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Economic Impacts of Recreation Activities at Oregon Coastal and River Ports

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ABSTRACT: This report documents the regional economic significance of recreational use associated with 18 Oregon coastal and river ports in 2002. Recreation use, visitor spending and regional economic effects were estimated using visitor surveys and regional economic input-output models. This study found that in 2002, over 700,000 recreation visits (in party-days) occurred at the 18 surveyed Oregon ports, resulting in \$75 million in trip spending and \$31 million in purchases of boat-related durable goods and other fixed costs. The spending by Port visitors was a significant economic factor to the State of Oregon, resulting in \$109 million in sales, \$42 million in personal income, and 1,700 jobs to the State's economy.

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Summary

Background

Boating and other recreational activities are becoming significant at many Oregon ports. An overall reduction in the shipment of resource-based goods such as logs and timber has limited the expansion of waterborne commerce. With recreational activities becoming more important to the economic health at Oregon coastal ports, there is a need to examine the economic impacts of these activities.

Characterize regional economic impacts

The goal of this study is to characterize the regional economic significance of recreational use of Oregon coastal and river ports. A visitor survey was conducted in the summer of 2002 to collect data needed for this study. The survey was administered by the Engineer Research and Development Center and the Portland District of the U.S. Army Corps of Engineers, and the Department of Forest Resources at Oregon State University, with assistance from the Oregon Economic and Community Development Department and all 18 participating Oregon ports.

Partnership efforts

***18 ports
4,100 marina slips
40 boat ramps***

This study includes 36 marinas and boat launch sites at 18 ports in Oregon (does not include the Port of Portland), totaling about 4,100 marina slips, 1,970 ft of transient dock, and about 40 boat ramps. Marinas and launch sites included in this study were identified by port managers as they are “physically located in the port or use the port as an access point to the Pacific Ocean/ Columbia River.”

***3,000 mailback surveys
(60% response rate)
and 2,300 onsite
surveys***

Data to estimate recreation use and spending was collected through two different modes of surveys of recreationists to these ports. In the first, about 3,000 surveys were mailed to marina slip renters of the 18 ports, with a response rate of 60 percent. In the second, onsite surveys were conducted at six ports to estimate use and spending information for port visitors who would not be captured by the slip renter mailback survey. A total of 2,327 onsite surveys were completed.



Photo: Onsite survey at the Port of Siuslaw

460,000 total boating days

The results of these surveys indicated that marina slip renters, boat ramp and transient slip users spent a total of 460,000 boating days at these Oregon ports in 2002. Including time spent en route to and from their homes to the ports, boaters spent a total of 589,000 party days on their boating trips to Oregon ports. Visitors also came to the ports for various non-boating activities that summed to 146,000 party days (392,000 person days) last year on recreation trips (86 percent of these days were spent locally).

Fishing is the No. 1 activity by boaters

About 68 percent of all boaters reported engaging in fishing activities during their last boating trips. Sightseeing, walking/hiking/biking, and windsurfing are among the most popular activities for non-boater respondents.

94% of port visitors' total trip spending was spent in Oregon

On average, marina slip renters reported using their boats 27 to 42 times last year, while boat ramp users used boats 23 to 29 times. Most of the non-boating visitors were repeat visitors who averaged 5 to 25 visits a year to the sites where the individual was interviewed.

Overnight visitors spent about three to eight times more than day visitors on a per-trip basis

Average per party-trip spending for marina slip renters was \$175 for day visitors and was around \$700 for overnight visitors. Of these amounts, 94 percent was spent in Oregon.

Average per party-trip spending for boat ramp and transient slip users was \$64 for day visitors and \$632 for overnight visitors. Of this spending, 95 percent occurred in Oregon.

Marina slip renters spent two to three times more on boats and related expenditures compared to boat ramp users



Photo: Boats moored at the Port of Newport

Average per party-trip spending for non-boating visitors was \$95 for day visitors and \$807 for overnight visitors. Of this spending, 94 percent occurred in Oregon.

On average, the cost of a new boat was \$57,400 and the cost of a used boat was \$32,600 for marina slip renters. The cost of a new boat was \$20,600 and was \$11,900 for a used boat for boat ramp users. About 13 percent of the respondents reported purchasing new or used boats last year. Respondents of marina slip renters also spent about \$3,400 on boating-related expenditures such as equipment, slip rental, insurance, and storage fees last year. Boat ramp and transient dock users averaged about \$1,450 on boat equipment and insurance last year.

Total annual trip spending: \$47 million by marina slip renters; \$14 million by boat ramp users; \$14 million by non-boating visitors

Marina slip renters spent a total of \$47 million in Oregon on trips to the ports last year. The annual spending on boat equipment, slip rental fees, insurance, and other services was \$8.4 million in Oregon. Marina slip renters also spent \$10.2 million on purchases of new and used boats in Oregon.

Total annual spending on boats and related expenses: \$31 million

Total annual boating trip spending by boat ramp and transient dock users in Oregon was \$14 million. Annual spending on boat equipment and insurance was \$4.8 million in Oregon. Boat ramp users also spent about \$7.8 million on purchases of new boats and used boats in Oregon.



Photo: Recreationists at the Port of Siuslaw

Non-boating visitors added another \$13.8 million to Oregon's economy on trip-related expenditures to these Oregon ports last year.

Port visitors' trip spending and annual and fixed boating expenses supported a total of 1,700 jobs and generated \$42 million in personal income

Trip spending by marina slip renters, boat ramp users, and non-boating visitors to these 18 Oregon ports totaled \$75 million last year. This spending resulted in \$55 million in direct sales and \$21 million in direct personal income. It also directly supported 1,050 jobs in the state economy. With multiplier effects, the total economic impacts associated with port visitors' trip spending were \$91 million in sales, \$35 million in personal income, and 1,500 jobs.

Marina slip renters and boat ramp users spent a total of \$31 million on purchases of new and used boats, slip rentals, equipment, storage, and insurance payments. About 34 percent (\$10.75 million) of this spending was captured by the state's economy as direct sales.¹ This spending resulted in \$4.2 million in direct personal income and directly supported 140 jobs in the state economy.



Photo: Port of Hood River and the adjacent community

With multiplier effects, the total economic impacts associated with port recreation boaters' durable goods and annual services were \$17.61 million in sales, \$7 million in income, and 228 jobs.

¹ For purchases of manufactured goods, only the portion that was made locally (in Oregon) would be captured by the state's economy as direct sales effects. While boaters spent a lot of money on purchases of new boats and equipment, most of this spending was not captured by the state's economy, as the goods were manufactured in other states or countries. As for purchases of used boats, only the retail margins for used boats purchased from dealers would be included.

Preface

The work reported herein was conducted as part of a “Planning Assistance to the States” project funded through a partnership between the U.S. Army Engineer District, Portland and the Oregon Economic and Community Development Department (OECDD). The project was assigned to the U.S. Army Engineer Research and Development Center (ERDC) under the purview of the Environmental Laboratory (EL). The authors are grateful to the managers and staff of all Oregon coastal and river ports for their great help in implementing this study, and to all members who provided invaluable input by participating in the port quarterly meetings.

This report was prepared by Dr. Wen-Huei Chang and Mr. R. Scott Jackson, EL. The study was supervised by Dr. Michael Passmore, Chief, Ecological Resources Branch, Ecosystem and Engineering Division (EED), EL. General supervision was provided by Dr. David J. Tazik, Chief, EED, and Dr. Elizabeth Fleming, Acting Director, EL. Technical Reviewers were Mr. Richard Kasul and Ms. M. Kathleen Perales, ERDC.

This study would not have been possible without the dedication and help of many partners and contributors during the entire process. Notable for coordinating the study are Mr. Timothy Kuhn, Portland District, and Mr. Gary Whitney and Ms. Louise Birk, OECDD, and Mr. Don Mann, Port of Newport, for appropriating the non-federal funding for this study.

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COL James R. Rowan, EN, was Commander and Executive Director of ERDC. Dr. James R. Houston was Director.

1 Introduction

Background

The coastal ports of Oregon have experienced an almost continuous evolution of economic activities since their inception. The ports were originally established to support waterborne commerce. Development of general navigation facilities such as jetties, navigation channels, docks, and moorage facilities was based primarily on movement of commercial goods for export and commercial fishing. Over time the economic focus of ports has expanded to include industrial parks, commercial developments, railroads, airports, recreational moorage, storage facilities, campgrounds, and related tourist facilities.

The evolution of economic activities can be attributed to many factors. Over the last 20 years, changes in the regulatory, political, and social environment have impacted the resource-based economy and port commerce beyond what anyone could have predicted. It is unlikely that we can accurately forecast the basis of port commerce 20 years into the future. Therefore, it is important that port infrastructure be maintained to serve the present needs but also be adaptable to meet future demands.

The primary focus of essentially all the Oregon coastal ports at present has moved away from waterborne commerce based on a range of economic factors. Of most prominent impact has been the reduction of shipment of resource-based goods such as logs and timber. Waterborne commerce on deep-draft vessels or oceangoing barges from Oregon coastal ports has declined significantly in the last two decades. While the future of waterborne commerce is difficult to forecast, this trend is not expected to change in the near future. As commercial shipping has declined, economic activity in all the ports has come to rely more on commercial fishing and recreational boating.

Recreation-related activities have become a more important part of port activities. Most coastal and river ports maintain marinas to serve recreation and commercial boating activities. They also provide an array of opportunities for other types of recreation activities. The Port of Hood River, for example, has become a nationally recognized facility for windsurfing, and the Port of Cascade Locks manages a successful sternwheeler tour boat (Oregon Blue Book, 2003).

With the general aging of the population and fairly affluent nature of the older population, the demand for recreational moorage and the size of the moorage is increasing. In 2001, there were 194,824 boats registered in the State

of Oregon (Oregon State Marine Board (OSMB), 2002a). Many of them have permanent mooring berths or require transient berths at coastal and river ports. In addition, many recreational boaters launched their boats at port ramps for day-use. Fishing and cruising are among the top activities by boaters. People also come to the ports for various non-boating activities such as windsurfing, crabbing, sightseeing, and beach walking.

Study Purpose

With recreational usage becoming a higher percentage of the economic activity at Oregon coastal and river ports, there is a need to determine the economic contribution of recreational activities to the local communities. Supportable estimates of economic impacts are needed, for example, to obtain state and Federal assistance in port activities and to justify continued port operations, maintenance of general navigation and moorage facilities, and identify port improvements needed to better meet the growing recreational use needs.

This study will estimate economic impacts associated with recreational activities for participating ports. The types of impacts to be defined are port visitor spending, and regional sales, income, and jobs associated with visitor spending.

Study Regions

This study will estimate economic impacts associated with port recreation activities on regions surrounding each of the 18 ports participating in this study as well as on the State of Oregon (see Figure 1 for locations of these ports). Twelve are coastal ports and the remaining six are located along the Columbia River. Participating ports and their basic demographic information are listed in Table 1. Due to the nature and the complexity of the port's business function, the Port of Portland was not included in this study.

According to the U.S. Census Bureau, the population of Oregon was 3.47 million in 2001, ranking 27th in the nation. In 2001, Oregon's per capital personal income¹ was \$28,165, which ranked 31st in the nation. The largest earnings in 2001 in Oregon were in service industries, accounting for 26.6 percent of total state earnings. Durable goods manufacturing was 13.9 percent and state and local government was 13.5 percent (Bureau of Economic Analysis (BEA) 2003). The land area in 2000 was 95,997 square miles with 35.6 people per square mile. The population density was about half of the U.S. average at 79.6 people per square mile in 2000 (U.S. Census Bureau 2003).

