

II. THE ECONOMIC IMPACTS OF THE SEATTLE SEAPORT

The impacts generated by the Seattle seaport consist of:

- Impacts generated by cargo and vessel activity at marine facilities owned and operated by the Port of Seattle, as well as facilities owned by the Port, but leased to private terminal operators.
- Impacts generated by the fishing fleet at the Port of Seattle-owned Fishermen's Terminal, as well as by fishing vessels homeported at Terminal 91 and the Maritime Industrial Center, including impacts generated by the purchases of supplies and services by the fishing fleet based at these Port of Seattle facilities. Also included are impacts with retail tenants and restaurants located at Fishermen's Terminal, as well as cold storage and fish processing operations at Terminal 91. *It is to be emphasized that the Washington based fishing fleet uses other non-Port of Seattle terminals and moorings throughout the Seattle and Puget Sound areas. The impacts of these vessels are not included in this study.*
- Impacts generated due to cruise vessel operations in the Seattle seaport, including harbor tours and Alaskan cruises.
- Impacts of Recreational Boating at the Port of Seattle owned marinas, including boats moored and transient calls at Shilshole Marina, Bell Harbor, Harbor Island, and Fisherman's Terminal.
- Impacts of Real Estate Tenants on Port of Seattle Property, including offices, retail, light industrial, and tourism (i.e., museums) tenants. These are real estate and industrial tenants of the Port that are not involved in waterborne or airport activity.

In the remainder of this chapter the impacts generated by the Seattle seaport are summarized. First, the impacts generated by all activity (marine cargo, the commercial fishing, cruise service and harbor tours, and recreational boating. Secondly, the impacts generated by type of activity are summarized.

1. THE ECONOMIC IMPACTS OF THE SEATTLE SEAPORT

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

Table II-1
Economic Impacts of Port of Seattle Seaport Activity

	MARINE CARGO	FISHING	MARINAS	CRUISE	HARBOR TOURS	REAL ESTATE	TOTAL
JOBS							
DIRECT JOBS	9,681	5,877	315	530	212	1,312	17,927
INDUCED	5,804	4,184	164	177	119	750	11,198
INDIRECT	2,707	1,774	209	365	56	265	5,376
TOTAL	18,192	11,836	688	1,072	387	2,327	34,501
INCOME (\$1000\$)							
DIRECT	\$480,650	\$392,243	\$11,851	\$13,666	\$11,870	\$62,022	\$972,302
RE-SPENDING	\$471,517	\$384,791	\$11,625	\$13,629	\$11,644	\$60,844	\$954,051
INDIRECT	\$103,173	\$68,990	\$8,254	\$11,636	\$3,355	\$8,558	\$203,966
TOTAL	\$1,055,340	\$846,024	\$31,730	\$38,931	\$26,869	\$131,424	\$2,130,318
REVENUE (\$1000)	\$1,438,323	\$672,008	\$26,109	\$106,898	\$14,151	\$206,893	\$2,464,382
POS REVENUE (\$1000)	\$41,658	\$8,163	\$7,780	\$1,692	\$2	\$28,436	\$87,731
LOCAL PURCHASES (\$1000)	\$251,644	\$113,712	\$11,963	\$17,039	\$9,754	\$27,225	\$431,337
STATE AND LOCAL TAXES (\$1000)	\$104,479	\$83,756	\$3,141	\$3,815	\$2,660	\$13,011	\$210,863

Totals may not add due to rounding

In 2003, marine cargo activity at the private and public marine terminals located in the Seattle seaport, the fishing fleet at Fishermen's Terminal and the vessels homeported at other POS marine terminals, waterborne passenger activity, recreational boating, and real estate activity generated:

- 17,927 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 11,198 induced jobs were generated in the Puget Sound region. As the result of \$431.3 million of local purchases by the firms directly providing services at the Port of Seattle marine facilities, 5,376 indirect jobs with local supplying firms were also supported in the regional economy.
- \$972.3 million of personal income was received directly by those employed directly by activities at the Seattle seaport. As the result of re-spending this income for purchases of goods and services by those directly employed, an additional \$954.1 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 11,198 induced jobs, while another portion is received by the firms providing the goods and services to the individuals directly employed due to seaport activity. In addition, those holding the 5,376 indirect jobs received \$204.0 million of indirect wages and salaries. In total \$2.1 billion of wages and salaries were created by cargo, fishing, passenger, marina and real estate activity at Port of Seattle facilities in 2003.

- The firms directly dependent upon supplying the services to support the seaport activity (those firms employing the 17,927 direct jobs) received \$2.5 billion of business revenue.⁵ Of this revenue, these firms made \$431.3 million of local purchases for goods and services. It is these local purchases that supported 5,376 indirect jobs in the regional economy.
- A total of \$210.9 million state and local taxes were generated by Port of Seattle seaport activity.
- In addition to these direct, induced and indirect impacts, about 148,500 jobs in the State of Washington are related to the marine cargo moving via the public and private marine terminals in the Seattle Harbor. The majority of these jobs are created by international and Alaskan containerized cargo handled at the Port of Seattle's marine terminals.

In the next section, the impacts generated by marine cargo at the Port of Seattle marine cargo terminals seaport are described. Section 3 of this chapter describes the impacts of commercial fishing activity, and section 4 details the impacts of the waterborne passenger activity. The impacts of recreational boating at the Port of Seattle's marinas are described in section 5, while the impact of the Port of Seattle Real Estate tenants is discussed in section 6.

2. THE ECONOMIC IMPACTS OF MARINE CARGO ACTIVITY IN THE SEATTLE SEAPORT

In 2003, a total of 14 million metric tons moved over marine facilities owned by the Port of Seattle. Of the 14 million tons of cargo, international containerized cargo accounted for 7.9 million tons. Containerized cargo moving to and from Alaska over the Port's marine terminals accounted for another 1.9 million tons and about 3.1 million tons of grain were exported via the Port of Seattle-owned grain elevator. Nearly 1 million tons of petroleum products moved via Port of Seattle facilities. Breakbulk cargo and other liquid bulk cargo accounted for another 150,000 tons.

2.1 Overview of the Seaport Impact Structure

The movement of these 14 million metric tons of cargo through the Port of Seattle marine cargo terminals generate economic activity in various business sectors of the state and local economy. Specifically, five distinct economic sectors are involved in providing services to move the cargo through the Port of Seattle marine terminals. These are the:

- Surface Transportation Sector
- Maritime Service Sector
- Port of Seattle
- Banking/Insurance/Law Sector
- Shippers/Consignees Using the Port of Seattle.

⁵ 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 Seattle seaport and the landed value of seafood caught by the fishing fleet based at Port of Seattle Terminals is not included in this business revenue impact measure.

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. Two mainline railroads serve the Seattle seaport, the Burlington Northern/Santa Fe and the Union Pacific/Southern Pacific railroads. In general, the railroads play a key part in the Seattle seaport's role as a leading intermodal port. Furthermore, the railroads are integral in the movement of grain from Midwestern states to the Seattle seaport for export.

Many local and national trucking firms serve the seaport, as do numerous individual owner-operators. Trucking firms are involved in distributing local containerized cargo (both full container loads, as well as less-than-container load (LCL) cargo). Typically, trucks distribute the imported containers moving locally, as well as to Canada, and move export containers originating in the Seattle area to the marine terminals for export. Truck transportation is also the major mode used for moving Alaskan-bound cargo to the marine terminals; trucks are also a primary mode to distribute the dry bulk products. Finally, trucks play a major role in the drayage of containers between rail yards and the marine terminals.

(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
- 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 seaport. 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 Seattle seaport 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, and the cargo passes over privately owned docks.

