Marine Terminals
Master Plan 2008

Incorporated into the Port of Everett Comprehensive Scheme of Harbor Improvements on July 8, 2008 through Port Commission Resolution No. 895

Westmar
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1</td>
<td>Planning Team</td>
<td>2</td>
</tr>
<tr>
<td>1.2</td>
<td>Marine Terminal Development Program 1995</td>
<td>2</td>
</tr>
<tr>
<td>1.3</td>
<td>Planning Framework</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Public Information and Consultation</td>
<td>5</td>
</tr>
<tr>
<td>2.1</td>
<td>Community Participation</td>
<td>5</td>
</tr>
<tr>
<td>2.1.1</td>
<td>Responding to a Survey</td>
<td>5</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Attending Master Plan Meetings</td>
<td>5</td>
</tr>
<tr>
<td>2.1.3</td>
<td>Attending Port Commission Updates</td>
<td>5</td>
</tr>
<tr>
<td>2.2</td>
<td>Outreach Themes</td>
<td>5</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Support Existing Operations and Leverage Growth Opportunities</td>
<td>5</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Public Waterfront Access</td>
<td>5</td>
</tr>
<tr>
<td>2.2.3</td>
<td>Minimize Impacts to the Surrounding Area</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Overview of Marine Cargo Traffic</td>
<td>6</td>
</tr>
<tr>
<td>3.1</td>
<td>Pacific Northwest Ports Marine Cargo Traffic</td>
<td>6</td>
</tr>
<tr>
<td>3.2</td>
<td>Port of Everett Traffic Profile</td>
<td>7</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Comprehensive Master Plan Summary and Forecast</td>
<td>7</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Actual Traffic from 1995 to 2007</td>
<td>7</td>
</tr>
<tr>
<td>3.3</td>
<td>Port of Everett Traffic Outlook</td>
<td>8</td>
</tr>
<tr>
<td>3.3.1</td>
<td>Logs Handled</td>
<td>8</td>
</tr>
<tr>
<td>3.3.2</td>
<td>Bulk Product Imports</td>
<td>8</td>
</tr>
<tr>
<td>3.3.3</td>
<td>General Cargoes</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Environmental and Geotechnical Assessment</td>
<td>8</td>
</tr>
<tr>
<td>4.1</td>
<td>Environmental</td>
<td>8</td>
</tr>
<tr>
<td>4.2</td>
<td>Geotechnical Assessment</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Development Alternatives</td>
<td>9</td>
</tr>
<tr>
<td>5.1</td>
<td>Initial Screening of Alternatives</td>
<td>9</td>
</tr>
<tr>
<td>5.2</td>
<td>Preferred Alternative</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Marine Terminal Business Planning Process</td>
<td>15</td>
</tr>
<tr>
<td>6.1</td>
<td>Competitive Position of the Port of Everett</td>
<td>15</td>
</tr>
<tr>
<td>6.2</td>
<td>Present Marine Terminals Operations</td>
<td>15</td>
</tr>
<tr>
<td>6.3</td>
<td>Framework for Marine Terminal Development and Operating Agreement</td>
<td>16</td>
</tr>
<tr>
<td>6.4</td>
<td>Economic Impact</td>
<td>16</td>
</tr>
</tbody>
</table>

APPENDIX A  Regulatory Framework for Marine Terminals Master Plan 2008
APPENDIX C  Public Outreach
APPENDIX D  The 2006 Economic Impact of the Port of Everett by Martin Associates
1 Introduction

Ports are a critical component of the local, regional, state, national and international economies as they are a vital link in the transportation network for the economic export and import of goods and materials. The Port of Everett’s deep-water marine terminals on Port Gardner Bay and at Mukilteo are important components in the marine transportation network on the West Coast and have the potential to play an even greater role. An aerial view of the Port of Everett’s marine terminal appears on the cover. These port’s marine terminals have the necessary physical assets required for an economic and efficient port operation: unrestricted deep-water access supported by a large area of level back-up lands connected to hinterland transportation service through the BNSF railroad and direct access to the interstate highway system.

In January of 2006, the Port of Everett Commission authorized Port Staff and Westmar Consultants Corp., (now part of WorleyParsons Westmar), to undertake a marine terminal master plan of the Port’s deep-water marine terminal facilities on Port Gardner Bay. The purpose of this master plan is to update the 1995 Marine Terminal Development Program, which was embodied in the Port’s Comprehensive Scheme of Harbor Improvement Final EIS (August 1995). In the text which follows, this master plan update is referred to as the “Marine Terminals Master Plan 2008” (MTMP 2008).

This MTMP 2008 report sets forth a vision for the future development of the Port’s marine terminals over the next 5 to 10 years in order to realize the full potential of its assets, which are designated as transportation facilities of state-wide significance, and thereby will provide the maximum future benefit to the local, regional and national economies. Figure 1-1, below, illustrates what the MTMP 2008 means to the process of Port development. In short, prior to any specific capital project proceeding, further studies, environmental reviews, evaluations, designs and business case analyses will be required.

As shown in Figure 1-2, below, to complete project specific activities within their time frames, it is important to conduct the vision setting well ahead of actual project implementation.

**Figure 1-1: Marine Terminals Master Plan 2008 - Three Step Process**

**Step 1: Master Plan – Set the Vision**
- Establish guiding principles and land uses
- Identify and consider alternatives
- Select preferred alternative

**Step 2: Project Review – Weigh Project Net Benefits**

<table>
<thead>
<tr>
<th>Financial Analysis</th>
<th>Economic Impacts</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Market Demand</td>
<td>• Job Creation</td>
<td>• Trails &amp; Open Space</td>
</tr>
<tr>
<td>• Financial Performance</td>
<td>• Development Catalyst</td>
<td>• Community Service</td>
</tr>
<tr>
<td></td>
<td>• Tax Generation</td>
<td>• Community Activities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3: Project Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
</tr>
<tr>
<td>• User Needs</td>
</tr>
<tr>
<td>• Site Conditions</td>
</tr>
<tr>
<td>• Environmental Issues</td>
</tr>
<tr>
<td><strong>Environmental Review &amp; Permit</strong></td>
</tr>
<tr>
<td>• Avoid / Minimize Impacts</td>
</tr>
<tr>
<td>• Mitigate</td>
</tr>
<tr>
<td><strong>Implement</strong></td>
</tr>
</tbody>
</table>

**Figure 1-2: Activity Time Frames**

The Port Commission directed that the master planning be guided by the Port’s Mission Statement to:

“Responsibly Grow the Economy to Enhance the Quality of Life in the Region”

and by the objectives for the Marine Terminals to:

“effectively manage and plan for marine terminals maintenance and operations, as set out in the Port of Everett Strategic Plan adopted in September 2007.”
The following strategic assessment and objectives taken from Goal 2 of the Strategic Plan speak directly to the need for developing an updated Marine Terminals Master Plan:

**Marine Terminals Strategic Assessment**

The region’s businesses benefit from the Port cost-competitive deep-water access of its marine terminal facilities that provide the necessary flexibility and responsiveness desired by the shipping community. In addition, the marine terminals serve as a critical piece of infrastructure supporting supply chain logistics for the aerospace industry of Everett's and other local businesses. The port facilities are recognized in state statutes as transportation facilities of state-wide significance. Maintaining existing port marine terminal facilities and equipment necessitates a long-term strategy to support and enhance current operations.

**Strategic Objectives**

- Develop a long-term vision for the marine terminals and complete the Marine Terminals Master Plan;
- Consider the long-term financial costs and benefits of marine terminal development, as well as the neighborhood context of new development;
- Identify appropriate markets and niche areas with growth potential, to grow terminal operations; and,
- Develop a strategic funding plan for equipment replacement and facility upgrades at the marine terminals.

### 1.1 Planning Team

The MTMP 2008 Planning Team is comprised of a diverse group of professionals with broad experience in the process of port and marine terminal development. The Port of Everett’s own planning, engineering and operations staff have provided the overall direction to the planning team with particular focus on ensuring that the local and regional issues are well understood so that the master plan will fulfill the Port’s mandate.

Westmar's multi-disciplinary team specializing in port planning and design was retained as the prime consultant and planning team leader. Westmar retained the following local specialist firms to assist in the master plan:

- Makers Architecture and Urban Design of Seattle, who led the public information and consultation process;
- HDR Engineering of Bellevue, have examined rail access opportunities and constraints;
- GeoEngineers of Tacoma, who have completed an environmental overview and geotechnical assessments of the proposed development areas;
- Mercator Transport of Bellevue, (now part of the Macquarie Group) who prepared the initial range of marine cargo traffic scenarios; and,
- Pentec Environmental of Edmonds, (a division of Hart Crowser), who undertook the review of marine zone environmental studies.

### 1.2 Marine Terminal Development Program 1995

As noted, this master plan represents the first formal update since the 1995 Marine Terminal Development Program.

*Figure 1-3*, below, is extracted from the 1995 report and presents the planning concept developed at that time for the area of the Pacific and South Terminals and Pier 1.

The proposals at that time focused on utilizing the existing wharves and piers to continue to provide service primarily to the forest products industry. Some expansion of the infrastructure was considered, should the market opportunities justify the need.

![Figure 1-3: 1995 Comprehensive Scheme](image-url)
PORT OF EVERETT
Marine Terminals Master Plan 2008

• Provide a framework for future planning and identify potential development opportunities for port property;
• Facilitate regional/bay-wide planning in cooperation with other governmental entities; and,
• Develop environmental management goals and guidelines related to resource mitigation, land use compatibility, public access, and transportation that will apply to future planning and development activities.

While the majority of the 1995 recommendations are still consistent with the Port’s current objectives, significant changes have occurred since 1995 in the local and regional economies and, correspondingly, to the types of cargoes that the Port is handling. In 1995, the cargoes included handling significant volumes of raw logs as well as other commodities related to the forest industry. However, since 1995, the forest industry has been in decline making the primary objective of the Port’s marine terminals to support the local aerospace industry by providing steady and consistent service.

Further, the Port has become a port-of-call for three major shipping lines discharging and loading containerized and break-bulk general cargoes, changing the requirements for the Port’s infrastructure to service larger ships with different cargo handling requirements. The Port of Everett now also services bulk cement ships at Pier 3 South.

In 2006, the Port recognized some of the changing requirements and re-commissioned two used container gantry cranes at the Pacific Terminal to provide improved cargo handling capacity. As shown in Figure 1-4, below, the improved general cargo handling efficiency has resulted in a significant increase in the volume of container and break-bulk cargo.