¹ Personal income includes wage and salary disbursements, other labor income, and proprietors' income.

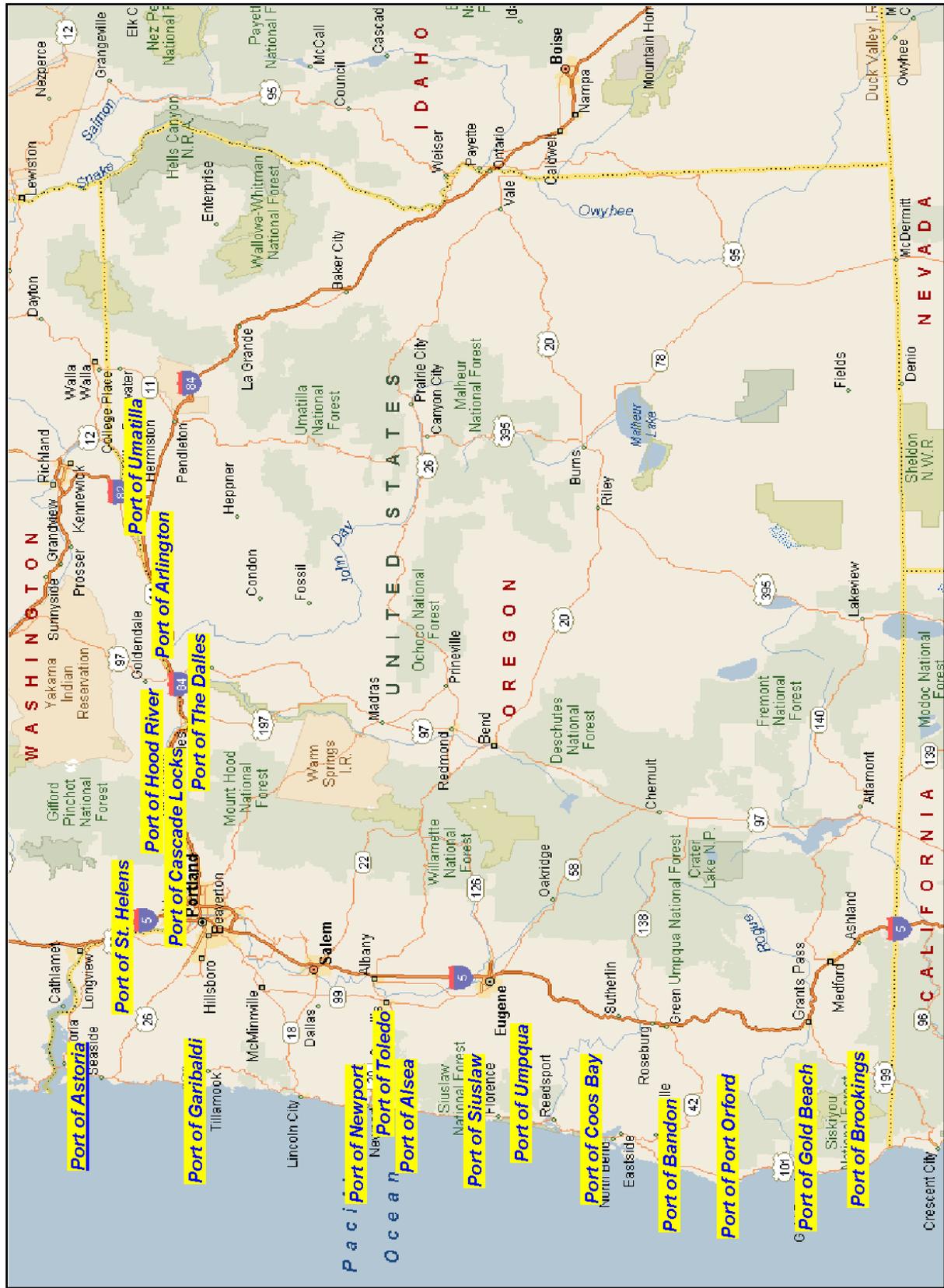


Figure 1. Locations of the 18 participating Oregon Coastal and River Ports

Port	Counties Included in Study Region	Population (2001)	Land Area sq. mile
Port of Alsea	Lincoln	44,264	980
Port of Arlington	Morrow, Gilliam	13,190	3,236
Port of Astoria	Clatsop	35,596	827
Port of Bandon	Coos	62,459	1,600
Port of Brookings Harbor	Curry	21,118	1,627
Port of Cascade Locks	Hood River	20,439	522
Port of Coos Bay	Coos	62,459	1,600
Port of Garibaldi	Tillamook	24,308	1,102
Port of Gold Beach	Curry	21,118	1,627
Port of Hood River	Hood River, Wasco	44,334	2,903
Port of Newport	Lincoln	44,264	980
Port of Port Orford	Curry	21,118	1,627
Port of Siuslaw	Western Lane ¹	324,316	4,554
Port of St. Helens	Columbia	44,547	657
Port of The Dalles	Hood River, Wasco	44,334	2,903
Port of Toledo	Lincoln	44,264	980
Port of Umatilla	Morrow, Umatilla	82,090	5,247

¹ The reported population and land area information are for the entire county.
Source: U.S. Census Bureau 2003.

The study area for each port was defined so each region is close to a functional economic area that is ideal for economic input-output analysis. Each study region consists of one or multiple adjacent counties (smallest unit available) that include the port, residential location of the labor force, and the gateway cities to the port.

Besides the Port of Siuslaw and Umpqua regions, where demographic information for the larger areas is shown in Table 1, the most populated regions are the Port of Umatilla, followed by the Port of Bandon, and the Port of Coos Bay. Most regions (14 out of 18) have populations fewer than 50,000, and all regions have population density (population per square mile) that is lower than the national average. In other words, most of these study regions are not highly populated and few industries may exist in the region.

Economic Impact Analysis

Economic impact analysis (EIA) estimates the changes in economic activity within a region resulting from some action. EIA can produce estimates of the total economic impacts of holding a sporting event, closing a power plant, passing an environmental bill, relocating a military base, opening an amusement park, and other actions that will influence a region's economy. There are two components to an economic impact analysis; to directly convert the action into monetary values such as sales, income, and jobs, and to estimate the secondary effects that are associated with the action (Pleeter 1980, p. 7).

Economic impact analysis traces changes in economic activity through the economy to measure the cumulative economic effects of an action. For example, visitors who purchase goods and services in a region will directly contribute to businesses such as hotels, restaurants, and retail stores. These businesses will pass the money to their employees as wages and salaries and their employees will spend the money they receive to purchase goods and services from other businesses in the region. These businesses in turn make additional purchases in the region, thereby creating a chain effect. The cumulative result is the total economic impact of visitors' spending in the region (Frechtling 1994).

Economic impacts may be categorized into direct, indirect, and induced effects. The summation of indirect and induced effects is also called "secondary effect." Multipliers capture the size of the secondary effects, usually expressed as a ratio of total effects to direct effects (Miller and Blair 1985, p. 101). The larger the multiplier, the greater the impact a dollar of visitor spending will have on the region's economy. For example, the sales multiplier for the lodging sector was 1.72 for the State of Oregon in 2000. This means that a visitor spending \$100 on lodging will have a total effect of \$172 in sales within the state (\$100 received by the hotel as direct sales effects and another \$72 received by related industries in the region as secondary effects).

Direct effects are changes in the industries associated directly with visitor spending. In the previous example, \$100 spent on lodging in the region will directly increase sales in the hotel sector. This is the direct sales effect of the visitor spending. The hotel will also hire employees and pay wages and salaries, which are the direct job and income effects.

Indirect and **induced** effects are the secondary effects resulting from the initial visitor spending.

Indirect effects are sales, income, or jobs resulting from various rounds of the purchases the hotel made to other "backward-linked" industries in the region. For example, a hotel buys linen supplies and utilities from other industries to deliver the services to its customers. The linen supply industry, on the other hand, also buys raw materials and equipment such as cotton and machinery from other industries. The sales of these backward-linked industries and the associated income and jobs generated from these sales are indirect effects.

Induced effects are the sales, income, or jobs resulting from household spending of income earned as a result of visitor spending—either directly or indirectly. The employees of hotels, linen suppliers, utility companies, etc., for instance, will spend their wages and salaries in the region and generate new rounds of sales, income, and jobs. Several iterations (rounds) may occur before dollars from indirect and induced effects leak entirely from the region. As a result, money spent by visitors will impact not only tourism industries, but also related industries in the region.

Reliable estimates of the regional effects of recreation require precise and current measures of money spent by visitors while engaged in recreation-related activities at Oregon ports. Visitor expenditures are typically arrayed as "spending

profiles,” which are vectors of average amounts spent (for itemized goods and services) in conjunction with recreational visits and uses associated with the ports. Results from past Corps surveys indicate that spending patterns were highly variable across visitor segments. Significant differences in spending patterns were found to be associated with whether visitors stayed overnight during their visit, the type of lodging they used, boat usage, and whether visitors lived within or outside the county or counties in which the site was located. Results from past Corps of Engineers marina slip renter and other visitor surveys provide information useful in developing effective sampling strategies for the survey employed in this study (Chang and Propst 2000; Chang et al. 2000, 2001; Propst et al. 1998).

Segmented spending profiles for Oregon port visitors were developed that can be tailored to better estimate port level spending based on regional visitation data. These spending profiles can then be used for economic impact analysis to estimate how visitor spending benefits regions surrounding Oregon ports. Generalized spending profiles were developed for two sets of visitor segments: (1) type of port facilities used (includes marina slips, boat ramps, and other non-boating facilities), and (2) day use versus overnight visitors. These profiles were applied to recreation use data gathered from this study and from other sources to estimate total spending by each segment for each of the 18 ports. Sales, income, and employment effects within the local region surrounding each of the 18 ports were estimated by applying total visitor spending to regional economic multipliers. The regional and state economic effects were estimated by applying total visitor spending to the Recreation Economic Assessment System (REAS) (Chang et al. 2000), and Impact Analysis for PLANning (IMPLAN) (Minnesota IMPLAN Group 2002) systems.

Note that the term “economic effects” rather than “economic impacts” is used in this study for the economic benefits associated with visitor spending. This is to distinguish two kinds of economic impact analyses identified in previous papers as “significance” and “impact” analysis (Stynes and Propst 1992).

Significance analysis identifies the overall contribution of visitor spending to the region. How much of the sales, income, and employment in the area is associated with visitor spending? No attempt is made here to use a “with versus without” framework. All spending of recreation visitors associated with their visits to the ports, including spending by both local residents and tourists, can be included.

Impact analysis identifies the changes in economic activity within the region that result from some action. The spending and related economic activity included in an impact analysis rests on a clear “with versus without” framework. Only spending that would not otherwise have occurred in the region should be counted (Stynes et al. 2000).

Since the economic impact estimates in this report include the overall contribution of visitor spending from both residents and non-residents (i.e., a significance analysis), the term “economic effects” is used to indicate that this is not a “pure” economic impact analysis where only effects from new money (i.e., non-residents) are included.

The remaining report is divided into three sections. The “Methods” section describes the sampling design and approaches used to measure recreation spending and economic effects. The “Results” section reports visitation, spending profiles, and economic effects for regions surrounding the 18 participating Oregon ports and the state as a whole. The “Discussions, Applications and Conclusions” section includes issues related to the data analysis and measurement approaches used in this study. This section also provides guidelines and options for applying these results, including local (port) level economic impact analysis. Suggestions for improving the credibility of spending profiles and economic impact analysis are also identified.

