, and real estate tenants of the Port of Grays Harbor. These purchases are for goods such as office supplies and equipment, maintenance and repair services, raw materials, communications and utilities, transportation services and other professional services. To estimate the indirect economic impact, local purchases, by type of purchase, were collected from each of the 139 firms interviewed and the Port of Grays Harbor. These local purchases were then combined with employment to sales ratios in local supplying industries, developed from U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System for the State of Washington and Grays Harbor County. These jobs to sales ratios capture the numerous spending rounds associated with the supply of goods and services. Special care has been exercised to avoid double counting the indirect impacts, and to specifically include only the expenditures by the directly dependent firms that are, in fact, local.

2.5 Related Impacts

Related impacts measure the jobs with shippers and consignees moving cargo through the Port of Grays Harbor marine terminals. These jobs are classified as related jobs, since the firms using the facilities for the movement of marine cargo can and do use other ports. For example, grain being grown in the Midwestern United States is exported via numerous grain elevators located in Washington and Oregon. Should the Port of Grays Harbor grain elevator cease operations, the grain being grown in the Midwest and exported through the elevator would most likely be exported via another grain elevator located in the Pacific Northwest, hence these jobs are related to port activity and not directly dependent on the Port of Grays Harbor. Similar situations apply to export automobiles and forest products.

Related impacts for the Port of Grays Harbor were estimated by multiplying the value of the Washington state cargo moving via the marine terminals with jobs to sales ratios specific to the exporters and importers.³

³ The value of cargo moving via the marine terminals was determined from U.S. Census, USA Trade On-Line, while the ratios of jobs to sales data for related Washington State and United States exporters and importers were developed from data supplied to Martin Associates by the Bureau of Economic Analysis, Regional Input-Output Modeling System.

2.6 Tax Impacts

The tax impacts include state and local taxes collected from all sources, both personal and business taxes. The state and local per capita income tax burdens (developed by the Tax Foundation for the State of Washington) are applied to the total direct, induced and indirect income impacts to estimate total state and local taxes created by marine cargo, marina, commercial fishing and real estate activity at the Port of Grays Harbor.

3. TOTAL IMPACT OF THE PORT OF GRAYS HARBOR

As Table I-1 indicates, the Port of Grays Harbor marine and non-maritime related real estate tenants generate the following economic impacts for the local and regional economy:

- 2,727 direct jobs are generated by Port of Grays Harbor-owned transportation facilities. As the result of local and regional purchases by those 2,727 individuals holding the direct jobs, an additional 1,608 induced jobs are supported in the region.
- 1,368 indirect jobs were supported by \$136.2 million of local purchases by businesses supplying services at the Port-owned facilities.
- \$118.9 million of direct wages and salaries were received by those 2,727 directly employed by the Port of Grays Harbor's transportation infrastructure and real estate tenants. As the result of re-spending this income, an additional \$147.4 million of income and consumption expenditures are created in Washington State, primarily Grays Harbor County. The indirect jobs holders received \$75.2 million of indirect wages and salaries.
- Businesses providing services at the Port-owned marine terminals, Westport Marina, as well as real estate tenants, received \$564 million of revenue, excluding the value of cargo shipped through the marine cargo facilities, and the landed value of the seafood caught by the commercial fishing fleet using Westport Marina.
- \$32.1 million of state and local taxes were generated by activity at the Port of Grays Harbor marine terminals, Westport Marina, and real estate tenants. In addition, the Port collected \$545,000 of leasehold taxes from its tenants.

Table I-1
 Summary of the Economic Impacts Generated by the Port of
 Grays Harbor Maritime and Real Estate Activity, 2013

PORT OF GRAYS HARBOR	MARINE CARGO	COMMERCIAL FISHING	RECREATIONAL BOATING	REAL ESTATE	TOTAL
Jobs					
Direct	574	1,067	137	950	2,727
Induced	645	442	81	440	1,608
Indirect	<u>305</u>	<u>543</u>	<u>27</u>	<u>493</u>	<u>1,368</u>
Total Jobs	1,524	2,052	245	1,882	5,704
Personal Income (\$1,000)					
Direct	\$36,239	\$38,968	\$3,693	\$40,005	\$118,905
Induced	\$79,654	\$27,894	\$7,546	\$32,256	\$147,350
Indirect	<u>\$14,860</u>	<u>\$27,730</u>	<u>\$704</u>	<u>\$31,866</u>	<u>\$75,161</u>
Total	\$130,754	\$94,592	\$11,943	\$104,127	\$341,417
Business Revenue (\$1,000)	\$143,488	\$203,537	\$23,548	\$193,440	\$564,013
Local Purchases (\$1,000)	\$31,513	\$45,522	\$2,099	\$57,060	\$136,194
State and Local Taxes (\$1,000)	\$12,291	\$8,892	\$1,123	\$9,788	\$32,093

* Totals may not add due to rounding

**The re-spending/local consumption impact cannot be divided by induced jobs to estimate induced income, since the re-spending impact also includes local purchases. This would overstate the induced income impact.

II. THE ECONOMIC IMPACTS OF THE PORT OF GRAYS HARBOR MARINE FACILITIES

The impacts generated by the Grays Harbor maritime facilities consist of:

- Impacts generated by cargo and vessel activity at marine cargo facilities owned and operated by the Port of Grays Harbor, as well as facilities owned by the Port, but leased to private terminal operators.
- Impacts generated by the fishing fleet home-ported at the Westport Marina, transient fishing vessels using facilities at Westport Marina, as well as impacts generated by the purchases of supplies and services by the fishing fleet based at Westport Marina. Also included are impacts with fish processing and cold storage operations located in Westport. ***It is to be emphasized that the Washington based fishing fleet uses other non-Port of Grays Harbor terminals and moorings throughout the West Coast and Puget Sound areas. The impacts of these vessels are not included in this study.***
- Impacts of recreational boating at the Westport Marina, including boats moored and transient calls at Westport Marina. Charter fishing operations and the impacts associated with visiting charter fishing anglers are included in these impacts.

In the remainder of this chapter the impacts generated by the Grays Harbor maritime facilities are summarized. First, the impacts generated by all activity (marine cargo, commercial fishing, and recreational boating). Secondly, the impacts generated by type of activity are summarized.

1. THE ECONOMIC IMPACTS OF THE GRAYS HARBOR MARINE FACILITIES

Table II-1 summarizes the economic impacts generated by marine activity.

Table II-1
Economic Impacts of Port of Grays Harbor Maritime Activity

PORT OF GRAYS HARBOR SEAPORT	MARINE CARGO	COMMERCIAL FISHING	RECREATIONAL BOATING	TOTAL
Jobs				
Direct	574	1,067	137	1,777
Induced	645	442	81	1,168
Indirect	<u>305</u>	<u>543</u>	<u>27</u>	<u>876</u>
Total Jobs	1,524	2,052	245	3,821
Personal Income (\$1,000)				
Direct	\$36,239	\$38,968	\$3,693	\$78,901
Induced	\$79,654	\$27,894	\$7,546	\$115,094
Indirect	<u>\$14,860</u>	<u>\$27,730</u>	<u>\$704</u>	<u>\$43,295</u>
Total	\$130,754	\$94,592	\$11,943	\$237,290
Business Revenue (\$1,000)	\$143,488	\$203,537	\$23,548	\$370,572
Local Purchases (\$1,000)	\$31,513	\$45,522	\$2,099	\$79,134
State and Local Taxes (\$1,000)	\$12,291	\$8,892	\$1,123	\$22,305

Totals may not add due to rounding.