![Figure 1-4: Marine Terminal Cargo Traffic 2005-2007](image)

Figure 1-4: Marine Terminal Cargo Traffic 2005-2007

Since 1995, the local community has also taken an active role in voicing expectations for the future development of the waterfront, including the Port’s marine terminals. These changes highlight the importance to re-examine and update the 1995 Plan for the marine terminals in order to ensure that the Port of Everett continues to fulfill its strategic role in the local, regional, and national economies.

1.3 Planning Framework

The specific criteria for MTMP 2008 were broadly outlined at the commencement of the planning process in 2006. It was recognized, however, that the specific criteria would be adjusted based on the interim planning assessments, port development opportunities identified or realized during the course of the work and, importantly, the feedback from the community.

The following summarizes the Port Commission’s final direction to the planning team:

• The master planning effort is to be undertaken within the existing framework of state and local statutes, including the enabling legislation for port districts in Washington State, the designation of port facilities engaging in international or interstate trade as transportation facilities of state wide significance, the local City of Everett Shoreline Master Program, and the Community Vision for Everett, (Vision 2025). Appendix A provides further detail on the planning framework.
• The Master Plan will consider the work completed for the Marine Terminal Development Program in the Port’s Comprehensive Scheme FEIS of 1995 as the basis for advancement of the MTMP 2008; 
• The Master Plan will build upon the success the Port has had in attracting niche container and break-bulk cargoes in recent years;
• The Master Plan will maintain the historical balance between the operating port and other community needs;
• Mega port concepts, which would substantially alter the Port’s transportation infrastructure needs, were explored but not pursued during the planning process;
• The input received during the public information sessions will be carefully considered and reasonably incorporated;
• The operation of Pier 1 and the Pacific Terminal would continue generally as at present for the foreseeable future; and,
• The planning area was initially to include the entire deep-water marine terminal area from the North Yard south to the South Terminal. However, during the planning process, three significant areas of the Hewitt Terminal were leased long-term to the Lehigh Northwest Cement Co., the Everett Ship Repair & Drydock (a subsidiary of Todd Shipyard), and Dunlap Towing. As a result, the area of particular focus was the area from Pier 1 through to the South Terminal as shown in Figure 1-5 on the following page. 

![Figure 1-5: Planning Area](image)

Figure 1-5 shows the planning area from Pier 1 to the Pacific and South Terminals and also shows the adjacent Hewitt Wharf/Pier 3 zone which includes the Lehigh, Everett Shipyard and Dunlap leasethold areas. Note that the Port of Everett’s satellite terminal, the Mount Baker Terminal, was incorporated into the Port’s Comprehensive scheme of Harbour Improvements through a previous resolution, and for that reason is not included in the Planning Area shown in Figure 1-5.

The Master Plan will incorporate the secondary access rail spur being planned from the west end of the South Terminal (this rail spur is a component of the rail access recovery program partly funded through a grant from the Department of Homeland Security); and,

The Master Plan will recognize the current limitations of the BNSF Railway that preclude long trains from being effectively serviced in the terminal areas and on the mainline leading east from Everett.
Figure 1-5: Marine Terminals Planning Area
2 Public Information and Consultation

This section summarizes the public information and consultation initiatives associated with the MTMP 2008 report. Topics include Community Participation, (surveys, meetings and Commission updates), plus the Outreach Themes gained from the program. Detailed information, compiled by Makers Architecture and Urban Design of Seattle, is located in Appendix C.

2.1 Community Participation

From this master plan’s inception, the Port Commission identified engaging the community as a priority for its MTMP 2008 initiative. To meet this directive, the planning team tailored a proactive outreach program intended to involve the community in the process and keep the community informed as the plan developed. Key to this effort was providing a range of comfortable and convenient opportunities for the community to get involved and stay informed. These opportunities included:

2.1.1 Responding to a Survey

A short survey, which broadly identified community planning priorities, concerns about future uses, and interest in participating in a planning focus group, was mailed to more than 3,000 households in the Port District. The Port received more than 420 responses to this survey, a return rate of approximately 14-percent.

2.1.2 Attending Master Plan Meetings

The Port hosted 20 interviews, seven focus group meetings and three public open house meetings during the planning process. These outreach efforts were in addition to the bi-monthly Port Commission meetings that provided the public the opportunity to comment on the planning process. Interviewees were selected to provide a cross-section of perspectives and included citizens, tenants, and local officials. Focus group meetings provided small forums to discuss project issues. Any community member, indicating their interest in participating, was invited to a focus group.

2.1.3 Attending Port Commission Updates

Opportunities for comment were provided throughout the process during periodic project updates at Port Commission meetings.

Additionally, interested community members could visit the Port’s Website to submit a comment, or to check for project updates and meeting announcements, or schedule a speaker to give project updates.

2.2 Outreach Themes

Several themes emerged from the input received throughout the process. These themes communicate participants' primary planning priorities and areas of concern and are summarized below.

2.2.1 Support Existing Operations and Leverage Growth Opportunities

The Port’s deep-water terminals are uniquely valuable assets capable of supporting oceangoing marine commerce and water-dependent industries. Many participants believe the Port should improve utilization and look for opportunities to upgrade these assets to ensure they remain competitive in an evolving market. Similarly, expanding activities at the marine terminals to create additional jobs in the area was a high priority for many survey respondents. According to the 2006 Economic Impact of the Port of Everett, the marine terminals and port-related properties are responsible for approximately 75-percent of the direct jobs generated by the Port of Everett’s cargo and property lines of business with the remaining 25-percent attributed to marine operations.

Suggestions for improving the marine terminals included:

- Maximize the existing facilities’ use efficiency prior to embarking on major expansion projects;
- Expand berthing capacity and provide adequate equipment to support current tenants and future business; and
- Continue to diversify business lines, building on the Port’s recent success attracting niche container, break-bulk, and project cargoes.

2.2.2 Public Waterfront Access

Public access to the shoreline is a high priority for many participants. Many stakeholders strongly support the Port’s “2-percent for public access” program, a policy that allocates 2-percent of Capital Improvement Projects within shoreline zones for improving access to the waterfront. To date the Port has contributed $8.3 million to public access improvements.

The Port’s 2-percent contributions are currently deposited into a fund, targeted for projects identified in the City of Everett’s Public Access Plan. As this plan spans Everett’s entire waterfront, many participants in this process would prefer public access benefits be targeted directly to the neighborhoods adjacent to the marine terminals most likely to be affected by the project. Specific public access projects of interest to Marine Terminals Master Plan stakeholders include:

- Design and construction of the Pigeon Creek over or under crossing of the BNSF rail line;
- Enhancing the existing Pigeon Creek public access trail and signage (including improvements to trail security);
- Expanding the Pigeon Creek Viewpoint and public access area; and
- Improving the Warren Avenue Overlook.

2.2.3 Minimize Impacts to the Surrounding Area

Many participants are concerned about the potential impacts of marine terminal operations and expansion alternatives explored in the master plan process. Primary areas of concern included:

- View impacts from container cranes located at Pacific Terminal;
- Night noise, especially from loading equipment back-up alarms;
- Air emissions from ships in port and terminal equipment; and
- Truck traffic through downtown Everett.
3 Overview of Marine Cargo Traffic

This section commences with an overview of International Marine Cargo Traffic through the Pacific Northwest Port region including the US Pacific Northwest ports of Washington State and the lower Columbia River of the State of Oregon, and the South Coast of British Columbia. This provides a big picture of the characteristics of the international trades which prevail in the Pacific Northwest region. The British Columbia South Coast Ports and the US Pacific Northwest Ports share to a certain extent a common winterland. For that reason, they are jointly referred to as the “Pacific Northwest Port Region”. The next subsection narrows the focus to examine the profile of international marine cargo traffic through the Port of Everett beginning in 1995 (following the Marine Terminal Development Program) until the end of 2007 (the last year of record). Finally, in light of the background in the previous subsections, the potential future marine cargo traffic through the Port of Everett is addressed.

3.1 Pacific Northwest Ports Marine Cargo Traffic

Over the past 5 years the total volume of international marine cargo traffic through the Pacific Northwest Port region increased by nearly 30 million tons to reach a level of 107 million tons in 2007. This traffic growth is illustrated by the data in the table and accompanying chart in Appendix B. From this data it can be seen that the British Columbia (BC) South Coast Ports have a marginally larger share of total international traffic (56-percent) largely resulting from the strength of exports of bulk products from the western Canadian hinterland.

The data in Appendix B shows that total bulk cargo movements through the Pacific Northwest Port region increased from 86 million tons in 2003 to reach a level of 103 million tons by the end of 2007. The dominance of the BC South Coast is clear from this data as some 64-percent of bulk products moved through terminals in these ports during the 5 year period under review. While it is clear from this data that the BC South Coast ports dominate the handling of Pacific Northwest regional bulk trades the reverse picture emerges for general cargoes. This reversal should be no surprise when one considers the economic size of the US hinterland served by the US Pacific Northwest ports versus the size of the primarily Canadian economic hinterland of the BC South Coast ports.

The data in Appendix B reveals that international marine general cargoes (defined as break-bulk and containers) moving through the Pacific Northwest Ports region increased from 48 million tons in 2003 to a level of 58 million tons by the end of 2007. Interestingly, by segment, this total was dominated by a 15 million ton per year increase in the level of containerized cargoes offset by a decrease of 1.5 million tons per year of general cargoes moving in break-bulk carriage. In summary, over the 5 year period some 274.5 million tons of general cargoes moved through the Pacific Northwest Ports region and 56-percent of this total was handled by terminals in the US ports with the remaining 44-percent by the terminals in the BC South Coast ports.

The rapid growth of container tonnage over the period under review (averaging 7-percent per year), is mirrored by a comparable increase in the number of Twenty Foot Equivalent Units (TEU) moving through the terminals in the Pacific Northwest Ports region. This is illustrated by the chart in Figure 3-1 where the number of TEU are shown to have increased from 4.5 million in 2003 to a level of 5.8 million by the year 2007. Similar to tonnage measure the US PNW ports have the largest TEU share (60-percent) versus 40-percent through the BC South Coast.

Figure 3-1: Pacific Northwest Ports Container Traffic

The final segment of international marine traffic comprises automobile imports and logs handled both of which are referred to as “neo-bulk” cargoes. The traffic data in Appendix B reveals that measured by tonnage the level of automobile import traffic has been essentially flat at about 1.6 million tons per year. The ports in the two sub-regions do not compete for shares of this cargo as US bound imports move through the US Ports and Canadian destined automobiles from Pacific Rim manufacturers move through specialized terminals in the BC South coast ports. In summary, 61-percent of regional automobile imports move through the US PNW Ports.