2 Methods

Study Site Selection

All 23 Oregon port managers were surveyed between July and September 2001. A two-page questionnaire was faxed/e-mailed to port managers asking recreation use and facility information for boat ramps and marinas associated with the port. Four managers answered there was no recreation activity at their ports and one chose not to participate in the survey (Table 2). Table 1 and Figure 1 provide a full list of the remaining 18 ports and their geographic locations.

Table 2 Survey Responses from Port Managers	
Total number of ports in Oregon	23
Ports with no recreation activity	4
Port that chose not to participate in survey	1
Total surveyed	18

All 18 ports were included in the mailback survey portion for this study to survey recreational boating use and spending for marina slip renters. In addition, six ports were also selected for onsite survey where other types of recreationists can be sampled. The onsite survey was designed to sample visitors who come to the

ports to use boat ramps or other recreation facilities that were not included in the mailback survey (Table 3). These six ports were selected to represent different types of ports in terms of location, facilities provided, and visitor use (e.g., river vs. coastal ports, north vs. south, heavy use vs. light use, certain visitor segments).

Table 3 Ports Selected for Onsite Survey		
Port	Type	Geographic Location
Cascade Locks	River Port	Columbia Gorge
Garibaldi	Coastal Port	North Central Coast
Gold Beach	Coastal Port	South Coast
Hood River	River Port	Columbia Gorge
Newport	Coastal Port	Central Coast
Siuslaw	Coastal Port	South Central Coast

Survey Procedures

The visitor spending survey was conducted in the summer of 2002 by the U.S. Army Engineer Research and Development Center (ERDC), the Portland District of the U.S. Army Corps of Engineers, and the Department of Forest Resources at Oregon State University, with assistance from the Oregon Economic and Community Development Department and all 18 participating Oregon ports. ERDC developed survey instruments used in the mailback and onsite surveys (Appendices A, B, and C). The mailback survey was administered by the Corps of Engineers' Portland District, while the onsite survey was administered by Oregon State University.

Port inventory and visitation data used to plan the surveys were obtained in fall 2001 through the port manager survey. This information was constantly updated as the study progressed based on new information provided by port managers and other sources such as the Oregon State Marina Board's publications.

Visitor characteristics, trip information, recreational usage at the port, and trip spending were gathered through the 2002 visitor survey. Visitors sampled either onsite or through mailback surveys were asked questions about party size, length of stay, activities, and primary purpose regarding their current or most recent trip to the port. They were also asked to report trip spending on the questionnaires for the same trip. Ten spending categories were provided on the questionnaires for trip expenses on lodging, food, transportation, recreation and other goods or services. In addition, annual costs of boating-related expenses such as equipment and slip rentals were also measured for all boaters through the survey.

Since the onsite survey took place before the trip was completed, respondents were asked for trip spending up to that point in time (by category) and for expected additional spending for the trip after they leave the site. The relative point in the trip when respondents were interviewed (and expected additional days/hours for the trip) was also recorded. This information was used to extrapolate additional spending and will be discussed later in this chapter.

Mailback Survey

Lists of marina slip renters were provided by personnel at the 18 participating ports. All annual and permanent slip renters were surveyed via a self-administered mailback questionnaire. Samples were drawn for transient and temporary slip renters in proportion to the total number of slips at each port in order to obtain a representative sample for each port and the state as a whole. A total of 3,152 surveys were sent to marina slip renters during the summer season from the Corps' Portland District Office.¹ Following the standard survey procedure, two follow-up reminders were sent to each respondent who had not

¹ Due to customer confidentiality concerns, the Port of Umpqua sent out 168 surveys and postcards independently.

responded to the survey. This approach is typically recommended in survey research that will normally double the response rate in visitor expenditure surveys (Dillman 1978).

Cover letters stating the purpose of the survey were sent to marina slip renters in three waves during the summer season along with questionnaires. Twenty-five percent of the surveys were sent out in the first wave on May 31st, fifty percent of the surveys were sent out in the second wave on June 28th, while the remaining surveys (25 percent) were sent out in the third wave on August 1st (Table 4). A reminder postcard was sent to each marina slip renter who had not responded to the survey three weeks after the initial mailing. Three weeks after the reminder postcards were sent, another wave of the full survey packages (cover letter and questionnaire) were sent to the slip renters who had not responded to the survey (Table 5).

Port	Wave 1 (05/31/2002)	Wave 2 (06/28/2002)	Wave 3 (08/01/2002)	Total
Alsea	6	11	5	22
Arlington	1	3	1	5
Astoria	107	214	107	428
Bandon	11	26	12	49
Brookings	116	231	116	463
Cascade Locks	7	13	7	27
Coos Bay	--	140	140	280
Garibaldi	107	214	109	430
Gold Beach	--	68	68	136
Hood River	30	60	32	122
Newport	124	249	121	494
Orford	--	14	14	28
Siuslaw	46	97	48	191
St. Helens	31	58	34	123
The Dalles	23	46	23	92
Toledo	3	6	3	12
Umatilla	20	42	20	82
Umpqua	55	76	37	168
Total	687	1,568	897	3,152

Wave No.	Survey Sent Out	Reminder Postcard Sent Out	Final Survey Sent Out	Number Sent Out
1	May 31, 2002	June 21, 2002	July 12, 2002	687
2	June 28, 2002	July 17, 2002	August 9, 2002	1,568
3	August 1, 2002	August 27, 2002	September 9, 2002	897

Onsite Surveys

Onsite surveys were conducted at six ports to estimate use and spending information for port visitors who would not be captured by the boat user mail-back survey. The authors visited five of the six selected onsite survey ports prior to the survey to interview port managers and staff and to scope out the survey sites. Visitors within each port are sampled proportional to use. This ensured that a good estimate for each of the six ports can be acquired at the port level. For ports where an onsite survey was not conducted, the weighted average visitor spending for each visitor segment estimated from these six ports was applied to estimate total visitor spending and economic effects.

The onsite survey was administered by the Department of Forest Resources at Oregon State University. A total of 2,372 surveys were completed during the Memorial Day to Labor Day period. A report by Dr. Johnson and Ms. Leahy of Oregon State University that summarizes the sampling design, survey procedures, and results for the onsite survey can be found in Appendix D.

Data Cleaning and Editing

Systematic rules for data cleaning and editing were established to ensure consistency in data analysis and to filter out extreme numbers (outliers) that might otherwise have distorted the results. Reasons for data editing and elimination of cases are described in Appendix E.

Recreation Visits by Segment

Total party day visits per year by segment for each port were estimated using the information gathered from this survey, inputs from port personnel, and other secondary data sources including Oregon State Marine Board's Triennial Boating Surveys and Marina Guide. The OSMB's Triennial Boating Survey reports total boating days (and activity days) by water body and launch site. Total boating days reported for each launch site were aggregated to match with the inventory information provided by port personnel to estimate total annual boating days for each port¹. These numbers were used as the baseline information to estimate boating days from boat ramps when no other information was available.

The total number of annual boating days at each port by *marina slip renters* was then estimated by using the following formula:

$$\text{Boating days for marina slip renters} = \text{Number of slips} \times \text{Occupancy rate} \times \\ \text{Average trips per year} \times \text{Days boat} \\ \text{was used per trip}$$

¹ These numbers were adjusted by results from this survey to include boating days from non-Oregon boaters as well, since the OSBM survey only sampled owners of Oregon-registered boats.

The total number of slips and occupancy rate at each marina were gathered from port personnel and the average trips per year and days boat was used per trip were taken from the survey results.¹

Once the total boating days and boating days by marina slip renters for each port were estimated, total boating days by boat ramp and transient dock users were estimated using one of the following two approaches. For ports where usage by boat ramp and transient dock users were recorded, the information was gathered from port personnel and converted to boating days if needed.² Where no separate port records were available, total boating days for boat ramp and transient dock users were estimated by subtracting boating days by marina slip renters from total boating days from the OSMB estimates. These estimates (includes percent of visitors that were overnight visitors) were then sent to port managers for final updates/validations. The total boating days estimated for marina slip renters and boat ramp and transient dock users were also converted and presented in “total trip days” to include days spent en route by overnight visitors to capture spending for the entire boating trip.³ This was done by comparing the “total days boat was used” and “total nights (days) away from home” from survey results.

Visitation for the “non-boating” segment was also estimated to capture economic significance from visitors who come to the port for reasons other than boating. Six ports provided visitation data for non-boating visitors from their own records.⁴ Four other ports were included in the onsite survey and the ratios between boaters and non-boaters at each port were used to estimate non-boater visitation. For the remaining eight ports, non-boater visitation was estimated by applying the average boater to non-boater ratio across all ports adjusted by facility information provided by port personnel. All of these estimates (includes percent of visitors that were overnight visitors) were then sent to port managers for final updates/validations. Note that some of these estimates were based on port personnel’s professional judgments and are therefore subject to errors.

Marina slip renters, boat ramp and transient dock users, and non-boating visitors were further divided into day use and overnight visitors based upon the proportion of overnight visitors reported by each port and from the survey results. This approach resulted in six visitor segments:

- Marina slip renters who use the boats for day trips.
- Marina slip renters who use the boats for overnight trips.
- Boat ramp and transient dock users who use the boats for day trips.
- Boat ramp and transient dock users who use the boats for overnight trips.

¹ All the information needed is not available for all ports. When information was not available or sample size was too small to estimate the mean, state average was applied with modifications based on other available factors.

² Instead of recording total boating days, some ports have financial reports showing total revenue from boat ramp or transient dock users (or parking lot usage from boat ramp users). These numbers were converted to boating days based on the information provided by each port.

³ For example, a boater could have spent 3 days on a boating trip but only used the boat for 2 days.

⁴ Sources for these estimates include day use parking lot revenues, campsite records, traffic count, and other local Chamber of Commerce estimates.

- Non-boating visitors who come to the port for day trips.
- Non-boating visitors who come to the port for overnight trips.

Visitor spending was originally measured in party trips. To be compatible with port data, all spending was converted to a per-party-day basis. This conversion has the practical advantage of making the spending data more readily utilizable by port managers.

Visitor Spending by Segment

Spending profiles were developed for each of the six segments. Trip spending included spending on goods and services consumed during a trip such as gasoline, food, and lodging in 10 spending categories. Expenditures for durable goods (items like boats and recreation vehicles that are used on multiple trips) were also included. Trip spending within 30 miles and outside 30 miles of the port was estimated for each segment to distinguish local spending versus spending outside of the area.

Due to the low sample sizes and survey availability at some ports, visitor spending may not be available for all segments at the port level. Average spending across all ports was used to compute total visitor spending when the sample was too small or there were no survey data (i.e., non-boating visitors at ports where no onsite survey was conducted).

Because of the availability of contact information and budget constraints, visitors were surveyed in two modes depending on the most optimal way to contact them. For marina slip renters where mailing addresses were available, a mailback survey was used and trip spending for the entire trip was recorded. For other recreation visitors that could not be sampled via mail survey, an onsite survey was used. This allowed collection of accurate spending data up to that point in time when the visitors were interviewed. Expected additional spending after leaving the site was also recorded, along with information on the relative point in the trip when interviewed, and expected additional days/hours. This information was used to estimate additional spending for each visitor. Additional spending was then allocated into different spending categories. Most visitors' spending was allocated according to the spending incurred to that point. As for day users who are heading home, or overnight visitors on their last day, most of the additional spending was allocated to gas and meals if this was the final destination.

