



Port of Olympia
2009 Economic Impact Study

Following is a brief summary of the key economic impact elements that are described in detail in the Port of Olympia's, 35-page 2009 study, *The Economic Impact of the Port of Olympia*, prepared by Martin and Associates, January 24, 2011:

7,249 total direct, induced and indirect jobs
\$350.7 million in total wages and salaries and local consumption expenditures
\$1.1 billion in revenue was generated by local businesses
\$439.7 million in local purchases
\$31.2 million of state and local tax revenue
\$94.3 million of Federal tax revenue
83% of the direct jobs are held by residents of Thurston County
\$10.2 million invested by the Port in fixed assets and infrastructure during and despite the economic conditions existing in 2009

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THE ECONOMIC IMPACT OF THE PORT OF OLYMPIA

Presented to:



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Prepared by:

MARTIN ASSOCIATES

941 WHEATLAND AVENUE, SUITE 203

LANCASTER, PA 17603

www.martinassoc.net

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EXECUTIVE SUMMARY

The Washington State Ports have been given a specific economic development mission as part of the Revised Code of Washington. Since the Port of Olympia's charter in 1922, the Port has acted in concert with this State directive to stimulate economic development and provide the economic catalyst to grow jobs and economic activity. The Port of Olympia provided capital investment in marine terminal infrastructure necessary to handle marine cargo and ocean going vessels; the Port invested in airport infrastructure to provide runway and hangar space to general aviation aircraft operations and provided infrastructure for the future development of commercial aviation service; and the Port invested in commercial marina development ensuring mooring space for the areas recreational boating community. In addition to these transportation infrastructure investments, the Port also engaged in the development of infrastructure that promotes economic development in Thurston County and the City of Olympia. The ports Peninsula properties and the NewMarket Industrial Campus provide real estate sites with developed road and utility infrastructure for companies seeking a Pacific Northwest presence. With the location of industry and real estate tenants, the Port's infrastructure investment through municipal non-taxable bonds along with state and Federal grants, provides an important economic development role within Thurston County. It is the purpose of this study to quantify the economic activity that occurs on Port-owned property, and as a result of the significant capital investment that has occurred since 1922. Over the 7 year period from January, 2003 to December, 2009 the Port invested \$33.3 million in Capital Assets net of depreciation. These investments in capital infrastructure resulted in significant economic development in the City and within Thurston County and the State of Washington.

The Port of Olympia retained Martin Associates to measure the local and regional economic impacts occurring at the Port of Olympia properties. The Port of Olympia operates four specific business units:

- The Marine Terminal which handles a variety of marine cargo including logs, wind energy equipment and project cargo.
- Swantown Marina and Boatworks includes the Port owned and operated marina and the Boatworks operation for repair and maintenance of small recreational craft.
- Olympia Regional Airport and NewMarket Industrial Campus. The Olympia Regional Airport is currently a general aviation facility offering runway and hangar space to corporate aviation tenants as well as private aircraft owners. The NewMarket Industrial Campus in Tumwater and contiguous to the airport serves as the location of numerous Port tenants, ranging from light industrial tenants, office space and restaurants.
- Peninsula Properties is home to numerous Port tenants that include restaurants, and offices as well as retail stores. There is also a City run farmers market on Port property.

Martin Associates estimated the economic impacts for the marine cargo, aviation and commercial/industrial activity within the Port's four lines of businesses as well as capital

investment conducted by the Port. It is important to stress that the impacts measured in this study are the current jobs, income and taxes generated by tenants of the Port's properties, as well as the commercial maritime cargo activity at the Port of Olympia's marine terminal. It is recognized that these are not necessarily net economic impacts in the sense that if the Port were to disappear, these jobs would be lost from the economy. For the marine terminal impacts, these impacts could be lost to the region as the commercial marine cargo activity would be relocated to another port, either in Washington State or perhaps in Oregon or Northern California. With respect to the real estate tenants, the Port's investment in highway and utility infrastructure on Port property provided site-ready, easily accessible options for commercial and light industrial tenants that may have located elsewhere had such infrastructure development not been provided by the Port. Since the Port has access to lower financing costs than commercial developers, it is likely, but not provable that some local businesses may not have started as privately sponsored development might not have been profitable with higher financing costs.

The methodology used in this analysis has been used by Martin Associates to estimate the economic impacts of seaport activity at more than 150 United States and Canadian ports. Exhibit E-1 shows the economic impacts generated by the marine cargo and marina activity, airport activity and real estate tenants of the Port in calendar year 2009.

Table E-1
Summary of the Economic Impacts of the Port of Olympia

| | SWANTOWN MARINA MARITIME | OLYMPIA REGIONAL & BOATWORKS | PENINSULA AIRPORT ¹ | PROPERTY | TOTALS |
|--|-----------------------------|---------------------------------|-----------------------------------|---------------|----------------|
| JOBS | | | | | |
| Direct | 177 | 51 | 2,263 | 553 | 3,043 |
| Induced | 182 | 34 | 935 | 240 | 1,390 |
| Indirect | <u>48</u> | <u>64</u> | <u>2,153</u> | <u>550</u> | <u>2,816</u> |
| TOTAL | 406 | 149 | 5,351 | 1,343 | 7,249 |
| PERSONAL INCOME (MILLIONS) | | | | | |
| Direct | \$9.4 | \$2.5 | \$78.5 | \$22.1 | \$112.5 |
| Re-Spending/Local Consumption Expenditures | \$21.4 | \$3.4 | \$54.3 | \$15.3 | \$94.5 |
| Indirect | <u>\$2.3</u> | <u>\$2.2</u> | <u>\$113.8</u> | <u>\$25.4</u> | <u>\$143.7</u> |
| TOTAL | \$33.2 | \$8.1 | \$246.6 | \$62.8 | \$350.7 |
| BUSINESS REVENUE (MILLIONS) | | | | | |
| | \$194.7 | \$2.8 | \$809.6 | \$55.1 | \$1,062.2 |
| LOCAL PURCHASES (MILLIONS) | | | | | |
| | \$6.2 | \$10.5 | \$337.7 | \$85.2 | \$439.7 |
| STATE/LOCAL TAXES (MILLIONS) | | | | | |
| | \$3.0 | \$0.7 | \$21.9 | \$5.6 | \$31.2 |
| FEDERAL TAXES (MILLIONS) | | | | | |
| | \$8.9 | \$2.2 | \$66.3 | \$16.9 | \$94.3 |

Notes: Totals may not add due to rounding.

1. Olympia Regional Airport includes the NewMarket Industrial Campus

In 2009, marine cargo, marina and general aviation activity and commercial and industrial real estate tenants at the Port of Olympia were responsible for the following economic impacts.

7,249 total direct, induced and indirect jobs are supported by activity at the Port of Olympia and its real estate tenants. Of the total jobs generated by Port activity, 3,043 are direct jobs, while **1,390** are induced jobs supported in the local economy due the purchases of goods and services by the directly employed individuals. As a result of **\$439.7** million in purchases of local supplies and services by firms providing direct services to the Port’s marine terminal operations or Port real estate tenants, an additional **2,816** indirect jobs are supported.

\$350.7 million in total wages and salaries and local consumption expenditures are generated in the local and regional economy by the activity at the Port of Olympia marine terminal, marina, general aviation activity and the Port’s real estate tenants. The direct job holders received about \$112.5 million of direct wages and salaries, for an average salary of about \$37,000. As the result of local purchases made by the directly employed individuals, an additional \$94.5 million of local consumption expenditures and induced wages and salaries were created. The **2,816** indirect job holders received **\$143.7** million of wages and salaries.

\$1.1 billion in revenue was generated by local businesses. This revenue is generated from providing services for the cargo and vessel activity at the Port’s marine terminal, in support of general aviation activity and marina operations. The revenue also includes the business sales activity of the tenants of the Port’s real estate properties.

\$439.7 million in local purchases were made by Port tenants, the Port of Olympia and those firms providing services at the Marine Terminal, Airport and marina. These local purchases supported the **2,816** indirect jobs.

\$31.2 million of state and local tax revenue was generated in 2009 by the Port of Olympia marine cargo, marina, and airport activity and the business activity of the Port’s real estate tenants. The State of Washington received about \$19.5 million of this tax revenue, with the local governments receiving the balance. The breakdown of this tax revenue by type of tax is presented in Table E-2.

**Table E-2
Distribution of State and Local Tax Impact by Type of Tax**

| TYPE OF TAX | STATE REVENUE MILLIONS | LOCAL REVENUE MILLIONS |
|--------------------|-----------------------------------|-----------------------------------|
| Property | \$1.91 | \$6.66 |
| Sales | \$15.80 | \$3.84 |
| Motor Vehicle | \$0.53 | \$0.04 |
| Miscellaneous | <u>\$1.32</u> | <u>\$1.10</u> |
| TOTAL | \$19.57 | \$11.63 |

Note: Distribution of State and Local Taxes Based on US Bureau of Census, State and Local Government Finance

\$94.3 million of Federal tax revenue was generated in 2009 by the Port of Olympia marine cargo, marina, and airport activity and the business activity of the Port's real estate tenants.

83% of the direct jobs are held by residents of Thurston County. Table E-3 shows the residency of the 3,043 direct job holders. This distribution of the direct jobs by place of residency is based on data supplied by the individual firms interviewed by Martin Associates as part of the study.