In 2013, marine cargo activity at the Port of Grays Harbor cargo terminals and the commercial fishing and recreational boating operations at Westport Marina generated:

- 1,777 direct jobs. As the result of purchases in the local and regional economy with the income received by those holding the direct jobs, an additional 1,168 induced jobs were generated in Washington State. As the result of \$79.1 million of local purchases by the firms directly providing services at the Port of Grays Harbor maritime operations, 876 indirect jobs with local supplying firms were also supported in the regional economy.
- \$78.9 million of personal income was received by those employed directly by activities at the Grays Harbor maritime operations. As the result of re-spending of this income for purchases of goods and services by those directly employed, an additional \$115.1 million of

income and consumption expenditures are generated in the region. A portion of this re-spending impact is used to pay those holding the 1,168 induced jobs, while another portion is received by the firms providing the goods and services to the individuals directly employed due to port activity. In addition, those holding the 876 indirect jobs received \$43.3 million of indirect wages and salaries. In total, \$237.3 million of wages and salaries were created by cargo, commercial fishing, and recreational boating activity at Port of Grays Harbor facilities in 2013.

- The firms directly dependent upon supplying the services to support the marine activity (those firms employing the 1,777 direct jobs) received \$370.6 million of business revenue.⁴ Of this revenue, these firms made \$79.1 million of local purchases for goods and services. It is these local purchases that supported 876 indirect jobs in the regional economy.
- A total of \$22.3 million state and local taxes were generated by Port of Grays Harbor maritime activity.
- In addition to these direct, induced and indirect impacts, about 36,909 jobs in the United States are related to the marine cargo moving via the marine terminals in the Port of Grays Harbor. The majority of these jobs are created by grain and autos handled at the Port of Grays Harbor.

In the next section, the impacts generated by marine cargo at the Port of Grays Harbor marine cargo terminals are described. Section 3 describes the impacts of commercial fishing activity and section 4 details the impacts of recreational boating at Westport Marina. The impacts generated by the Port of Grays Harbor real estate tenants are discussed in section 5.

2. THE ECONOMIC IMPACTS OF MARINE CARGO ACTIVITY AT THE PORT OF GRAYS HARBOR

In 2013, a total of 2.38 million metric tons of cargo moved over marine facilities owned by the Port of Grays Harbor. Of the 2.38 million tons of cargo, soy meal & other bulk commodities accounted for 1.36 million tons via the Port's grain elevator. Autos accounted for another 177,529 tons, or 92,270 auto units. Each auto unit is approximately 1.9 tons. Forest product exports accounted for 412,122 metric tons in 2013, 94,732 tons of chips and 317,390 tons of log exports. The Ports' two liquid bulk terminals, Westway Terminals and Imperium Renewables handled 433,981 tons of liquid bulk.

⁴ Business revenue is a measure of the value of the services provided by the firms. The value of the marine cargo shipped or received through the Port of Grays Harbor cargo terminals and the landed value of seafood caught by the fishing fleet based at Westport Marina is not included in this business revenue impact measure.

2.1 Overview of the Port Impact Structure

The movement of these 2.38 million metric tons of cargo through the Port of Grays Harbor cargo terminals generates economic activity in various business sectors of the state and local economy. Specifically, four distinct economic sectors are involved in providing services to move the cargo through the Port of Grays Harbor marine terminals. These are the:

- Surface Transportation Sector
- Maritime Service Sector
- Port of Grays Harbor
- Shippers/Consignees Using the Port of Grays Harbor

Jobs, income, revenue and tax impacts are estimated for each sector, as well as for specific job categories within each sector.

2.1.1 *Economic Impact Sectors*

Within each sector, various participants are involved. Separate impacts are estimated for each of the participants. A discussion of each of the four economic impact sectors is provided below, including a description of the major participants in each sector.

(1) The Surface Transportation Sector

The surface transportation sector consists of both the railroad and trucking industries. These sectors are responsible for moving the various cargoes between the marine terminals and their inland origins and destinations. Puget Sound and Pacific Railroad connects the Port's terminals with the Burlington Northern/Santa Fe and the Union Pacific railroads and inland origins and destinations. In general, the railroads play an integral part in the movement of grain and autos from Midwestern states to the Port of Grays Harbor for export.

Many local and national trucking firms serve the cargo facilities. Trucking firms are involved in delivering forest products from logging sites to the Port's marine terminals. Liquid Bulk commodities also use local trucks to deliver products within the regional economy. Finally, trucks play a major role in the delivering imported autos to auto auctions in California.

(2) The Maritime Service Sector

This sector consists of numerous firms and participants performing functions related to the following maritime services:

- Cargo Marine Transportation;
- Vessel Operations;
- Cargo Handling; and
- Federal, State, and Local Government Agencies.

A brief description of the major participants in each of these categories is provided below:

- Cargo Marine Transportation - Participants in this category are involved in arranging for overland and water transportation for export or import freight through the port. The freight forwarder/customhouse broker is the major participant in this category. The freight forwarder/customhouse broker arranges for the freight to be delivered between the Grays Harbor and inland destinations, as well as the ocean transportation. This function performed by freight forwarders is most prevalent for general cargo commodities. For bulk cargo, arrangements are often made by the shipper/receiver.
- Vessel Operations - This category consists of several participants. The steamship agents provide a number of services for the vessel as soon as it enters the Port of Grays Harbor; the agents arrange for pilot services and towing, for medical and dental care of the crew, and for ship supplies. The agents are also responsible for vessel documentation. In addition to the steamship agents arranging for vessel services, those providing the services include:
 - Pilots - assist vessels navigating to and from the Port of Grays Harbor terminals;
 - Chandlers - supply the vessels with ship supplies (food, clothing, nautical equipment, etc.);
 - Towing firms - provide tug assist service to vessels docking and undocking at a terminal;
 - Bunkering firms - provide fuel to the vessels;
 - Marine surveyors - inspect the vessels and the cargo; and
 - Shipyards/marine construction firms - provide repairs, either emergency or scheduled, as well as marine pier construction and dredging.