Estimates of Economic Effects

Four components are needed to estimate economic effects: recreation spending, visitor use estimates, capture rates, and economic multipliers (Jackson et al. 1992).

$$\text{Economic effects} = \# \text{ of visits} \times \text{average spending per visit} \times \text{capture rate} \times \text{regional economic multiplier}$$

For this report, the first two components were derived from the surveys and methods stated in this chapter. Capture rates and economic multipliers were generated by the Impact Analysis for Planning (IMPLAN) system. IMPLAN is a microcomputer-based input-output (I-O) modeling system that was originally developed by the U.S. Department of Agriculture, Forest Service as a DOS application. It is currently maintained by the Minnesota IMPLAN Group Inc., which has modified IMPLAN to fit the Windows™ environment (Minnesota IMPLAN Group 2000). Regional and state models were developed using IMPLAN-Pro version 2.0 with a 2000 database (the most current one at the time the analysis was performed). The Micro-Implan Recreation Economic Impact (MI-REC) system was used to bridge the total spending into the appropriate industrial sectors of the U.S. I-O model (Stynes and Propst 1996; Chang et al. 1998). Total employment (not full-time equivalent), income, value added,¹ and sales due to direct and secondary effects were estimated by IMPLAN.

Total visitor spending was obtained by multiplying average spending per party day by the number of party days for each visitor segment and then summing the results across segments. Economic effects at the port level were estimated by multiplying total visitor spending by capture rates and multipliers (from the IMPLAN models) that were unique to each region. Only spending within 30 miles of the port was included in local economic effect estimates. Economic effects at the state level were estimated by multiplying total visitor spending both within and outside the 30-mile radius by the percent of money spent within Oregon and then applying the total spending to the IMPLAN model.

¹ IMPLAN's value added data consists of four components (employee compensation, proprietor income, other property income, and indirect business taxes). The first two components are also called personal income (or labor income) in the IMPLAN Windows™ version.

3 Results

The results are provided in eight sections.

- Section 1 presents response rates by mode of survey by port.
- Section 2 describes the boating facilities and visitation information at the 18 participating ports in Oregon.
- Section 3 provides respondents' recreational activity information at the ports.
- Section 4 details visitor trip characteristics and spending information across all 18 ports. Visitors were grouped into six market segments based on their lodging types and primary activity at the ports.
- Section 5 reports expenditures by ports' recreational boaters on boat-related expenses, including durable goods and other annual spending.
- Section 6 describes the economic effects of visitor trip spending at the state level.
- Section 7 describes the economic effects of boat-related expenditures associated with Oregon ports at the state level.
- Section 8 summarizes the economic effects of visitor spending at port level for each of the 18 participating ports.

Response Rates

A total of 3,152 surveys were mailed out to marina slip renters at the 18 participating ports. Since 196 surveys were returned as non-deliverable, there were 2,956 deliverable surveys. Of these, 1,770 surveys were mailed back by respondents for a response rate of 60 percent (Table 6). Onsite surveys were conducted at six ports to estimate use and spending information for port visitors who would not be captured by the boat user mailback survey. Out of 3,146 visitors contacted, 2,327 onsite surveys were completed.

The response rates for mailback surveys ranged from 100 percent at the Port of Arlington to 36 percent at the Port of Toledo. For ports with at least 50 surveys sent out, the Port of Gold Beach has the highest response rate at 78 percent while the Port of Umpqua has the lowest response rate at 39 percent. Note that the mailback survey at the Port of Umpqua was the only one administered by port

Table 6 Survey Response Rate							
Port	Mailback Survey				Onsite Survey		
	Total Sent	Total Deliverable	Total Responded	Response Rate	Contacted	Completed	Success rate
Port of Alsea	22	21	17	81%			
Port of Arlington	5	4	4	100%			
Port of Astoria	428	395	224	57%			
Port of Bandon	49	48	31	65%			
Port of Brookings Harbor	463	449	303	67%			
Port of Cascade Locks	27	27	12	44%	598	467	78%
Port of Coos Bay	280	260	146	56%			
Port of Garibaldi	430	384	235	61%	654	533	81%
Port of Gold Beach	136	127	99	78%	422	289	68%
Port of Hood River	122	118	62	53%	547	441	81%
Port of Newport	494	461	282	61%	526	340	65%
Port of Port Orford	28	25	11	44%			
Port of Siuslaw	191	181	112	62%	399	257	64%
Port of St. Helens	123	122	74	61%			
Port of The Dalles	92	87	51	59%			
Port of Toledo	12	11	4	36%			
Port of Umatilla	82	75	41	55%			
Port of Umpqua	168	161	62	39%			
Total	3,152	2,956	1,770	60%	3,146	2,327	74%

personnel rather than Corps staff. Instead of two follow-ups with one reminder postcard and one full survey package, only one reminder postcard was sent to Port of Umpqua marina slip renters with no full package follow-ups.

Boating Facilities and Visitation

Based on port managers' inputs, 36 marinas or boat launch sites at 18 ports in Oregon were included in this study (does not include the Port of Portland). A total of 4,104 marina slips, 1,970 feet of transient dock, and about 40 boat ramps were included in this study (Table 7). Marinas and launch sites included in this study were identified by port managers as they are "physically located in the port or use the port as an access point to the Pacific Ocean/ Columbia River."

For future application and comparison purposes, the classification of marina slip size in Table 8 is based on OSMB's publication "Oregon Marina Guide" (OSMB 2002b). In addition to the 769 slips that do not have size information associated with the slips, about half of the slips are for boats 26 ft and smaller and the rest are for boats larger than 26 ft. Marina slips for the 16- to 26-ft and 26- to 40-ft boats account for more than half of the total slips, with roughly a quarter apiece.

Table 7 Marina Facility Summary ¹									
Port	Number of Marina/ Launch Sites	Marina Slips							Transient Dock (ft)
		<16'	16-26'	26-40'	40-65'	>65'	No Size	Total	
Port of Alsea	1								200
Port of Arlington	1			4	4			8	120
Port of Astoria	2		82	237	68	30		417	
Port of Bandon	2	18	16	32	25	4		95	300
Port of Brookings Harbor	2		225	341	63	19	69	717	
Port of Cascade Locks	1	9	22	5	1			37	200
Port of Coos Bay ²	1		110	100				210	
Port of Garibaldi	5	36	152	63	58	2		311	300
Port of Gold Beach	1	159	25	25	3	3		215	
Port of Hood River	2		129	28	3			160	
Port of Newport	1						600	600	
Port of Port Orford ³	1								
Port of Siuslaw	5	110	94	10				214	620
Port of St. Helens	1		22	67	13			102	
Port of The Dalles	2						100	100	230
Port of Toledo	2		18	6	3			27	
Port of Umatilla	1		75	16	32	1		124	
Port of Umpqua	5	210	185	185	185	2		767	
Total	36	542	1,155	1,119	458	61	769	4,104	1,970

¹ Marinas and launch sites included in this study were identified by port managers as they are "physically located in the port or use the port as an access point to the Pacific Ocean/ Columbia River."
² Only slips for recreational boaters were included.
³ No marina slips; 910 hoists per year.

Three ports, the Ports of Brookings Harbor, Newport, and Umpqua have more than 600 slips each. The Port of Coos Bay also has more than 600 marina slips but only 210 of them are currently used for recreational boating moorages. The Port of Astoria and the Port of Garibaldi are the other two ports with a large quantity of slips for at least 300 slips on premises. Some ports provide less marina slips to boaters at the premises. The Ports of Alsea, Arlington, Cascade Locks, and Toledo each provide less than 40 marina slips, while the Port of Orford does not have a marina slip but hoists boats in and out of the water.

About half of the 18 ports also provide dock space for transient boats to moor for short periods of time. Transient dock users are usually charged a daily rate or services may be available free of charge on a first-come, first-serve basis. These docks are usually for broadside moorages.

Marina slip renters totaled 410,000 party days on trips to Oregon ports last year. This includes 306,000 days when boats were used and 104,000 days for other activities and for trips en route to the ports. About 73 percent of these

**Table 8
Port Visitation Summary (2002, in Party-Days¹)**

Port	Marina Slip Renters				Boat Ramp and Transient Dock Users				Non-Boating Visitors		
	Total Trip Days ²	Days Spent Locally ³	Days Boat Was Used	Pct Overnight ⁴	Total Trip Days ²	Days Spent Locally ³	Days Boat Was Used	Pct Overnight ⁴	Total Trip Days ²	Days Spent Locally ³	Pct Overnight ⁴
Port of Alsea	612	597	581	54%	5,154	5,077	5,000	31%	7,605	6,920	36%
Port of Arlington	546	524	502	88%	536	523	510	51%	468	396	59%
Port of Astoria	19,017	16,431	15,843	74%	5,904	5,408	5,295	43%	4,971	4,341	50%
Port of Bandon	16,815	10,393	10,000	79%	4,091	3,008	2,941	45%	26,998	23,353	53%
Port of Brookings Harbor	108,706	99,457	80,620	70%	17,998	17,011	15,000	40%	5,240	4,619	47%
Port of Cascade Locks	3,737	3,515	3,406	25%	500	471	456	25%	4,769	4,125	25%
Port of Coos Bay	28,781	25,186	22,272	77%	3,906	3,596	3,345	44%	2,983	2,589	52%
Port of Garibaldi	46,078	43,833	34,590	74%	14,945	14,369	12,000	55%	7,738	6,148	74%
Port of Gold Beach	16,168	14,095	13,115	95%	12,040	11,229	10,845	45%	3,265	2,644	71%
Port of Hood River	6,066	5,379	5,228	58%	14,223	12,517	12,141	62%	26,824	24,243	66%
Port of Newport	42,179	34,440	31,329	93%	25,471	22,590	21,431	50%	10,600	7,190	71%
Port of Port Orford ⁵	-	-	-	-	1,670	1,635	1,600	44%	833	725	51%
Port of Siuslaw	19,797	16,824	14,855	86%	21,784	20,138	19,047	37%	4,713	3,620	60%
Port of St. Helens	13,565	12,799	12,482	51%	14,476	13,990	13,789	29%	13,250	12,125	34%
Port of The Dalles	11,102	8,911	8,753	53%	16,541	14,483	14,334	30%	13,743	12,521	36%
Port of Toledo	2,606	2,538	2,471	55%	2,515	2,476	2,438	32%	2,333	2,118	37%
Port of Umatilla	6,067	5,769	5,670	35%	4,770	4,649	4,609	18%	4,162	3,334	75%
Port of Umpqua	67,866	60,731	44,585	74%	12,407	11,531	9,547	43%	5,589	4,880	50%
Total	409,711	361,423	306,301	73%	178,933	164,700	154,329	42%	146,083	125,890	53%

¹ All units are in party-days. To convert party days into person days, multiply total party days by average party size at each port (from Tables G1 to G3).

² Total trip days include days visitors spent en route to the ports as well as days spent at the port.

³ Within 30 miles of the port/marina.

⁴ Percent of total boating or visitor days by visitors who stayed at least one night away from their permanent homes for the trips they were surveyed.