Finally, the traffic data in Appendix B reveals that over the past 5 years logs handled through the Pacific Northwest ports regions have declined by half: from 2 million tons to 1 million tons per year. This dramatic decrease mirrors the decline in the size and output of the coastal forest industry on both sides of the border. The BC South Coast ports have traditionally been the larger source of log shipments: over the past 5 years, accounting for nearly 80-percent of logs handled.
3.2 Port of Everett Traffic Profile

3.2.1 Comprehensive Master Plan Summary and Forecast

The 1995 Comprehensive Scheme of Harbor Improvements (the FEIS) contained a summary of Port of Everett marine traffic for the decade 1985 to 1994 and a forecast for the period from 1995 to 2020.

Over the decade 1985 to 1994, the marine cargoes moving through the Port of Everett averaged 1.9 million tons. By segment this traffic was 80-percent logs handling, 15-percent alumina imports and 5-percent general cargoes.

The traffic forecast in the Comprehensive Scheme of Harbor Improvements called for logs handling to average about 1 million tons per year and alumina imports to total 300,000 tons per year to the horizon year 2020. General cargoes (agricultural products, Boeing Company containers, pulp, lumber and commodities not otherwise specified, (NOS), were forecast to increase a level of about 250,000 tons per year over the period from 2005 to 2020.

3.2.2 Actual Traffic from 1995 to 2007

With the benefit of hindsight, the actual levels and composition of marine cargo traffic moving through the Port of Everett during the period 1995 to 2007, did not match the forecast in the 1995 Comprehensive Plan.

Figure 3-2 on the following page presents a picture of marine traffic through the Port of Everett from 1995 to 2007 both in terms of tonnage (for the key cargo categories of logs, bulk products, break-bulk cargoes and containerized cargoes) and the number of vessel arrivals in each of those years.

The picture which emerges in the chart in Figure 3.2, on the following page, is that:

- Logs handled which were the dominant traffic segment declined over the period and averaged only 40,000 tons/year over the past 3 years;
- Bulk imports of alumina were a very significant component of traffic until the year 2000 and have recently been replaced by cement imports (reaching 125,000 tons in partial year 2007);
- Break-bulk cargoes averaged approximately 45,000 tons/year until the year 2000, declined dramatically until 2005, and have since rebounded to the 95,000 ton level in 2007; and
- Containerized cargoes through the Port of Everett were not significant (or were not recorded in the statistics) until after the year 2000. This key traffic segment has increased rapidly, especially from the year 2005, and last year reached a level of 85,000 tons.
3.3 Port of Everett Traffic Outlook

This subsection provides a brief outlook for marine traffic through the Port of Everett going forward from 2007.

3.3.1 Logs Handled

The present situation is that the log handling activity at South Terminal has ceased. With this observation it is anticipated that large volume log handling through the Port of Everett will not be a factor in the future.

3.3.2 Bulk Product Imports

Following the decline of alumina imports, the bulk handling facility was re-configured in 2007 to accommodate cement imports.

The import of cement through the bulk handling facility inshore of Pier 3 is anticipated to reach its design level in the range of 500,000 to 800,000 tons per year.

3.3.3 General Cargoes

Based on traffic results over the past 2 years it is clear that the Port of Everett is emerging as a strategic multipurpose general cargo location in the US Pacific Northwest port complex. It is well positioned to complement the large scale hub ports of Seattle and Tacoma to provide a more niche or custom level of service to Pacific Rim oriented shipping companies. At this time, the Port is constrained to accommodating deep-sea ships up to Handymax size (less than 200 meters LOA). The services provided at Pacific Terminal and Pier 1 to Westwood, ECL and FESCO are efficient and well accepted by the carriers. However, to grow as a multipurpose location, this master plan calls for the future addition of a new terminal designed to accommodate the larger range of shipping companies operating Panamax size vessels to Pacific Northwest port positions.

Of the two segments within general cargo carriage break-bulk is and will continue to be the smaller in scope. Everett is well positioned and, with a new terminal, could easily look forward to levels in the magnitude of 200,000 tons.

Containerized traffic is the key to future general cargo shipments in trans-Pacific and other world trades. Over the past half decade, container traffic through the Pacific Northwest ports has increased at about 8-percent per year. In this situation, the Port of Everett at today’s level of 20,000 TEU accommodates approximately one-half of 1-percent of the Pacific Northwest Port region container traffic. Clearly there is potential for growth. Increased market share of container traffic is one of attaining a larger share of the market as international carriers do and will shift to efficient new terminal capacity combined with inland road and rail services.

Going forward the consensus of international trade experts is that container traffic will continue to grow but at a lower rate perhaps more like the rate of economic growth (say 3-percent). On this basis, Pacific Northwest container traffic can be expected to reach a level of 7 million TEU by 2015 and more than 8 million TEU by the year 2020.

The question of the amount of this traffic which can be claimed by the Port of Everett would likely turn on the provision of new capacity as outlined in this MTMP 2008 report combined with a case put forward with a business partner to finance and possibly operate the proposed facility. If one uses a market range 7 to 8 million TEU and assumes that, with efficient new capacity, Everett could reach a container traffic level of 200,000 TEU - in the magnitude of 2 to 3-percent of the regional market.

4 Environmental and Geotechnical Assessment

This section provides a summary of the environmental and geotechnical assessments.

4.1 Environmental

The Port of Everett marine terminals and surrounding properties have been occupied by industries such as lumber mills, pulp and paper mills, lumber storage, wire and nail production and shipping and military activities (including the Navy Homeport facility) for more than 100 years. Previous work by others has identified a variety of environmental legacy affects on the soil, groundwater, and marine sediments within the Port lands.

For the purpose of the MTMP 2008, the project team reviewed the existing available environmental data and studies with the objective of identifying those environmental conditions that could impact upon future redevelopment of the Port lands.

Areas of potential environmental concern have been identified in upland and near shore portions of the site based on historical uses and previously completed environmental sampling and analysis. Site conditions were researched by reviewing reports and studies contained within the Port’s archive files, historical aerial photographs (available on-line), Department of Ecology documents, and by reviewing the results of a subcontracted regulatory database search prepared by Environmental Data Resources Inc., (EDR).

The sources reviewed included:

- EDR Radius Map and Report, Port of Everett Marine Terminal (2006);
- “Port of Everett Comprehensive Scheme of Harbor Improvement, Final EIS” by the Port of Everett, August 14, 1995;
- “Characterization of Sediments at Port of Everett South Terminal Development Project” by Pentec Environmental, October 22, 1992;
- “Sediment Quality in Puget Sound, Year 1 - Northern Puget Sound” by the National Oceanic and Atmospheric Administration and the Washington State Department of Ecology, December 1999;
- “Site Characterization Report, South Terminal Expansion - Port of Everett”, by Dalton, Olmsted and Fuglevand, Inc. and Pentec Environmental, Inc. October 22, 1992;
- “Sanborn Fire Insurance Maps - Port of Everett South Terminal site (1893, 1902, 1914, 1950, 1957, and 1968); and

As noted, various mills and log storage facilities have occupied the South Terminal upland area for at least 100 years. The former Weyerhaeuser pulp mill and sawmill occupied the entire South Terminal from about 1901 to 1984. Activities at the mill, including fuel storage, maintenance and pulp processing, may have impacted the upland soil within the South Terminal area.
In summary, the planning area has been found to have the environmental conditions consistent with its age and historic uses. Comprehensive assessment of each of the areas to be developed will be completed to determine the most appropriate remediation and mitigation measures to meet the State, Federal, and Port requirements for a safe and sustainable environment.

4.2 Geotechnical Assessment

The planning team completed a review of previous studies and site investigations to gain an appraisal of the soil and foundations conditions which occur within the planning area. A subsequent further foundation assessment for the preferred development alternative was also completed.

The upland portion of the South Terminal was constructed using fill originating from historic Snohomish River Channel dredging and other unknown sources. The fill may include wood, sawdust, timbers, railroad ties and pilings.

In general soil conditions at the South Terminal site are expected to consist partly of wood waste fill overlying, soft and loose compressible soils and dense bearing soils at depth. The depth of the fill is expected to range from 20 feet to 25 feet. The soft and compressible soils include loose sand to silty sand and soft silt, organic silt and peat. The sandy portions are considered to be highly liquefiable. The dense bearing soils are typically very dense sand with varied amounts of silt and gravel. The depth to this bearing appears to range from about 40 feet to 70 feet.

From the above discussion, it has been determined that adequate foundation capacities and slope stability can be achieved for the purposes of the preferred alternative.

5 Development Alternatives

This section describes the master plan development alternatives starting with the initial screening and moving forward to the preferred alternative.

5.1 Initial Screening of Alternatives

When the master plan was commissioned in 2006, a variety of drivers indicated that the future development of the Port lay in creating a major high capacity container handling facility. These included:

- Shipping analysts were predicting a steady and almost ever increasing volume of container traffic through the West Coast ports. As discussed, the general slowing of the economy combined with some changing trade patterns over 2007 now suggest that the rate of increase in West Coast container traffic may have peaked.

- At the time the master plan commenced, the existing ports on the West Coast of the United States and Canada were capacity constrained creating a potential opportunity for other ports with suitable infrastructure which could be redeveloped for container traffic.

- The Port has a considerable area of lightly utilized level port land adjacent to relatively deep-water sufficient to accommodate Panamax class vessels.

- The Port is served by the BNSF Railway, which has trans-continental capability that is necessary for container transhipment.

- Container cargo operations, other than for emissions from vessels and handling equipment, is generally environmentally benign and less risk than some dry and liquid bulk cargoes and is therefore well suited to ports with adjacent residential and light commercial development.

- Container traffic is a highly profitable marine terminal activity and is therefore more readily able to support the larger capital investments necessary for new port infrastructure.

While the early planning work did not exclusively focus on a major container terminal, the ultimate outcome resulted in the determination that the value of the port lands could be maximized by creating a higher volume container terminal as shown in Figure 5-1 on the following page.
The concept suggested a final development that would provide for three new container berths by filling the area from the South Terminal to Pier 1 to the outer harbor line. The concept allowed for the staged implementation with facilities only being constructed as the business opportunities were realized.

The plan was not entirely dissimilar to the plan in the 1995 Marine Terminal Development Program which also proposed a considerable fill area between the South Terminal north to approximately the midpoint of Pacific Terminal. The primary difference was that, in 1995, the vessel sizes forecast were smaller and did not require the increased water depth hence the fill did not extend out to the outer harbor line but followed the alignment of the South Terminal Wharf projected northward.

The plan further recognized that the total available land area, existing land and new fill, was not sufficient to provide adequate intermodal (rail and truck) service for such a large container facility. It was therefore proposed that the Port’s Riverside Business Park property would need to be developed as an intermodal yard to support a high-capacity container operation.