- Cargo Handling - This category involves the physical handling of cargo at the Port of Grays Harbor between land and the vessel. Included in this category are the following participants:
 - Longshoremen - are members of the International Longshore and Warehouse Union, and are involved in the loading and unloading of cargo from the vessels, as well as handling the cargo prior to loading and after unloading;
 - Stevedoring firms - manage the longshoremen and cargo-handling activities;
 - Terminal operators - are often stevedoring firms who operate the maritime terminals where cargo is loaded and off-loaded;
- Government Agencies - This maritime service sector category involves federal, state and local government agencies that perform services related to cargo handling and vessel operations at the Port of Grays Harbor. U.S. Customs and Border Protection and U.S. Department of Agriculture are involved. In addition, both civilian and military personnel with the U.S. Coast Guard and the U.S. Army Corps of Engineers dedicated to marine cargo moved via Port of Grays Harbor marine terminals are included. Federal grain inspectors work the grain elevator.

(3) Port of Grays Harbor

This sector includes those individuals employed by the Port of Grays Harbor whose purpose is to oversee port activity. The Port of Grays Harbor leases terminal space to terminal operators and private companies and also leases equipment such as liquid bulk hoses and connections to the terminal operators.

(4) Shippers/Consignees Using the Port of Grays Harbor Marine Cargo Facilities

Shippers/Consignees included in this category are those shippers and consignees located throughout the State of Washington and United States, whose businesses use the marine cargo facilities for the export and import of cargo. These users also ship and/or receive materials via other ports such as Tacoma. It is to be emphasized that these shippers/consignees are not dependent upon the use of the Port of Grays Harbor, since they are users of other ports as well. Since these users are not dependent upon the Port of Grays Harbor, employment with these shippers/consignees is considered port-related and not port-generated.

2.1.2 Commodities Included in the Study

A major use of an economic impact analysis is to provide a tool for port development planning. As a port grows, available land and other resources for port facilities become scarce, and decisions must be made as to how to develop the land and utilize the resources in the most efficient manner. Various types of facility configurations are associated with different commodities. For example, grain requires silos for storage, while autos require paved lots for parking.

An understanding of the commodity's relative economic value in terms of employment and earnings to the local community, the utilization and cost of providing the facilities, and the relative demand for the different commodities is essential in making future port development decisions. Because of this need for understanding relative commodity impacts and the impacts associated with marine terminal investments, economic impacts are estimated for the following commodities handled via the Port of Grays Harbor marine terminals.

- Chips
- Grain
- Autos
- Logs
- Liquid Bulk

It should be emphasized that commodity-specific impacts are not estimated for each of the five economic sectors described in the last section. Specific impacts cannot be allocated to individual commodities with any degree of accuracy for the maritime services, marine construction and the government job categories.

The impacts, by commodity, are estimated on a per ton basis to determine the contribution of each commodity to the local economy on a throughput basis. The impacts per 1,000 ton ratio is a key input into port planning decisions regarding new facilities development and expansion.

The impacts generated by the Port of Grays Harbor marine terminals are estimated:

- By sector of the local and regional economy (e.g., maritime service sector, surface transportation sector, etc.);
- By commodity group, i.e., chips, grain, autos, logs, liquid bulk; and

- By the residency of individuals directly employed by the activity at the Port of Grays Harbor marine terminals.

2.2 Summary of the Economic Impacts Generated by Cargo Activity at Port of Grays Harbor Marine Terminals

The economic impacts generated by marine cargo handled at Port of Grays Harbor marine terminals are summarized in Table II-2.

Table II-2
Economic Impacts of Cargo
Activity at Port of Grays Harbor Marine Terminals

PORT OF GRAYS HARBOR	MARINE CARGO
Jobs	
Direct	574
Induced	645
Indirect	<u>305</u>
Total Jobs	1,524
Personal Income (\$1,000)	
Direct	\$36,239
Induced	\$79,654
Indirect	<u>\$14,860</u>
Total	\$130,754
Business Revenue (\$1,000)	\$143,488
Local Purchases (\$1,000)	\$31,513
State and Local Taxes (\$1,000)	\$12,291

Note: Totals may not add due to rounding

As this table indicates, maritime activity (cargo and vessel activity) at the Port of Grays Harbor facilities created the following economic impacts:

- 574 direct jobs;

- 645 induced jobs were supported by the purchases of the 574 directly employed individuals;
- 305 indirect jobs were generated as a result of \$31.5 million of local purchases by firms directly dependent upon activity at Port of Grays Harbor marine cargo facilities;
- The 574 direct employees earned \$36.2 million of wages and salaries, for an average salary of \$63,134 per year;
- Businesses providing services to the Port of Grays Harbor received \$143.5 million of business revenue;
- A total of \$12.3 million of state and local taxes were generated by port activity; and
- 36,909 jobs in the United States were related to the cargo moving via the Port of Grays Harbor marine terminals, the majority of which were related to grain and auto exports.

The next section details the employment impacts generated by the Grays Harbor marine cargo operations.

2.3 Employment Impacts of the Port of Grays Harbor Marine Terminals

This section details the direct, induced, indirect and related job impacts generated by marine cargo and vessel activity at the Port of Grays Harbor.

The direct employment impacts are first described.

2.3.1 Direct Employment Impacts

The distribution of the 574 direct job impacts by economic sector and job category is presented in Table II-3.

Table II-3
Direct Jobs by Detailed Category

PORT OF GRAYS HARBOR	DIRECT JOBS
Surface Transportation	
Rail	128
Truck	57
Maritime Services	
Terminal Employees	212
ILWU/Dockworkers	87
Towing	17
Pilots	3
Agents	5
Maritime Services	5
Government	12
Construction	15
Port of Grays Harbor	33
Totals	574

Note: Totals may not add due to rounding

As this table indicates, the largest direct job impact occurs with terminal employees, followed by jobs with railroads moving autos and grain to the Port’s marine terminals. The 128 direct rail jobs include employment with the local short line, as well as crew dedicated to moving cargo to and from the Port of Grays Harbor marine terminals and the Midwestern United States. Cargo activity creates 12 jobs with federal, state and local government agencies, Coast Guard, Army Corps of Engineers, and USDA grain inspectors. The cargo activity also generates 87 full-time jobs with the International Longshore and Warehouse Union.

Employment Impacts by Commodity

Table II-4 presents the distribution of the direct job impacts by commodity/handling type. A total of 512 direct jobs are allocated to commodities moving over the Port of Grays Harbor marine cargo terminals⁵. The importance of autos is underscored by the fact that

⁵ 62 jobs generated by cargo and vessel activity at marine terminals are not allocated to specific commodities. These direct jobs are with government agencies, maritime services, marine construction firms, and the Port of Grays Harbor.

202 direct jobs are supported by the loading and discharge of automobiles, and the processing jobs associated with autos moving via the Port of Grays Harbor auto terminal.

Table II-4
Direct Jobs by Commodity Group

COMMODITY	DIRECT JOBS	TONNAGE METRIC TONS	JOBS/ 1,000 TONS
Chips	22	94,732	0.236
Grain	105	1,360,611	0.077
Autos (units)	202	92,790	2.176
Logs	82	317,390	0.260
Liquid Bulk	101	433,981	0.232
Not Allocated	<u>62</u>		
Total	574		

Note: Totals may not add due to rounding

Note: Autos in units not tons

Table II-4 also shows the direct job impacts per 1,000 metric tons of cargo. This exhibit indicates that on a per 1,000 ton basis, autos generate the greatest impact, primarily due to the labor intensive processing associated with autos being exported via the Port of Grays Harbor auto facility. Because of the less labor intensive handling associated with bulk cargoes, the jobs per 1,000 tons generated by grain are relatively small. Chips, logs, and liquid bulk generate between .232 and .236 jobs per thousand tons.