**Table E-3
Place of Residency of the Direct Jobs**

| Residency | Zipcode | % | Direct Jobs |
|-----------------------|----------------|-------------|--------------------|
| Olympia | 98502 | 6.8% | 208 |
| Olympia | 98501 | 16.8% | 512 |
| Olympia | 98507 | 1.7% | 51 |
| Olympia | 98508 | 0.8% | 24 |
| Olympia | 98512 | 11.5% | 351 |
| Olympia/Lacey | 98506 | 8.0% | 245 |
| Olympia/Lacey | 98516 | 6.3% | 191 |
| Tumwater | 98501 | 5.5% | 169 |
| Tumwater | 98511 | 3.3% | 100 |
| Lacey | 98509 | 3.3% | 101 |
| Lacey | 98503 | 7.3% | 223 |
| Lacey/Olympia | 98513 | 4.9% | 149 |
| Rochester | 98579 | 3.2% | 99 |
| Tenino | 98589 | 2.7% | 82 |
| Other WA ¹ | | 15.5% | 470 |
| Other US | | <u>1.8%</u> | <u>54</u> |
| | | 100.0% | 3,043 |

Notes: 1. Other Washington consists primarily of Tacoma and Seattle places of residency

\$10.2 million invested by the Port in fixed assets and infrastructure during and despite the economic conditions existing in 2009. This investment included approximately \$368 thousand for airport improvements, approximately \$4.6 million for marine terminal improvements, \$4.1 million for property development, and \$1 million for marina upgrades. The remaining \$132 thousand was for various equipment and infrastructure improvements. The remaining commitments on these and other miscellaneous construction projects are approximately \$6 million. The \$10.2 million construction investment in the Port's assets in 2009 is estimated to have supported 66 direct construction jobs in Thurston County, and an additional 48 induced and indirect jobs. A total of \$4.6 million of personal income was paid to the 114 direct, induced and direct job holders, and an additional \$6.6 million of local purchases in Thurston County were stimulated by the Port's \$10.2 million of construction expenditures in 2009. Finally, as a result of the \$10.2 million of construction expenditures, \$1.3 million of state

and local tax revenue was created. It is to be emphasized that while these may be one time impacts, the Port has shown a history of investment in infrastructure. Thus, while the number of generated jobs, income and taxes may vary slightly from year to year, there is a continuity about their impact.

The most recent economic impact study of the Port of Olympia was completed in 2004.¹ The 2004 impact study was based on 71 completed mailed surveys (of a universe of 214 firms receiving the mailed surveys), representing a response rate of 33%. Also in 2004, 25 interviews were conducted. This compares to the current study, which is based on 212 completed surveys and interviews, for a 100% coverage of Port tenants and service providers. In addition, the 2004 impact study was based on the IMPLAN model, which is a macro driven input-output model that does not provide for the sensitivity analysis capability that the current impact models provide. Therefore, it is difficult to compare the results of the 2004 economic impact study with the current study results. Nonetheless, when comparing the 2004 impacts with the current economic impact of the Port of Olympia, the following comparisons can be made.

- Total jobs increased from 5,105 jobs in 2004, to 7,249 jobs in 2009
- Personal Income and local consumption expenditures increased from \$144.8 million to \$350.7 million in 2009. However, it is not clear if local consumption expenditures are included in the 2004 study.
- Direct business revenue increased from \$429.7 million to \$1.1 billion in 2009, but it is not clear what is included in the 2004 direct business revenue, as it is generated through a macro input-output model driven by a small sample size with a less than a 33% coverage of port tenants.

Despite the differences in methodologies and the limited sample size on which the previous impact study was based, it appears that the economic contribution of the Port of Olympia continues to grow, adding more than 2,100 total jobs to the local economy over the past five years.

As the Port continues to invest in its asset base, it not only creates immediate economic impacts for Thurston County and the State of Washington from a construction perspective, but these investments provide the critical infrastructure to market Olympia and Thurston County to potential real estate tenants and users of the Marine Terminal and the Olympia Regional Airport.

¹ Port of Olympia, 2004 Economic Impact Study, Prepared for the Port of Olympia, January 30, 2006, by BST Associates

I. OVERVIEW OF THE ANALYSIS AND SUMMARY OF METHODOLOGY

The Port of Olympia retained Martin Associates to measure the local and regional economic impacts generated by maritime (marine cargo) activity at the Port, marina activity at the Port's Marina and Swantown Boatworks, general aviation activity and real estate activity at the Olympia Regional Airport, real estate activity on the Port's Peninsula Properties and impacts related to capital expenditures. The impacts are estimated for calendar year 2009 which matches the Port's fiscal year.

The purpose of the study, measurement of economic impacts, includes: measuring contributions to the local, regional and national economies from individual employment and personal income, local and state government tax revenue generation, and business revenue creation. A realistic assessment of the impacts associated with the Port of Olympia's four lines of business and capital expenditures was the study's major emphasis. A realistic assessment combines proper economic theory, and sound survey techniques with a clear, concise explanation.

During the study, Martin Associates conducted 212 interviews with firms providing services to the Port of Olympia marine terminal operations, marina activity, general aviation activity as well as the Port's real estate tenants and capital project contractors. Unlike prior Port of Olympia economic impact studies, the 212 interviews conducted by Martin Associates constitute 100% coverage of the firms in the Port of Olympia seaport community and real estate tenants. The data collected included employment, payroll, revenue and purchasing information. Thus, the impacts calculated can be traced back to the collected company level detail.²

Once collected, Martin Associates used the data collected to develop operational models for the Port's cargo operations, the marina and boatworks activity, airport activity and the Port's real estate tenants. In addition to the baseline impact estimates, sensitivity impact models have been developed for each of the Port's lines of business – marine terminal, marina, airport, and real estate. These sensitivity models allow future analysis of marine terminal changes in tonnage, labor productivity, labor work rules, commodity mix, inland origins/destinations of commodities and vessel size. The model can also evaluate the impacts of new terminal development and be used for annual updates, as well as changes in the Port's non-maritime tenant base. The marina model tests impacts resulting from changes in the number of sailboats and power boats moored at the Port's facilities, as well as transient operations. The real estate model can be used to assess the potential impacts of new tenants and to compare alternative uses of port owned real estate in terms of potential economic impact to the local and regional economy.

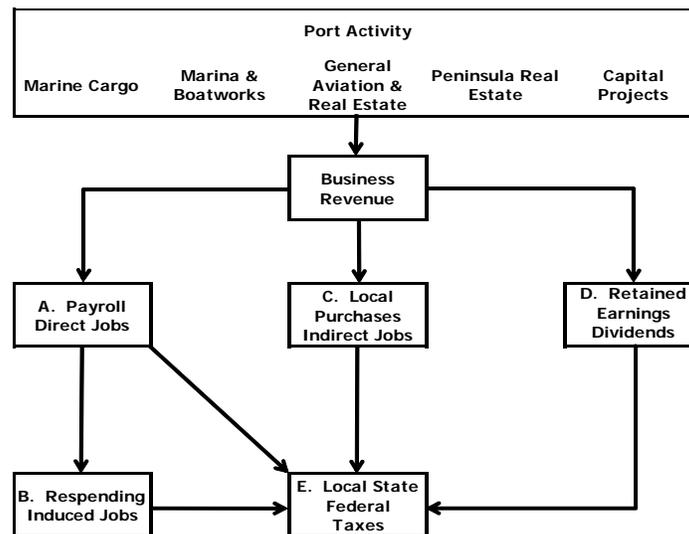
² Since this current interview based analysis is significantly different than the methodologies used on past Port of Olympia Economic Impact Studies, it is not possible to draw valid comparisons with the previous studies. For example, the 2004 Port of Olympia Economic Study is based on 71 completed surveys and 25 interviews, compared to 212 completed interviews as part of this current study. In the future, if the same methodology is used, comparisons can be made with the results of this current study and at a firm level of detail.

1. ECONOMIC IMPACT STRUCTURE

The marine cargo, marina, general aviation, real estate tenant activity and capital investment of a public port contributes to the local, regional, and national economies by providing employment and income to individuals, tax revenues to local, state and federal governments, and revenue to businesses engaged in handling, shipping, and receiving cargo via the port. Exhibit I-1 illustrates the flows of economic impacts throughout the economy. As this exhibit shows, the marine cargo, marina, and general aviation activity, as well as the commercial and industrial activity of the Port's real estate tenants along with capital project spending initially creates business revenue to the firms providing the services in support of these activities. This revenue is in turn used for several purposes:

- A. To hire employees to provide services or manufacture products;
- B. To buy personal goods and services (Employee re-spending)
- C. To buy goods or services from other firms (Local purchases);
- D. To pay stockholders dividends, retire debt, and invest; and
- E. To pay local, state and federal taxes.

Exhibit I-1
Flows of Economic Activity through the Economy



The hiring of employees generates personal income. This personal income is spent throughout the state, local and national economy to purchase goods and services. This re-spending of income is known as the multiplier effect, which in turn creates induced jobs throughout the economy to the firms providing the goods and services to those directly employed. The firms providing the services to handle the marine cargo moving via the Port's Marine Terminal, and the general aviation activity at the Airport, as well as activity of the recreational boating tenants of the Port's Swantown Marina and Boatworks purchase local

services and goods to support the direct activity. Similarly, the real estate tenants purchase goods and services from local vendors to support the services and products produced by the commercial and industrial tenants of the Port-owned real estate. These purchases by the directly dependent firms and the port's real estate tenants generate the indirect jobs. Finally, state, local and Federal taxes are paid by those directly employed due to port activity and those employed as a result of the in-state purchases of goods and services by those individuals directly employed and the individual real estate tenants.

As can be seen from Exhibit I-1, and the previous discussion, the flow of economic impacts throughout an economy creates four separate and non-additive types of impacts.