In early 2007, this initial plan was tested against the Port’s established criteria described above and which broadly includes:

- Environmental sustainability;
- Impacts on the local community;
- Operational feasibility;
- Capital investment requirements; and, ultimately
- A business case.

It was determined that the proposal had significant limitations at this time, including:

- A large capital cost, likely outside of the Port’s current and future capacity, without placing an undue risk on the port’s funding sources.
- High operating expenses because of the cost of drayage of the containers to the proposed intermodal yard at the Riverside Business Park property. These large operating expenses would significantly affect the financial viability of the terminal.
- The portion of the community impacted by the development plans determined the scale of expansion to be generally unacceptable.
- The required rail service to and from the proposed intermodal yard at Riverside Business Park could not be guaranteed as the BNSF Railway was not in a position to commit to the level of service necessary for a terminal of this size.

In summary, both the socio-environmental and financial business cases for a development of the scale being considered were not sustainable at this time.

5.2 Preferred Alternative

As a consequence of the findings of the initial screening exercise, the planning framework was revised as discussed above.

Importantly, it was also further recognized that the trend to an ever increasing container traffic may, in fact, have peaked and that in the time the master plan had been underway significant new capacity was being planned and implemented at other West Coast ports; both factors that would direct the Port away from creating a large volume facility designed to compete directly with the major West Coast container ports.

The Port had already taken some modest measures to position itself as a multi-purpose niche container and break-bulk port by the re-commissioning of the two used gantry cranes at Pacific Terminal and investments in reach stackers and a heavy-lift rubber-tired Harbor Crane, designed to efficiently handle both containerized and break-bulk cargoes. It was recognized that the major ports on the West Coast have a general tendency to focus on “major development opportunities” and to some extent at the expense of the smaller niche cargoes.
Given these factors, it was determined that the preferred alternative for the Port would be to develop a plan that would build upon its recent success in handling niche cargoes while recognizing the operational and community constraints of its lands.

It is understood that the existing Pier 1 and Pacific Terminals are currently meeting the majority of the Port’s cargo handling requirements within the planning area and would need to continue in operation throughout any redevelopment activity. Further, both assets are currently in good operating condition and have ongoing value to the Port. The South Terminal was determined to be the most suitable alternative area for the Port development and the master plan then focused its planning in this area.

The redevelopment of the South Terminal will only be required when customer demands determine that the existing facilities at Pacific Terminal and Pier 1 are no longer adequate. These factors could be cargo volumes in excess of the existing facilities’ capacities, a change in vessel size requiring increased length and/or draft, increased cargo handling capacity, or the deterioration of the existing infrastructure through use and age which would necessitate its replacement.

It is estimated that the South Terminal redevelopment would be required when the Port throughput of containers was in the range of 100,000 TEUs to 250,000 TEUs per annum, combined with break-bulk volumes of 100,000 tons or greater, and/or when it was necessary to accommodate Panamax or larger size vessels, or when customer demand and associated cargo volumes dictate.

Utilizing the above a preferred redevelopment plan for the South Terminal was developed. Figure 5-2 and Figure 5-3, on the following two pages, show the South Terminal redevelopment concept in plan view and cross-section.
Figure 5-2: Marine Terminal Master Plan Layout - Plan View
Figure 5-3: Marine Terminal Master Plan Layout - Cross-Section
The plan would require the demolition and removal of the existing wharf at the South Terminal which is presently in need of structural repair. The foreshore slope would be re-graded, and new, densified fill placed on the slope sufficient to create a seismically stable foundation.

The new wharf would be approximately 950 feet in length by 100 feet in width with a design draft of 45 feet at low water to accommodate, as a minimum, Panamax size vessels. Figure 5-4, below, illustrates two types of Panamax vessels: on the left a cellular container ship and on the right a Roll-on Roll-off (Ro-Ro) vessel.

Figure 5-4: Panamax Vessels

Panamax size ships have a width of 106 ft (32.8 m), length of 750 ft +/- (230 m), and draft of 40 ft +/- (12 m).

A minimum of two crane rails will be incorporated into the wharf deck to facilitate new container cranes of approximately 100 foot gauge. If determined to be of operational value, a third crane beam could also be provided for the relocation of one of the existing cranes from the Pacific Terminal that has a 50 foot gauge.

It is envisioned that the new wharf would be constructed from precast concrete piles and a combination cast-in-place and precast concrete superstructure.

The upland area behind the wharf would be re-graded and paved and new site services installed. The new site services would include fire protection, potable water, electrical distribution, area lighting and site drainage collection and treatment. The pavement and substrate would be designed for the storage of both container and break-bulk general cargoes.

Other features of the proposed preferred alternative plan include:

- Road access to the terminal will be from the north.
- A new truck gate will be provided with two lanes in and one lane out. Truck staging for terminal access will be on the Port land and not on the public roads.
- Rail access will be from the south utilizing the new access recovery spur.
- Two yard tracks, each approximately 1,100 feet in length for rail discharge and loading, will be provided. Sufficient area exists for expansion of rail sidings, if required.
- The water area to the north of the proposed berth will be reserved for future port development.
- The existing South Terminal maintenance shop could be either retained or relocated.
- The existing wharf-side pulp shed would be removed.
- A new terminal operations building would be provided.
- The Pacific Terminal and Pier 1 facilities would continue to support the current customer base. It is anticipated that one gantry crane would be required at Pacific Terminal after the South Terminal is redeveloped. This single crane would be supplemented, as required, by the Port’s existing mobile harbor crane or additional mobile harbor cranes in the future. When South Terminal is redeveloped, one of the cranes at Pacific Terminal will be removed.
- The new wharf would ultimately be serviced by a minimum of two new container cranes sized for Panamax vessels. Additionally, the wharf would be designed to also accommodate mobile harbor crane use.
- Back-up land yard equipment could include a variety of mobile equipment such as forklifts, yard tractors and trailers, reach stackers, straddle carriers, and either rail mounted or rubber tired gantries for container handling within the yard.
6 Marine Terminal Business Planning Process

This final section covers topics related to moving forward with the business planning process for the MTMP 2008 at the Port of Everett. The general objective will be to achieve an efficient multi-purpose niche marine terminal complex within the criteria of the Port’s triple bottom line: business case, community outreach and environmental sustainability.

A business plan is defined to be “a detailed document describing the past, present and future financial and operational objectives of a company” or in this case, the Port District. It is premature in this master plan update to develop the detailed business case as defined above. Rather, this document is to set the stage for the development of the business plan well in advance of implementing the redevelopment alternative described in the previous section of this report.

The text below starts with a description of the competitive position of the Port of Everett. This is followed by a description of the present style of marine terminal operations in the Port of Everett. With this background, the essence of the business plan going forward is described including the components of a conceptual framework for marine terminal development and operation between a (public) Port District and a qualified (private) Marine Terminal Operator.

6.1 Competitive Position of the Port of Everett

A natural deep-water harbor, Everett has a strategic location in the US Pacific Northwest port range to competitively serve international carriers especially in the Pacific Rim trades. In this context the Port of Everett has emerged as the premier break-bulk service provider and, in parallel operations, is the third largest container port in Washington State.

From a land transport perspective Everett is also very competitive: it is the first port reached by the BNSF railway trains arriving from the US Midwest States and, with close proximity to the US Interstate 5 corridor, has efficient north-south road access with connections to east-west long-haul trucking routes.

6.2 Present Marine Terminals Operations

The Port of Everett manages the operation of its break-bulk and containerized general cargo operations centered on the Pacific Terminal/Pier 1 complex in Port Gardner Bay. In addition to its terminals in Port Gardner Bay, the Port of Everett operates a satellite rail/barge transfer facility at Mukilteo. This newly commissioned facility is known as the Mount Baker Terminal.

For ship to shore transfers the Port has two 40 long-ton Hitachi gantry cranes complemented by a 100 ton Gottwald mobile harbor crane. For yard handling and storage operations, the Port of Everett has three Linde reach stacker units. The satellite Mount Baker terminal has a rail mounted gantry crane designed to transfer the aerospace containers from barge to railcar. The Port of Everett has a highly skilled longshore labor force that is able to handle the growth at the Port. Two well-known stevedoring companies, Jones Stevedoring and Stevedoring Services of America, regularly facilitate the cargo handling activities at Everett. Tug assistance services at the marine terminals are provided by Brusco Tug & Barge.

The photographs below in Figure 6-1 illustrate the Port of Everett operations in Port Gardner Bay encompassing break-bulk, heavy lift and containerized cargo handling.

Figure 6-1: Port of Everett Operations at Pacific Terminal/Pier 1

The photographs below in Figure 6-2 illustrate the Port of Everett operations at the Mount Baker Terminal in Mukilteo. Aerospace parts arrive at Pacific Terminal/Pier 1 in oversized containers and are transferred to barge for delivery to the Mount Baker Terminal. The newly-commissioned facility features a rail-mounted crane which transfers the containers to rail cars for delivery to Boeing at Paine Field.

Figure 6-2: Mount Baker Satellite Rail/Barge Transfer Terminal
6.3 Framework for Marine Terminal Development and Operating Agreement

The MTMP 2008 describes the concept for the redevelopment of the South Terminal facilities to accommodate long term multipurpose cargo handling activities in concert with the existing marine terminal operations at the adjacent Pacific Terminal/Pier 1 location. While primarily targeted to serve container operations, the terminal under this plan will also be able to handle lift-on/lift-off shipments of general break-bulk and specialized neo-bulk cargoes. In this context, neo-bulk refers to shipments of cargoes such as logs and vehicles. The resulting concept will position the Port of Everett as a multipurpose destination and loading port for Panamax size vessels.

The level of increased international cargo handling activity at the Port of Everett calls for the involvement of a qualified Marine Terminal Operator to work in partnership with the Port District staff to plan, gain approvals for, finance, construct, equip and operate the expanded facilities. In this context, it is recommended that the Port of Everett commence the process of selecting a qualified Marine Terminal Operator and entering into a long term agreement with that entity covering the applicable aspects of plan implementation.

This type of agreement is frequently referred to as a “public-private partnership”. The port/marine terminal sector is generally well versed in this type of agreement which typically involves the Port District entering into a long term lease agreement covering the planning, approval, construction and operation of the expanded facility. There are many variations of the terms of such an agreement. While it is premature to articulate the terms of such an arrangement, it is possible, at this point, to set out a framework for agreement on the future development and operation of the redeveloped marine terminal.

Figure 6-3 sets out the five main components of a conceptual agreement. The relative location and shading of the bars in the Figure are meant to indicate the comparative level of responsibility of the public and private sector partners. It is important to stress that in the definitive development of this type of agreement, the level of responsibilities between the parties are negotiable on the basis of the comparative advantage and resources of each member.