Employment Impact by Place of Residency

The importance of the Port of Grays Harbor to the local and regional economy is underscored by the residency of those holding the 574 marine cargo-generated direct jobs. As Table II-5 indicates, about 94 percent of the 574 direct jobs generated by cargo activity are held by residents of Grays Harbor County, of which almost 50 percent are held by residents of Aberdeen.

Table II-5
Distribution of Direct Jobs by Place of Residence

RESIDENCY	PERCENTAGE	TOTAL
Aberdeen	46.73%	268
Cosmopolis	2.15%	12
Hoquiam	18.76%	108
Elma	5.51%	32
McCleary	0.55%	3
Montesano	12.22%	70
Oakville	1.75%	10
Ocean Shores	3.00%	17
Westport	3.18%	18
Other GH County	0.40%	2
Pacific Co.	0.06%	0
Mason Co.	0.01%	0
Thurston Co.	3.54%	20
Other WA	2.14%	12
Total	100%	574

Note: Totals may not add due to rounding

2.3.2 Induced Job Impact

The induced jobs are generated as the result of purchases of goods and services by those 574 directly employed as a result of marine cargo and vessel activity at Port of Grays Harbor marine cargo terminals. As the result of the local and regional purchases by these directly employed individuals, 645 induced jobs were supported in the State of Washington. The greatest number of induced jobs are supported in non-consumption driven sectors of the economy such as business services, state and local government agencies, social services and education services, followed by impacts with restaurants and housing.

2.3.3 Indirect Job Impact

Indirect jobs are generated in the local economy as the result of local purchases by the firms directly dependent upon the Port of Grays Harbor marine cargo activity. These purchases were identified from the surveys of directly dependent firms supplying services in support of the vessel and cargo activity at the Port of Grays Harbor marine terminals. Based on the surveys, a total of \$31.5 million of local purchases were made in the local economy. Based on employment to purchase ratios in supplying firms, produced for the State of

Washington by the U.S. Bureau of Economic Analysis, Regional Input-Output modeling system, these local purchases supported 305 indirect jobs in the state.

2.3.4 Related Job Impact

In addition to the direct and induced jobs, an estimate of jobs in the United States related to cargo moving via the Port of Grays Harbor was developed. It is estimated that 36,909 jobs with U.S. grain farmers and auto manufacturers, as well as Washington State logging operations, are related to cargo moving via the Port of Grays Harbor marine cargo terminals. It is to be emphasized that these jobs are only related jobs, not jobs dependent upon the Port of Grays Harbor. These jobs are with shippers/consignees and manufacturers located throughout the United States and forest product firms who ship via the Port of Grays Harbor terminals, as well as via other ports on the West Coast. Therefore, jobs with these shippers and consignees cannot be classified as totally dependent upon the existence of the Port of Grays Harbor.

2.4 Business Revenue Impact of the Port of Grays Harbor Marine Terminals

The revenue impact is a measure of the *total economic activity* that is impacted by the cargo moving via the Port of Grays Harbor. In 2013, \$7.9 billion of total economic activity in the United States was related to the cargo activity. Of the \$7.9 billion, \$143.5 million is the direct business revenue received by the firms directly dependent upon the Port and providing maritime services and inland transportation services to the cargo handled at the marine terminals and the vessels calling the port.⁶ The remaining \$7.8 billion represents the value of the output to the United States that is associated with the cargo moving via the Port of Grays Harbor marine terminals. This includes the value added at each stage of producing an export cargo. Of this \$7.8 billion, \$127.1 million represents the value of related output to the State from the export of forest products originating in-state.

The balance of the discussion focuses on the \$143.5 million of direct business revenue generated from the provision of services to the cargo and vessels handled at the Port of Grays Harbor marine terminals.

2.4.1 Revenue Impacts by Sector

Table II-6 shows the distribution of this revenue impact by category and economic sector. As this exhibit indicates, railroads receive the greatest revenue impact, followed by Port of Grays Harbor, Terminal Services, and Trucking Firms. It is to be emphasized that this revenue impact should not be viewed totally as a local or state impact, but instead as a

⁶ Of the \$7.9 billion total economic output, \$270.6 is the total value of the cargo operations at the Port to the State of Washington.

national, even international impact. For example, the revenue received by firms providing services is used to hire labor, to pay state, local and federal taxes, to pay stockholder dividends, invest, retire debt and to purchase goods and services. These uses of revenue suggest that only the payment of wages and salaries to employees residing in the state, the purchase of local goods and services, and the payment of state and local taxes can be identified as remaining in the State of Washington. The other portions of the revenue impact cannot be isolated geographically with the same degree of defensibility.

Table II-6
Revenue Impact by Category and Economic Sector

PORT OF GRAYS HARBOR	REVENUE (\$1,000)
Surface Transportation	
Rail	\$85,951
Truck	\$9,331
Maritime Services	
Terminal Services	\$19,628
Towing	\$1,613
Pilots	\$1,268
Agents	\$444
Maritime Services	\$625
Marine Construction	\$3,560
Port of Grays Harbor	\$21,068
Totals	\$143,488

Note: Totals may not add due to rounding

2.4.2 Revenue Impacts by Commodity

About \$118 million of the total \$143 million revenue impact of the Port of Grays Harbor marine cargo terminals can be allocated to commodities/commodity types. The remaining \$25 million of revenue cannot be allocated to specific commodities. Table II-7 shows the distribution of the direct revenue impact by commodity. Similar to the direct job impacts by commodity, the handling of autos generates the greatest revenue, followed by grain and liquid bulk.

Table II-7
 Distribution of the Direct Revenue Impact
 Generated by the Port of Grays Harbor Marine Cargo Terminals

COMMODITY	DIRECT REVENUE (\$1,000)	TONNAGE METRIC TONS	REVENUE/ 1,000 TONS
Chips	\$1,130	94,732	\$11.93
Grain	\$69,186	1,360,611	\$50.85
Autos (units)	\$32,513	92,790	\$350.39
Logs	\$5,165	317,390	\$16.27
Liquid Bulk	\$10,241	433,981	\$23.60
Not Allocated	\$25,253		
Total	\$143,488		

Note: Totals may not add due to rounding

Note: Autos in units not tons

On a per ton/unit basis, autos generate the greatest revenue impact per unit, followed by grain. The higher revenue per ton of autos and grain reflects the more labor intensive handling and processing involved with autos as well as the surface transportation revenue generated from moving the autos and grain from the Midwest to the Port of Grays Harbor marine terminals. The majority of the revenue generated by autos and grain is in the surface transportation sector followed by terminal operations.