These four types of impacts are:

- Employment Impact - the number of full-time equivalent jobs generated by activity at each the of the Port's primary business units and through Port of Olympia related capital projects, as well as the Port's non-maritime tenants and general aviation activity. These impacts consist of jobs directly generated by port activity as well as induced jobs, or jobs created in-state due to the purchase of goods and services by those individuals directly dependent upon port activity. In addition to the direct and induced jobs, indirect jobs, or those jobs generated in the local economy due to the local purchases of goods and services by firms directly dependent upon maritime/marina/boatworks activity at the Port of Olympia, the non-maritime tenants and general aviation activity, and resulting from Port of Olympia related capital projects are also measured as part of the employment impact.
- Personal Income Impact/Local Consumption Impact - the level of earnings associated with the jobs created by port activity and associated with the real estate tenants of the Port. Also part of the personal income impact is the re-spending of the income and adjusted to reflect re-spending throughout the economy. Also included in the personal income impact/local consumption impact is the value of the local purchases by the directly employed job holders. These purchases include purchases for food, apparel, transportation services, housing and medical services. The value of the local expenditures for these purchases includes the value of the goods and services, as well as the personal income received by those individuals (the induced job holders) providing the goods and services to those directly employed. Thus, the personal income and local consumption impacts include the direct personal income earned by those directly employed due to port activity or by Port real estate tenants, plus the value of the local purchases and the portion of the value of the services paid to the induced job holders.
- Revenue Impact - the sales generated by firms engaged in handling and transporting cargo through the Port of Olympia's marine terminal and servicing the recreational boating activity at the Port's Swantown Marina and Boatworks,

and the service providers to the general aviation activity at the Olympia Regional Airport are counted as business revenue. In addition, the value of the sales by the Port's real estate tenants at NewMarket Industrial Campus and the Peninsula Properties are included as business revenue. This impact includes national as well as local and state revenue.

- Tax Impacts - the local, state and federal tax revenues generated by port activity. These are taxes paid by individuals and firms directly dependent upon the maritime activity, marina activity and general aviation activity as well as the Port of Olympia related capital projects, and by the real estate tenants at the Olympia Regional Airport (including NewMarket Industrial Campus) and the Peninsula Properties.

2. DATA COLLECTION

The Port of Olympia Economic Impact Study is based on telephone and personal interviews with customers and tenants involved in the four lines of businesses operated by the Port. The Port tenants and the non-tenant service providers to the Marine Terminal operations and general aviation activity at the airport were identified from local directories of aviation and maritime services. Port real estate tenants were identified by the Port of Olympia tenant list. The sub tenants of the Port of Olympia real estate tenants were identified from the interviews with the Port's tenants, conducted by Martin Associates. For specific maritime cargo service providers not located in the Olympia region, Martin Associates used information collected from other port studies it conducted (Pacific Northwest Ports of Seattle, Tacoma, Bellingham, Everett, Vancouver and Portland) to augment the Olympia data. In addition to data collected from the sources noted above, Martin Associates used other published data. These publications include:

- Census of Wholesale Trade;
- Census of Retail Trade;
- Census of Construction;
- Census of Service Industries; and
- Annual Survey of Manufacturers.

Additionally, Martin Associates obtained other published data from the U.S. Bureau of Census, County Business Patterns; U.S. Bureau of Economic Analysis, Regional Income Division; and U.S. Bureau of Labor Statistics, "Consumer Expenditure Survey, 2007" for the Seattle/Olympia/Tacoma MSA.

3. DIRECT IMPACTS

Direct impacts are estimated from the results of the surveys. The *direct job impacts* are essentially a census of employment, earnings and revenue by firm, and then aggregated by Port-operated line of business. For example, for the marine terminal operations, the count of employees with the terminal operator and tenants of the Marine Terminal are counted as direct

employees. Similarly, the jobs with each real estate tenant and sub tenant are also counted and included as direct jobs with real estate tenants, and aggregated by line of business -- Olympia Regional Airport (including NewMarket Industrial Campus), Peninsula Properties and the Swantown Marina and Boatworks.

In addition to the census of the direct jobs from the telephone and personal interviews with 100% of the Port's tenants, direct jobs are also estimated for non-tenant service providers, including truckers moving cargo to and from the Marine Terminal, freight forwarders, steamship agents, chandlers, tug boat operators, etc. The firms providing these services are identified from the maritime directories used by Martin Associates at other Washington State Ports, and interviews conducted with these service providers to determine the number of directly employed individuals employed due to marine cargo activity at the Port of Olympia. For the direct truck impacts, the average distance of the cargo moved to and from the marine terminal is based on interviews with the terminal operator at the Marine Terminal, and the transport distance combines with tonnage per truck to estimate full time truck drivers associated with moving the marine cargo to and from the Port.

The *direct personal income* is derived directly from the interview process and estimates an average wage rate for the direct job holders, by industry/firm. This average wage by firm is then multiplied by the direct jobs.

The *direct business revenue* is also derived directly from the interview process.

4. INDUCED IMPACTS

The induced impacts are based on an income multiplier for each line of business operated by the Port of Olympia. The concept of the income multiplier results from successive rounds of spending a portion of the direct wages and salaries (personal income) for goods and services. Specific to the Port of Olympia, the US Bureau of Economic Analysis develops a final demand income multiplier for waterborne cargo operations, various types of real estate development, and for recreational boating and its components. The re-spending of income within a state is measured by a local income multiplier. The size of the multiplier for each line of business operated by the Port varies depending on the proportion of goods and services purchased locally by individuals as well as by the size of the state. The higher the proportion of locally purchased goods and services, the lower is the income leakage out of the region/state. The share of the goods purchased in-state also depends on the supplying firm's location as well as the level of direct income per employee.

For example, a final demand income multiplier of 4 indicates that for every one dollar of direct income, about \$0.75 is spent in the defined geographic region, while the other \$0.25 is either saved or spent out of the defined geographic area. The full income multiplier effect results from successive rounds of re-spending. In the initial round, one dollar is earned; of that \$1.00, \$.75 is used to purchase goods and services; of that \$.75 received,

another 75 percent, or \$.5625, will be used for the next round of purchases of goods and services; of this \$.5625, again 75 percent, or about \$.4219, will be used for further regional purchases. These successive re-spending rounds continue until an additional \$3.00 of spending in the regional economy is generated for every dollar of direct earned income. At each stage of the re-spending, additional jobs and income are created, as are consumption expenditures.

Local purchases are allocated to local service/goods suppliers based on the current expenditure profile of residents in the Olympia area, as estimated by the US Bureau of Labor Statistics, "Consumer Expenditure Survey". This survey indicates the distribution of consumer expenditures over key consumption categories for Olympia area residents. The consumption categories are:

- Housing;
- Food at Restaurants;
- Food at Home;
- Entertainment;
- Health Care;
- Home Furnishings; and
- Transportation Equipment and Services.

The estimated consumption expenditures generated as a result of the re-spending impact is distributed across these consumption categories. Associated with each consumption category is the relevant retail and wholesale industry. Jobs to sales ratios in each industry are then computed for the Olympia area (from the 2007 Economic Census), and induced jobs are estimated for the relevant consumption categories. It is to be emphasized that induced jobs are only estimated at the retail and wholesale level, since these jobs are most likely generated in the Olympia area. Further levels of induced jobs are not estimated since it is not possible to defensibly identify geographically where the subsequent rounds of purchasing occur.

"The Consumer Expenditure Survey" does not include information to estimate the job impact with supporting business services, legal, social services and educational services. To estimate this induced impact, a ratio of State of Washington employment in these key service industries to total State of Washington employment is developed. This ratio is then used with the direct and induced consumption jobs to estimate induced jobs with business/financial services, legal, educational and other social services, not directly estimated from the consumption effect. This ratio is then used with the direct and induced jobs to estimate induced jobs with business/financial services, legal, educational and other social services. For every direct and consumption induced job, there is 0.28 jobs with state and local government, education, financial services, and other social services.

The re-spending impact includes not only the wage and salary income received by those employed to provide the goods and services to the direct job holders, but also the value of the

purchases. Therefore, the re-spending/local consumption impact cannot be divided by the induced jobs to estimate the induced income, as this would overestimate the induced personal wage/salary impact per induced job.

5. INDIRECT IMPACTS

The *firms* employing directly generated jobs also make local purchases for goods and services from the revenue received in providing the direct services or producing the goods and services. To estimate these indirect impacts, actual local expenditures by directly dependent firms or real estate tenants were estimated from the 212 firms interviewed by telephone or personally by Martin Associates staff. To estimate the indirect jobs, the local expenditures were used as inputs into a regional input-output model developed for the Olympia Metropolitan area for Martin Associates by the US Bureau of Economic Analysis, Regional Input-Output Modeling System. The local purchases by type of purchase (i.e., goods, office supplies, contract business services, fuel, utilities, insurance, maintenance and repair, capital expenditures, etc.) were multiplied by the specific employment multipliers and income multipliers for the relevant goods and services providing industry sectors to estimate the indirect job and income impacts by each line of business operated by the Port.

The local purchases are the sum of the local expenditures by firm within each line of business.

6. LOCAL, STATE AND FEDERAL TAX IMPACTS

It is important to emphasize that the economic impact study is not a financial impact study, and does not include a firm by firm tax calculation. Instead, Martin Associates uses a local, state and federal tax burden based on a percentage of income generated. The Tax Foundation publishes the local, state and federal tax burdens (as a percent of income) for each state. This burden is applied to the total personal income impact and re-spending impact for each Port operated line of business. The local, state and federal share of the tax impact is then estimated from the US Bureau of Census State and Local Government Finance. This Census source provides tax collections by state for the local, state and federal portions as well as by specific type of tax.

II. ECONOMIC IMPACTS OF MARINE CARGO ACTIVITY AT THE PORT OF OLYMPIA MARINE TERMINAL

In this chapter, the economic impacts generated by maritime cargo activity at the Port of Olympia are documented. In 2009, the port handled export logs and imported wind energy equipment as well as a limited volume of dry bulk cargo.

1. OVERVIEW OF THE SEAPORT IMPACT STRUCTURE

Shipments and receipts of cargo through the marine terminals at the Port of Olympia generate economic activity in various business sectors of the state and local economy. Specifically, the following economic sectors are involved in providing cargo and vessel handling services at the Port of Olympia's Marine Terminal. These are the:

- Surface Transportation Sector;
- Maritime Service Sector;
- Dependent Shippers/Consignees; and
- Port of Olympia Administration dedicated to seaport activity.