- 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 Seattle seaport; 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 Puget Sound between Port Angeles and Seattle
 - 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
 - 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 the cargo at the Seattle seaport between the 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, including stuffing and stripping containers
 - 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

- Warehouse operators - store cargo after discharge or prior to loading and consolidate cargo units into shipment lots
 - Container leasing and repair firms - provide containers to steamship lines and shippers/consignees and repair damaged containers
 - Automobile service firms - service new automobiles after they are off-loaded from the vessels and are often terminal operators as well.
- 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 Seattle seaport. U.S. Customs, Bureau of Immigration, U.S. Department of Labor, U.S. Department of Agriculture, and U.S. Department of Commerce employees are involved. In addition, both civilian and military personnel with the U.S. Coast Guard, U.S. Navy and the U.S. Army Corps of Engineers dedicated to the marine cargo moved via Port of Seattle marine terminals are included, as are members of the Military Sealift Command. The city police and fire departments are also included, as are state grain inspectors.

(3) Port of Seattle

This sector includes those individuals employed by the Port of Seattle whose purpose is to oversee port activity. The Port of Seattle leases terminal space to steamship lines and terminal operators and also leases equipment such as container cranes to the terminal operators.

(4) Banking/Insurance/Law Sector

While this sector is not directly involved in cargo or ship operations, it nonetheless does provide services such as financing export/import transactions, insuring cargo and vessels, and providing legal services to the Port of Seattle, businesses and individuals working on the Seattle seaport waterfront.

(5) Shippers/Consignees Using the Port of Seattle Marine Cargo Facilities

Shippers/Consignees included in this category are those shippers and consignees located throughout the State of Washington and particularly King County, 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, Los Angeles/Long Beach, Oakland and Vancouver, BC. It is to be emphasized that these shippers/consignees are not dependent upon the use of the Port of Seattle, since they are users of other ports as well. Since these users are not dependent upon the Port of Seattle, employment with these shippers/consignees is considered port-related, and not port-generated. No revenue, earnings or tax impacts are estimated for the related users.

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, breakbulk cargo requires covered warehouse space, while containerized cargo requires significant investments in cranes and intermodal facilities.

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 and commodity types handled via the Port of Seattle-owned and privately-owned marine terminals in the Seattle seaport:

- International containerized cargo
- Domestic containerized cargo
- Grain
- Breakbulk cargo (forest products and iron and steel imports)
- Petroleum
- Other 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 by commodity cannot be allocated to individual commodities with any degree of accuracy for the banking and insurance sector, shipyards and marine construction and the government job categories.

The impacts, by commodity, are estimated on a per ton basis order 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 Seattle marine terminals are estimated:

- By sector of the local and regional economy, e.g., maritime service sector, surface transportation sector, banking and insurance sector, etc.
- By commodity group, i.e., containerized cargo, breakbulk cargo (including steel and lumber), grain, petroleum, and other liquid bulk
- By the residency of individuals directly employed by the activity at the Port of Seattle marine terminals.

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

The economic impacts generated by marine cargo handled at Port of Seattle marine terminals in Table II-2.

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

		Port of Seattle Cargo Operations
JOBS		
DIRECT		9,681
INDUCED		5,804
INDIRECT		2,707
TOTAL JOBS		18,192
RELATED USERS		
		148,488
PERSONAL INCOME (1,000)		
DIRECT		\$480,650
INDUCED		\$471,517
INDIRECT INCOME		\$103,173
TOTAL INCOME		\$1,055,340
BUSINESS REVENUE (1,000)		
		\$1,438,323
POS REVENUE (1,000)		
		\$41,658
LOCAL PURCHASES (1,000)		
		\$251,644
STATE AND LOCAL TAXES (1,000)		
		\$104,479
FEDERAL TAXES (1,000)		
		\$199,459

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

- 9,681 direct jobs.
- 5,804 induced jobs were supported by the purchases of the 9,681 directly employed individuals.
- 2,707 indirect jobs were generated as a result of \$251.6 million of local purchases by firms directly dependent upon seaport activity at Port of Seattle marine cargo facilities.
- The 9,681 direct employees earned \$480.7 million of wages and salaries, for an average salary of \$49,649 per year.
- Businesses providing services to the Seattle seaport received \$1.4 billion of business revenue.
- A total of \$104.5 million of state and local taxes were generated by seaport activity.
- 148,488 jobs in the state of Washington were related to the cargo moving via the Port of Seattle marine terminals the majority of which were related to international and domestic containerized cargo.

The next section details the employment impacts generated by the Seattle seaport.

2.3 Employment Impacts of the Seattle Seaport

This section details the direct, induced, indirect and related job impacts generated by marine cargo and vessel activity in the Seattle seaport.

The direct employment impacts are first described.

2.3.1 Direct Employment Impacts

The distribution of the 9,681 direct job impacts by economic sector and job category is presented in Table II-3.

Table II-3
Direct Jobs by Detailed Category

			DIRECT JOBS
SURFACE TRANSPORTATION			
	RAIL		1,080
	TRUCK		1,535
MARITIME SERVICES			
	TERMINAL EMPLOYEES		334
	ILWU/DOCKWORKERS		776
	TOWING		59
	PILOTS		22
	AGENTS		136
	SURVEYORS/CHANDLERS		161
	FORWARDERS		281
	WAREHOUSE		982
	GOVERNMENT		1,010
	SHIPYARDS/SHIPREPAIR		2,354
	BARGE		311
	BUNKERS		21
BANKING/INSURANCE/LAW			188
PORT OF SEATTLE			432
TOTALS			9,681

As this table indicates, the largest direct job impact occurs with shipyards and marine construction activity, followed by jobs with the trucking industry serving the Port's marine terminals. Nearly 1,100 direct jobs are generated with the railroads, and include employment at the Seattle rail yards dedicated to intermodal cargo, as well as crew dedicated to moving the cargo to and from the Seattle seaport. More than 1,000 jobs are with federal, state and local government agencies, including security operations, civilian and military employment with the Coast Guard and other federal agencies, as well as employment with City agencies including police and firefighters.

Employment Impacts by Commodity

Table II-4 presents the distribution of the direct job impacts by commodity/handling type. A total of 5,678 direct jobs are allocated to commodities moving over the Port of Seattle marine cargo seaport terminals⁶. The importance of containerized cargo is underscored by the fact that nearly 5,000 direct jobs are supported by international and domestic containerized cargo.

⁶ 4,003 jobs generated by cargo and vessel activity at seaport-wide marine terminals are not allocated to specific commodities. These direct jobs are with government agencies, shipyards and marine construction firms, banking and law firms, and the Port of Seattle.

Table II-4
Direct Jobs by Commodity Group

Commodity	Direct Jobs	1,000 Metric Tons	Jobs/1000 Tons
Containerized Cargo			
International	3,908	7,890.8	0.50
Domestic	1,011	1,900.1	0.53
Grain	324	3,107.7	0.10
Breakbulk	349	117.9	2.96
Petroleum	57	909.9	0.06
Liquid Bulk	28	46.8	0.60
Not Allocated	4,003		
Total	9,681	13,973.3	

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, breakbulk cargo generates the greatest impact, primarily due to the labor intensive handling associated with cargo such as steel and forest products. Domestic containerized cargo generates 0.53 jobs per 1,000 tons, followed by international containerized cargo. The slightly higher job impacts over 1,000 tons supported by domestic cargo reflects the fact that a large share of the domestic containerized cargo moves to and from the Port via truck rather than rail. Because of the less labor intensive handling associated with bulk cargoes, the jobs per 1,000 tons generated by grain, petroleum and other liquid bulk cargoes are relatively small.

Employment Impact by Place of Residency

The importance of the Seattle seaport to the local and regional economy is underscored by the residency of those holding the 9,681 marine cargo generated direct jobs. As Table II-5 indicates, nearly 54 percent of the 9,681 direct jobs generated by seaport activity are held by residents of King County, of which about 26 percent are held by residents of Seattle.