⁵ No marina slips at the Port of Port Orford; 910 hoists per year plus boat ramp users.

boating days were for boaters who stayed overnight on their trips. Boat ramp and transient dock users added another 179,000 party days for trips to the ports and used boats for 154,000 days. Of these boating days, 42 percent were for boaters who stayed overnight on their trips. That's a total of 589,000 party days on trips to the ports or 460,000 boating days by marina and boat ramp users on trips to Oregon ports a year. Visitors also came to the ports for various non-boating activities that summed to 146,000 party days a year on recreation trips. Of these days, 126,000 were spent locally, and 53 percent of these days were from visitors who stayed overnight on their trips to the port (Table 8).

The four most heavily used ports are the Ports of Brookings Harbor, Garibaldi, Umpqua, and Newport. Each had more than 30,000 boating days by marina slip renters last year. The Ports of Brookings Harbor, Newport, and

Siuslaw have a heavy presence of boat ramps and transient dock users; each had more than 15,000 boating days from this segment last year. Non-boating visitors visited the Ports of Bandon and Hood River the most (each had more than 23,000 visitor party days last year).

Recreation Activities by Port Visitors

Fishing was the most frequent activity for all boating visitors to Oregon ports. About 68 percent of all boater respondents engaged in boat fishing during their last boating trip (Table 9). Besides boating and fishing, crabbing was the most popular activity for all visitor segments; more than 40 percent of the boating respondents reported participating in crabbing and about 22 percent of the non-boater respondents said that they participated in crabbing during the trips they were interviewed. Shopping, sightseeing, hiking/walking/biking, and camping were also popular among marina slip renters and non-boating visitors. For each activity, more than 20 percent of the respondents from each of these two segments (marina slip renters and non-boating visitors) reported participating in these activities.

Activity	Marina Slip Renters	Boat Ramp and Transient Dock Users	Non-Boating Visitors
Fishing from boat	68%	67%	0%
Boating (private boat)	82%	30%	0%
Crabbing	40%	49%	22%
Sightseeing	33%	16%	38%
Shopping	31%	15%	28%
Hiking/walking/biking	21%	15%	37%
Camping	20%	18%	24%
Windsurfing/Kiteboard sailing	1%	6%	37%
Picnicking	16%	8%	18%
All Other Activities	5%	10%	23%
Wildlife Viewing	15%	6%	11%
Fishing from shore	10%	4%	14%
Swimming	10%	7%	9%
Clamming	13%	5%	5%
Kite flying	4%	4%	7%
Kayaking/Canoeing/Sailboating	7%	6%	0%
Boating (public cruise)	4%	0%	4%
Water/Jet Skiing	2%	3%	3%
Boating (charter)	2%	3%	0%
Diving	2%	1%	2%

¹ Results for boat ramp and non-boating visitors are weighted averages based on port visitation of the six surveyed ports.

While state averages are reported in Table 9, some of these activities are more localized than others. Windsurfing/kite board sailing, for example, is very popular at the Port of Hood River. However, its presence is not as significant at other ports, with less than 10 percent of respondents reported participating in this activity at all other ports.

When asked to identify the primary activity (one primary activity per respondent) on their trips to the ports, more than 50 percent of the boaters reported boat fishing and 36 percent of the non-boaters reported windsurfing/ kite board sailing as the primary activity (Table 10). Crabbing is also popular among port visitors. About 30 percent of the boat ramp users and 15 percent of the non-boating visitors reported crabbing as the primary activity.

Activity	Marina Slip Renters	Boat Ramp and Transient Dock Users	Non-Boating Visitors
Fishing from boat	55%	51%	0%
Crabbing	6%	29%	14%
Windsurfing/Kiteboard sailing	0%	4%	36%
Boating (private boat)	13%	4%	0%
Sightseeing	2%	1%	12%
Relaxing/Reading/Socializing	4%	2%	5%
Fishing from shore	2%	1%	7%
Kayaking/Canoeing/Sail boating	7%	2%	0%
Hiking/Walking/Biking	1%	1%	6%
Camping	1%	1%	3%
Working/Studying	3%	1%	1%
All other activities	1%	1%	2%
Partying/Wedding/Reunion	1%	1%	2%
Eating/Dining/Drinking	1%	1%	2%
Shopping	0%	0%	2%
Clamming	1%	1%	1%
Water/Jet Skiing	0%	1%	1%
Other outdoor recreation	1%	0%	1%
Boating (public cruise)	1%	0%	2%
Picnicking	0%	0%	1%
Swimming	0%	0%	1%
Sternwheeler	0%	0%	1%
Exercising/Games	0%	0%	1%
Diving	0%	0%	0%
Wildlife viewing	0%	0%	1%
Kite flying	0%	0%	1%
Boating (charter)	0%	0%	0%

¹ Results for boat ramp and non-boating visitors are weighted averages based on port visitation of the six surveyed ports.

Visitor Trip Characteristics and Spending

The average distances for visitors to the ports vary from 21 miles for day use marina slip renters to almost 500 miles for non-boating overnight visitors (Table 11). On average, overnight visitors traveled six to ten times farther than day visitors within each segment and had more people in the party. Non-boating visitors also traveled farther than boaters and had a greater percentage of visitors coming from regions outside the local area or the state compared to boaters.

More than 90 percent of the money spent on visitors' last trips to the ports was spent in Oregon for all segments. While day users made more trips to the ports last year, overnight visitors stayed an average of more than 6 days away from home for their last trips.

Category	Marina Slip Renters		Boat Ramp and Transient Dock Users		Non-Boating Visitors	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Trip Characteristics						
Days away from home (within 30 miles)	1.00	5.26	-	5.32	-	5.58
Days away from home (total trip)	1.00	6.48	-	6.26	-	7.70
Hours spent onsite			6.94		5.61	
Party size	3.05	3.48	2.70	3.34	2.50	3.01
Pct of non-Oregon resident	6%	12%	7%	22%	14%	55%
Pct of non-local (outside/30 miles)	20%	74%	45%	70%	48%	100%
One-way mileage from home	20.65	130.97	35.90	187.03	50.11	491.32
Percentage of total trip spending spent in Oregon	98%	93%	98%	93%	100%	90%
Percentage of trip spending devoted to this port					90%	74%
Is this site your sole destination (Pct. Yes)					80%	62%
Would have made trip regardless of this port (Pct. Yes)					57%	65%
Trips Made in the Past 12 Months						
To this marina/site	33.10	18.62	15.17	7.98	25.29	4.59
To all other marinas/sites	8.60	8.07	13.75	15.58		
¹ Results for boat ramp and non-boating visitors are weighted averages based on port visitation of the 6 surveyed ports.						

Non-boating visitors were asked additional questions to determine the significance of the ports to their entire trips. Most of their trip spending was devoted to the ports (90 percent for day users, 74 percent for overnight visitors). A majority of them also made the port their sole destination of the trip, with about 40 percent saying they would not have made the trip if the port were not there.

Typical Oregon port visitors (i.e., the weighted average of spending profiles across all 18 surveyed ports) in 2002 spent \$64 per party per trip for day visit

boat ramp users to \$806 per party for overnight non-boating visitors on a 7.7-day trip (Table 12). Most of the spending occurred within 30 miles of the ports (ranged from 71 percent for overnight non-boaters to 90 percent for day use non-boaters). Of the expenditures made within 30 miles of the ports, visitors spent the most on groceries, restaurants, and gas and oil. Spending on these three categories accounted for about 50 percent of the total trip spending. In general, marina slip renters and non-boating visitors spent more than boat ramp users and overnight visitors spent more than day visitors.

Table 12 Average Trip Spending by Segments, All Oregon Ports¹ (2002, in Party-Trip)						
Category	Marina Slip Renters		Boat Ramp and Transient Dock Users		Non-Boating Visitors	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per Party Trip Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 67.10	\$ -	\$ 72.34	\$ -	\$ 86.15
Campground fees	\$ -	\$ 41.62	\$ -	\$ 47.02	\$ -	\$ 44.19
Restaurants	\$ 26.06	\$101.46	\$ 10.24	\$ 87.83	\$22.33	\$116.46
Groceries	\$ 26.35	\$ 84.90	\$ 8.47	\$ 76.96	\$ 9.63	\$ 77.31
Gas and oil for auto, boat, RV	\$ 29.90	\$ 96.01	\$ 12.58	\$ 45.47	\$ 5.25	\$ 26.75
Other auto expenses	\$ 5.72	\$ 11.36	\$ 0.20	\$ 2.46	\$ 1.47	\$ 2.89
Other boat expenses	\$ 37.87	\$ 71.30	\$ 4.68	\$ 18.45	\$ 0.51	\$ 2.08
Recreation and entertainment fees	\$ 1.54	\$ 15.60	\$ 8.98	\$ 38.03	\$22.33	\$ 38.85
Sporting goods	\$ 23.17	\$ 39.74	\$ 8.24	\$ 51.06	\$15.99	\$131.66
Other expenses	\$ 4.54	\$ 28.33	\$ 0.81	\$ 19.52	\$ 9.24	\$ 44.67
Total spending	\$155.14	\$557.41	\$ 54.20	\$459.14	\$86.75	\$571.00
Percent Error ²	8%	4%	11%	7%	15%	7%
Per Party Trip Spending, Total Trip Spending (Both Within and Outside 30 Miles of the Port)						
Hotels, motels, cabins, B&B	\$ -	\$ 79.03	\$ -	\$ 91.96	\$ -	\$119.66
Campground fees	\$ -	\$ 46.36	\$ -	\$ 56.31	\$ -	\$ 57.45
Restaurants	\$ 29.40	\$122.86	\$10.85	\$106.56	\$22.79	\$145.36
Groceries	\$ 28.80	\$102.29	\$10.58	\$105.59	\$11.47	\$106.67
Gas and oil for auto, boat, RV	\$ 34.34	\$128.53	\$18.33	\$ 94.08	\$10.28	\$ 86.50
Other auto expenses	\$ 6.55	\$ 17.61	\$ 0.74	\$ 25.52	\$ 1.61	\$ 47.41
Other boat expenses	\$ 39.99	\$ 89.06	\$ 5.05	\$ 20.70	\$ 1.22	\$ 2.14
Recreation and entertainment fees	\$ 1.73	\$ 21.39	\$ 9.15	\$ 44.98	\$22.45	\$ 43.61
Sporting goods	\$ 28.58	\$ 53.08	\$ 8.44	\$ 57.03	\$16.21	\$142.00
Other expenses	\$ 5.14	\$ 37.72	\$ 0.81	\$ 28.96	\$ 9.43	\$ 55.70
Total spending	\$174.52	\$697.93	\$63.95	\$631.69	\$95.46	\$806.50
Percent Error ²	8%	4%	10%	6%	14%	6%
Sample size	314	1,033	598	631	416	671
¹ Results for boat ramp and non-boating visitors are weighted averages based on port visitation of the 6 surveyed ports.						
² Percent Error = Standard Error / Mean. Two Standard Errors yield a 95% confidence interval.						

The percent errors (standard error divided by mean) for trip spending were about 4 to 7 percent for all overnight visitors segments and about 8 to 15 percent for the day visitors. The 95-percent confidence interval for trip spending for each segment is average spending plus or minus two standard errors. Thus, the 95-percent confidence interval for spending within 30 miles of the ports for marina slip renters who stayed overnight was \$513 to \$602 per party trip (\$557 plus or minus \$45). This means that if the study was repeated 100 times, the average spending amount by this segment would fall between \$513 and \$602 in 95 out of 100 repetitions. This is a respectable error range for visitor expenditure surveys in general. The reason why the percent error, and hence the confidence interval, doubles and then quadruples from overnight marina slip renters to day users to other non-boating day visitors, respectively, is related to sample size. Since the formula for computing sampling error has sample size in the denominator, as sample size decreases, percent error increases. In examining the results in Table 12, sample sizes for the other segments are about one-half to one-third of the sample size for overnight marina slip renters and hence the relevant spending profiles are less stable and reliable (i.e., more prone to error).