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

1.1 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 Port and their inland origins and destinations.

Many local and national trucking firms serve the marine terminals at the Port of Olympia. The trucking industry's major involvement is in moving logs to and from local logging operations and lumber mills, as well as transporting wind energy equipment. For example, in 2009, 180 windmill blades were moved to wind farm projects in eastern Washington State.

1.2 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;
- Linehaul Barge Operators; and

- Federal, State, and Local Government Agencies.

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

- Cargo Marine Transportation - Participants in this category are involved in arranging for inland and water transportation for the export or import of freight through the Port of Olympia. 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 marine terminals and inland destinations, as well as the ocean transportation. This function performed by freight forwarders and customhouse brokers 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 providing vessel services including:
 - Steamship agents - provide a number of services for the vessel as soon as it enters the Port; including arranging for pilot, tug assist services, for medical and dental care of the crew, and for ship supplies. Agents are also responsible for vessel documentation;
 - Pilots – provide navigation services to ensure safe transit of vessels between the harbor entrance and docks;
 - Chandlers - supply the vessels with ship supplies (food, clothing, nautical equipment, etc.);
 - Towing firms - provide the tug service to guide the vessel to and from port;
 - Bunkering firms - provide fuel to the vessels;
 - Marine surveyors - inspect the vessels and the cargo;
 - Launch services - provide transportation for the crew between land and vessel;
 - Shipyards/ship repair firms - provide repairs, either emergency or scheduled;
 - Barge operators - move cargo to and from the Port of Olympia and Canada.

- Cargo Handling - This category involves the physical handling of the cargo at the Port between the land and the vessel. Included in this category are the following participants:
 - Longshoremen - are members of the International Longshore and Warehouse Union (ILWU), 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;
 - Warehouse operators - store cargo after discharge or prior to loading and consolidate cargo units into shipment lots;
 - Barge Operators - move dry bulk cargo such as sand and gravel and aggregates, logs and chips and bunker ships while in port.

- Government Agencies - This service category involves federal, state and local government agencies that perform services related to cargo handling and vessel operations at the Port. 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 and the U.S. Army Corps of Engineers have been included.

- Consultants/Architects – This category includes engineers, architects and consultants who provide a wide spectrum of services to the maritime industry, including terminal design, naval architect services, and planning services.

- Miscellaneous - This category includes a wide range of service providers, including environmental firms, security firms, and firms providing fumigation services.

- Banking/Insurance/Law - This service sector is not directly involved in cargo or ship operations, it nonetheless does provide services such as financing export/import transactions and insuring cargo and vessels. Also included in this sector are legal firms specializing in maritime law.

1.3 NON-MARITIME TENANTS

The Port also leases land to tenants not directly engaged in cargo activity. These tenants do not export and import via the marine terminals but in some cases these tenants provide services to the maritime community. These non-marine cargo tenants include restaurants, hotels, light manufacturing, and transportation/distribution activity. The impacts of these tenants are described in Chapter IV.

1.4 PORT OF OLYMPIA

The Port of Olympia includes those individuals employed by the Port whose purpose it is to oversee port activity, including cargo, marina and real estate activity.

2. COMMODITIES INCLUDED IN THE ANALYSIS

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 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, cement requires covered storage, while containerized cargo requires container cranes, open storage and on-, or near-dock rail. Covered storage is needed for breakbulk cargo such as steel and lumber, while high and heavy equipment requires outside storage.

An understanding of the commodity's relative economic value in terms of employment and income to the local community, the cost of providing the facilities, and the relative demand for the different commodities is essential in making future port development plans. Because of this need for understanding relative commodity impacts, economic impacts are estimated for the following commodities handled via the facilities at the Port of Olympia:

- Logs
- Windmill Blades
- Garnett

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

3. ECONOMIC IMPACTS GENERATED BY CARGO ACTIVITY AT THE PORT OF OLYMPIA MARINE TERMINALS

The economic impacts generated by marine cargo handled at the Port of Olympia marine terminals are summarized in Table II-1.

**Table II-1
Economic Impacts of Cargo
Activity at the Port of Olympia**

| | | MARITIME |
|--|--|--------------|
| JOBS | | |
| Direct | | 177 |
| Induced | | 182 |
| Indirect | | <u>48</u> |
| TOTAL | | 406 |
| PERSONAL INCOME (MILLIONS) | | |
| Direct | | \$9.4 |
| Re-Spending/Local Consumption Expenditures | | \$21.4 |
| Indirect | | <u>\$2.3</u> |
| TOTAL | | \$33.2 |
| BUSINESS REVENUE (MILLIONS) | | \$194.7 |
| LOCAL PURCHASES (MILLIONS) | | \$6.2 |
| STATE/LOCAL TAXES (MILLIONS) | | \$3.0 |
| FEDERAL TAXES (MILLIONS) | | \$8.9 |
| RELATED IMPACTS | | |
| Jobs | | 2,530 |
| Output (MILLIONS) | | \$86.4 |
| Personal Income (MILLIONS) | | \$61.1 |
| State and Local Taxes (MILLIONS) | | \$5.5 |
| Federal Taxes (MILLIONS) | | \$16.4 |

Totals may not add due to rounding

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

- 177 direct jobs;
- 182 induced jobs were supported by the purchases of the 177 directly employed individuals;
- 48 indirect jobs were generated as a result of \$6.2 million of local purchases by firms directly dependent upon seaport activity at the Port of Olympia marine cargo facilities;
- The 177 direct employees earned \$9.4 million of wages and salaries, for an average salary of \$53,400 per year;
- Businesses providing services to the cargo activity received \$194.7 million of business revenue; this is direct revenue from the provision of services and does not include the value of the cargo moved via the marine terminal. The value of the cargo is determined by the demand for the cargo, not the specific port used.
- A total of \$3.0 million of state and local taxes were generated by seaport activity; In addition a total of \$8.9 million of total Federal Taxes were collected.
- 2,530 jobs in the State of Washington were related to the cargo moving via the Port of Olympia, the majority of which related to the logs handled at the Port. The 2,530 related jobs associated with the production of the logs moving via the Port of Olympia and processed at the Port received \$61.1 million of total personal income. This includes land preparation, maturing of the trees over the life cycle, purchases of supplies and equipment to harvest the trees, and the actual harvesting of the trees. This related measure quantifies the total value of the logs handled at the Port of Olympia, based on the tonnage moved at the Port, both via water and processed at the Port's logging tenant's facility. The value per ton of the logs is estimated from the US Bureau of Census data which provides export commodity values per ton. The value of the logs handled at the port (dollar value multiplied by the tonnage handled at the Port) is then combined with the jobs per million of revenue coefficient developed from the US Bureau of Economic Analysis to estimate jobs associated with this level of dollar output in the logging industry. The direct, induced and indirect jobs associated with logs at the Port of Olympia are then subtracted from the total related jobs impact to avoid double counting.

The logging operation created \$86.4 million of revenue and created \$5.5 million in state and local tax revenue. It is to be emphasized that these related impacts are not as directly dependent upon the Port of Olympia as the direct, induced and indirect impacts, since these logs could move via other Pacific Northwest Ports, although at higher transportation costs. If this were the case, the related impacts with those involved in the logging operations would not be discontinued (although the impacts could be reduced due to higher transportation costs) as would the direct, induced and indirect impacts.

The next section details the employment impacts generated by the cargo activity.

4. EMPLOYMENT IMPACTS

First, the total employment that is in some way related to the cargo activity at the Port of Olympia is estimated. Second, the subset of total employment that is judged to be totally dependent on maritime cargo activity is analyzed in the following ways. Direct jobs are estimated in terms of key job categories (e.g., trucking jobs, terminal operators, and towing). Induced and indirect jobs generated by local purchases made by those directly employed as a result of cargo activity are then described.

4.1 TOTAL CARGO RELATED JOBS

It is estimated that **2,937** jobs in the Olympia regional economy are in some way influenced by cargo and vessel activity at the Port of Olympia

- 177 direct jobs are generated by cargo activity at the Port of Olympia. These jobs are classified as direct jobs and if activity at the Port of Olympia were to cease, these jobs would be discontinued over the short term.
- **182** are employed by providing goods and services to the 177 individuals directly involved with port activity. Consequently, employment in this group is as directly dependent upon port activity as the first group.
- Firms directly dependent on the Port of Olympia **made \$6.2** million of local purchases for office supplies, parts and equipment, maintenance and repair services, business services, utilities, communications services and fuel. These purchases supported **48** indirect jobs in the local economy.
- In addition to the direct, induced and indirect jobs generated by cargo activity, 2,530 jobs are related to the cargo activity at the Port, but not directly dependent on the Port as are the direct, induced and indirect jobs. These jobs are with the logging industry producing the logs exported and handled at the Port, and these jobs are dependent on the demand for the logs, not the use of the Port of Olympia.

The next section of this chapter is dedicated to the direct impact category of the 177 jobs.

4.2 DIRECT JOB IMPACTS

As a result of port activity, 177 full-time jobs were directly created by cargo activity at the Port of Olympia³. Table 2 presents the distribution of the 177 direct jobs by type of job. As

³ Jobs are measured in terms of full-time equivalent workers working 2,080 hours per year. If a worker is employed

this table shows, a large job impact is with surface transportation, followed by employment with terminals and the ILWU. Fifty-nine truckers are employed by moving cargo to and from the terminals, while 28 full time equivalent members of the ILWU are employed by cargo activity at Olympia. In addition, another 30 jobs are directly supported with terminal operators. The largest impact is with truck drivers. Cargo activity did not use rail service to and from the Marine Terminal during the 2009 analysis year.