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

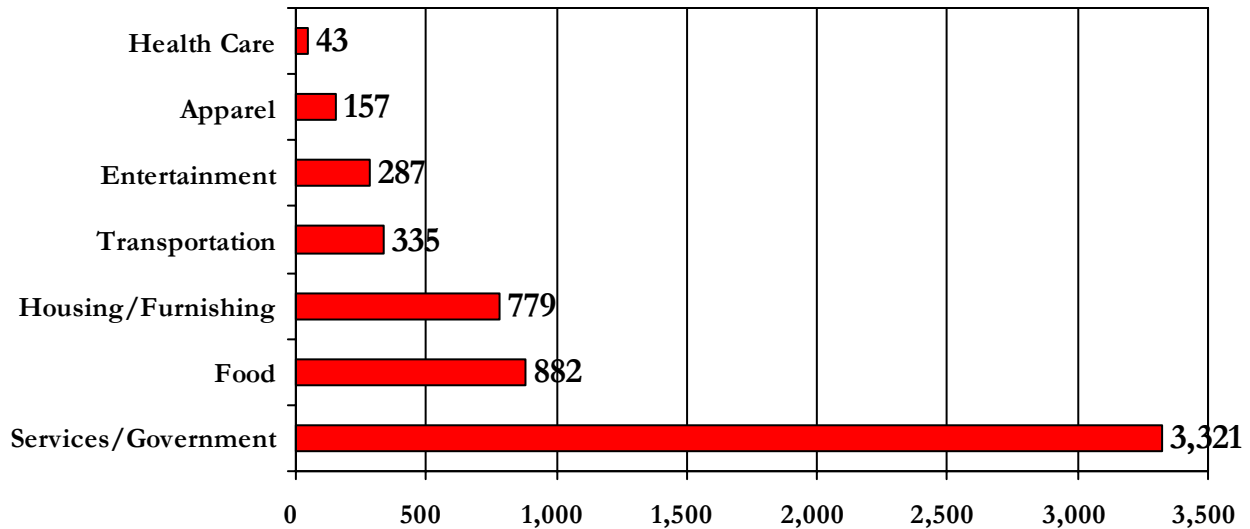
JURISDICTION	DIRECT JOBS	PERCENTAGE
Auburn	195	2.01%
Bellevue	84	0.87%
Bothell	367	3.80%
Burien	100	1.03%
Des Moines	142	1.46%
Enumclaw	20	0.21%
Federal Way	366	3.78%
Issaquah	35	0.36%
Kent	189	1.95%
Kirkland	41	0.43%
Mercer Island	23	0.24%
Normandy Park	33	0.34%
Redmond	17	0.17%
Renton	178	1.84%
Sea-Tac	168	1.74%
Seattle	1,369	14.14%
Tukwila	83	0.86%
Vashon	7	0.07%
Edmonds	66	0.68%
Everett	115	1.19%
Mt. Lake Terrace	35	0.37%
Tacoma	699	7.22%
King County	1,805	18.64%
Pierce County	1,118	11.55%
Snohomish County	533	5.50%
Other WA	1,749	18.07%
Other US	143	1.48%
TOTAL	9,681	100.00%

2.3.2 *Induced Job Impact*

The induced jobs are generated as the result of purchases of goods and services by those 9,681 directly employed as a result of marine cargo and vessel activity at Port of Seattle marine cargo terminals. As the result of the local and regional purchases by these directly employed individuals, 5,804 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 grocery stores.

Exhibit II-1

Distribution of Induced Jobs Generated by the Marine Cargo Activity at the Port of Seattle



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 Seattle 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 Seattle marine terminals. Based on the surveys, a total of \$251.6 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 2,707 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 State of Washington related to cargo moving via the Seattle seaport was developed. It is estimated that 148,488 jobs with regional manufacturing and distribution firms are related to cargo moving via the Port of Seattle marine cargo terminals. It is to be emphasized that these jobs are only related jobs, not jobs dependent upon the Port of Seattle. These jobs are with shippers/consignees and manufacturers located throughout the region who ship via the Port of Seattle terminals, as well as via other ports, including Tacoma, Los Angeles/Long Beach and Oakland. Therefore, jobs with these shippers and consignees cannot be classified as totally dependent upon the existence of the Seattle seaport.

The majority of the related jobs are with containerized cargo shippers and consignees.

2.4 Business Revenue Impact of the Seattle Harbor

In 2003, activity at the Port of Seattle seaport created more than \$1.4 billion of gross receipts to firms supplying cargo or vessel handling services.

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 terminal operations, shipbuilding/repair and maritime construction activity, barge/bunkering operations and trucking. It is to be emphasized that this revenue impact should not be viewed totally as a local or state impact, but instead as a 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

			REVENUE (\$1,000)
SURFACE TRANSPORTATION			
	RAIL		\$463,910
	TRUCK		\$102,951
MARITIME SERVICES			
	TERMINAL EMPLOYEES		\$244,886
	TOWING		\$4,950
	PILOTS		\$4,383
	AGENTS		\$2,110
	SURVEYORS/CHANDLERS		\$43,516
	FORWARDERS		\$75,391
	WAREHOUSE		\$95,057
	SHIPYARDS/SHIPREPAIR		\$196,629
	BARGE/BUNKERS		\$192,873
BANKING/INSURANCE/LAW			\$11,668
TOTALS			\$1,438,323

2.4.2 Revenue Impacts by Commodity

About \$1.2 billion of the total \$1.4 billion revenue impact of the Port of Seattle marine cargo terminals can be allocated to commodities/commodity types. The remaining \$213.6 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 international cargo generates the greatest revenue, followed by domestic cargo, primarily Alaskan cargo and grain exports.

Table II-7
Distribution of the Direct Revenue Impact
Generated By the Port of Seattle Marine Cargo Terminals Seaport

Commodity	Direct Revenue	1,000 Metric Tons	Revenue per Ton
Containerized Cargo			
International	\$759,024	7,890.8	\$96.19
Domestic	\$201,016	1,900.1	\$105.79
Grain	\$128,792	3,107.7	\$41.44
Breakbulk	\$32,191	117.9	\$272.97
Petroleum	\$101,409	909.9	\$111.45
Liquid Bulk	\$2,299	46.8	\$49.12
Not Allocated	\$213,591		
Total	\$1,438,322	13,973.3	

On a per ton basis, breakbulk cargo generates the greatest revenue impact per ton, reflecting the revenue from the more labor intensive handling of the breakbulk cargo. Petroleum generates the second greatest revenue impact per ton, reflecting the bunkering and barge operations, as well as truck distribution associated with petroleum. Domestic containerized cargo (primarily Alaskan cargo) generates the next greatest revenue impact per ton, reflecting the greater involvement of truck transportation and warehousing activity associated with the domestic containerized cargo. Grain generates the lowest revenue impact per ton, since the movement of grain is less labor intensive in its loading process and moves by rail. The majority of the revenue generated by grain and liquid bulk cargoes is in the surface transportation sector, while for breakbulk and containers, the majority of the revenue impacts are concentrated in the maritime services sector, primarily with stevedores and terminal operators, agents, chandlers and warehousing operations.

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

2.5 Employee Earnings Impact of the Seattle Seaport

The 9,681 individuals directly employed as a result of activity at the Port of Seattle marine terminals received \$480.7 million in wages and salaries, for an average annual salary of \$49,649. 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 1.98, which indicates that for every \$1 earned in the state, an additional \$.50 is created due to re-spending of the initial \$1 throughout the state. Using the local personal earnings multiplier, an additional \$471.5 million of income and local consumption are created in the local economy. In addition, the 2,707 indirectly employed workers receive indirect wages and salaries totaling \$103.2 million. Combining the direct, induced and indirect income impacts, the maritime activity at the Port of Seattle marine cargo terminals created nearly \$1.1 billion of wages and salaries.