The responsibility for planning and approvals will most likely reside with the Port District. However, assuming an agreement with the private sector entity is reached at an early stage their input and expertise could be employed.

In the majority of marine terminal developments, the Port District will want to take primary responsibility for the actual design and construction of the required infrastructure. This is logical when one considers that the Port will want to control the development of the lands that they control over the long term. Further, the Port District will have the potential to access debt financing of the infrastructure through the issue of tax exempt revenue bonds. The amortization of these debt instruments would have to be covered by the rental payments under the long term lease agreement with the Terminal Operator. Conversely, the procurement of the specialized equipment required for the future operation should be the responsibility of the Terminal Operator who will utilize the selected units to handle the marine cargoes. An exception to this notion would be the container gantry crane(s) which may be limited by local ordinance and are more long-lived than mobile equipment.

Operation and maintenance of the marine terminal under this type of agreement will primarily be for the Marine Terminal Operator. This entity will supply “mind and management” of the operation and will be responsible for marketing and operational relations with the shipping lines arriving at the Port. Maintenance could be a shared item with capitalized expenditures to the account of the Port District and operating maintenance to the account of the Terminal Operator, or as negotiated. Finally, the accountability for the future marine terminal operation is a shared activity. The Port District is responsible to its constituents and, in that context, will keep them informed on the results of its international trade oriented enterprise. In a larger context, the Port District will want to ensure that its state, regional and even national hinterland is aware of its activities. The Terminal Operating entity will be responsible to the shareholders of its company or member companies in the event of a consortium.

6.4 Economic Impact

Martin Associates was retained by the Port of Everett to measure local and regional economic impacts generated by maritime (marine cargo and marina) activity at the Port. These economic impacts for marine cargo and marina activity were estimated at year 2006 level.

A copy of the Martin Associates’ report entitled “The Economic Impact of the Port of Everett” appears in Appendix D. In brief the employment and income impacts are summarized as follows:

- Induced and Indirect Employment: 1,887 jobs of workers supplying direct services to port workers plus businesses that supply the port employment base.
- Income: $59.7 million per year in direct income for the cargo, property and marina workers, plus an additional $110.7 million in re-spending and indirect income for those working in supporting businesses.

Based on the results of the estimates in the Martin Associates’ report the following economic impacts can be estimated for the expanded level of activities resulting from the MTMP 2008:

- Direct Employment: 140 workers in the Port of Everett including 120 in terminal operations and surface transportation plus 20 in maritime services.
- Induced and Indirect Employment: 300 support jobs in the Everett area and the port region.
- Income: $10 million per year for direct cargo and property workers in the port plus an additional $15 million per year for those workers supporting the incremental direct workers.
APPENDIX A

Regulatory Framework for Marine Terminals Master Plan 2008
Regulatory Framework

for the

Marine Terminals Master Plan 2008

Why was the plan undertaken within the context of maintaining and enhancing deep-water marine terminal facilities?

State Law

RCW 53- Enabling Legislation for Port Districts

Port districts are hereby authorized to be established in the various counties of the state for the purposes of acquisition, construction, maintenance, operation, development and regulation within the district of harbor improvements, rail or motor vehicle transfer and terminal facilities, water transfer and terminal facilities, air transfer and terminal facilities or any combination of such transfer and terminal facilities, and other commercial transportation transfer, handling, storage and terminal facilities and industrial improvements. – RCW 53.04.010 (1)

RCW 47- Transportation Facilities of Statewide Significance

(1) The legislature declares the following transportation facilities and services to be of statewide significance: Highways of statewide significance as designated by the legislature under chapter 47.05 RCW, the interstate highway system, interregional state principal arterials including ferry connections that serve statewide travel, intercity passenger rail services, intercity high-speed ground transportation, major passenger intermodal terminals excluding all airport facilities and services, the freight railroad system, the Columbia/Snake navigable river system, marine port facilities and services that are related solely to marine activities affecting international and interstate trade, and high-capacity transportation systems serving regions as defined in RCW 41.104.015.

State Shoreline Management Act

This state law is carried out at the local level through the City of Everett’s Shoreline Master Program (SMP). The City of Everett completed a major update to its SMP in 2002, following an extensive community involvement process lead by a Citizens Advisory Committee. Among the objectives that are set forth in the City’s SMP is “shoreline and water-areas on navigable waterways particularly suited for water-dependent and water-related uses should be reserved for such uses even if there is no current demand for such uses.” Accordingly, the SMP designated the Port’s deep-water marine terminal area as “Urban Deepwater Port”, which is to provide areas for large-scale water-dependent industries, port facilities, and supporting services that require proximity to navigable waters that can accommodate deep-draft ocean going vessels, and to ensure optimum use of the shorelines that are presently industrial in nature, while protecting and restoring ecological functions.”

Local Land Use Plans

City of Everett Zoning Code: The deepwater marine terminal area of the Port is zoned M-2, Heavy Manufacturing. This zone is one of only two zones in the City that list marine shipping terminals as a permitted use.

City of Everett’s Growth Management Act Comprehensive Plan: The deepwater marine terminal area is designated “5.1, Heavy Manufacturing.” This designation covers areas where heavy manufacturing or industrial uses are established and expected to continue...
APPENDIX B

### Pacific Northwest Ports Region International Marine Cargo Traffic 2003 - 2007 (Tons 000 / year)

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<th>Year</th>
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Sources: Port Statistics & Consultants Estimates
Before the Marine Terminals Master Plan got underway, the Everett Port Commission requested the planning process incorporate a proactive community outreach program. The intent of this program was to encourage broad-based dialogue and feedback about the planning process and the development options being studied for the Port’s shipping terminals. The goal of the outreach program was to educate the community on the proposed plan and to constructively involve community members, local businesses, and Port tenants and customers in the outcome of this process.

The public outreach process involved five individual components. These were:

- Interviews with key stakeholders and community representatives to discuss planning issues and objectives.
- Focus group meetings with interested community, neighborhood, and business groups to discuss the plan and its potential relationship to or impact on their neighborhood or area of interest.
- Public meetings and open houses to promote general community awareness and to allow public review of the plan and its components.
- Public hearings to take formal comment on the plan and its recommendations.
- The use of direct mail to distribute survey forms, newsletters, and other outreach materials to inform and draw input from constituents throughout the port district.

In addition, the Port posted project information and took comments on its Web site during the planning process.

In implementing the project’s public outreach program, the Port of Everett:

- Mailed more than 150,000 copies of Port newsletters containing updates and descriptions of the marine terminals’ master planning process and its progress.
- Conducted more than 20 individual interviews to gather specific stakeholder input.
- Made three mailings of informational brochures and survey forms—each to more than 3,000 neighboring residents, neighboring businesses, and other stakeholders—to solicit their input and to invite their participation in the planning process and focus groups.
- Conducted seven focus group meetings to discuss the plan and its development opportunities and issues with adjacent neighborhoods and business interests.
- Held three open houses to describe the plan and the planning process to interested citizens and to solicit their ideas, comments, and input.
- Presented planning process updates at regularly scheduled Port Commission meetings.
- Presented the planning process to a variety of other community groups and organizations.
- Conducted an open public hearing on the recommended plan at the June 10, 2008 Port Commission meeting to solicit public comments before considering the plan for adoption.
How to Participate?
(Note: The following document shown as originally created.)

The community will have numerous opportunities to provide feedback and participate in the development of the Marine Terminals Master Plan. Some of the ways to do this are listed below:

Attend Meetings and Workshops:
Share your thoughts and views on the future of Everett’s Marine Terminals at a public meeting. Look for meeting notifications in your mailbox, or check the Port’s Web site for meeting times.

Volunteer to participate in a focus group:
The master planning team plans to meet in a small group setting with various interest groups during the planning process. To volunteer for one of these focus groups, please contact Lisa Mandt, Communication Administrator, at 425-388-0617 or by e-mail at lisam@portofeverett.com.

Look on-line at www.portofeverett.com:
To find out meeting times or project information, please visit the Port of Everett Web site.

Watch Everett’s Channel 21:
All public outreach meetings and events related to the Marine Terminals Master Planning will be announced on Everett’s Channel 21.

Check out the city’s event calendar at www.ci.everett.wa.us:
The Port will publish all events or meetings concerning the master planning effort on the city’s event calendar page.

Schedule a Speaker:
The Port is willing to come to local groups, neighborhoods or organizations to make a presentation on the progress of the master planning effort.

To schedule a time, contact the Port of Everett at 425-388-0617.

Want to issue a written comment?
Write to Port of Everett, P.O. Box 538, Everett, WA 98206 or e-mail the Port at lisam@portofeverett.com.

Invitation taken from the original survey brochure.
Surveys

3,000 survey postcards were mailed, with more than 14% of the surveys completed and returned.

Survey results by location.
### Summary of Survey Results

#### Bayside Neighborhood

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#### Port Gardner Neighborhood

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<td>24%</td>
</tr>
<tr>
<td>Loss of business opportunities</td>
<td>2 5</td>
<td>4%</td>
</tr>
<tr>
<td>Impacts on the natural env.</td>
<td>3 19</td>
<td>23%</td>
</tr>
<tr>
<td>Impacts on views</td>
<td>4 25</td>
<td>21%</td>
</tr>
<tr>
<td>Changes in use</td>
<td>5 6</td>
<td>5%</td>
</tr>
<tr>
<td>Increases noise / light</td>
<td>6 24</td>
<td>21%</td>
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</table>

#### Rucker Hill Neighborhood

<table>
<thead>
<tr>
<th>Concerns</th>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Traffic / access</td>
<td>1 14</td>
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</tr>
<tr>
<td>Loss of business opportunities</td>
<td>2 2</td>
<td>3%</td>
</tr>
<tr>
<td>Impacts on the natural env.</td>
<td>3 17</td>
<td>25%</td>
</tr>
<tr>
<td>Impacts on views</td>
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<tr>
<td>Changes in use</td>
<td>5 2</td>
<td>3%</td>
</tr>
<tr>
<td>Increases noise / light</td>
<td>6 18</td>
<td>26%</td>
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### Marine Terminals Master Planning

The Port of Everett is beginning its marine terminals master plan. This plan will evaluate current and future marine business opportunities and examine ways its marine terminals can support these opportunities. The plan will help the Port Commission make informed decisions about how to use its land and water assets for future maritime development.

The Port Commission has decided that a proactive community outreach program be an integral part of the plan's development. This program will help the Port Commission understand the community's needs and priorities for the Port of Everett seaward waterfront and the Port's potential business opportunities. The public outreach process will begin during this initial phase and will continue through the master plan development.