**Table II-2
Direct Employment Impacts by Job Category**

| IMPACT CATEGORIES | DIRECT JOBS |
|-------------------------------------|-------------|
| SURFACE TRANSPORTATION | |
| Rail | NA |
| Truck | <u>59</u> |
| SUBTOTAL | 59 |
| MARITIME SERVICES SECTOR | |
| Terminal Employees | 30 |
| ILWU | 28 |
| Towing | 2 |
| Pilots | 1 |
| Maritime Services/Forwarders/Agents | 5 |
| Marine Construction/Ship Repair | 19 |
| Barge | 15 |
| Government | <u>11</u> |
| SUBTOTAL | 111 |
| PORT OF OLYMPIA SEAPORT | 7 |
| TOTAL | 177 |

4.3 INDUCED JOBS

The regional purchases by the 177 direct jobholders with the direct income earned from port activity create additional jobs throughout the regional economy. In calendar year 2009, \$9.4 million in wages (\$53,400 average annual wages) was received by those 177 directly employed by cargo activity at the Port of Olympia. As the result, re-spending of this income for purchases in the State of Washington generated an additional 182 induced jobs.

only 50% of the year, the job is reported as 0.5 direct jobs.

4.4 INDIRECT JOBS

The firms directly dependent upon the vessel and cargo activity at the Port of Olympia made \$6.2 million of purchases from local (in-state) suppliers of parts and equipment, business services, maintenance and repair services, communications and utilities, office equipment, and fuel. The purchases supported 48 local indirect jobs. These are purchases by the firms directly dependent on providing services to the Port. The purchases are adjusted by the degree of dependency of each firm on the cargo activity at the Port, as are the employees and revenue.

If maritime activity at the Port of Olympia were to cease, these indirect jobs would also be lost. To estimate these indirect jobs, actual local expenditures by port-dependent firms were estimated from the telephone surveys. To estimate the indirect jobs, the local expenditures were used as inputs into a regional input-output model developed for Washington State for Martin Associates by the US Bureau of Economic Analysis, Regional Input-Output Modeling System, 2008.

4.5 RELATED JOBS

In addition to the direct, induced and indirect jobs, Martin Associates developed an estimate of jobs related to cargo moving via the Port. It's estimated that 2,530 jobs with the regional logging operations are related to log cargo moving via the Port of Olympia's marine cargo terminal and also processed and handled at the Port. As described earlier on this chapter, it is to be emphasized that these jobs are only related jobs, not jobs solely dependent upon the Port of Olympia.

5. REVENUE, INCOME AND TAX IMPACTS

The maritime activity at the Port of Olympia marine terminal generates revenue for the directly dependent firms providing services to the vessels and cargo calling the Port. For example, revenue is received by surface transportation firms (local trucking firms) as a result of moving export cargo to the marine terminal and then distributing the imported commodities inland after receipt at the terminals. The firms in the maritime service sector receive revenue from arranging for transportation services, cargo handling, and providing services to vessels in port. Marine construction firms receive revenue by providing new construction and repair work at the marine terminals. The Port of Olympia receives revenue from leases at the terminal it owns. In addition, revenue is received by shippers/consignees from the sales of cargo shipped or received via Olympia marine cargo facilities and from the sales of products made with raw materials received through the Port. Since this chapter is concerned with the revenue generated from providing maritime services, the shipper/consignee revenue (i.e., the value of the cargo shipped or received through the Port) will be excluded from the remaining discussion. Similarly, steamship lines revenue from the ocean line haul portion of the cargo movements is excluded from the revenue impact, since very few vessels calling the Port are American flag vessels, and it is not likely that a large portion of the revenue from ocean transportation remains in the local or even national economy.

The revenue generated by port activity consists of many components. For example, gross revenue is used to pay employee salaries and taxes, it is distributed to stockholders, and it is used for the purchases of equipment and maintenance services. Of these components, only three can be isolated geographically with any degree of accuracy. The personal income component of revenue can be traced to geographic locations based on the residence of those receiving the income. The local purchases by firms dependent upon maritime activity at the Port of Olympia terminals are identified through the interviews and used to estimate the indirect job impacts. Finally, state and local taxes paid by individuals and businesses can be traced to a geographic location based on the residency of the individuals directly employed and the location of the firms dependent on maritime activity. The balance of the revenue is distributed in the form of non-local payments to firms providing goods and services, for the distribution of company profits to shareholders and to payment of federal taxes. Many of these firms and owners are located outside of Washington State, and, thus, it is difficult to trace the ultimate location of the distributed revenue (other than personal income, taxes and local purchases).

5.1 REVENUE IMPACT

The revenue impact is a measure of the *total economic activity* in the state that is generated by the cargo moving via the Port. In 2009, marine cargo activity at the Port generated a total of \$281.1 million of total economic activity in the region. Of the \$281.1 million, \$194.7 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. The remaining \$86.4 million represents the value of the output to the State of Washington that is created due to the cargo moving via the Port. This includes the value added at each stage of producing the logs handled at the Port.

The balance of the discussion focuses on the \$194.7 million of direct business revenue generated from the provision of services to the cargo and vessels handled at the Port. This does not include the value of cargo moved via the Port by the dependent shippers/consignees and key users. However, the local expenditures of these firms are included since if these firms were to leave the area, the local purchases would cease, and the revenue generated by the lines of business that are dependent upon the use of the Port of Olympia would be lost.

Table II-3 presents the revenue impact generated by impact category for maritime activity at the Port.

**Table II-3
Total Revenue Generated by Port Activity**

| IMPACT CATEGORIES | REVENUE (\$1,000) |
|---------------------------------|-------------------|
| SURFACE TRANSPORTATION | |
| Rail | NA |
| Truck | \$158,079 |
| SUBTOTAL | \$158,079 |
| MARITIME SERVICES SECTOR | |
| Terminal Operator | \$27,438 |
| ILWU | NA |
| Towing | \$53 |
| Pilots | \$135 |
| Matime Services | \$1,943 |
| Marine Construction/Ship Repair | \$4,600 |
| Government | NA |
| SUBTOTAL | \$34,169 |
| PORT OF OLYMPIA | \$2,449 |
| TOTAL | \$194,697 |

Note: Totals may not add due to rounding. Revenue for ILWU/dockworkers is included in terminal operator revenue

Firms in the surface transportation sector (trucking) received more than \$158 million of revenue. The revenue generated by the surface transportation sector is based on the relevant modal (truck) rate for a commodity multiplied by the tonnage of that commodity moved to and from the Port by the specified mode. The terminal operations at the Port received \$27.4 million from the handling of logs, wind mill components and dry bulk cargo.

5.2 PERSONAL INCOME AND CONSUMPTION IMPACT

In the previous section of this chapter, the total revenue generated by port activity was identified. As described earlier, the personal income received by those directly dependent upon port activity is one of the components of revenue that can be traced to the Olympia area. The direct income impact is estimated by multiplying the average annual earnings of each port participant, i.e., truckers, steamship agents, longshoremen etc., by the corresponding number of jobs in each category. The individual annual earnings in each category multiplied by the corresponding job impact resulted in \$9.4 million in personal income. This equates to an average annual salary of about \$53,400.

Based on data developed by the U.S. Bureau of Economic Analysis⁴, it is estimated that for every one dollar earned by Olympia area residents as a result of jobs directly generated by

⁴ U.S. Department of Commerce, Bureau of Economic Analysis, RIMSII, 2008.

waterborne cargo activity, an additional \$2.27 of income would be created as a result of re-spending the direct income for purchases of goods and services in the State of Washington. This equates to a total of \$3.27 in personal income for each one dollar spent by those directly employed by providing transportation services to waterborne cargo transportation. Using a 3.27 personal income multiplier and direct personal income of \$9.4 million yields a total income and re-spending impact of about \$30.8 million. The difference between the \$30.8 million total income and local consumption impact and the \$9.4 million direct personal income impact is \$21.4 million. This \$21.4 million of re-spending and local consumption expenditures cannot be divided by the 182 induced jobs to estimate induced income, since the \$21.4 million re-spending impact also includes local consumption purchases by the individuals, and the division would overstate the induced salary. By adding the \$21.4 million of re-spending impact to the \$9.4 million of direct personal income impact, the total direct and induced/local consumption impact is estimated at \$30.8 million. This reflects the personal income multiplier of 3.27 for waterborne cargo transportation.

The indirect jobholders received \$2.3 million of personal wages and salaries. Combining the direct, induced and indirect income impacts and the local consumption expenditures impact, maritime cargo activity and non-maritime tenants at the Port of Olympia marine terminal generated nearly \$33.2 million of total direct, induced, indirect wages and salaries and consumption expenditures in the State of Washington.

5.3 LOCAL PURCHASES

The firms directly dependent upon the maritime activity at the Port of Olympia made \$6.2 million of purchases in the State of Washington. These purchases were directly dependent on the activity levels of the firms as they relate to the Port of Olympia marine cargo activity. These purchases were for maintenance and repair services, utilities, communications services, office products, parts and equipment, fuel, etc. The \$6.2 million of purchases generated the 48 indirect jobs described in the previous chapter.

5.4 TAX IMPACTS

State and local tax impacts are based on state and local tax burdens for the State of Washington, which are developed from data provided by the Tax Foundation⁵. Maritime activity at Port of Olympia generated \$3.0 million of state and local taxes, of which about \$1.9 million was collected at the state level, and the balance at the local level.

In addition, \$8.9 million of Federal taxes were supported by cargo activity at the Port of Olympia. This estimate is based on tax indices developed by the Tax Foundation.

⁵ The Tax Foundation is an educational organization formed in 1937 to provide American citizens with a better understanding of the tax system and the effects of tax policy (www.taxfoundation.org).