2.6 State and Local Tax Impact

Total state and local tax impacts generated by activity at the Port of Seattle marine cargo terminals is estimated at \$104.5 million. Of the \$104.5 million of state and local taxes generated annually by seaport activity, \$80.3 million was generated at the state level, \$11.1 million at the county level and \$13.1 million at the local level.

In the following section, the economic impacts generated by the Port of Seattle's Fishermen's Terminal and fishing vessels homeported at other Port facilities are presented.

3. THE ECONOMIC IMPACT OF COMMERCIAL FISHING ACTIVITY AT THE PORT OF SEATTLE'S FISHERMEN'S TERMINAL, TERMINAL 91 AND THE MARITIME INDUSTRIAL CENTER

A second key component of the Port of Seattle seaport operations is the local and distant water fishing fleet based at the Port of Seattle's Fishermen's Terminal and Maritime Industrial Center, and the catcher processor vessels homeported at the Port of Seattle's Terminal 91. *It is to be emphasized that the Washington based fishing fleet uses other terminals and moorings throughout the Seattle and Puget Sound areas. The purpose of this impact analysis is to focus only on the impacts generated by the fleet using Fishermen's Terminal, Terminal 91 and the Maritime Industrial Center. 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 in Seattle and the Puget Sound region.*

Fishermen's Terminal is owned and operated by the Port of Seattle, and combines a working fish terminal with public restaurants, offices, retail shops, and boat yards. In 2003, 370 fishing boats were moored at Fishermen's Terminal. While tied up at Fishermen's Terminal, 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, lawyers, ship brokers, insurance brokers, and hardware stores. Similar purchases are made by the 21 catcher processor vessels that homeport at Terminal 91, and the 5 vessels, primarily factory trawlers moored at the Maritime Industrial Center.

In addition to the direct jobs supported by the purchases by the fishing fleet using the Port of Seattle's Fishermen's Terminal, Terminal 91 and the Maritime Industrial Center, impacts are also generated by the public restaurants, retail stores and offices located at Fishermen's Terminal and the Maritime Industrial Center. Landside processing and cold storage facilities on Terminal 91 are also included in this impact.

To estimate the economic impacts generated by the commercial fishing activity at Fishermen's Terminal, Terminal 91, and the Maritime Industrial Center, the types of fishing vessels moored at each Terminal 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.
- Where the fishing is done - in local or distant waters.

The fishing fleets based at the Port of Seattle's Fishermen's Terminal, Terminal 91, and the Maritime Industrial Center consist of the following types of vessels:



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



Gillnet boats, which use gillnets for salmon and herring fishing



Trollers, which troll for salmon using lines



Longline vessels, which fish for groundfish such as halibut and cod using a hook and line gear



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



Catcher trawlers, which catch fish by dragging a net



Factory trawlers, which catch and process frozen fish at sea



Processors, which are large "mother" vessels that receive fish from catcher boats and process the fish at sea



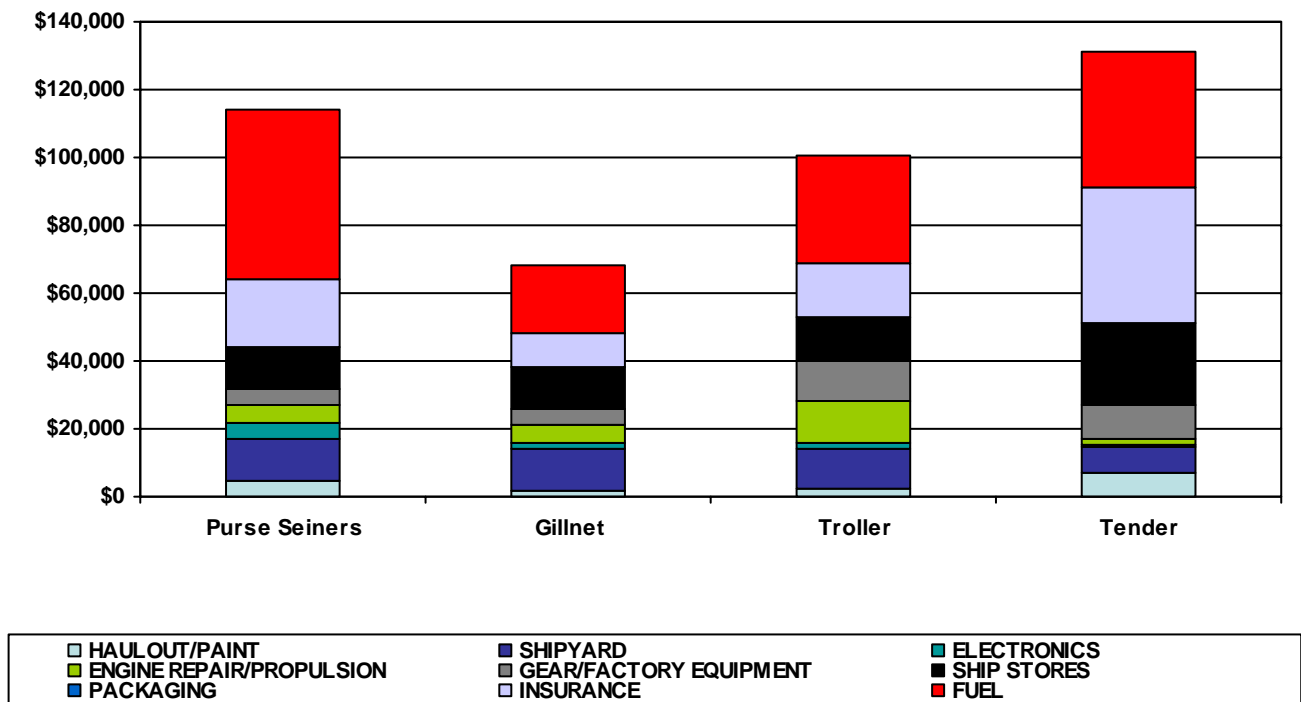
Tenders, which essentially supply boats servicing the various fishing fleets and transporting fish.

To estimate the expenditures for each type of vessel, Martin Associates conducted interviews with the various trade associations representing the types of boats operating from the Port of Seattle terminals. 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 Seattle based fishing fleet, as well as with chandlers, brokers, hardware and electronics retailers, lawyers and engine and propulsion shops.

Interviews with the operators of the catcher processor vessels homeported at Terminal 91 and the factory trawlers at the Maritime Industrial Center were used to estimate the direct impacts of the homeporting activity as well as the shore-side activity that occurs to support these operations.

Exhibit II-2 presents the expenditures in Seattle per vessel for the fleet based at Fishermen's Terminal, Terminal 91, and the Maritime Industrial Center in 2004. 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 marine terminals. Added to these direct jobs are the number of crew employed by the fleet, attorneys, ship brokers, and insurance brokers providing services to the fishermen at the terminals, and employees with the restaurants and retail stores located at Fishermen's Terminal.⁷

Exhibit II-2
Annual Expenditures in Seattle by Fishing Vessels at Fishermen's Terminal
Smaller Boats



⁷ The employees with the cold storage operators and fish processors are included as impacts of the Port of Seattle seaport, and cannot be double counted when combining the economic impacts of the Fishermen's Terminal and the Seattle seaport.