Visitor spending profiles are also presented on a per-party-day basis for application purposes (Table 13). This was done because “boating day” is used by the Oregon State Marine Board as the unit for estimating total boating activities in Oregon. Many Oregon ports also keep records of numbers of boating days via fee revenues or other counting mechanisms. Converting party-trip spending to party-day spending allows direct application of the visitation data to visitor spending profiles generated from this survey. Visitor spending profiles for boaters by boat length are presented in Appendix F.

Durable Goods and Annual Costs by Boaters

A majority of the respondents reported using boats between 16 and 26 ft long. About 57 percent of the boats used by marina slip renters were 16 to 26 ft long, while almost 80 percent of the boats used by boat ramp and transient dock boaters were in the same size category (Table 14). For marina slip renters, 37 percent of the survey respondents reported using boats that were larger than 26 ft, with more than 8 percent of them 40 ft and larger. However, almost all boats used by boat ramp users were less than 26 ft long, with less than 3 percent of the respondents reported using a boat that was larger than 26 ft.

Of the marina slip renter respondents, 3 percent reported purchasing new boats in the past 12 months, while another 8 percent reported purchasing used boats during the same timeframe (Table 15). The average cost of a new boat was \$57,358 while the cost of a used boat was \$32,642 (price inflated to 2002 dollars if boat was acquired before 2002). While most of the boats were acquired in Oregon (74 percent), less than one-third of these boats were purchased locally where the boats were moored. Marina slip renters reported spending an average of \$715 annually on slip rentals and storage fees and \$440 on insurance payments. They also spent \$2,257 on boat equipment last year.

Table 13
Average Trip Spending by Segments, All Oregon Ports¹ (2002, in Party-Days)

Category	Marina Slip Renters		Boat Ramp and Transient Dock Users		Non-Boating Visitors	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per Party Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 12.76	\$ -	\$ 13.59	\$ -	\$ 15.45
Campground fees	\$ -	\$ 7.91	\$ -	\$ 8.84	\$ -	\$ 7.92
Restaurants	\$ 26.06	\$ 19.29	\$ 10.24	\$ 16.51	\$ 22.33	\$ 20.89
Groceries	\$ 26.35	\$ 16.14	\$ 8.47	\$ 14.46	\$ 9.63	\$ 13.87
Gas and oil for auto, boat, RV	\$ 29.90	\$ 18.26	\$ 12.58	\$ 8.55	\$ 5.25	\$ 4.80
Other auto expenses	\$ 5.72	\$ 2.16	\$ 0.20	\$ 0.46	\$ 1.47	\$ 0.52
Other boat expenses	\$ 37.87	\$ 13.56	\$ 4.68	\$ 3.47	\$ 0.51	\$ 0.37
Recreation and entertainment fees	\$ 1.54	\$ 2.97	\$ 8.98	\$ 7.15	\$ 22.33	\$ 6.97
Sporting goods	\$ 23.17	\$ 7.56	\$ 8.24	\$ 9.60	\$ 15.99	\$ 23.61
Other expenses	\$ 4.54	\$ 5.39	\$ 0.81	\$ 3.67	\$ 9.24	\$ 8.01
Total spending	\$ 155.14	\$ 106.00	\$ 54.20	\$ 86.29	\$ 86.75	\$ 102.41
Percent Error ²	8%	4%	11%	7%	15%	7%
Per Party Day Spending, Total Trip Spending (Both Within and Outside 30 Miles of the Port)						
Hotels, motels, cabins, B&B	\$ -	\$ 12.20	\$ -	\$ 14.70	\$ -	\$ 15.53
Campground fees	\$ -	\$ 7.16	\$ -	\$ 9.00	\$ -	\$ 7.46
Restaurants	\$ 29.40	\$ 18.97	\$ 10.85	\$ 17.04	\$ 22.79	\$ 18.87
Groceries	\$ 28.80	\$ 15.79	\$ 10.58	\$ 16.88	\$ 11.47	\$ 13.85
Gas and oil for auto, boat, RV	\$ 34.34	\$ 19.85	\$ 18.33	\$ 15.04	\$ 10.28	\$ 11.23
Other auto expenses	\$ 6.55	\$ 2.72	\$ 0.74	\$ 4.08	\$ 1.61	\$ 6.15
Other boat expenses	\$ 39.99	\$ 13.75	\$ 5.05	\$ 3.31	\$ 1.22	\$ 0.28
Recreation and entertainment fees	\$ 1.73	\$ 3.30	\$ 9.15	\$ 7.19	\$ 22.45	\$ 5.66
Sporting goods	\$ 28.58	\$ 8.20	\$ 8.44	\$ 9.12	\$ 16.21	\$ 18.43
Other expenses	\$ 5.14	\$ 5.82	\$ 0.81	\$ 4.63	\$ 9.43	\$ 7.23
Total spending	\$ 174.52	\$ 107.76	\$ 63.95	\$ 100.99	\$ 95.46	\$ 104.69
Percent Error ²	8%	4%	10%	6%	14%	6%

¹ Results for boat ramp and non-boating visitors are weighted averages based on port visitation of the six surveyed ports listed in Table 1.
² Percent Error = Standard Error / Mean. Two Standard Errors yield a 95% confidence interval.

Table 14
Distribution of Boat Length for Oregon Port Recreation Boaters

Boat Length	Marina Slip Renters	Boat Ramp and Transient Dock Boaters ¹
<16'	6.5%	18.1%
16-26'	56.7%	79.1%
26-40'	28.5%	2.3%
40-65'	7.9%	0.5%
>65'	0.4%	0.0%

¹ Results for boat ramp users are weighted averages based on port visitation of the six surveyed ports.

Even though a higher percentage of boat ramp and transient dock users reported purchasing new or used boats last year compared to marina slip renters, the average costs of new and used boats were only about one-third of what marina slip renters paid (Table 15). Again, while most of the boats were acquired in Oregon (84 percent), only about 18 percent of these boats were purchased locally (where the boats were moored). Boat ramp users reported spending an average of \$1,240 annually on boat equipment and \$205 on insurance payments.

Table 15 Average Costs on Durable Goods and Annual Expenditures for Boaters¹ (2002)		
Parameter	Marina Slip Renters	Boat Ramp and Transient Dock Boaters
About the Boat		
Cost of new boat (in 2002 dollars)	\$57,358	\$20,586
Cost of used boat (in 2002 dollars)	\$32,642	\$11,879
Percent of boats purchased in the past 12 months	11%	16%
Percent of boaters who purchased new boats in the past 12 months	3%	6%
Percent of boats acquired in Oregon	74%	84%
Percent of boats acquired within 30 miles of the marina	29%	18%
Average boat length (ft)	25.24	18.29
Median boat length (ft)	23.00	18.00
Depth boat will draw (ft)	3.11	1.46
Percent of boaters who live in Oregon	90%	82%
Other Annual Costs on Boating-Related Expenditures		
Total amount spent on boat equipment	\$ 2,257	\$ 1,240
<i>Within 30 miles of the marina</i>	\$ 803	\$ 342
<i>All other places in Oregon</i>	\$ 675	\$ 755
<i>Outside Oregon</i>	\$ 778	\$ 143
Total amount spent on insurance	\$ 440	\$ 205
Total amount spent on slip rental	\$ 660	
<i>At this marina</i>	\$ 502	
<i>All other places in Oregon</i>	\$ 89	
<i>Outside Oregon</i>	\$ 68	
Total amount spent on storage fees ²	\$ 55	
<i>Within 30 miles of the marina</i>	\$ 36	
<i>All other places in Oregon</i>	\$ 11	
Sample Size	1,312	1,188
¹ Results for boat ramp visitors are weighted averages based on port visitation of the six surveyed ports listed in Table 1. ² For application purposes, average storage fees are based on all boaters. The average storage fee for boaters who paid storage fees in the past 12 months was \$365.		

Economic Effects of Visitor Trip Spending at the State Level

Total trip spending for all port recreational visitors (both boaters and non-boaters) in Oregon was estimated by applying average party day spending for each visitor segment in Table 13 to the total number of party days in Table 8. Total annual trip spending was estimated for the local area (within 30 miles of the port), in the State of Oregon, and for the entire trip (Table 16). Trip spending in the state (total trip spending multiplied by the percentage of spending that occurred in Oregon) was used to estimate the economic effects on the State economy. The estimated trip spending for all marina visitors in Oregon in the previous year (2002) was \$75 million (Table 16). However, as trip spending outside 30 miles is not likely to impact the study region, only trip spending within 30 miles of the port will be included when conducting economic impact analysis at the port level (multi-county region).

Table 16
Total Annual Trip Spending by Port Visitors in Oregon¹ (2002, in millions)

Category	Marina Slip Renters		Boat Ramp and Transient Dock Users		Non-Boating Visitors	
	Day Visitor	Overnight	Day Visitor	Overnight	Day Visitor	Overnight
Local Trip Spending (within 30 miles of the port)						
Hotels, motels, cabins, B&B	\$ -	\$ 3.47	\$ -	\$ 1.00	\$ -	\$ 0.80
Campground fees	\$ -	\$ 2.15	\$ -	\$ 0.65	\$ -	\$ 0.41
Restaurants	\$ 2.29	\$ 5.24	\$ 0.93	\$ 1.22	\$ 1.66	\$ 1.09
Groceries	\$ 2.32	\$ 4.39	\$ 0.77	\$ 1.07	\$ 0.72	\$ 0.72
Gas and oil for auto, boat, RV	\$ 2.63	\$ 4.96	\$ 1.14	\$ 0.63	\$ 0.39	\$ 0.25
Other auto expenses	\$ 0.50	\$ 0.59	\$ 0.02	\$ 0.03	\$ 0.11	\$ 0.03
Other boat expenses	\$ 3.33	\$ 3.68	\$ 0.43	\$ 0.26	\$ 0.04	\$ 0.02
Recreation and entertainment fees	\$ 0.13	\$ 0.81	\$ 0.82	\$ 0.53	\$ 1.66	\$ 0.36
Sporting goods	\$ 2.04	\$ 2.05	\$ 0.75	\$ 0.71	\$ 1.19	\$ 1.23
Other expenses	\$ 0.40	\$ 1.46	\$ 0.07	\$ 0.27	\$ 0.69	\$ 0.42
Total spending	\$ 13.63	\$ 28.81	\$ 4.93	\$ 6.36	\$ 6.46	\$ 5.32
Total Trip Spending in Oregon						
Hotels, motels, cabins, B&B	\$ -	\$ 3.61	\$ -	\$ 1.20	\$ -	\$ 1.00
Campground fees	\$ -	\$ 2.12	\$ -	\$ 0.73	\$ -	\$ 0.48
Restaurants	\$ 2.54	\$ 5.61	\$ 0.97	\$ 1.38	\$ 1.69	\$ 1.22
Groceries	\$ 2.49	\$ 4.67	\$ 0.95	\$ 1.37	\$ 0.85	\$ 0.89
Gas and oil for auto, boat, RV	\$ 2.97	\$ 5.87	\$ 1.64	\$ 1.22	\$ 0.76	\$ 0.72
Other auto expenses	\$ 0.57	\$ 0.80	\$ 0.07	\$ 0.33	\$ 0.12	\$ 0.40
Other boat expenses	\$ 3.46	\$ 4.07	\$ 0.45	\$ 0.27	\$ 0.09	\$ 0.02
Recreation and entertainment fees	\$ 0.15	\$ 0.98	\$ 0.82	\$ 0.58	\$ 1.67	\$ 0.37
Sporting goods	\$ 2.47	\$ 2.42	\$ 0.75	\$ 0.74	\$ 1.21	\$ 1.19
Other expenses	\$ 0.44	\$ 1.72	\$ 0.07	\$ 0.38	\$ 0.70	\$ 0.47
Total spending	\$ 15.09	\$ 31.86	\$ 5.72	\$ 8.21	\$ 7.10	\$ 6.75
Total Trip Spending for the Entire Trip²						
Hotels, motels, cabins, B&B	\$ -	\$ 3.89	\$ -	\$ 1.29	\$ -	\$ 1.12
Campground fees	\$ -	\$ 2.28	\$ -	\$ 0.79	\$ -	\$ 0.54
Restaurants	\$ 2.58	\$ 6.05	\$ 0.99	\$ 1.49	\$ 1.70	\$ 1.36
Groceries	\$ 2.53	\$ 5.04	\$ 0.96	\$ 1.48	\$ 0.86	\$ 1.00
Gas and oil for auto, boat, RV	\$ 3.02	\$ 6.33	\$ 1.67	\$ 1.32	\$ 0.77	\$ 0.81
Other auto expenses	\$ 0.58	\$ 0.87	\$ 0.07	\$ 0.36	\$ 0.12	\$ 0.44
Other boat expenses	\$ 3.51	\$ 4.38	\$ 0.46	\$ 0.29	\$ 0.09	\$ 0.02
Recreation and entertainment fees	\$ 0.15	\$ 1.05	\$ 0.83	\$ 0.63	\$ 1.67	\$ 0.41
Sporting goods	\$ 2.51	\$ 2.61	\$ 0.77	\$ 0.80	\$ 1.21	\$ 1.33
Other expenses	\$ 0.45	\$ 1.86	\$ 0.07	\$ 0.41	\$ 0.70	\$ 0.52
Total spending	\$ 15.34	\$ 34.36	\$ 5.81	\$ 8.86	\$ 7.11	\$ 7.53