The following two sections summarize the personal earnings impact and the tax impact created by the Port of Grays Harbor marine terminals.

2.5 Employee Earnings Impact of the Port of Grays Harbor Marine Terminals

The 574 individuals directly employed as a result of activity at the Port of Grays Harbor marine terminals received \$36.2 million in wages and salaries, for an average annual salary of \$63,134. These individuals, in turn, use the earnings to purchase goods and services (both from in-state as well as out-of-state sources), to pay taxes, and for savings. The purchase of goods and services from local sources creates a local re-spending effect known as the personal earnings multiplier effect. This re-spending, or multiplier effect, was estimated using a personal earnings multiplier of 3.198, which indicates that for every \$1 earned in the State, an additional \$2.198 is created due to re-spending of the initial \$1 throughout the state. Using the local personal earnings multiplier, an additional \$79.7 million of income and local consumption are created in the local economy. In addition, the 305 indirectly employed workers receive indirect wages and salaries totaling \$14.9 million. Combining the direct, induced and indirect income impacts, the maritime

activity at the Port of Grays Harbor marine cargo terminals created nearly \$130.8 million of wages and salaries.

The 36,909 related port users earned \$1.6 billion in wages and salaries.

2.6 State and Local Tax Impact

Total state and local tax impacts generated by activity at the Port of Grays Harbor marine cargo terminals is estimated at \$12.3 million. Of the \$12.3 million of state and local taxes generated annually by cargo activity, \$7.5 million was generated at the state level and \$4.8 million at the county and local level.

In addition, \$162.8 million of state and local taxes were created in the related users sector throughout the United States. Of that, \$1.3 million of related state and local taxes were supported in the State of Washington.

3. THE ECONOMIC IMPACT OF COMMERCIAL FISHING ACTIVITY AT WESTPORT MARINA

A second key component of the Port of Grays Harbor maritime operations is the fishing fleet based at the Port of Grays Harbor Westport Marina. *It is to be emphasized that the Washington based fishing fleet uses other terminals and moorings throughout the West Coast and Puget Sound areas. The purpose of this impact analysis is to focus only on the impacts generated by the fleet using Westport Marina. As a result, the impacts of the fishing fleet measured in this report are only a subset of the total economic impacts generated by the fishing industry on the West Coast and the Puget Sound region.*

Westport Marina is owned and operated by the Port of Grays Harbor, and combines commercial fishing moorage and fish processing operations. In 2013, 159 fishing boats were moored at Westport Marina. While tied up at Westport Marina, these vessels make numerous purchases of goods and services from local firms. Such purchases include expenditures for shipyard repair services, painting, electronic equipment, engine and propulsion services, fishing gear, packaging material, fuel, insurance, legal services, and ship stores (food and supplies for the crew). These purchases by the fishing fleet in turn support local jobs with shipyards, ship chandlers, electronics retailers, marine engine specialists, local retail and grocery stores, ship brokers, insurance brokers and hardware stores.

In addition to the direct jobs supported by the purchases by the fishing fleet using the Port of Grays Harbor Westport Marina, crew working the fleet, landside processing and cold storage facilities, and transient vessels off-loading their catch are also included in this impact.

To estimate the economic impacts generated by the commercial fishing activity at Westport Marina the types of fishing vessels moored at the marina were profiled. It is necessary to estimate the economic impacts by type of vessels, since each type of fishing boat has a very different expenditure profile, which is a function of such factors as:

- The size of the boat;
- Designed purpose of the vessel -- a catcher boat which catches fish and delivers the catch to on-shore or off-shore processors, a tender -- which services the fishing fleet with supplies and ship stores, or a factory ship or processor -- which processes fish at sea;
- Type of fishing gear used, such as the use of longlines versus nets versus pots; and
- Where the fishing is done - in local or distant waters.

The fishing fleet based at the Port of Grays Harbor Westport Marina consists of the following types of vessels:



Purse seine vessels, which typically fish for salmon, sardines and herring using a purse seine net;



Trollers, which troll for salmon using lines;



Crab boats, which include crab catchers using crab pots as well as crab processors which process the crab at sea; and



Catcher trawlers, which catch fish by dragging a net.

To estimate the expenditures for each type of vessel, Martin Associates conducted interviews with the various trade associations representing the types of boats operating in the Pacific Northwest. Interviews were also conducted with individual boat operators identified by the trade associations, as well as interviews with fleet managers of processing companies. Furthermore, interviews were conducted with shipyards specializing in providing services to the Grays Harbor based fishing fleet, as well as with chandlers, brokers, hardware and electronics retailers, and engine and propulsion shops.

Interviews with the processors and vessel owners/operators located at Westport Marina were used to estimate the direct impacts of the home-porting activity as well as the shore-side activity that occurs to support these operations. For those directly employed as crew members on these vessels, efforts were made to identify what percent of the crew are full time residents of the region versus those who travel to the Grays Harbor-area for a specific fishery's season.

Exhibit II-1 presents the expenditures in Grays Harbor per vessel for the fleet based at Westport Marina in 2013. These expenditures were then combined with jobs to value of sales ratios in corresponding supplying industries to estimate the number of local direct jobs supported by the vessels based at the Port's marina. Added to these direct jobs are the number of crew employed by the fleet, ship brokers and insurance brokers providing services to the fishermen at the marina and employees with shore-side fish processing.

Exhibit II-1
Annual Expenditures in Grays Harbor by Fishing Vessels at Westport Marina

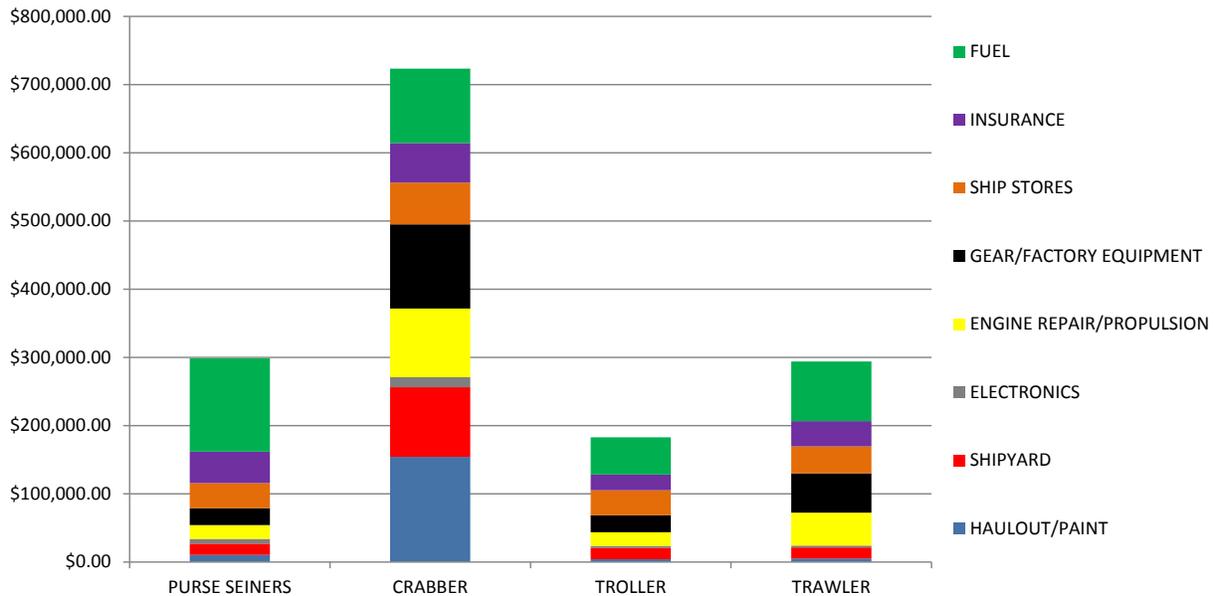


Table II-8 presents the economic impacts generated by the Port of Grays Harbor commercial fishing activity.