Exhibit II-2 (Continued)
Processors and Trawlers

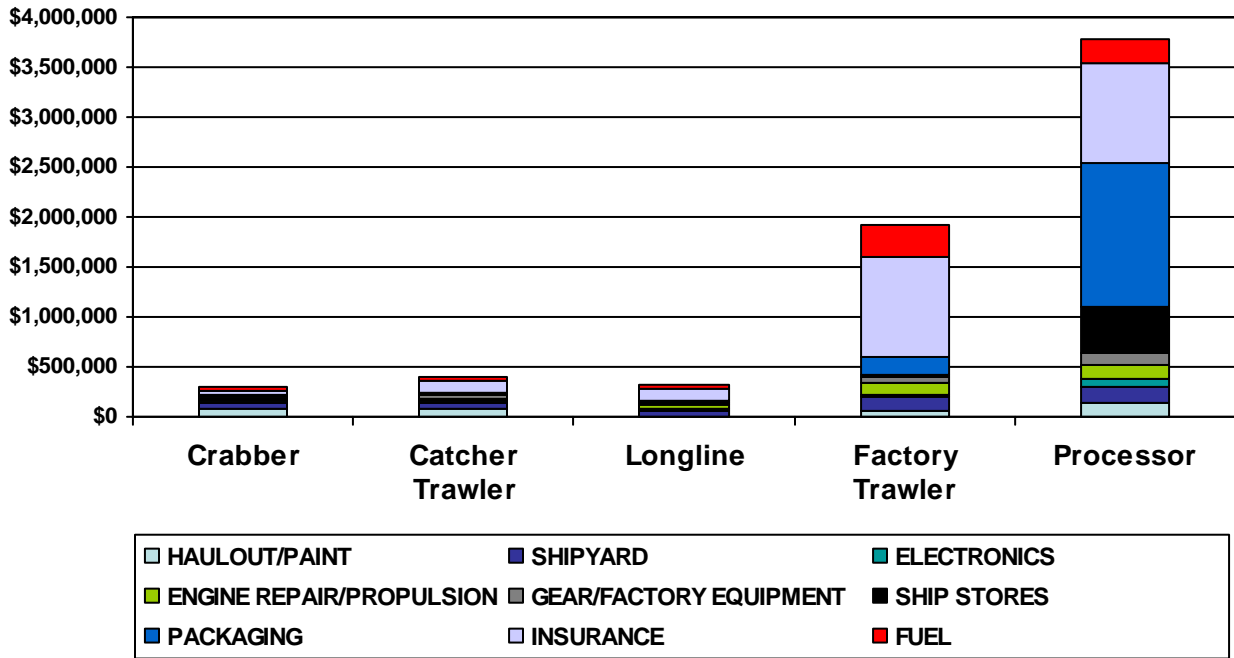


Table II-8 presents the economic impacts generated by the Port of Seattle's commercial fishing activity.

Table II-8
Economic Impacts of Port of Seattle Related Fishing

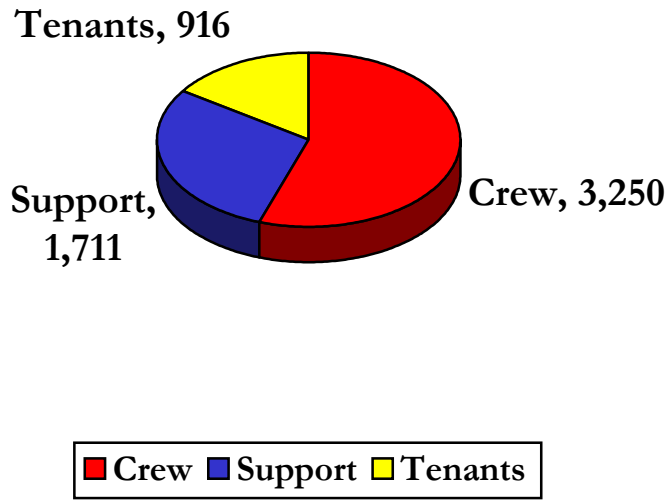
	TERMINAL 91	FISHERMEN'S TERMINAL	MARITIME INDUSTRIAL CENTER	TOTAL FISHING
JOBS				
DIRECT JOBS	3,061	2,526	291	5,877
INDUCED	2,208	1,807	169	4,184
INDIRECT	475	1,191	108	1,774
TOTAL	5,744	5,524	568	11,836
INCOME (1000\$)				
DIRECT	\$208,669	\$169,979	\$13,596	\$392,243
RE-SPENDING	\$204,704	\$166,749	\$13,337	\$384,791
INDIRECT	\$17,666	\$46,926	\$4,398	\$68,990
TOTAL	\$431,039	\$383,654	\$31,331	\$846,024
REVENUE (\$1000)				
	\$480,436	\$179,636	\$11,937	\$672,008
POS REVENUE (\$1000)				
	\$3,924	\$3,841	\$399	\$8,163
LOCAL PURCHASES (\$1000)				
	\$33,573	\$73,736	\$6,404	\$113,712
STATE AND LOCAL TAXES (\$1000)				
	\$42,673	\$37,982	\$3,102	\$83,756

In 2003, fishing activity at Fishermen's Terminal, Terminal 91 and the Maritime Industrial Center generated the following impacts:

- 5,877 direct jobs, including full-time equivalent jobs with the fishing crew based at the Port's Terminals, jobs with local shipyards, chandlers, engine/propulsion repair shops, retail stores, suppliers of fishing gear, insurance brokers, and public restaurants, retail stores, and offices located at Fishermen's Terminal.
- As the result of purchases by these 5,877 directly generated jobs, an additional 4,184 induced jobs are created in the local economy.
- As the result of \$113.7 million of local purchases by the firms located at Fishermen's Terminal, Terminal 91, and the Maritime Industrial Center, an additional 1,774 indirect jobs were created in the local economy.
- The 5,877 direct job holders earned \$392.2 million in direct wages and salaries. As the result of re-spending of this income, an additional \$384.8 million of personal income and consumption expenditures were generated. The 1,774 indirect jobs received \$69.0 million in indirect wages and salaries.
- Local businesses received \$672.0 million of revenue from the purchases by the fishing fleet at Fishermen's Terminal and homeported at Terminal 91 and the Maritime Industrial Center other Port terminals, as well as from retail sales. This does not include the landed value of the fish catch.
- State and local governments received \$83.8 million of tax revenue from the activity generated by the Port of Seattle's Fishermen's Terminal and by the commercial fishing vessels moored at Terminal 91 and the Maritime Industrial Center.

Because of the diversity of commercial fishing-associated activity at Fishermen’s Terminal, Terminal 91 and Maritime Industrial Center, the distribution of the direct job impacts created by type of activity is shown in Exhibit II-3. As this exhibit demonstrates, the majority of the 5,877 direct jobs are held by crewmembers, followed by jobs with local firms supplying support services to the fleet based at the Port of Seattle terminals, such as jobs with shipyards/engine propulsion companies, ship chandlers and equipment supply firms and insurance brokers and lawyers. The balance of the jobs are with the retail, restaurant, office and landside fish processing services at the relevant terminals.

Exhibit II-3
Distribution of the Direct Jobs Generated by Port of Seattle Related Fishing



4. THE ECONOMIC IMPACT OF PASSENGER TRANSPORTATION OPERATIONS AT THE PORT OF SEATTLE MARINE TERMINALS

The third component of the economic impacts generated by the Port of Seattle seaport is the economic impact of waterborne passenger transportation at the Port of Seattle marine facilities. This component includes the impacts generated by cruise service and harbor tours.

The economic impacts generated by the Seattle seaport passenger activity are estimated in terms of:

- Direct, induced and indirect jobs
- Personal income, including the re-spending impact (personal income and consumption expenditures)
- Business revenue received by the businesses providing services to the cruise lines and harbor tours calling the Port of Seattle.
- State and local taxes generated from passenger operations in the Seattle seaport.

To identify these impacts, interviews were held with cruise and tour boat operators to identify Seattle-based impacts, as well as the potential to initiate/expand cruise service in Seattle. A separate computer model has been developed by Martin Associates to measure the impacts of existing cruise and tour boat operations based at the Port of Seattle facilities.