¹ Total annual recreation spending for all 18 participating ports. Does not include Port of Portland.

² Includes total trip spending by visitors to the ports regardless of where the money was spent.

Marina slip renters spent a total of \$47 million on trip-related expenditures in Oregon in 2002 while boat ramp and transient dock users and other non-boating visitors each contributed \$14 million. As the total spending is a function of both per-visit spending and total visits, overnight boaters (for both marina slip renters and boat ramp users) had more annual total trip spending than their day-use counterparts. For the non-boating visitor segment, however, as day visitors spent more days locally and spent a higher percentage of their trip spending in Oregon, they had more annual trip expenditures than their counterpart overnight visitors for local spending and spending in Oregon.

Of the \$75 million visitor trip spending, 74 percent was captured by the state economy, while 26 percent went to out-of-state and foreign imports, which yielded \$55 million in direct sales effects (Table 17). Three sectors, lodging, eating and drinking, and retail, received the bulk of direct sales effects. This spending also directly generated \$21 million in personal income and supported 1,050 jobs in Oregon. About 38 percent of all direct sales are converted to personal income and roughly 19 jobs are supported by each \$1 million in direct sales. With multiplier effects, visitor trip spending contributed \$91 million in sales effects, generated \$35 million in personal income, and supported almost 1,500 jobs in Oregon.

Table 17 Economic Effects of Visitor Trip Spending in Oregon (2002)				
	Sales (\$MM)	Income (\$MM)	Value Added (\$MM)	Jobs
Direct Effects				
Lodging	\$ 9.35	\$ 3.57	\$ 5.55	196.10
Eating and drinking	\$13.39	\$ 5.12	\$ 7.24	355.50
Amusement and recreation	\$ 3.44	\$ 1.45	\$ 2.12	122.50
Retail	\$ 9.67	\$ 4.71	\$ 7.68	204.40
Wholesale	\$ 4.99	\$ 2.09	\$ 3.45	40.70
Other services	\$ 2.95	\$ 1.07	\$ 1.57	40.30
Groceries	\$ 1.87	\$ 0.31	\$ 0.60	8.50
Sporting goods	\$ 0.44	\$ 0.10	\$ 0.17	3.60
Other manufacturing	\$ 8.83	\$ 2.70	\$ 3.19	78.70
Government	\$ 0.07	\$ 0.02	\$ 0.03	0.30
Total	\$55.00	\$21.14	\$31.61	1,050.60
Total Effects				
Lodging	\$ 9.82	\$ 3.75	\$ 5.83	206.10
Eating and drinking	\$14.51	\$ 5.55	\$ 7.85	385.20
Amusement and recreation	\$ 4.35	\$ 1.80	\$ 2.55	139.80
Retail	\$12.18	\$ 5.95	\$ 9.70	260.60
Wholesale	\$ 8.33	\$ 3.49	\$ 5.76	68.00
Other services	\$23.86	\$ 8.95	\$14.64	286.50
Groceries	\$ 3.20	\$ 0.50	\$ 0.94	14.00
Sporting goods	\$ 0.46	\$ 0.10	\$ 0.18	3.70
Other manufacturing	\$13.29	\$ 4.23	\$ 5.16	120.40
Government	\$ 1.14	\$ 0.40	\$ 0.49	10.10
Total	\$91.16	\$34.72	\$53.11	1,494.40

Economic Effects of Annual and Fixed Boating Expenses at the State Level

Total annual and fixed boating expenditures for all port recreational boaters (both marina slip renters and boat ramp and transient dock users) in Oregon was estimated by applying average annual spending for each boater segment in Table 15 to the total number of boats associated with each port. For marina slip renters, based on the assumption that there was one boat for each occupied slip, a total of 3,328 boats at Oregon port marinas was computed by multiplying the occupancy rate by the total number of slips at each port. For boat ramp and transient dock users, a total of 3,781 boats was estimated by dividing total boating days by average boating days per boat per year, and then multiplying times the percent of boating trips at the surveyed port.

Total annual and fixed boating expenditures were estimated for the local area (within 30 miles of the port), in the State of Oregon, and for the entire trip (Table 18). Spending in the State (expenditures occurred in Oregon) was used to estimate the economic effects on the State economy. The estimated spending for all recreational boaters in Oregon in the previous year (2002) was \$31 million. Again, as any spending outside 30 miles is not likely to impact the study region, only spending within 30 miles of the port will be included when conducting economic impact analysis at the port level (multi-county region).

Marina slip renters spent a total of \$18.6 million on boat-related expenditures in Oregon in 2002 while boat ramp and transient dock users added another \$13 million. Less than half of the marina slip renters' boating expenses occurred within 30 miles of the port and only about a quarter of the boat ramp and transient dock users' boating expenses occurred within 30 miles of the port.

Different from visitor trip spending, only 34 percent of the \$31 million in boat-related expenses was captured by the state economy, while 66 percent went to out-of-state and foreign imports, which yielded \$10.75 million in direct sales effects (Table 19). The main reason for such a low capture rate (money captured by the region's economy as direct sales effects) is because a high portion of the boat-related expenditures is for manufactured goods. Only the portion of manufactured goods that were made locally (in Oregon) would be captured by the state's economy as direct sales effects. While boaters spent a lot of money on purchases of new boats and equipment, most of this spending was not captured by the state's economy as the goods were manufactured in other states or countries. As for purchases of used boats, only the retail margins for used boats purchased from dealers would be included.

Most of the spending goes to the retail sectors, followed by other services and wholesale sectors. Again, because most of these manufactured goods were made somewhere other than Oregon, direct sales effects to the manufacturing sectors in Oregon are minimal. This spending also directly generated \$4.3 million in personal income and supported 140 jobs in Oregon. About 40 percent of all direct sales are converted to personal income and roughly 13 jobs are supported

Table 18 Total Annual and Fixed Boating Expenses by Port Users in Oregon¹ (2002)		
Category	Marina Slip Renters	Boat Ramp and Transient Dock Users
Annual and Fixed Expenditures in Local Areas that are Attributable to the Ports (in millions)		
Purchases of new boats	\$ 1.55	\$ 0.88
Purchases of used boats	\$ 2.49	\$ 0.77
Boat equipment	\$ 2.67	\$ 1.29
Insurance	\$ 0.87	\$ 0.40
Slip rental	\$ 1.67	-
Storage fees	\$ 0.12	-
Total spending	\$ 9.37	\$ 3.34
Annual and Fixed Expenditures in Oregon that are Attributable to the Ports (in millions)		
Purchases of new boats	\$ 3.92	\$ 4.18
Purchases of used boats	\$ 6.30	\$ 3.68
Boat equipment	\$ 4.92	\$ 4.15
Insurance	\$ 1.35	\$ 0.71
Slip rental	\$ 1.97	-
Storage fees	\$ 0.15	-
Total spending	\$18.62	\$12.72
Total Annual and Fixed Expenditures that are Attributable to the Ports (in millions)		
Purchases of new boats	\$ 5.33	\$ 4.96
Purchases of used boats	\$ 8.56	\$ 4.37
Boat equipment	\$ 7.51	\$ 4.69
Insurance	\$ 1.47	\$ 0.78
Slip rental	\$ 2.19	-
Storage fees	\$ 0.18	-
Total spending	\$25.24	\$14.79
¹ Total annual recreation spending for all 18 participating ports. Does not include Port of Portland.		

by each \$1 million in direct sales. With multiplier effects, boat-related expenditures contributed \$17.6 million in sales effects, generated \$7 million in personal income, and supported almost 228 jobs in Oregon.

Economic Effects at the Port Level

Tables 20 and 21 summarize the port level estimates of economic effects of visitor trip spending and boat-related durable goods and annual expenditures in the local areas. Estimates of economic effects for these port regions were based on the spending profiles developed in this study and multipliers generated from IMPLAN models for the regions around each port (Table 1). Local spending (within 30 miles only) was applied to visitation at each port to obtain estimates of total spending and economic effects on sales, income, and jobs. Visitor spending profiles and sector-specific impacts (for direct effects) of this spending are reported in Appendix G.