Table II-8
Economic Impacts of Port of Grays Harbor Commercial Fishing

PORT OF GRAYS HARBOR	COMMERCIAL FISHING
Jobs	
Direct	1,067
Induced	442
Indirect	<u>543</u>
Total Jobs	2,052
Personal Income (\$1,000)	
Direct	\$38,968
Induced	\$27,894
Indirect	<u>\$27,730</u>
Total	\$94,592
Business Revenue (\$1,000)	\$203,537
Local Purchases (\$1,000)	\$45,522
State and Local Taxes (\$1,000)	\$8,892

Note: Totals may not add due to rounding

*Revenue excludes value of the catch

In 2013, commercial fishing activity at Westport Marina generated the following impacts:

- 1,067 direct jobs, including full-time equivalent jobs with the fishing crew based at the Westport Marina, jobs with local shipyards, chandlers, engine/propulsion repair shops, retail stores, suppliers of fishing gear, insurance brokers, public restaurants, retail stores, and fish processing and cold storage operations.
- As the result of purchases by these 1,067 directly generated jobs, an additional 442 induced jobs are created in the local economy.
- As the result of \$45.5 million of local purchases by the firms located at Westport Marina, an additional 543 indirect jobs were created in the local economy.

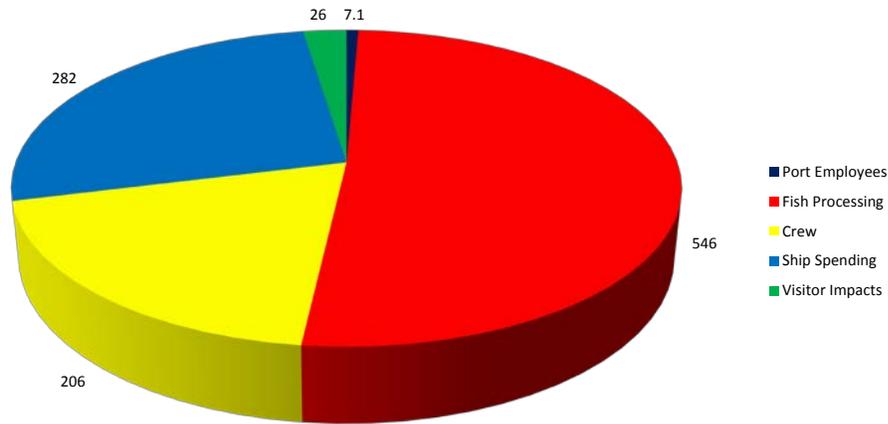
THE 2013 ECONOMIC IMPACT OF THE PORT OF GRAYS HARBOR

- The 1,067 direct job holders earned almost \$39 million in direct wages and salaries. As the result of re-spending of this income, an additional \$27.9 million of personal income and consumption expenditures were generated.⁷ The 543 indirect jobs received \$27.7 million in indirect wages and salaries.
- Local businesses received \$203.5 million of revenue from the purchases by the fishing fleet at Westport Marina, as well as from retail sales. This does not include the landed value of the fish catch.
- State and local governments received \$8.9 million of tax revenue from the activity generated by the Port of Grays Harbor Westport Marina.

Because of the diversity of commercial fishing-associated activity at Westport the distribution of the direct job impacts created by type of activity is shown in Exhibit II-2. As this exhibit demonstrates, the majority of the 1,067 direct jobs are held by shore-side fish processing, followed by crew and support services including local firms supplying support services to the fleet based at Westport Marina, such as jobs with shipyards/engine propulsion companies, ship chandlers and equipment supply firms. The balance of the jobs are with the Port of Grays Harbor staff who oversee Westport Marina operations and visitor impacts generated by transient and visiting fishing vessels using Westport Marina moorage or offloading fish to the processors located in Westport.

⁷ The re-spending/local consumption impact is based on the personal income multiplier for commercial fishing in the State of Washington, as developed by the U.S. Bureau of Economic Analysis, RIMS II.

Exhibit II-2
 Distribution of the Direct Jobs Generated by Port of Grays Harbor Commercial Fishing



The importance of the Port of Grays Harbor to the local and regional economy is underscored by the residency of those holding the 1,067 commercial fishing generated direct jobs. Table II-9 shows the direct jobs by place of residency. As indicated the majority of the commercial fishing jobs are held by residents living in Grays Harbor County, the majority residing in Aberdeen, Hoquiam and Westport.

Table II-9
 Distribution of Direct Jobs by Place of Residence

RESIDENCY	PERCENTAGE	TOTAL
Aberdeen	27%	289
Cosmopolis	3%	35
Hoquiam	18%	196
Elma	4%	40
McCleary	2%	26
Montesano	4%	40
Oakville	2%	26
Ocean Shores	7%	71
Westport	18%	187
Other GH Co.	8%	89
Pacific County	6%	69
Total		1,067

4. THE ECONOMIC IMPACT OF RECREATIONAL BOATING AT WESTPORT MARINA

The third component of the Port of Grays Harbor maritime facilities impact analysis is the economic impacts generated by recreational boating at the Port of Grays Harbor's Westport Marina. The impacts created by the recreational boating activity include the impacts generated by the vessels moored at Westport Marina, the impacts of transient boats that temporarily use the marina, as well as charter fishing operations based at Westport Marina and the associated impacts generated by visiting anglers. To estimate the impacts, Martin Associates developed a profile and inventory of recreational boats, by size and type, at Westport Marina. For example, there were 182 recreational boats that were moored at the Westport Marina, of which 176 were powerboats. In addition to the recreational boats that are moored at each of these facilities, there are a large number of transient boats that tie up at the marina and the passengers typically go ashore for eating, shopping and entertainment. Westport Marina received 1,000 transient visitors in 2013. The marina is also a hub of charter fishing activity in the Pacific Northwest. It is estimated by the Westport Charter Association that 30,000 anglers used charter operations based at Westport Marina in 2013. These impacts and the visitor impacts associated with anglers who spend the night, shop and dine in Westport prior to and/or after a charter trip are also included in the recreational boating impacts.⁸