4.1 Impacts of Cruise Service Activity

In 2003, the Port of Seattle hosted 99 calls by cruise lines carrying 345,000 passengers. These 99 port calls included 86 homeport calls and 13 ports of call. For the vessels homeporting, passengers embark and disembark to begin and end their cruise, and the vessel often takes on supplies. For those vessels making port of calls, passengers embark and disembark for day visits in Seattle, but the vessels typically do not take on supplies. Each of these types of calls creates economic impacts in the local economy.

4.1.1. Economic Impact of Homeport Cruise Calls

Homeport cruise activity at the Port of Seattle affects two sectors of the local and regional economy. These sectors are the:

- Maritime Service Sector
- Visitor Industry Sector

The maritime service sector includes those firms that provide services to the cruise vessels while in port, such as:

- Chandlers and other local retailers and wholesalers that provide ship stores and provisions to be used by passengers and crew. These suppliers include Sysco, Dairy Valley, Pacific Seafood, United Electric, Charlie's Produce, Flower Masters, Harbor Ship Supply, International Paint and Unitor to name a few.
- Towing services that assist vessels in docking and undocking (a majority of the new cruise vessels are equipped with bow and stern thrusters and the need for tug assistance is minimized)
- Pilots, assist the vessels navigating the channels from the open sea to the docks
- Stevedoring services performed by members of the International Longshore and Warehouse Union (ILWU) and other dockworkers including handling baggage and ship supplies
- Linehandling services that are required when a vessel enters port
- Bunkering firms that provide fuel to the vessels
- Landside tours and other charters
- Parking services for the passengers driving from their place of residence to embark on the cruise
- Ground transfers from the airport and hotels to the ship prior to and after the cruise.

The visitor industry sector consists of firms providing services to the passengers and crew of the current cruises prior to and after the cruise. Included in this category are:

- Hotels and motels
- Restaurants/bars
- Retail goods
- Entertainment establishments such as ground tours, movies, amusements, etc.

To estimate these impacts, the cruise lines currently calling the Port of Seattle were interviewed. The purpose of these interviews was to determine the amount of purchases, by type of service, made by each vessel call and type of service. Types of purchases include vessel purchases for:

- Ship stores
- Bunkers
- Water
- Liquor
- Flowers
- Pilots
- Tugs
- Local advertising
- Local travel agents
- Linehandling
- Tendering services
- Stevedoring
- Retail items
- Maintenance and repair
- Trash disposal
- Laundry
- Crew allowance
- Wharfage and dockage

Cruise ship expenditure data was provided by Princess Cruises, Holland America Line and Norwegian Cruise Line. The results of these interviews were used to develop a typical ship disbursement account profile. Associated with each vessel expenditure category are jobs to sales ratios with the types of firms providing the goods and services to a homeported vessel. These jobs to sales ratios as well as personal income levels were developed from the U.S. Bureau of Census data sources for the Seattle Metropolitan Area. The total annual expenditures, by type of service, is multiplied by the corresponding jobs to sales ratios to estimate the total direct job impacts in the maritime service sector, by type of service.

Martin Associates surveyed 35 local vendors to determine employment levels and dependency on the cruise service at Seattle. The vendors were also queried as to the origin of the goods (produce, liquor, flowers, and retail items) that are loaded onto the vessels at port. In general the cruise service at the Port of Seattle had minimum impact on employment levels with these firms, typically accounting for less than 5 percent of annual business with these firms. In addition, the survey of these firms indicated that the majority of the food and goods originate from all parts of the United States. With respect to produce, about 20 percent of the produce loaded on cruise vessels is locally grown, while the majority is purchased from distributors sourcing nationwide. Dairy products are typically purchased from local suppliers, while flowers are supplied from Washington and British Columbia suppliers. Other suppliers of meat and cheese are located in Florida and California.

The revenue impacts are estimated directly from the expenditure profiles provided by the carriers. Direct income is estimated from the average annual salaries developed by type of firm, from the interviews.

The jobs generated in the Visitor Industry/Tourism Sector (for example, hotels, restaurants, etc.) are estimated based on a survey of 600 passengers conducted by Martin Associates and Maritime Strategies. Two sets of surveys were conducted. The first set of passenger surveys was conducted on August 16th and 17th, 2003. While the second set was conducted on September 6th and 7th, 2003. In addition, a survey of 136 crewmembers was conducted to determine local purchases while the vessel is in port. Of particular interest is the total number of passengers per vessel call, the percent of those passengers arriving by air as well as the percent that stay in local hotels prior to or after the homeport cruise, as well as the purchases made by the passengers in the local economy. These purchases include expenditures on hotels for embarking and debarking passengers, as well as local purchases for retail items, food and local landside tours. The average expenditures on hotel lodging and nights stayed pre- and post cruise, as well as food and in-town cabs, are entered into the visitor industry model. The key findings indicate that on average, 73.9% of the passengers arrive via air, and about 73% spend about 1.6 nights in Seattle area hotels. The typical cruise passenger spends about \$63 per night per person in local hotels. For those passengers making local purchases on specific items, on average each passenger spends \$27 in restaurants, \$26 on retail purchases, \$34 on local transportation and rental cars and \$30 on entertainment and land-side tours. Also included in the visitor industry impacts are the impacts created by crew spending. On average, each crewmember spends an average of \$120 per call at Seattle, the majority of which is spent on restaurant and retail purchases.

Martin Associates has developed the Seattle-Tacoma economic impact model for the Port of Seattle, and this model is used to estimate the economic impact on the cruise passengers arriving for the cruise via Seattle-Tacoma International Airport. Using these purchase patterns, and the appropriate jobs to sales ratios and personal income measures for the supplying firms, the visitor industry model calculates the direct jobs, induced and indirect impacts that are generated by the homeport cruise service at the Port of Seattle.

4.1.2 Port of Call Economic Impacts

Economic impacts created by a port of call, rather than a homeport call, generate impacts primarily on the landside consisting of tour packages and individual sightseeing excursions. To estimate these impacts, only passenger purchases for local retail/restaurants and tour packages were included in the impact analysis. Interviews with local tour operators provided an estimate of the share of passengers that typically purchase land-side tours while on a port of call at Seattle. These local purchases were converted into direct, induced and indirect impacts using the visitor industry methodology described above. In addition to the passenger expenditures, the vessels also spend money for linehandling, pilots, tender services, and in some cases miscellaneous emergency purchases. These purchases are also included in the port of call impact analysis.

4.1.3 Cruise Service Impact Model

In order to assess the economic impacts of potential cruise business at the Port of Seattle, Martin Associates developed a spreadsheet framework, which can be used to assess the impacts of changes in such factors as:

- Number of cruise vessel calls
- Number of passengers
- Passenger characteristics
 - Local expenditures
 - Local residents versus tourists
 - Length of time and where stayed after disembarking
- Different types of cruise service, including
 - Homeport
 - Port of Call
- Size of crew
- Size of vessel

This model will estimate the impacts of current and potential cruise operations at the Port of Seattle.

4.1.4 Economic Impacts of the Cruise Services at the Port of Seattle

Cruise operations for the 2003 cruise season at the Port of Seattle created the economic impacts summarized in Table II-9.