The following key components will be included:

1. Initial invitation/mailer for the survey and focus groups.
2. Summary of Survey Results

---

**Retaining existing jobs**

<table>
<thead>
<tr>
<th>Priorities</th>
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<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic / access</td>
<td>1 10</td>
<td>24%</td>
</tr>
<tr>
<td>Traffic / access</td>
<td>1 11</td>
<td>27%</td>
</tr>
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</table>

**Creating new jobs**

<table>
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<tr>
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<th>Percentage</th>
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<td>Loss of business opportunities</td>
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<td>22%</td>
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**Diversifying business lines**

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<tbody>
<tr>
<td>Impacts on the natural env.</td>
<td>3 6</td>
<td>15%</td>
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**Use land efficiently**

<table>
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<th>#votes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts on views</td>
<td>4 11</td>
<td>27%</td>
</tr>
</tbody>
</table>

**Supporting water dependent uses**

<table>
<thead>
<tr>
<th>Priorities</th>
<th>#votes</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Changes in use</td>
<td>5 5</td>
<td>12%</td>
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Total: 41 100%
### Summary of Survey Results (continued)

<table>
<thead>
<tr>
<th>Retaining existing jobs</th>
<th>Creating new jobs</th>
<th>Diversifying business lines</th>
<th>Use land efficiently</th>
<th>Supporting water dependent uses</th>
<th>Other</th>
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<tbody>
<tr>
<td>Priorities (#votes)</td>
<td>Percentage</td>
<td>Concerns (#votes)</td>
<td>Percentage</td>
<td></td>
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<td>25% Loss of business opportunities</td>
<td>2 13</td>
<td>8%</td>
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<tr>
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<td>24%</td>
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<tr>
<td>Use land efficiently</td>
<td>4 97</td>
<td>28% Impacts on views</td>
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<td>20%</td>
<td></td>
</tr>
<tr>
<td>Supporting water dependent uses</td>
<td>5 53</td>
<td>15% Changes in use</td>
<td>5 29</td>
<td>7%</td>
<td></td>
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<tr>
<td>Other</td>
<td>1 24</td>
<td>16% Increases noise / light</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>143 100%</td>
<td>154 100%</td>
<td></td>
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</table>

**Responce Rate**: 0.116333 0.14033333

**Combined summary of survey responses.**
Focus Groups

Based on survey responses, five focus groups were held to explore stakeholder issues.

Focus Group Participants
- Business / Economic Development
- Neighborhoods
  - Port Gardner
  - Rucker Hill
  - Northwest / Bayside
  - General Neighborhoods

Key Issues:
- Business
  - Public Access
    - Park
    - Trail
    - Pathway Security
  - Noise
  - View
  - Air Quality
- Neighborhoods

<table>
<thead>
<tr>
<th>Draft Evaluation Criteria</th>
<th>Business</th>
<th>Comm. #6</th>
<th>Comm. #9</th>
<th>Municipality</th>
<th>Top Criteria</th>
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<tbody>
<tr>
<td>Most Customer Needs &amp; Support Existing Tansit/Operations</td>
<td>25</td>
<td>4.1</td>
<td>4.0</td>
<td>4.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Retain Jobs</td>
<td>25</td>
<td>3.9</td>
<td>4.0</td>
<td>4.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Create Jobs</td>
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<td>3.7</td>
<td>3.0</td>
<td>4.5</td>
<td>4.7</td>
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<td>Quality Business Lines</td>
<td>25</td>
<td>3.2</td>
<td>5.0</td>
<td>3.8</td>
<td>5.0</td>
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<tr>
<td>Use Land Efficiently</td>
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<td>3.7</td>
<td>5.0</td>
<td>4.5</td>
<td>5.0</td>
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<td>Support Water Dependent Uses</td>
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<td>4.7</td>
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<tr>
<td>Concrete and Flood Evidence</td>
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<td>3.4</td>
<td>4.3</td>
<td>4.7</td>
<td>3.7</td>
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<td>Return on Investment</td>
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<td>3.6</td>
<td>4.0</td>
<td>4.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Minimize Investment Risk</td>
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<td>3.3</td>
<td>4.0</td>
<td>3.5</td>
<td>4.7</td>
</tr>
<tr>
<td>Minimize Shoreline / In-Water Environ. Impacts</td>
<td>25</td>
<td>3.3</td>
<td>4.5</td>
<td>4.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Minimize Noise Impact</td>
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<td>3.1</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Minimize Light Impact</td>
<td>25</td>
<td>2.9</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Minimize View Impact</td>
<td>25</td>
<td>2.8</td>
<td>1.0</td>
<td>3.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Minimize Traffic and Congestion Impact</td>
<td>25</td>
<td>2.9</td>
<td>2.0</td>
<td>4.5</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Within Criteria:
| Access to Nationwide Rail Lines | 1 | 5.0 |
| Improve Sewer/Gas | 4 | 4.5 |
| Homeland Security Compliance | 4 | 5.0 |
| Minimize Impact on Downtown Streets | 1 | 5.0 |
| No Negative Impacts to Citizens | 2 | 4.5 |
| Support the Downtown and Future Plans | 1 | 5.0 |
| Improved Public Access | 2 | 4.0 | 5.0 |
| Encourages/Accommodates Businesses | 1 | 3.0 |
| Good Neighbors | 1 | 5.0 |
| Trade-Off for Community Most Affected | 1 | 5.0 |
| New Upland Public Space | 1 | 5.0 |
| Balance Economic and Recreational Uses | 1 | 5.0 |
| Enhance Quality of Life | 1 | 5.0 |
| Increase Close Spaces, Use Native Plants | 1 | 5.0 |
| Restore Shoreline | 1 | 5.0 |
| Public Restrooms | 1 | 5.0 |
| Public Safety | 1 | 5.0 |
MARINE TERMINALS MASTER PLAN
Port of Everett — May 2008

In 2006, the Port of Everett set to plan the future of its deep-water marine terminals, which are designated as facilities of statewide significance per state law. This reserved the area for water-dependent ongoing marine commerce, heavy industry and supporting activities.

The study initially explored ways to maximize container shipping operations by expanding the terminals' handling capacity and developing a holding and transfer facility at the Riverside Business Park. This alternative was presented to the community in May 2007.

Since then, the Port and its consultant team have refined the master plan concept to incorporate objectives from the Port's recently adopted Strategic Plan, respond to community concerns, and build on evolving market trends. The refined concept:

1. Builds upon the Port's recent success attracting niche container, break bulk, bulk, and project cargos.
2. Carefully considers input received from neighbors, community members, tenants and business leaders throughout the planning process.
3. Shifts focus away from the container-centric approach.
4. Incorporates recent long-term leases as fixed components of the plan.

You are invited to attend an open house on May 19, 2008 to review and comment on the updated draft Marine Terminals Master Plan and environmental review documentation. The project team will further refine the draft plan based on this input and present it to the Port Commission for discussion in June. Project milestones and the outreach schedule are summarized on the back.

We'd Like Your Input!

If you are unable to attend the open house, you may also participate by submitting a written comment via the Port's Web site at www.portof Everett.com, by mail, or dropped off at 2911 Bond Street, Ste. 202, Everett, WA 98201. To be considered in the planning process, comments must be submitted to the Port by May 30, 2008. If you have questions, please contact Lisa Manefield at (425) 388-0617 or lisan@portofEverett.com.

OBJECTIVES FOR MARINE TERMINALS:

Effectively Manage and Plan for the Marine Terminals
(Based on the Port's Strategic Plan, adopted in September 2007)

- Develop a long-term, flexible vision for the marine terminals
- Consider the long-term economic costs and benefits of marine terminal development, as well as the neighborhood context of new development
- Identify appropriate markets and niche areas with growth potential to grow terminal operations
- Develop a strategic funding plan for equipment replacement and facility upgrades
- Build on the current profitability of the marine terminals to ensure that facilities are financially viable

Master Plan Outreach Schedule

COMMUNITY OPEN HOUSE: The Port will be hosting a community open house for the draft Marine Terminals Master Plan from 6:30 p.m. to 8 p.m. on Monday, May 19 in the Weyerhaeuser Room of Everett Station, 3201 Smith Avenue, Everett, WA 98201. A brief overview of the draft master plan will be provided at 7 p.m. Port staff and the consultant team will be on hand to answer questions and take your comments throughout the evening.


Presentation of Draft Master Plan: On June 8, the draft master plan will be presented to the Port Commission.

Public Hearing on the Master Plan: On June 10, the Port will have a public hearing on the draft Marine Terminals Master Plan in the Port Commission room.

Proposed Commission Adoption: On July 8, Port staff will ask the Port Commission to consider the final draft plan, and amend the Comprehensive Scheme of Harbor Improvements to incorporate the plan.

For more information, visit the Port's Web site at www.portofEverett.com

May 2008 Marine Terminals Master Plan project summary mailer, inside (left) and outside (above).
APPENDIX D

The 2006 Economic Impact of the Port of Everett
by Martin Associates
I. OVERVIEW OF THE ANALYSIS AND SUMMARY OF RESULTS

Martin Associates was retained by the Port of Everett to measure the local and regional economic impacts generated by maritime (marine cargo and marina) activity at the Port. The impacts are estimated for marine cargo activity and marina activity at the Port’s facilities in calendar year 2006.

In addition to the baseline impact estimates, a computer model specific to the Port of Everett marine terminals and marina has been prepared, which can be used in evaluating the sensitivity of impacts to changes in tonnage, labor productivity, labor work rules, commodity mix, inland origins/destinations of commodities and vessel size. The model can also be used to evaluate the impacts of new terminal development and for annual updates.

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, including:

- Seattle
- Portland
- Longview
- Vancouver, BC
- Vancouver, WA
- Portland, OR
- Los Angeles (containers only)
- Long Beach
- Oakland
- Sacramento
- Houston
- Jacksonville
- Boston.
- Corpus Christi
- Baton Rouge
- Port Everglades
- Wilmington, NC
- Morehead City, NC
- Baltimore
- Philadelphia
- Wilmington, DE
- Norfolk (Virginia Port Authority)
- Palm Beach
- Halifax
- Port Everglades
- Morehead City, NC
- Baltimore
- Philadelphia
- Wilmington, DE
- Norfolk (Virginia Port Authority)
- Palm Beach
- Halifax

The impact models have been used by the Federal Government in assessing the economic impacts of the West Coast Port Shutdown in 2002 and the impact of the Section 201 Steel Import Tariffs imposed in 2002.

This chapter presents an overview of the economic impact analysis by defining the following:

- The types of economic impacts estimated;
- The economic sectors for which impacts have been estimated;
- The commodities/commodity types for which impacts have been estimated.