To develop the impact data, Martin Associates conducted interviews with tenants at Westport Marina, including fishing charter associations and fish charter operators. The results of these surveys were used directly in estimating marina tenant impacts. Interviews with the charter operators identified the percentage of anglers spending a night in Westport as well as average expenditures per angler. Next, typical annual expenditures by type of moored boat and for transient boats were developed from published sources, including:

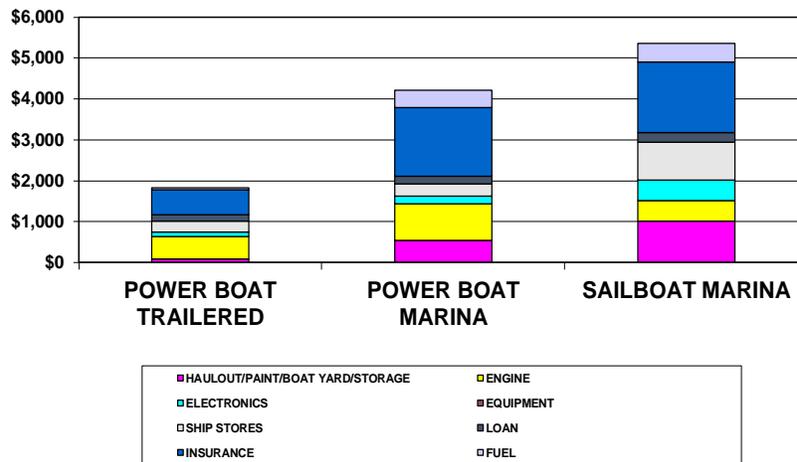
- Boating 2000: A Survey of Boater Spending In Maryland, University of Maryland Sea Grant Program;
- Interviews with Northwest Marine Trade Association;
- Marine Manufacturers Association;
- The Economic Impact of Michigan's Recreational Boating Industry, Michigan State University, Ed Mahoney;
- Marine Operators Association of America; and
- Clean Vessel Act, Michigan Boating Survey, 1994-1995.

Based on interviews with the Northwest Marine Trade Association and the University of Maryland Sea Grant authors, it was concluded that the use of expenditure data per type of boat

⁸ The visitor profile of a "typical angler" was provided to Martin Associates from interviews with charter operators based at Westport Marina.

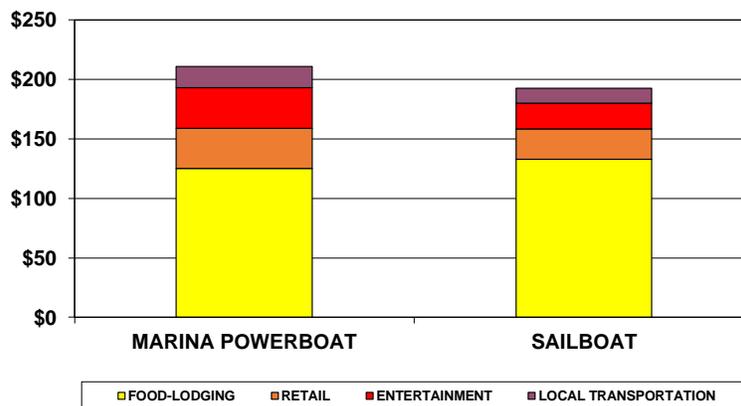
identified in Maryland would be representative of typical annual expenditures per boat in the Pacific Northwest. Exhibit II-3 shows the breakdown of annual purchases by type of boat as developed from the “Boating 2000: A Survey of Boater Spending in Maryland”, Maryland Sea Grant Program, University of Maryland. Exhibit II-4 shows the breakdown for local spending by transient boat operations.

Exhibit II-3
Annual Operating Expenses by Type of Boat



Source: Boating 2000: A Survey of Boater Spending in Maryland, University of Maryland Sea Grant Program – adjusted for current dollars

Exhibit II-4
Local Spending per Trip for Transient Boats



Boating 2000: A Survey of Boater Spending in Maryland, University of Maryland Sea Grant Program – adjusted for current dollars.

These annual purchases per boat are adjusted for current dollars and then multiplied by the number of boats in each category at Westport Marina. The annual purchases by type of boat at Westport Marina are then converted into direct jobs using survey data from suppliers and marina support services firms interviewed by Martin Associates.

The local purchases per trip for transient calls at Westport marina are converted into jobs, income and revenue impacts using a visitor’s industry model.

Indirect impacts are developed from local purchases data supplied by support services providers (from interviews).

Table II-10
Economic Impact of Recreational Boating at the Port of Grays Harbor Westport Marina

PORT OF GRAYS HARBOR	RECREATIONAL BOATING
JOBS	
DIRECT JOBS	137
INDUCED	81
INDIRECT	<u>27</u>
TOTAL	245
INCOME (\$1000)	
DIRECT	\$3,693
RE-SPENDING	\$7,546
INDIRECT	<u>\$704</u>
TOTAL	\$11,943
REVENUE (\$1000)	\$23,548
LOCAL PURCHASES (\$1000)	\$2,099
STATE AND LOCAL TAXES (\$1000)	\$1,123

Note: Totals may not add due to rounding

In 2013, the recreational boating activity at Westport Marina generated the following economic impacts.

- 137 direct jobs were created by recreational boating activity at Westport Marina;
- As a result of purchases by these 137 direct jobs, 81 induced jobs were generated in the local economy;

- As the result of \$2.1 million of local purchases by the firms dependent upon recreational boating activity at Westport Marina, 27 indirect jobs were supported in the local economy;
- The 137 direct jobs holders received nearly \$3.7 million of direct wages and salaries. As the result of the re-spending impact, an additional \$7.5 million of personal income and local consumption expenditures were generated. The indirect jobholders received \$0.7 million of indirect wages and salaries;
- The recreational boating created \$23.5 million of business revenue; and
- \$1.1 million of state and local taxes were generated by Westport Marina recreational activity.

Table II -11 shows direct marina job residency by location. Only a small percentage of the direct job holders reside outside of Grays Harbor County.

Table II -11
Distribution of Direct Jobs by Place of Residence

RESIDENCY	PERCENTAGE	TOTAL
Aberdeen	27%	37
Cosmopolis	3%	4
Hoquiam	18%	25
Elma	4%	5
McCleary	2%	3
Montesano	4%	5
Oakville	2%	3
Ocean Shores	7%	9
Westport	18%	24
Other GH Co.	8%	11
Pacific County	6%	9
Total		137

III. ECONOMIC IMPACT OF THE PORT OF GRAYS HARBOR REAL ESTATE TENANTS

In addition to the marine cargo, commercial fishing, and recreational boating operations of the Port of Grays Harbor, the Port also leases land to non-maritime related tenants. The Port of Grays Harbor operates four real estate sites, the Port Industrial Area, Westport Marina, Satsop Industrial Park and Bowerman Field. Impacts in the real estate analysis include businesses in the Port Industrial Area not associated with marine cargo and businesses located at Westport Marina not associated commercial fishing or recreational boating activity. In the instance where a business is involved in several of the Port's lines of business a percentage related to that particular line of business was applied to corresponding impact analysis. Property at these four sites is leased for light manufacturing, warehousing and distribution, and retail, etc. Essentially these are tenants of the Port of Grays Harbor that are not included in the marine cargo, commercial fishing, or recreational boating analysis.