Table II-9
Economic Impact of Cruise Service at the Port of Seattle
(2003)

	Total Cruise	Cruise Visitors Only	Airport	Total Seaport and Airport
JOBS				
DIRECT	439	308	91	530
INDUCED	156	110	21	177
INDIRECT	<u>264</u>	<u>183</u>	<u>101</u>	<u>365</u>
TOTAL	859	601	213	1,072
INCOME (\$1,000)				
DIRECT	\$10,490	\$4,674	\$3,176	\$13,666
INDUCED	\$10,290	\$4,585	\$3,339	\$13,629
INDIRECT	<u>\$8,699</u>	<u>\$6,182</u>	<u>\$2,937</u>	<u>\$11,636</u>
TOTAL INCOME	\$29,479	\$15,441	\$9,452	\$38,931
REVENUE (\$1,000)				
REVENUE (\$1,000)	\$55,889	\$25,827	\$51,009	\$106,898
OTHER PURCHASES (By Firms)	<u>\$10,963</u>	<u>\$7,177</u>	<u>\$6,076</u>	<u>\$17,039</u>
TOTAL REVENUE	\$66,852	\$33,005	\$57,085	\$123,937
STATE/LOCAL TAX (\$1,000)	\$2,889	\$907	\$926	\$3,815

The cruise vessel activity at the Port of Seattle in 2003 supported the following economic impacts:

1,072 direct, induced and indirect jobs were created in the State of Washington due to the cruise activity at the Port of Seattle. Of the 1,072 jobs:

- 859 were generated by the cruise operations, of which 601 were supported in the visitors industry
- 213 direct, induced and indirect jobs were created by the passenger activity at Seattle-Tacoma International Airport
- Furthermore, of the 1,072 jobs:
- 530 were direct jobs
- 177 were induced jobs
- 365 were indirect jobs

Nearly \$39 million of local wages and salaries were generated by the cruise activity at the Port of Seattle in 2003:

- \$13.7 million of direct wages and salaries were generated and received by the 530 directly generated jobs, for an average salary of \$25,840 per direct employee.
- As the result of re-spending, another \$13.6 million of re-spending and consumption purchases were generated and supported the 177 induced jobs.
- The 365 indirect job holders received \$11.6 million of wages and salaries.

The 2003 cruise activity at the Port of Seattle generated \$124 million of business revenue to local businesses supplying services to the cruise vessels, passengers and crew as well as to the airport-related businesses at Seattle-Tacoma:

- Of the \$106.9 million of direct business revenue generated by the cruise activity in 2003, the vessel expenditures generated:
- \$55.9 million of revenue to local businesses, of which the visitors industry received \$25.8 million
- \$51.0 million was generated at the airport by the cruise passengers using Seattle-Tacoma International Airport
- An additional \$17.0 million of local purchases were made by those firms dependent upon the cruise business at the Port of Seattle during the 2003 cruise season.

\$3.8 million of state and local taxes were generated by the cruise activity at the Port of Seattle in 2003.

4.2 Harbor Tours

Based on the results of interviews, the impacts of the tourboat operations based at Port of Seattle facilities were estimated and are presented in Table II-10. Also included in this table are impacts generated by passenger activity using Port of Seattle facilities.

Table II-10
Economic Impacts of Harbor Cruises and Tourboat Operations based at the Port of Seattle.

		IMPACTS
JOBS		
	DIRECT JOBS	212
	INDUCED	119
	INDIRECT	56
	TOTAL	387
INCOME (1000\$)		
	DIRECT	\$11,870
	RE-SPENDING	\$11,644
	INDIRECT	\$3,355
	TOTAL	\$26,869
	REVENUE (\$1000)	\$14,151
	POS REVENUE (\$1000)	\$2
	LOCAL PURCHASES (\$1000)	\$9,754
	STATE AND LOCAL TAXES (\$1000)	\$2,660

As this table indicates, harbor cruises and tourboat activity generated the following impacts:

- 212 direct jobs
- As a result of purchases by these 212 direct jobs, 119 induced jobs were generated in the local economy.
- As the result of \$9.8 million of local purchases by the firms dependent upon harbor cruises and tourboat operations at the Port of Seattle facilities, 56 indirect jobs were supported in the local economy.
- The 212 direct jobs received \$11.9 million of direct wages and salaries. As the result of the re-spending impact, an additional \$11.6 million of personal income and local consumption expenditures were generated. The indirect jobholders received \$3.4 million of indirect wages and salaries.
- The tour boat operators received \$14.2 million of business revenue from the operations at Port of Seattle facilities.
- \$2.7 million of state and local taxes were generated by the harbor cruises and tourboat operations.

5. THE ECONOMIC IMPACT OF RECREATIONAL BOATING AT THE PORT OF SEATTLE MARINAS

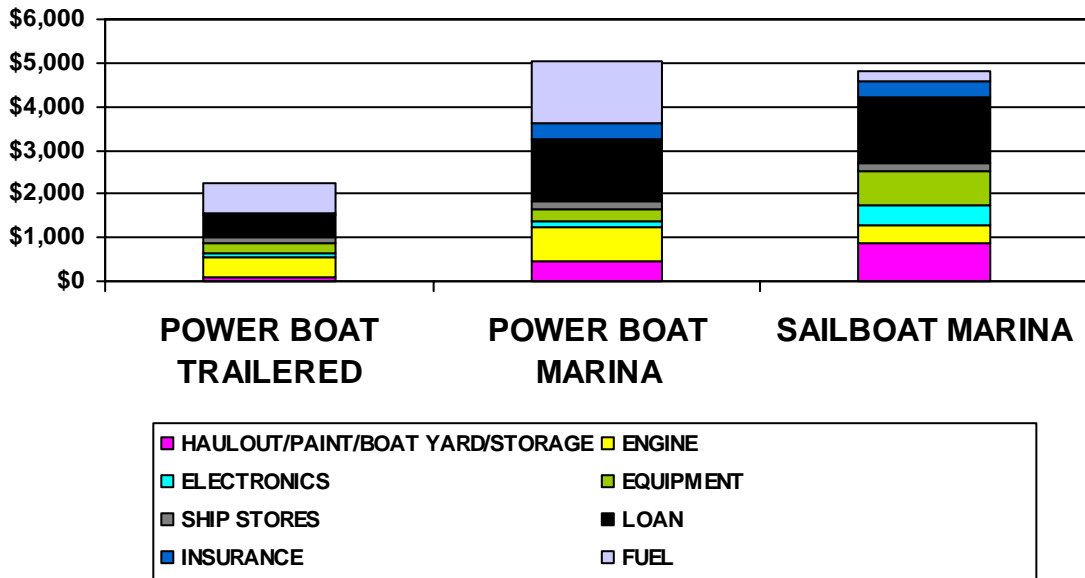
The fourth component of the Port of Seattle Seaport impact analysis is the economic impact generated by recreational boating at the Port of Seattle owned marinas – Shilshole Bay, Harbor Island, Fishermen’s Terminal and Bell Harbor. The impacts created by the recreational boating activity include the impacts generated by the vessels moored at each of these marinas, as well as the impacts of transient boats that temporarily use these marinas. To estimate the impacts, Martin Associates developed a profile and inventory of recreational boats, by size and type, at each Port of Seattle marina. For example, there were nearly 1,500 recreational boats that were moored at the Port’s Shilshole Marina, of which 1,252 were sail boats. Twenty-five boats were moored at Bell Harbor, 99 boats were moored at Harbor Island, and 169 recreational boats were moored at Fishermen’s Terminal. 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 these marinas and the passengers typically go ashore for eating, shopping and entertainment. For example, at Bell Harbor, 5,114 transient boats called this marina, while 6,485 transient boats were recorded at Shilshole Marina in 2003.