In addition, a summary of the data sources used in the analysis is presented.
1. **ECONOMIC IMPACT STRUCTURE**

A deep water port such as Everett contributes to the local, regional, and national economies by providing employment and income to individuals, tax revenues to local and state governments, and revenue to businesses engaged in handling, shipping, and receiving cargo via the port. Exhibit 1 illustrates the flows of economic impacts throughout the economy. As this exhibit shows, activity at a seaport (i.e., the handling of cargo, the servicing of vessels, and recreational boating) initially creates business revenue to firms providing those cargo handling and vessel services, and services supporting recreational boating. This revenue is in turn used for several purposes:

- To hire employees to provide the services;
- To pay stockholders dividends, retire debt, and invest;
- To buy goods from other firms;
- To pay federal, state, and local taxes.

### Exhibit 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 spending of income is known as the multiplier effect, which in turn creates induced jobs throughout the economy.

Finally, state and local 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.

As can be seen from Exhibit 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 the marine cargo terminals and marina at the Port of Everett. This consists 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, 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 activity at the Port, are also measured as part of the employment impact.

- **Income Impact** - the level of earnings associated with the jobs created by port activity, and adjusted to reflect respending throughout the economy.

- **Revenue Impact** - the sales generated by firms engaged in handling and transporting cargo through the Port of Everett and servicing the recreational boating activity and the Ports Marina. This impact includes national as well as local and state revenue. The value of shipments through the Port is not included as a revenue impact for the purposes of this analysis.

- **Tax Impacts** - the state and local tax revenues generated by port activity. These are taxes paid by individuals and firms directly dependent upon the maritime activity.

Shipment and receipts of cargo through the marine terminals at the Port of Everett 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 Everett. These are the:

- **Surface Transportation Sector**;
- **Maritime Service Sector**;
- **Non-Maritime Tenants**;
- **Port of Everett**.

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.

A separate impact analysis was conducted for the 2,000 slip Port-owned marina.
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 Everett, as do numerous individual owner-operators. The trucking industry's major involvement is in moving containers, logs, equipment and chilled cargo for local distribution.

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;
- Federal, State, and Local Government Agencies.

A brief description of the major participants in each of these five 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 Everett. 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.

**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, 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;

- **Container leasing and repair firms** - provide containers to steamship lines and shippers/consignees and repair damaged containers;

- **Container consolidators** - consolidate containerized cargo as well as full containers in order to achieve favorable transportation rates for their customers;

- **Automobile service firms** - service new automobiles after they are off-loaded from the vessels and are often terminal operators as well.
• **Barge Operators** - move dry bulk cargo such as sand and gravel and aggregates, logs, chips and bunker ships while in port. Barges also move containers between Seattle and Everett for use by the Boeing facility in Everett.

• **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 Port Users

Port users consist of shippers and consignees using the Port of Everett marine terminals to export and import cargo. Two categories of Port users are considered in the analysis: those that are totally dependent on the Port of Everett, and those located throughout the region whose business is only influenced by the cargo and vessel activity at the Port of Everett terminals. Those in the first category include Everett Shipyard, High River Gold, Columbia Falls Aluminum Company, and Dunlap Towing, and these dependent users would most likely shut down operations if the marine terminals were not available for their use, while those in the second category (such as Boeing) would ship or receive materials via another port or mode. Because of this difference, employment, income and tax impacts are estimated for shippers/consignees in the first category only. Employment with port users in the second category is considered port-influenced or port-related, and not port-generated. For this group, no income and tax impacts are estimated.

### 1.4 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 American Construction, Quality Seafood Services, and Sunset Body Works.

### 1.5 Port of Everett

The Port of Everett includes those individuals employed by the Port whose purpose is to oversee port 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 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, alumina and some bulks require a 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. Perishable cargo such as Washington state apples, requires temperature controlled warehouses.

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 Everett:

- Containerized Cargo;
- Logs;
- Project Cargo/Equipment;
- Chilled Cargo;
- Alumina.

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 banking/insurance/law job category, marine construction and the government category.
3. DATA COLLECTION

This Economic Impact Study of the Port of Everett is based on a telephone survey of members of each of the five economic sectors. Participants were identified by the Port of Everett and the Journal of Commerce, “Port Telephone Tickler”, the Pacific Northwest Ports Handbook, and the Washington Public Ports Association Directory. Also, data collected for freight forwarders, steamship lines and agents, chandlers, pilots, tug operators and surveyors in the Pacific Northwest were used to achieve a 90 percent response rate in all sectors. In total, 27 firms in Everett were interviewed. A data base of more than 900 maritime firms that Martin Associates was developed from our previous (2004 and 2005) economic impact studies for the Ports of Seattle and Tacoma were used to develop ratios of area maritime services firms supporting activity in Everett.

In addition to data collected from the sources noted above, published data was collected from several sources. These publications include:

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

Other published data was obtained 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, 2003” for the Seattle/Everett/Tacoma MSA.

The economic relationships and methodology have been used to develop an economic impact model that is designed to update the port impact assessment on an annual basis, as well as to test sensitivities of impacts to changes in commodity tonnage, labor productivity, labor work rules, vessel calls (by type of vessel), pilotage and tug assist assumptions. Also, the model is designed to test the impacts of new facilities development.

4. IMPACT SUMMARY

The resulting economic impacts are presented in Table 1. The impacts for cargo and marina activity at the Port of Everett are detailed, in the following Table.

Table 1
Summary of Economic Impacts Generated By Port Activity in 2006

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<tr>
<th></th>
<th>Cargo and Property</th>
<th>Marina</th>
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<tr>
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<td>295</td>
<td>1,241</td>
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<tr>
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<td>485</td>
<td>160</td>
<td>646</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,431</td>
<td>455</td>
<td>1,886</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INCOME ($1000)</th>
<th>Cargo and Property</th>
<th>Marina</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIRECT</td>
<td>$47,536</td>
<td>$12,165</td>
<td>$59,701</td>
</tr>
<tr>
<td>INDIRECT</td>
<td>$42,554</td>
<td>$9,729</td>
<td>$52,284</td>
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<tr>
<td>TOTAL</td>
<td>$136,724</td>
<td>$33,828</td>
<td>$170,552</td>
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<table>
<thead>
<tr>
<th>REVENUE ($1000)</th>
<th>Cargo and Property</th>
<th>Marina</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$136,585</td>
<td>$15,971</td>
<td>$152,556</td>
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</table>

<table>
<thead>
<tr>
<th>LOCAL PURCHASES ($1000)</th>
<th>Cargo and Property</th>
<th>Marina</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$203,313</td>
<td>$15,297</td>
<td>$218,610</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE AND LOCAL TAXES ($1000)</th>
<th>Cargo and Property</th>
<th>Marina</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$13,536</td>
<td>$3,349</td>
<td>$16,885</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RELATED JOBS</th>
<th>Cargo and Property</th>
<th>Marina</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,912</td>
<td>2,912</td>
<td>2,912</td>
<td></td>
</tr>
</tbody>
</table>

Note: Totals may not add due to rounding
II. ECONOMIC IMPACTS OF MARINE CARGO ACTIVITY

In this chapter, the economic impacts generated by maritime cargo activity at the Port of Everett are documented. The chapter is organized as follows:

The first section details the employment impact, while the revenue impacts are described in this section. Personal income impacts as well as tax impacts are also presented.

1. EMPLOYMENT IMPACTS

First, the total employment that is in some way related to the cargo activity at the Port of Everett 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., rail and trucking jobs, terminal operators). Induced and indirect jobs generated by local purchases made by those directly employed as a result of cargo activity are then described.

1.1 TOTAL CARGO RELATED JOBS

It is estimated that 5,879 jobs in the Everett regional economy are influenced by cargo and vessel activity the Port of Everett.

- 946 direct jobs are generated by cargo activity at the Port of Everett. These jobs are classified as direct jobs and if activity at the Port of Everett were to cease, these jobs would be discontinued over the short term.
- 485 are employed by providing goods and services to the 946 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 Everett made $203.3 million of local purchases for office supplies, parts and equipment, maintenance and repair services, business services, utilities, communications services and fuel. These purchases supported 1,536 indirect jobs in the local economy.
- An additional 2,912 jobs are with users of the Port of Everett that ship and receive cargo via the marine terminals. These jobs are considered to be influenced by activities at the Port, but the degree of dependence on the Port is difficult to estimate. Of these jobs, the majority are related to the containerized cargo handled at the Port of Everett. If the marine terminals were not available to these organizations, they would suffer an economic penalty over the longer term. Such a penalty would vary from a loss of employment opportunities in some cases, to an increase in total transportation costs in other cases, which could in turn, result in employment reductions.

Containerized cargo shippers can use other Pacific Northwest (PNW) ports, primarily Seattle and Tacoma.

The next section of this chapter is dedicated to the direct impact category of the 946 jobs.

1.2 DIRECT JOB IMPACTS

As a result of port activity, 946 full-time jobs were directly created by cargo activity at the Port of Everett.

Table 2 presents the distribution of the 946 direct jobs by type of job. As this table shows, the largest job impacts are with Port tenants, followed by employment with local shipyards providing services to the vessels calling the Port and firms providing marine construction. More than 150 truckers are employed by moving cargo to and from the terminals, while 30 full-time equivalent members of the ILWU are employed by cargo activity at Everett. In addition, another 30 jobs are directly supported with terminal operators.

Table 2

<table>
<thead>
<tr>
<th>Direct Employment Impacts by Job Category</th>
<th>Direct Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE TRANSPORTATION</td>
<td></td>
</tr>
<tr>
<td>RAIL</td>
<td></td>
</tr>
<tr>
<td>TRUCK</td>
<td>160</td>
</tr>
<tr>
<td>MARITIME SERVICE</td>
<td></td>
</tr>
<tr>
<td>TERMINAL EMPLOYEES</td>
<td>30</td>
</tr>
<tr>
<td>ILWU</td>
<td>30</td>
</tr>
<tr>
<td>TOWING/PILOTAGE</td>
<td>135</td>
</tr>
<tr>
<td>AGENTS</td>
<td>115</td>
</tr>
<tr>
<td>FORWARDERS</td>
<td>1</td>
</tr>
<tr>
<td>WAREHOUSEMEN</td>
<td>104</td>
</tr>
<tr>
<td>MARINE CONST/ SHIPYARDS</td>
<td>163</td>
</tr>
<tr>
<td>BARGE</td>
<td>11</td>
</tr>
<tr>
<td>TENANTS</td>
<td>167</td>
</tr>
<tr>
<td>PORT OF EVERETT</td>
<td>23</td>
</tr>
<tr>
<td>TOTAL</td>
<td>946</td>
</tr>
</tbody>
</table>

Note: Totals may not add due to rounding

1 Jobs are measured in terms of full-time equivalent workers working 2,080 hours per year. If a worker is employed only 50% of the year, the job is reported as 0.5 direct jobs.
The firms directly dependent upon the vessel and cargo activity at the Port of Everett made $203.3 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. These purchases supported 1,536 local indirect jobs.