III. THE ECONOMIC IMPACT OF RECREATIONAL BOATING AT THE PORT OF OLYMPIA

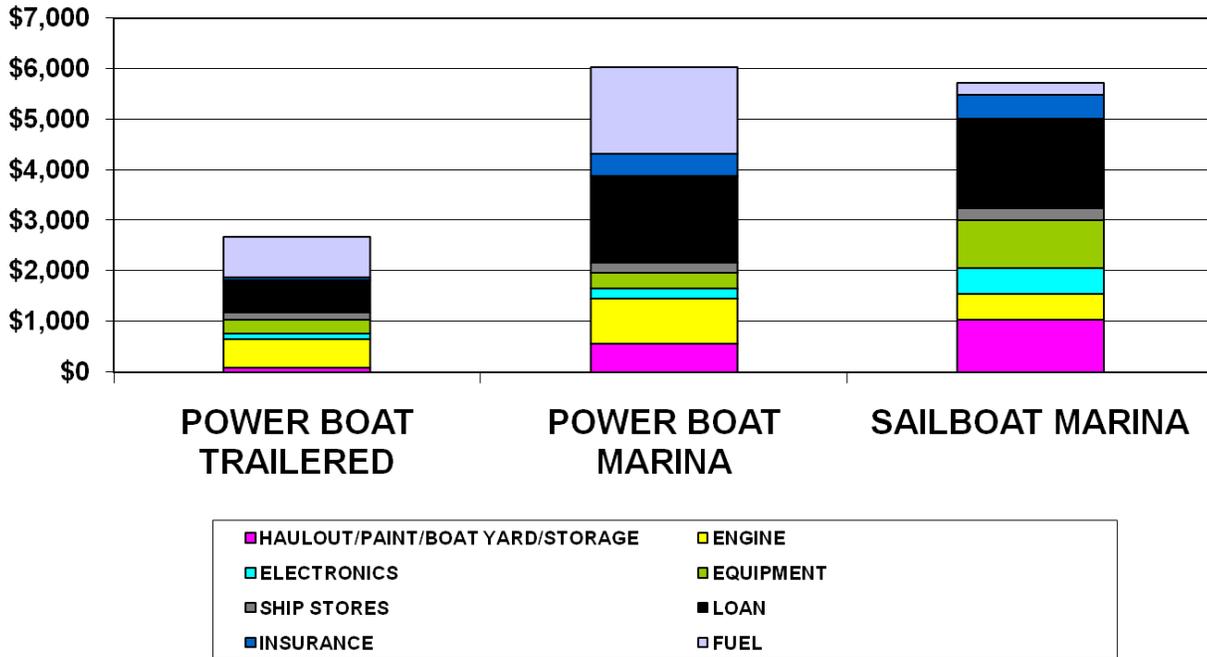
The Port of Olympia owns and operates a 738 slip marina, which creates substantial economic impacts in the Olympia regional economy. The impacts created by the recreational boating activity include the impacts generated by the vessels moored at the marina, as well as the impacts of transient boats that temporarily use the marina. To estimate the impacts, Martin Associates developed a profile and inventory of recreational boats, by size and type moored, at the Swantown Marina. In 2009, there were 614 recreational boats moored at the Port of Olympia Swantown Marina.

To develop the impact data, Martin Associates conducted interviews with tenants at the marina, including yacht clubs and sailing schools. The results of these surveys were used directly in estimating marina tenant impacts. Next, typical annual expenditures by type of moored boat were developed from published sources, including:

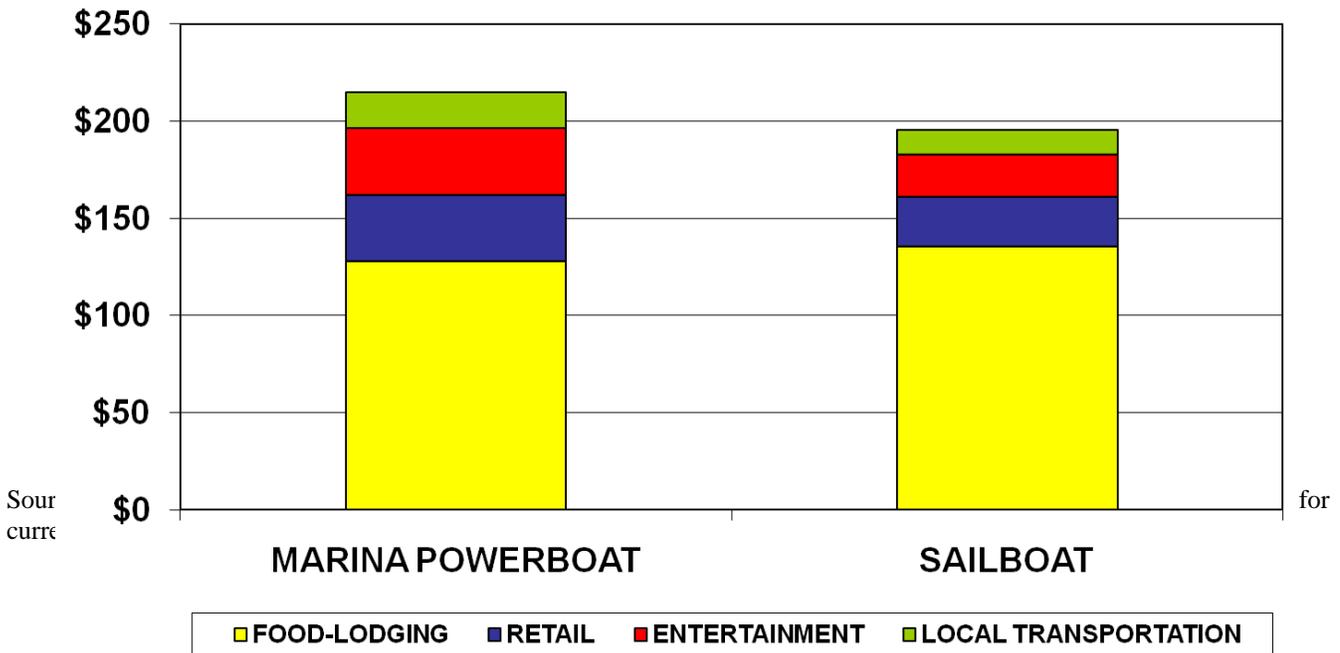
- Boating 2000: A Survey of Boater Spending In Maryland, University of Maryland Sea Grant Program;
- Measuring the Values of Marinas, 2004, Recreational Marine Research Center, Michigan State University;
- Interviews with Northwest Marine Trade Association;
- Marine Manufacturers Association;
- The Economic 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.

Table III-1 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 and "Measuring the Value of Marinas", 2004. Table III-2 shows the breakdown for local spending by transient boat operations, and adjusted for inflation.

**Table III-1
Annual Purchases by Recreational Boats Moored at the Port of Olympia Marina**



**Table III-2
Local Spending per Trip for Transient Boats**



These annual purchases per boat are multiplied by the number of boats in each category at the marina. The annual purchases by type of boat at the Port's 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 Olympia/Seattle/Tacoma MSA. Indirect impacts are developed from local purchases data supplied by support services providers including equipment suppliers and repair firms.

Table III-3 shows the impacts of the Port of Olympia's Swanton Marina.

**Table III-3
Economic Impact of Recreational Boating at the Port of Olympia Swantown Marina and Boatworks, 2009**

| SWANTOWN MARINA AND BOATWORKS | |
|--|---------------|
| JOBS | |
| Direct | 51 |
| Induced | 34 |
| Indirect | <u>64</u> |
| TOTAL | 149 |
| PERSONAL INCOME (MILLIONS) | |
| Direct | \$2.5 |
| Re-Spending/Local Consumption Expenditures | \$3.4 |
| Indirect | <u>\$2.2</u> |
| TOTAL | \$8.1 |
| BUSINESS REVENUE (MILLIONS) | \$2.8 |
| LOCAL PURCHASES (MILLIONS) | \$10.5 |
| STATE/LOCAL TAXES (MILLIONS) | \$0.7 |
| FEDERAL TAXES (MILLIONS) | \$2.2 |

In 2009, the recreational boating activity at the Port of Olympia Swantown Marina generated the following economic impacts.

- 51 direct jobs were created by recreational boating activity at the Port of Olympia marina.
- As a result of purchases by these 51 direct jobs, 34 induced jobs were generated in the local economy. The lower ratio of induced jobs to direct jobs in the marina sector reflects the lower income multiplier and hence re-spending impact associated with a 2.39 income multiplier for boatbuilding.
- As the result of \$10.5 million of local purchases by the firms dependent upon recreational boating activity at the Port of Olympia marina, 64 indirect jobs were supported in the local economy.
- The 51 direct jobs holders received \$2.5 million of direct wages and salaries. As the result of the re-spending impact, an additional \$3.4 million of personal income and local consumption expenditures were generated. The indirect jobholders received \$2.2 million of indirect wages and salaries.
- The marina operations generated \$2.8 million of business revenue excluding the sale of boats.
- \$726 thousand of state and local taxes were generated by the Port of Olympia marina activity.
- \$2.2 million of Federal Taxes were also generated by Port of Olympia cargo activity.

IV. ECONOMIC IMPACT OF THE PORT OF OLYMPIA REAL ESTATE HOLDINGS – Olympia Regional Airport and Peninsula Properties

The Port's real estate holdings include two separate lines of business – the Olympia Regional Airport (including the NewMarket Industrial Campus (NMIC)) and the Peninsula Properties. Each line of business is discussed separately.