With respect to the real estate analysis, the impacts created with the real estate tenants of the Port of Grays Harbor are generated by the demand for the goods and services produced by the tenants, and not by activity specific to transportation services provided by the Port of Grays Harbor. In contrast, the capital investments made by the Port in the marine terminals are essential for the existence of cargo operations at the Port of Grays Harbor. As a result, the impacts generated by tenants of the Port's real estate holdings are not as directly dependent upon the Port of Grays Harbor and its investment as are the maritime impacts. Some of these companies are located on Port-owned property as a direct result of efforts by the Port of Grays Harbor to recruit them, and would likely not have located in Aberdeen, Hoquiam, Elma, or Westport otherwise. Other firms would likely have located in the area regardless of the Port's efforts and infrastructure investment.

The impact analysis of the real estate tenants are based on a survey of 80 tenants not included in other port operations. Martin Associates developed a separate real estate impact model to estimate the impacts of these tenants on the Grays Harbor area economy. In addition, the impact model can be used to assess the impacts of potential uses of Port-owned property, including, light manufacturing, warehousing and distribution, retail, etc.

Table III-1 summarizes the economic impacts of the real estate tenants of the Port of Grays Harbor.

Table III-1
Economic Impacts of the Port of Grays Harbor’s Real Estate Tenants

PORT OF GRAYS HARBOR	REAL ESTATE
Jobs	
Direct	950
Induced	440
Indirect	<u>493</u>
Total Jobs	1,882
Personal Income (\$1,000)	
Direct	\$40,005
Induced	\$32,256
Indirect	<u>\$31,866</u>
Total	\$104,127
Business Revenue (\$1,000)	\$193,440
Local Purchases (\$1,000)	\$57,060
State and Local Taxes (\$1,000)	\$9,788

Note: Totals may not add due to rounding

As summarized in Table III-1, the Port of Grays Harbor real estate tenants create the following economic impacts:

- 950 direct jobs are generated by these tenants, and as the result of local purchases by these direct employees, another 440 induced jobs are supported in the Grays Harbor area’s economy. Due to \$57.1 million of local purchases, 493 indirect jobs are supported. This indirect impact reflects the dependency on the local economy supply infrastructure for port tenants;
- The 950 directly employed workers received \$40 million of wages and salaries. As the result of the local purchases by these employees, another \$32.3 million of income and consumption expenditures were generated, resulting in the induced job impact.⁹ The 493

⁹ The re-spending and local consumption impacts are based on the average income multipliers for manufacturing, retail and warehouse and distribution in the State of Washington, as developed by the U.S. Bureau of Economic Analysis, RIMS II.

indirect jobholders received \$31.9 million of indirect wages and salaries for a total personal income impact of \$104 million;

- The Port tenants received \$193.4 million of revenue, of which \$57.1 million was used for local purchases, as identified from the surveys of these tenants. These local purchases supported the 493 local indirect jobs; and
- The Port of Grays Harbor real estate tenants generated \$9.8 million of state and local taxes.

Exhibit III-1 shows the distribution of the 950 direct jobs by location. The Port Industrial Area generates the greatest number of jobs, followed by the Westport Marina and Satsop Industrial Park. Bowerman Field has the fewest number of businesses of all real estate locations and is reflected in the number of direct jobs.

Exhibit III-1
Distribution of Direct Jobs by Business Location

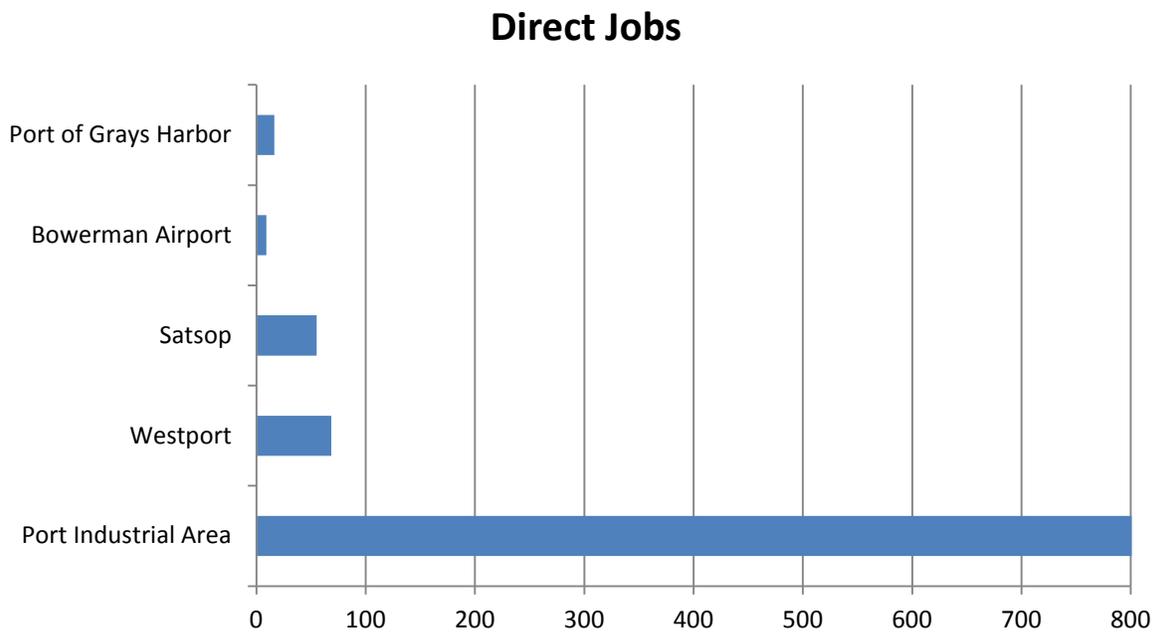


Table III-2 shows the distribution of the 950 direct jobs holders by place of residency. As shown in this table, nearly 85 percent of the direct jobs with the Port of Grays Harbor real estate tenants reside in Grays Harbor County. 33 percent of the direct jobs are held by residents of Aberdeen.

Table III-2
Distribution of Direct Jobs by Place of Residency

RESIDENCY	PERCENTAGE	TOTAL
Aberdeen	33.3%	317
Cosmopolis	2.6%	24
Hoquiam	20.2%	192
Elma	7.0%	66
McCleary	0.8%	8
Montesano	13.5%	128
Oakville	0.6%	6
Ocean Shores	2.3%	22
Westport	3.0%	28
Other GH Co.	1.6%	15
Pacific County	1.9%	18
Mason Co.	0.3%	3
Thurston Co.	9.6%	91
Other WA	3.1%	30
Other US	0.3%	3
Total		950

Note: Totals may not add due to rounding