If maritime activity at the Port of Everett 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 by Martin Associates for the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System, 2004.

Related jobs are jobs with users of the Port of Everett facilities. These users include Boeing, as well as log exporters and other importers moving the cargo via the Port. It is to be emphasized that these users are related to the Port of Everett marine terminals in that if these facilities were not available, the users could ship and receive cargo via other ports. In fact, the majority of these users currently use multiple ports for export and import, especially those moving containerized cargo through the Port. Furthermore, the level of employment with the related users is driven by the demand for the products produced by these firms, and not as the result of providing cargo handling or vessel support services at the marine terminals.

To estimate the related user impact, Martin Associates identified the types of containerized cargo moving via the Port’s terminals, the average value per ton of the specific key commodities, and the share either originating or consumed in the region. A weighted average dollar value per ton of containerized export cargo was multiplied by the tons of containerized cargo exported via the Port of Everett and the share of containerized cargo that originated in Washington State. The weighted average job coefficients corresponding to the export containerized commodities produced in Washington were next multiplied by the value of the containerized cargo exports via the Port to estimate the related jobs with exported containerized cargo.

For export containerized cargo, employment to value of output coefficients for the export producing industries related to the export containerized cargoes were then computed from Bureau of Economic Analysis, Regional Input-Output Model for the State of Washington, as well as from a key "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 was developed. 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.

1.4 INDIRECT JOBS

The estimated consumption expenditures generated as a result of the respending impact is distributed across these consumption categories. Associated with each consumption category is the relevant retail and wholesale sectors. Jobs to sales ratios in each industry are then computed for the Everett/Tacoma metropolitan area and for the State of Washington, 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 initially in the Everett/Tacoma metropolitan area and subsequently in the State of Washington. 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 was developed. 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.

1.4 INDIRECT JOBS

The regional purchases by the 946 direct jobholders with the direct income earned from port activity create additional jobs throughout the regional economy. In calendar year 2006, $47.5 million was received by those 946 directly employed by cargo activity at the Port of Everett. As the result of the respending of a portion of this income for purchases in the State of Washington, an additional 485 induced jobs were generated.

These induced jobs are estimated based on the current expenditure profile of residents in the Everett/Tacoma metropolitan region as estimated by the U.S. Bureau of Labor Statistics, "Consumer Expenditure Survey", 2003. This survey indicates the distribution of consumer expenditures over key consumption categories for residents of the Everett/Tacoma metropolitan area. The consumption categories are:

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

The estimated consumption expenditures generated as a result of the respending impact is distributed across these consumption categories. Associated with each consumption category is the relevant retail and wholesale sector. Jobs to sales ratios in each industry are then computed for the Everett/Tacoma metropolitan area and for the State of Washington, 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 initially in the Everett/Tacoma metropolitan area and subsequently in the State of Washington. 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 was developed. 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.
Finally, the direct, induced and indirect job impacts associated with the containerized cargo movements were subtracted from the total related jobs to avoid double counting, as the related jobs include job impacts at each stage of handling the imported and exported cargo and domestic cargo, such as the port activity and the trucking and rail activity to move the cargo to and from the port and the induced and indirect jobs associated with the direct port activity.

A similar method was used to estimate jobs related to the shipment of logs. The value of logs shipped via the Port was estimated from the U.S. Maritime Administration, Foreign Trade Statistics. The employment coefficient for logging in the State of Washington was obtained from the U.S. Bureau of Economic Analysis, Regional Input Output Modeling System (RIMSII), and this coefficient multiplied by the value of the logs exported via Everett provided an estimate of related jobs in the logging industry. The direct, induced and indirect jobs associated with the log moves via the Port were subtracted from the related logging jobs to avoid double counting.

Using this methodology, it is estimated that 2,912 jobs with Washington firms are related to the cargo moving via the Port of Everett.

2. **REVENUE, INCOME AND TAX IMPACTS**

The maritime activity at the Port of Everett marine terminals 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 (both railroads and trucks) as a result of moving export cargo to the marine terminals 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. Ship repair yards and marine construction firms receive revenue by providing repair services to vessels and new construction and repair work at the marine terminals. The Port of Everett receives revenue from leases at the terminals it owns. In addition, revenue is received by shippers/consignees from the sales of cargo shipped or received via Everett 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 business services in the State of Washington. 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, but revenue to the company would continue as long as product of demand was maintained.

Table 2 presents the revenue impact generated by impact category for maritime activity at the Port.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Total Revenue Generated by Port Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SURFACE TRANSPORTATION</strong></td>
<td><strong>$1,000</strong></td>
</tr>
<tr>
<td>RAIL</td>
<td>$375</td>
</tr>
<tr>
<td>TRUCK</td>
<td>$13,277</td>
</tr>
<tr>
<td><strong>MARITIME SERVICE</strong></td>
<td></td>
</tr>
<tr>
<td>TERMINAL EMPLOYEES</td>
<td>$6,513</td>
</tr>
<tr>
<td>SURVEYORS/CHANDLERS</td>
<td>$8</td>
</tr>
<tr>
<td>TOWING/PILOTAGE</td>
<td>$37,574</td>
</tr>
<tr>
<td>AGENTS</td>
<td>$4,143</td>
</tr>
<tr>
<td>FORWARDERS</td>
<td>$464</td>
</tr>
<tr>
<td>WAREHOUSEMEN</td>
<td>$39,658</td>
</tr>
<tr>
<td>MARINE CONST./SHIYARDS</td>
<td>$38,662</td>
</tr>
<tr>
<td>PORT OF EVERETT</td>
<td>$5,911</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$136,585</strong></td>
</tr>
</tbody>
</table>

Note: Totals may not add due to rounding. Revenue for ILWU/dockworkers is included in terminal operator revenue.
revenue generated by the surface transportation sector is based on the relevant modal (rail or truck) rate for a commodity multiplied by the tonnage of that commodity moved to and from the Port by the specified mode. The share of each commodity transported by rail and truck was estimated from interviews with the terminal operators handling the respective commodities, as well as from steamship lines.

The relative modal shares were then applied to the port tonnage (or units) of the specific cargo. Average rail rates were obtained from the railroad serving the Port and importers using the rail. These rates were multiplied by the tonnage of each commodity carried by rail to estimate revenue accruing to railroads. The trucking revenue was based on interviews with terminal operators, steamship lines, and shippers/consignees.

The revenue from the sales of goods and services produced by the non-maritime lease holders is not included.

2.2 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 Everett area. The income impact is estimated by multiplying the average annual earnings of each port participant, i.e., railroad employees, truckers, steamship agents, freight forwarders, bankers, insurance agents, 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 $47.5 million in personal income.

Based on data developed by the U.S. Bureau of Economic Analysis, it is assumed that for every one dollar earned by Everett area residents as a result of jobs directly generated by cargo activity, an additional $0.98 of income would be created as a result of respending the direct income for purchases of goods and services in the state of Washington. Applying this multiplier to the direct income impact, the re-spending generated an additional $46.6 million of personal income and consumption expenditures in business and service providers located throughout the state. This additional respending of the direct income generates the induced job impact, jobs, described in the previous chapter.

The indirect jobholders received $42.6 million of personal wages and salaries. Combining the direct, induced and indirect income impacts, maritime cargo activity at the Port of Everett produced $136.7 million of wages and salaries and consumption expenditures in the State of Washington.

2.3 LOCAL PURCHASES

The firms directly dependent upon the maritime activity at the Port of Everett made $203.3 million of purchases in the State of Washington. These purchases were for maintenance and repair services, utilities, communications services, office products, parts and equipment, fuel, etc. The $203.3 million of purchases generated the 1,536 indirect jobs described in the previous chapter.

2.4 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 Foundation. The tax burdens are the total state and local taxes collected divided by total state income. Maritime activity at Port of Everett generated nearly $13.5 million of state and local taxes, of which about $10.4 million was collected at the state level, and the balance at the local level.


3 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 EVERETT MARINA

The Port of Everett owns and operates a 2,000 slip marina, which creates substantial economic impacts in the Everett 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 Everett Marina. In addition to the recreational boats that are moored, 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. In 2006, there were 5,991 days spent in Everett by transient boats.

To develop the impact data, Martin Associates conducted interviews with tenants at the 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;

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. Table 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. Table 5 shows the breakdown for local spending by transient boat operations.
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 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 Everett/Seattle/Tacoma MSA.

Indirect impacts are developed from local purchases data supplied by support services providers including equipment suppliers and repair firms.

Table 6
Economic Impact of Recreational Boating at the Port of Everett Marina, 2006

<table>
<thead>
<tr>
<th>SUMMARY</th>
<th>PORT OF EVERETT MARINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOBS</td>
<td></td>
</tr>
<tr>
<td>DIRECT JOBS</td>
<td>295</td>
</tr>
<tr>
<td>INDUCED</td>
<td>160</td>
</tr>
<tr>
<td>INDIRECT</td>
<td>248</td>
</tr>
<tr>
<td>TOTAL</td>
<td>703</td>
</tr>
<tr>
<td>INCOME (1000$)</td>
<td></td>
</tr>
<tr>
<td>DIRECT</td>
<td>$12,165</td>
</tr>
<tr>
<td>RE-SPENDING</td>
<td>$11,934</td>
</tr>
<tr>
<td>INDIRECT</td>
<td>$9,729</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$33,828</td>
</tr>
<tr>
<td>REVENUE (1000$)</td>
<td>$15,971</td>
</tr>
<tr>
<td>LOCAL PURCHASES</td>
<td>$15,297</td>
</tr>
<tr>
<td>STATE AND LOCAL TAXES (1000$)</td>
<td>$3,349</td>
</tr>
<tr>
<td>PORT OF EVERETT E REVENUE (1,000$)</td>
<td>$6,200</td>
</tr>
</tbody>
</table>

In 2006, the recreational boating activity at the Port of Everett Marina generated the following economic impacts.

- 295 direct jobs were created by recreational boating activity at the Port of Everett marina.
- As a result of purchases by these 295 direct jobs, 160 induced jobs were generated in the local economy.

As the result of $15.3 million of local purchases by the firms dependent upon recreational boating activity at the Port of Everett marina, 248 indirect jobs were supported in the local economy.

The 295 direct job holders received $12.2 million of direct wages and salaries. As the result of the re-spending impact, an additional $11.9 million of personal income and local consumption expenditures were generated. The indirect job holders received $9.7 million of indirect wages and salaries.

The marina operations generated $15.3 million of business revenue excluding the sale of boats.

$3.4 million of state and local taxes were generated by the Port of Everett marina activity.