With respect to the real estate analysis, the impacts created with the real estate tenants of Port of Olympia 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 Olympia. As a result, the impacts generated by tenants of the Port's real estate holdings are not as directly dependent upon the Port of Olympia 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 Olympia to recruit them, and would likely not have located in Olympia otherwise. Other firms would likely have located in Olympia regardless of the Port's efforts and infrastructure investment. Therefore, the economic impacts of the real estate activity should be viewed as impacts at a point in time by tenants of the Port, and further these impacts are the result of the tenants that have chosen to locate on Port of Olympia property. This location choice may reflect the desire of these tenants to locate on prime real estate property on which the Port has through investment developed the necessary infrastructure, including road and utility access. This infrastructure investment by the Port has occurred in a stagnant economy, and at the risk of the Port in undertaking infrastructure investment with municipal non-taxable bonds and grants, secured at lower interest costs than would be the case otherwise. Thus, the Port of Olympia's investment at lower infrastructure and development financing costs allows businesses to form and or operate in the region when private developers may not otherwise be able. This type of investing and business support fulfills one of the Port of Olympia's primary purposes, that of economic development within Thurston County.

The impact analysis of the real estate tenants are based on a survey of 197 tenants and sub-tenants. Martin Associates developed a separate real estate impact model to estimate the impacts of these tenants on the Olympia 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.

1. PORT OF OLYMPIA REGIONAL AIRPORT (INCLUDING NEWMARKET INDUSTRIAL CAMPUS)

The Port of Olympia Regional Airport is a general aviation airport with limited airport related activity. The primary use of the property is by the Port's real estate tenants, ranging from limited fixed base operations to restaurants, light manufacturing, and commercial offices. The economic impacts of the NewMarket Industrial Campus are also included in the Olympia Regional Airport line of business to reflect the current accounting/financial reporting practices of the Port of Olympia.

Within this line of business, the Olympia Regional Airport (including the New Market Industrial Campus) the Port of Olympia leases land to tenants for office and commercial space, retail space, restaurants, and light industrial activity. In addition to leasing land, the Port of Olympia has developed the necessary infrastructure to attract businesses to the City of Olympia, Thurston County and the State of Washington. Essentially these are tenants of the Port of Olympia that are not included in the marine or marina divisions.

The Olympia Area Regional Airport site consists of FBOs servicing general aviation flights in and out of Olympia Regional Airport, an FAA Tower and The Olympic Flight Museum. Other tenants operate recreational activities such as a golf course, karting, and batting cages. Several restaurants and retail stores are also located on the Port of Olympia’s Airport property. NewMarket Industrial Campus is part of the Olympia Area Regional Airport. Tenants at the NewMarket Industrial Campus include offices, Tumwater School District, warehousing and distribution tenants and a public library. The New Market Industrial Campus tenants benefit from proximity and access to I-5.

Table IV-1 summarizes the economic impacts of the Port of Olympia Regional Airport and NewMarket Industrial Campus.

**Table IV-1
Economic Impacts of the Port of Olympia Regional Airport (Including NewMarket Industrial Campus)**

| | NewMarket Industrial Campus | Olympia Regional Airport | Total |
|---------------------------------------|-----------------------------------|--------------------------------|----------------|
| JOBS | | | |
| Direct | 2,036 | 227 | 2,263 |
| Induced | 838 | 97 | 935 |
| Indirect | <u>1,955</u> | <u>198</u> | <u>2,153</u> |
| TOTAL | 4,829 | 521 | 5,351 |
| PERSONAL INCOME (MILLIONS) | | | |
| Direct | \$69.9 | \$8.6 | \$78.5 |
| Re-spending/Local Consumption | \$48.4 | \$6.0 | \$54.3 |
| Indirect | <u>\$104.4</u> | <u>\$9.4</u> | <u>\$113.8</u> |
| TOTAL | \$222.7 | \$23.9 | \$246.6 |
| BUSINESS REVENUE (MILLIONS) | | | |
| | \$789.5 | \$20.0 | \$809.6 |
| LOCAL PURCHASES (MILLIONS) | | | |
| | \$313.7 | \$24.0 | \$337.7 |
| STATE/LOCAL TAXES (MILLIONS) | | | |
| | \$19.8 | \$2.1 | \$21.9 |
| FEDERAL TAX REVENUE (MILLIONS) | | | |
| | \$59.9 | \$6.4 | \$66.3 |

Note: Totals may not add due to rounding

As summarized in Table IV-1, the Port of Olympia Regional Airport (including NewMarket Industrial Campus) tenants create the following economic impacts due to the level of business activity of these tenants in 2009:

- 2,263 direct jobs are generated by these tenants, and as the result of local purchases by these direct employees; another 935 induced jobs are supported in the Olympia regional economy. These tenants made \$337.7 million of local purchases, supporting 2,153 indirect jobs. This indirect impact reflects the dependency on the local economy supply infrastructure for port tenants such as business offices, industrial firms, boatyards, etc.
- The 2,263 directly employed workers received \$78.5 million of wages and salaries. As the result of the local purchases by these employees, another \$54.3 million of income and consumption expenditures were generated, resulting in the induced job impact. This reflects a personal income multiplier of 1.69 for offices and business services, which account for the majority of tenants. The 2,153 indirect jobholders received \$113.8 million of indirect wages and salaries for a total personal income and local consumption impact of \$246.6 million
- The Port tenants of Olympia Regional Airport and NewMarket Industrial Campus received \$809.6 million of revenue, of which \$337.7 million was used for local purchases, as identified from the surveys of these tenants. These local purchases supported the 2,153 local indirect jobs.
- The Port of Olympia tenants generated \$21.9 million of state and local taxes, and \$66.3 million of Federal Taxes

Table IV-2 shows the composition of the tenants of the Olympia Regional Airport and the NewMarket Industrial Campus. As this table indicates, the majority of the real estate tenant impacts occur at the NewMarket Industrial Campus. This reflects not only the number of tenants located within the NewMarket Industrial Campus, but also the composition of the tenants, as a larger share of these tenants are involved in office and distribution activity.

**Table IV-2
Composition and Economic Impact of Tenants of the Olympia Regional Airport and
NewMarket Industrial Campus**

| | DIRECT JOBS | INDUCED JOBS | INDIRECT JOBS | TOTAL JOBS | DIRECT INCOME (\$1,000) | INDUCED INCOME (\$1,000) | INDIRECT INCOME (\$1,000) | TOTAL INCOME (\$1,000) | REVENUE (\$1,000) | LOCAL PURCHASES (\$1,000) | State/Local Taxes(\$1,000) | Federal Taxes(\$1,000) |
|------------------------------------|----------------|-----------------|------------------|---------------|----------------------------|-----------------------------|------------------------------|---------------------------|----------------------|------------------------------|-------------------------------|---------------------------|
| NewMarket Industrial Campus | | | | | | | | | | | | |
| Office | 1,013 | 375 | 1,013 | 2,401 | \$24,312.0 | \$16,836.0 | \$60,456.0 | \$101,604.0 | \$3,798.8 | \$202,600.0 | \$9,042.8 | \$27,311.2 |
| Warehouse/ Distribution/Storage | 578 | 263 | 581 | 1,421 | \$26,145.0 | \$18,105.1 | \$27,300.0 | \$71,550.0 | \$666,644.3 | \$65,800.0 | \$6,368.0 | \$19,232.6 |
| Library/Communications | 139 | 67 | 76 | 282 | \$7,253.6 | \$5,023.4 | \$3,579.0 | \$15,856.0 | \$42,911.1 | \$9,435.0 | \$1,411.2 | \$4,262.1 |
| Manufacturing | 132 | 50 | 132 | 313 | \$3,419.0 | \$2,368.0 | \$5,836.0 | \$11,623.0 | \$55,149.8 | \$15,293.0 | \$1,034.4 | \$3,124.3 |
| School District | 94 | 46 | 95 | 235 | \$4,908.8 | \$3,399.2 | \$4,376.0 | \$12,684.0 | NA | \$10,748.0 | \$1,128.9 | \$3,409.5 |
| Construction | 34 | 14 | 34 | 82 | \$1,320.3 | \$913.7 | \$1,608.0 | \$3,842.0 | \$11,546.0 | \$6,332.0 | \$341.9 | \$1,032.7 |
| Light Industrial/Commercial | 33 | 18 | 11 | 62 | \$2,109.0 | \$1,460.0 | \$571.0 | \$4,140.0 | \$8,577.0 | \$1,208.0 | \$368.5 | \$1,112.8 |
| Recreation | 15 | 6 | 14 | 35 | \$408.8 | \$283.2 | \$689.0 | \$1,381.0 | \$922.8 | \$2,286.0 | \$122.9 | \$371.2 |
| Subtotal | 2,036 | 838 | 1,955 | 4,829 | \$69,876.4 | \$48,388.6 | \$104,415.0 | \$222,680.0 | \$789,549.8 | \$313,702.0 | \$19,818.5 | \$59,856.4 |
| Olympia Regional Airport | | | | | | | | | | | | |
| Light Industrial | 77 | 35 | 77 | 189 | \$3,326.8 | \$2,304.2 | \$3,493.0 | \$9,124.0 | \$11,246.5 | \$7,471.0 | \$812.0 | \$2,452.5 |
| FBO | 50 | 21 | 50 | 120 | \$1,840.7 | \$1,274.3 | \$2,322.0 | \$5,437.0 | \$3,581.9 | \$4,776.0 | \$483.9 | \$1,461.5 |
| Restaurants | 31 | 11 | 31 | 72 | \$594.8 | \$412.3 | \$1,434.0 | \$2,441.0 | \$1,591.2 | \$5,299.0 | \$217.2 | \$656.1 |
| Hangars/Storage | 19 | 8 | 2 | 28 | \$622.0 | \$431.0 | \$117.0 | \$1,170.0 | \$1,256.4 | \$355.0 | \$104.1 | \$314.5 |
| Office | 17 | 9 | 17 | 43 | \$1,026.0 | \$711.0 | \$1,021.0 | \$2,758.0 | \$1,026.0 | \$3,420.0 | \$245.5 | \$741.4 |
| Gov't/FAA Tower | 12 | 7 | NA | 19 | \$850.0 | \$589.0 | NA | \$1,439.0 | NA | NA | \$128.0 | \$386.8 |
| Farming | 12 | 4 | 11 | 27 | \$138.0 | \$96.0 | \$574.0 | \$808.0 | \$345.0 | \$1,248.0 | \$71.9 | \$217.2 |
| Retail | 5 | 2 | 5 | 12 | \$105.0 | \$73.0 | \$225.0 | \$403.0 | \$690.0 | \$693.0 | \$35.9 | \$108.3 |
| Recreation/Museum | 5 | 2 | 5 | 11 | \$89.9 | \$62.1 | \$208.0 | \$162.0 | \$296.0 | \$765.0 | \$14.4 | \$43.5 |
| Subtotal | 227 | 97 | 198 | 521 | \$8,593.2 | \$5,952.8 | \$9,394.0 | \$23,742.0 | \$20,033.0 | \$24,027.0 | \$2,113.0 | \$6,381.8 |
| Total | 2,263 | 935 | 2,153 | 5,351 | \$78,469.6 | \$54,341.4 | \$113,809.0 | \$246,422.0 | \$809,582.8 | \$337,729.0 | \$21,931.5 | \$66,238.2 |