To develop the impact data, Martin Associates conducted interviews with tenants at each marina, including yacht clubs, sailing schools, restaurants, and retail stores. The results of these surveys were used directly in estimating marina tenant impacts. 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
- Clean Vessel Act, Michigan Boating Survey, 1994-1995

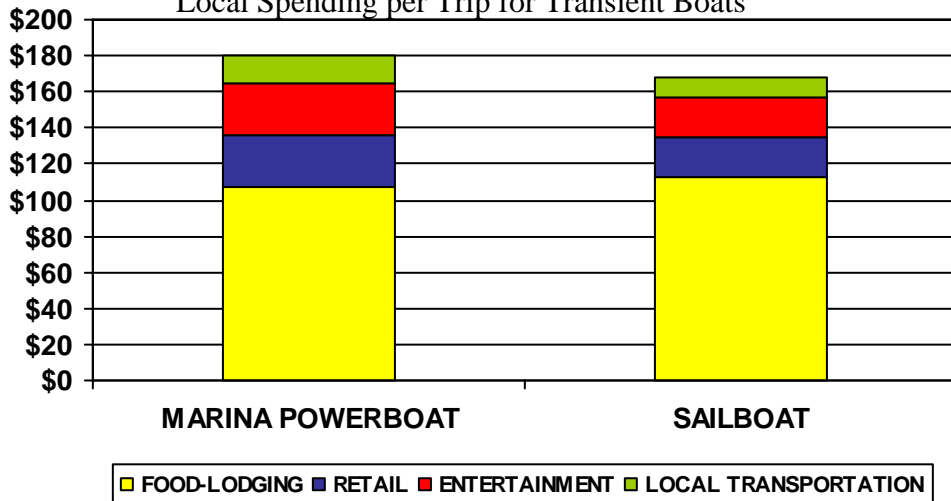
Based on interviews with the Northwest Marine Trade Association and the University of Maryland Sea Grant authors, it was concluded that the use of expenditure data per type of boat identified in Maryland would be representative of typical annual expenditures per boat in Puget Sound. Exhibit II-4 shows 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-5 shows the breakdown for local spending by transient boat operations.

Exhibit II-4
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-5
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 multiplied by the number of boats in each category at each of the Port of Seattle marinas. The annual purchases by type of boat at each 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 each marina are converted into jobs, income and revenue impacts using a visitor's industry model developed for the cruise industry impact analysis, as well as for Sea-Tac International Airport.

Indirect impacts are developed from local purchases data supplied by support services providers (from interviews) and upland tenants (restaurants, retail, boat yard, sailing schools, etc.)

Table II-11
Economic Impact of Recreational Boating at the Port of Seattle Marinas

SUMMARY		SHILSHOLE	BELL HARBOR	FISHERMEN'S	HARBOR ISLAND	TOTAL
JOBS						
	DIRECT JOBS	271	23	13	9	315
	INDUCED	142	10	7	5	164
	INDIRECT	176	12	14	8	209
	TOTAL	589	44	34	21	688
INCOME (\$1000)						
	DIRECT	\$10,340	\$532	\$586	\$392	\$11,851
	RE-SPENDING	\$10,144	\$521	\$575	\$385	\$11,625
	INDIRECT	\$6,992	\$396	\$544	\$322	\$8,254
	TOTAL	\$27,477	\$1,449	\$1,706	\$1,100	\$31,730
REVENUE (\$1000)						
		\$23,748	\$1,032	\$840	\$489	\$26,109
POS REVENUE \$(1000)						
		\$6,952	\$288	\$144	\$396	\$7,780
LOCAL PURCHASES (\$1000)						
		\$10,232	\$482	\$785	\$463	\$11,963
STATE AND LOCAL TAXES (\$1000)						
		\$2,720	\$143	\$169	\$109	\$3,141

In 2003, the recreational boating activity at the Port of Seattle generated the following economic impacts.

- 315 direct jobs were created by recreational boating activity at the Port of Seattle marinas.
- As a result of purchases by these 315 direct jobs, 164 induced jobs were generated in the local economy.
- As the result of nearly \$12 million of local purchases by the firms dependent upon recreational boating activity at Port of Seattle marinas, 209 indirect jobs were supported in the local economy.
- The 315 direct jobs holders received \$11.9 million of direct wages and salaries. As the result of the re-spending impact, an additional \$11.6 million of personal income and local consumption expenditures were generated. The indirect jobholders received \$8.3 million of indirect wages and salaries.

- The tour boat operators received \$26.1 million of business revenue from the marina operations at Port of Seattle facilities.
- \$3.1 million of state and local taxes were generated by the Port of Seattle marina activity.

6. ECONOMIC IMPACT OF THE PORT OF SEATTLE REAL ESTATE TENANTS

In addition to the marine cargo, commercial fishing, passenger, and recreational boating operations of the Port of Seattle Seaport Division, the Port also leases land to non-maritime related tenants. This property is leased for office and conference space, retail space, restaurants, and the Odyssey Maritime Discovery Center. Essentially these are tenants of the Port of Seattle that are not included in cargo, fishing, recreational boating, or cruise analysis.

With respect to the real estate analysis, the impacts created with the real estate tenants of the Port of Seattle 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 Seattle. In contrast, the capital investments made by the Port in the marine terminals and airport facilities are essential for the existence of maritime operations and commercial aviation operations in Seattle. As a result, the impacts generated by tenants of the Port's real estate holdings are not as directly dependent upon the Port of Seattle and its investment as are the seaport and airport impacts. Some of these companies are located on Port-owned property as a direct result of efforts by the Port of Seattle to recruit them, and would likely not have located in Seattle otherwise. Other firms would likely have located in Seattle regardless of the Port's efforts and infrastructure investment.

The impact analysis of the real estate tenants are based on a survey of 144 tenants not included in other Seaport operations. Martin Associates developed a separate real estate impact model to estimate the impacts of these tenants on the Seattle economy. In addition, the impact model can be used to assess the impacts of potential uses of Port-owned property, including, office, restaurant, retail and industrial uses.

Table II-12 summarizes the economic impacts of the real estate tenants of the Port of Seattle.

Table II-12
Economic Impacts of the Port of Seattle’s Real Estate Tenants

REAL ESTATE IMPACTS	
JOB	
DIRECT	1,312
INDUCED	750
INDIRECT	<u>265</u>
TOTAL JOBS	2,327
PERSONAL INCOME (1,000)	
DIRECT	\$62,022
RE-SPENDING	\$60,844
INDIRECT INCOME	<u>\$8,558</u>
TOTAL INCOME	\$131,424
BUSINESS REVENUE (1,000)	
	\$206,893
POS REVENUE (1,000)	
	\$28,436
LOCAL PURCHASES (1,000)	
	\$27,225
STATE AND LOCAL TAXES (1,000)	
	\$13,011

As summarized in Table II-14, the Port of Seattle Seaport real estate tenants create the following economic impacts:

- 1,312 direct jobs are generated by these tenants, and as the result of local purchases by these direct employees, another 750 induced jobs are supported in the Seattle area’s economy. Due to \$27.2 million of local purchases, 265 indirect jobs are supported. This indirect impact reflects the dependency on the local economy supply infrastructure for port tenants such as business offices. In addition to these 1,312 direct jobs, there are 2,217 direct jobs with industrial and commercial properties that are included in other categories of the Seaport impact analysis, such as with the cargo, fishing, and recreational boating operations.
- The 1,312 directly employed workers received \$62.0 million of wages and salaries. As the result of the local purchases by these employees, another \$60.8 million of income and consumption expenditures were generated, resulting in the induced job impact. The 265 indirect jobholders received \$8.6 million of indirect wages and salaries for a total personal income impact of \$131.4 million. In addition to the \$131.4 million, an additional \$206.5 million of total personal income associated with industrial and commercial properties are included in the impacts created by other Seaport operations.

- The Port tenants received \$206.9 million of revenue, of which \$27.2 million was used for local purchases, as identified from the surveys of these tenants. These local purchases supported the 265 local indirect jobs. In addition to these 265 indirect jobs, there are 390 indirect jobs with industrial and commercial properties that are included in other categories of the Seaport impact analysis, such as with the cargo, fishing, and recreational boating operations.
- The Port of Seattle Seaport Real Estate Tenants generated \$13.0 million of state and local taxes. In addition to the \$13.0 million of state and local taxes, an additional \$20.4 million of state and local taxes associated with industrial and commercial properties are included in the impacts created by other Seaport operations

Exhibit II-6 shows the distribution of the 1,312 direct jobs by type of business. Office tenants generate the greatest number of jobs, followed by the industrial/manufacturing tenant category.

Exhibit II-6
Distribution of Direct Jobs by Type of Business