2. PENINSULA PROPERTIES

In downtown Olympia, the Port of Olympia developed Peninsula Properties. Many retail stores and offices are located downtown Olympia in Market Centre and Market Place Buildings and the Olympia Farmers Market. Several restaurants, a radio station, and a coffee roasting company are also located on Peninsula Properties. Table IV-3 summarizes the impacts for the Peninsula Properties

**Table IV-3
Economic Impacts of the Peninsula Properties**

| Peninsula Properties | |
|---------------------------------------|---------------|
| JOBS | |
| Direct | 553 |
| Induced | 240 |
| Indirect | <u>550</u> |
| TOTAL | 1,343 |
| PERSONAL INCOME (MILLIONS) | |
| Direct | \$22.1 |
| Re-spending/Local Consumption | \$15.3 |
| Indirect | <u>\$25.4</u> |
| TOTAL | \$62.8 |
| BUSINESS REVENUE (MILLIONS) | \$55.1 |
| LOCAL PURCHASES (MILLIONS) | \$85.2 |
| STATE/LOCAL TAXES (MILLIONS) | \$5.6 |
| FEDERAL TAX REVENUE (MILLIONS) | \$16.9 |

As summarized in Table IV-1, the Port of Olympia Regional Airport (including NewMarket Industrial Campus) tenants create the following economic impacts due to the level of business activity of these tenants in 2009.

In calendar year 2009, the Peninsula property tenants of the Port of Olympia had the following economic impact.

- 553 direct jobs are generated by these tenants, and as the result of local purchases by these direct employees; another 240 induced jobs are supported in the Olympia regional economy. These tenants made \$85.2 million of local purchases, supporting 550 indirect jobs. This indirect impact reflects the dependency on the local economy supply infrastructure for port tenants such as business offices, industrial firms, retail outlets, etc.
- The 553 directly employed workers received \$22.1 million of wages and salaries. As the result of the local purchases by these employees, another \$15.3 million of income and consumption expenditures were generated, resulting in the induced job impact. The 550 indirect jobholders received \$25.4 million of indirect wages and salaries for a total personal income and local consumption impact of \$62.8 million.
- The Port tenants of the Peninsula Properties received \$55.1 million of direct revenue, and made \$85.2 million of local purchases, as identified from the surveys of these tenants. These local purchases supported the 550 local indirect jobs.⁶
- The Port of Olympia tenants of the Peninsula properties generated \$5.6 million of state and local taxes, and \$16.9 million of Federal Taxes.

The breakdown of the Peninsula Properties by type of tenants is shown in Table IV-4. As this table shows, retail activity and the farmers market creates the largest economic impact by the tenants of the Peninsula Properties, followed by office tenants and restaurants.

**Table IV-4
Economic Impact of Peninsula Properties by Type of Tenant**

| | DIRECT JOBS | INDUCED JOBS | INDIRECT JOBS | TOTAL JOBS | DIRECT INCOME (\$1,000) | INDUCED INCOME (\$1,000) | INDIRECT INCOME (\$1,000) | TOTAL INCOME (\$1,000) | REVENUE (\$1,000) | LOCAL PURCHASES (\$1,000) | State/Local Taxes(\$1,000) | Federal Taxes(\$1,000) |
|-----------------------------|----------------|-----------------|------------------|---------------|----------------------------|-----------------------------|------------------------------|---------------------------|----------------------|------------------------------|-------------------------------|---------------------------|
| Peninsula Properties | | | | | | | | | | | | |
| Retail/Farmers Market | 171 | 62 | 171 | 404 | \$3,777.4 | \$2,615.6 | \$7,692.0 | \$14,085.0 | \$9,808.6 | \$23,713.0 | \$1,253.6 | \$3,786.0 |
| Restaurants | 146 | 57 | 146 | 349 | \$4,204.7 | \$2,911.3 | \$5,779.0 | \$12,895.0 | \$8,775.0 | \$19,418.0 | \$1,147.7 | \$3,466.2 |
| Office | 152 | 82 | 150 | 384 | \$9,971.9 | \$6,905.1 | \$7,326.0 | \$24,203.0 | \$26,391.3 | \$29,287.0 | \$2,154.1 | \$6,505.8 |
| Light Industrial | 44 | 19 | 43 | 106 | \$1,799.6 | \$1,246.4 | \$2,367.0 | \$5,413.0 | \$3,954.6 | \$6,820.0 | \$482.0 | \$1,455.0 |
| Port of Olympia | 35 | 18 | 35 | 89 | \$2,199.6 | \$1,523.4 | \$1,920.0 | \$5,643.0 | \$6,004.9 | \$5,243.0 | \$502.2 | \$1,516.8 |
| Recreation | 6 | 2 | 5 | 13 | \$148.2 | \$102.8 | \$271.0 | \$522.0 | \$197.8 | \$743.0 | \$46.5 | \$140.3 |
| Total | 553 | 240 | 550 | 1,343 | \$22,101.3 | \$15,304.7 | \$25,355.0 | \$62,761.0 | \$55,132.2 | \$85,224.0 | \$5,585.7 | \$16,870.2 |

⁶ The fact that purchases were greater than annual revenue suggests that some purchases were made from non-operating revenue sources, including debt as well as cash balances, and revenue generated from non-local operations.

V. ECONOMIC IMPACTS OF PORT OF OLYMPIA CAPITAL DEVELOPMENT PROGRAM

The Washington State Ports have been given a specific economic development mission as part of the Revised Code of Washington. Since the Port of Olympia's charter in 1922, the Port has acted in concert with this State directive to stimulate economic development and provide the economic catalyst to grow jobs and economic activity. The Port of Olympia has provided required capital investment in marine terminal infrastructure necessary to handle marine cargo and ocean going vessels; the Port has invested in airport infrastructure to provide runway and hangar space to general aviation aircraft operations and provide infrastructure for the future development of commercial aviation service; and the Port has invested in commercial marina development to provide mooring space to the areas recreational boating community. In addition to this transportation infrastructure investment, the Port also has engaged in the development of infrastructure to promote economic development in Thurston County and the City of Olympia. The ports Peninsula properties and the NewMarket Industrial Campus provide real estate sites with developed road and utility infrastructure to companies seeking a Pacific Northwest presence. With the location of industry and real estate tenants, the Port's infrastructure investment through municipal revenue bonds and state and Federal grants, provides an important economic development role within Thurston County.

Despite the economic conditions that existed in 2009, the Port invested \$10.2 million in additional fixed assets during 2009. This investment included approximately \$368 thousand for airport improvements, approximately \$4.6 million for marine terminal improvements, \$4.1 million for property development, and \$1 million for marina upgrades. The remaining \$132 thousand was for various equipment and infrastructure improvements. The remaining commitments on these and other miscellaneous construction projects approximate \$6 million.

The economic impacts in Thurston County of this \$10.2 million investment in 2009 are summarized in Table V-I. These estimates are based on construction industry multipliers for Thurston County, as developed for Martin Associates by the US Bureau of Economic Analysis. The \$10.2 million construction investment in the Port's assets in 2009 is estimated to have supported 66 direct construction jobs in Thurston County, and an additional 48 induced and indirect jobs. A total of \$4.6 million of personal income was paid to the 114 direct, induced and direct job holders, and an additional \$6.6 million of local purchases in Thurston County were stimulated by the Port's \$10.2 million of construction expenditures in 2009. Finally, as a result of the \$10.2 million of construction expenditures, \$1.3 million of state and local tax revenue was created, reflecting an 8.5% sales tax paid on the \$10.6 million of expenditures. It is to be emphasized that these are one time impacts, related to the \$10.2 million of construction expenditures by the Port in 2009. While these may be one time impacts, the Port has shown a history of investment in infrastructure. Thus, while the number of generated jobs, income and taxes may vary slightly from year to year, there is a continuity about their impact.

As the Port continues to invest in its asset base, it not only creates immediate economic impacts for Thurston County and the State of Washington from a construction perspective, but

these investments provide the critical infrastructure to market Olympia and Thurston County to potential real estate tenants and users of the Marine Terminal and the Olympia Regional Airport.

**Table V-1
Economic Impact of \$10.2 Million Capital Investment by Port of Olympia**

| | |
|---|--------------|
| JOBS | |
| Direct | 66 |
| Induced/Indirect | <u>48</u> |
| Total Jobs | 114 |
| | |
| PERSONAL INCOME (MILLIONS) | |
| Direct | \$3.0 |
| Respending/Indirect | <u>\$1.6</u> |
| Total | \$4.6 |
| | |
| CONSTRUCTION PRUCHASES(MILLIONS) | \$10.2 |
| | |
| LOCAL PURCHASES (MILLIONS) | \$6.6 |
| | |
| STATE AND LOCAL TAXES (MILLIONS) | \$1.3 |