**Table 19
Economic Effects of Boating Expenses by Port Visitors in Oregon
(2002)**

Category	Sales (\$MM)	Income (\$MM)	Value Added (\$MM)	Jobs
Direct Effects				
Lodging	\$ -	\$ -	\$ -	-
Eating and drinking	\$ -	\$ -	\$ -	-
Amusement and recreation	\$ -	\$ -	\$ -	-
Retail	\$ 5.41	\$2.51	\$ 4.16	98.20
Wholesale	\$ 1.38	\$0.58	\$ 0.96	11.30
Other services	\$ 3.36	\$1.06	\$ 1.73	26.10
Groceries	\$ -	\$ -	\$ -	-
Sporting goods	\$ 0.39	\$0.09	\$ 0.15	3.50
Other manufacturing	\$ 0.19	\$0.05	\$ 0.07	1.40
Government	\$ 0.02	\$0.00	\$ 0.01	0.10
Total	\$10.75	\$4.29	\$ 7.08	140.60
Total Effects				
Lodging	\$ 0.09	\$0.03	\$ 0.05	1.90
Eating and drinking	\$ 0.21	\$0.08	\$ 0.11	5.60
Amusement and recreation	\$ 0.13	\$0.05	\$ 0.06	2.80
Retail	\$ 5.92	\$2.76	\$ 4.58	109.70
Wholesale	\$ 1.82	\$0.76	\$ 1.26	14.90
Other services	\$ 7.88	\$2.92	\$ 4.64	79.70
Groceries	\$ 0.10	\$0.01	\$ 0.03	0.40
Sporting goods	\$ 0.40	\$0.09	\$ 0.16	3.60
Other manufacturing	\$ 0.85	\$0.29	\$ 0.37	7.20
Government	\$ 0.21	\$0.08	\$ 0.09	2.00
Total	\$17.61	\$7.08	\$11.35	227.80

**Table 20
Economic Effects of Visitor Spending to the Port Areas¹ (2002)**

Port	Spending (\$000's)	Direct Effects (\$000's)			Total Effects (\$000's)		
		Sales	Jobs	Income	Sales	Jobs	Income
Port of Alsea	\$ 1,032	\$ 711	17	\$ 298	\$ 957	21	\$ 380
Port of Arlington	\$ 133	\$ 92	3	\$ 36	\$ 114	3	\$ 43
Port of Astoria	\$ 2,939	\$ 2,001	45	\$ 831	\$ 2,700	56	\$ 1,077
Port of Bandon	\$ 4,002	\$ 2,907	74	\$ 1,166	\$ 4,052	91	\$ 1,569
Port of Brookings Harbor	\$15,728	\$10,917	262	\$ 4,317	\$14,631	320	\$ 5,580
Port of Cascade Locks	\$ 747	\$ 569	13	\$ 196	\$ 712	16	\$ 268
Port of Coos Bay	\$ 3,730	\$ 2,506	58	\$ 1,010	\$ 3,453	72	\$ 1,342
Port of Garibaldi	\$ 6,747	\$ 4,666	118	\$ 1,847	\$ 6,446	143	\$ 2,453
Port of Gold Beach	\$ 2,279	\$ 1,596	41	\$ 627	\$ 2,157	50	\$ 816
Port of Hood River	\$ 4,139	\$ 3,044	81	\$ 1,210	\$ 4,229	98	\$ 1,611
Port of Newport	\$ 6,591	\$ 4,540	100	\$ 1,861	\$ 6,103	122	\$ 2,380
Port of Port Orford	\$ 179	\$ 123	3	\$ 50	\$ 167	4	\$ 64
Port of Siuslaw	\$ 2,857	\$ 2,148	45	\$ 811	\$ 3,318	61	\$ 1,250
Port of St. Helens	\$ 3,874	\$ 2,504	73	\$ 993	\$ 3,236	83	\$ 1,228
Port of The Dalles	\$ 3,278	\$ 2,386	58	\$ 934	\$ 3,293	71	\$ 1,241
Port of Toledo	\$ 676	\$ 456	10	\$ 191	\$ 610	12	\$ 242
Port of Umatilla	\$ 1,261	\$ 871	21	\$ 338	\$ 1,168	25	\$ 441
Port of Umpqua	\$ 8,036	\$ 5,836	139	\$ 2,320	\$ 8,134	171	\$ 3,146
Total	\$68,228	\$47,873	1,160	\$19,036	\$65,480	1,419	\$25,131

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

**Table 21
Economic Effects of Boat-Related Durable Goods and Annual Expenses to the Port Areas¹ (2002)**

Port	Spending (\$000's)	Direct Effects (\$000's)			Total Effects (\$000's)		
		Sales	Jobs	Income	Sales	Jobs	Income
Port of Alsea	\$ 102	\$ 33	1	\$ 15	\$ 44	1	\$ 18
Port of Arlington	\$ 25	\$ 9	0.2	\$ 4	\$ 10	0.2	\$ 4
Port of Astoria	\$ 1,180	\$ 345	5	\$ 143	\$ 464	7	\$ 186
Port of Bandon	\$ 477	\$ 180	3	\$ 72	\$ 247	4	\$ 96
Port of Brookings Harbor	\$ 2,389	\$ 970	16	\$ 365	\$1,369	22	\$ 526
Port of Cascade Locks	\$ 117	\$ 44	1	\$ 15	\$ 62	1	\$ 22
Port of Coos Bay	\$ 1,034	\$ 453	7	\$ 178	\$ 625	10	\$ 240
Port of Garibaldi	\$ 1,127	\$ 434	8	\$ 168	\$ 589	11	\$ 223
Port of Gold Beach	\$ 460	\$ 148	3	\$ 60	\$ 205	4	\$ 81
Port of Hood River	\$ 440	\$ 145	2	\$ 52	\$ 201	3	\$ 73
Port of Newport	\$ 1,918	\$ 671	12	\$ 270	\$ 893	16	\$ 346
Port of Port Orford	\$ 27	\$ 8	0.2	\$ 4	\$ 11	0.2	\$ 5
Port of Siuslaw	\$ 432	\$ 143	2	\$ 61	\$ 218	3	\$ 91
Port of St. Helens	\$ 608	\$ 239	4	\$ 93	\$ 307	5	\$ 115
Port of The Dalles	\$ 516	\$ 203	3	\$ 75	\$ 281	5	\$ 103
Port of Toledo	\$ 122	\$ 42	1	\$ 16	\$ 57	1	\$ 21
Port of Umatilla	\$ 306	\$ 111	2	\$ 44	\$ 146	2	\$ 57
Port of Umpqua	\$ 2,064	\$ 821	14	\$ 313	\$1,147	19	\$ 437
Total	\$13,344	\$5,000	85	\$1,947	\$6,876	114	\$2,644

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

4 Discussion, Applications, and Conclusions

Discussion

The sites selected in this study were based on Oregon port managers' recommendations. Marinas and launch sites included in this study were identified by port managers as they are "physically located in the port or use the port as an access point to the Pacific Ocean/ Columbia River." Therefore, *conservative estimates* of visitation and the resulting spending and economic impacts are reported in this study, since they do not include other marinas within port districts that depend on waterway improvements from the ports' development.

All visitors were surveyed via one of the two modes used in this study—mailback survey or onsite survey. While the mailback survey allows visitors to record trip spending for the entire trip, the onsite survey only allows visitors to record trip spending for up to the point of interview and report estimated additional spending for the trip. An onsite survey with a mailback questionnaire for them to report spending would be an ideal alternative for these visitors. However, it is subject to low response rate, non-response bias, and higher costs. Telephone survey tends to induce recall errors and also requires higher administration costs (about 3 to 6 times higher than an onsite survey for this study). Because of the availability of contact information and budget constraints, all visitors other than marina slip renters were surveyed via an onsite survey.

The occupancy rate for marina slips was used to estimate the number of boats moored at each port. Because some ports did not record their marina occupancy, state average was used at these ports. Using the average occupancy rate may over- or under-estimate the number of boats associated with those marinas. As for visitor spending at the port level, not all three main visitor segments were sampled at all 18 participating ports. The state average was applied to ports when there was no survey for a certain visitor segment or the sample size was too small (i.e., standard error was too big). This will also introduce some errors. However, as the standard errors for visitor trip spending ranged only from 5 to 10 percent for most segments (15 percent at the most), this approach would yield errors at plus or minus the 10- to 20-percent range most of the time at the 95-percent confidence interval.

Since the purpose of the study is to estimate the economic significance of recreational activities at Oregon ports, economic impact estimates in this report

include the overall contribution of visitor spending from both residents and non-residents. Therefore, this is not a “pure” economic impact analysis where only the effects of new money (i.e., non-residents) are included. For managers and planners who would like to conduct an impact analysis, models were developed for this study that allow users to either apply visitor spending profiles to non-resident visitors or other proposed increases/ decreases in visitation to estimate the economic impacts.

Applications

There were two purposes for subdividing the general profiles into distinct segments: to obtain subgroups with relatively homogeneous spending patterns, and to give managers the opportunity to apply these spending profiles to port level use data.

The study reports Oregon ports recreational visitor profiles including expenditure estimates for a detailed list of goods and services purchased from Oregon ports and surrounding regional businesses. Both trip and annual goods and services expenditures are presented in this report. Port visitor segments were developed where data were available and served practical purposes. Two sets of slip renter segments were used in the impact analysis, while a third set was developed and included in this report: (1) day users versus overnight visitors, (2) type of visitors by port facilities used, and (3) small, medium, and large boat owners. These segments were developed for managers and planners who desire to calculate their own spending profiles based on their own local use data. The port manager may compute a marina level spending profile with a known number of occupied slips and can classify them into the number or percentage of boats in each class size category. By applying the segmented spending profiles, the estimated total spending will reflect the changes in visitation at each port. The following formulas illustrate how to compute total marina slip renter spending at a given marina. The choice of one or the other depends on whether the manager has better data for percentage of day versus overnight visitation or boat size at the marina.

$$\text{Total Spending} = (\text{Average Spending for Day Users} \times \text{Total Number of Visits}) + (\text{Average Spending for Overnight Users} \times \text{Total Number of Visits})$$

or
$$\text{Total Spending} = (\text{Average Spending for Boats smaller than 16'} \times \text{Total Number of Visits for Boats Smaller than 16'}) + (\text{Average Spending for Boat 16' to 26'} \times \text{Total Number of Visits for 16' to 26' Boats}) + (\text{Average Spending for Boat 26' or larger} \times \text{Total Number of Visits for 26' and Larger Boats})$$

$$\text{Economic Impacts} = \text{Total Spending (i.e., Use} \times \text{Average Spending per unit of Use)} \times \text{Capture Rate} \times \text{Regional Economic Multiplier}$$

These estimates can also be used to evaluate the potential economic effects of resource allocation and management decisions. For example, port managers and planners may conduct "what if" analyses by using the segmented spending profiles. Questions like "what if a new hotel were to open near the marina (more overnight users)?" can be answered by applying the segmented spending profiles to the port use data. All of the above information, including regional multipliers at the port level, is available in the models developed for this study. For port managers or planners who would like to estimate economic impacts at the port level, these models along with spending profiles and multipliers are available for downloading at the Corps of Engineers' Natural Resources Gateway Website at <http://corpslakes.usace.army.mil/employees/economic/economic.html>.

Conclusions

This study surveyed more than 4,000 visitors who participated in various recreational activities at 18 Oregon coastal and river ports. Total recreation visitation was estimated by using information gathered from ports' inputs, surveys from this study, and from secondary data. Economic effects of port visitor spending were estimated by applying visitor spending and use data to regional economic multipliers. These results provide a database for further analyses and improvements in future studies like these. We recommend three interrelated areas for future study.

- a. Developing guidelines for measuring and monitoring use and spending. The use and spending data are the first priority in terms of their contribution to error in estimating economic impacts. Currently, visitation data do not exist or have not been systematically monitored for most ports. While a visitor survey is capable of estimating average visitor spending, it often relies on other mechanisms for estimating total visitation. Many ports and marinas already have different mechanisms for estimating numbers of visitors to their facilities (i.e., revenues from boat ramps, traffic counts, parking revenues, etc). To better utilize this survey data and other existing data, guidelines should be developed and followed in future studies like this one in order to maintain the consistency of study and to make the best use of information gathered.
- b. Institutionalizing the economic impact analysis. The spending and use information gathered in this study can be used as a baseline for future analysis and refinement. This can be done by continuing to monitor the use information and applying the price-adjusted spending (based on consumer price index) to new visitation data. One alternative is to incorporate recreation spending and use information gathered from this study into existing reporting systems, such as the Oregon Port Reporting System.
- c. Refinements of sampling procedures. Refinements of the sampling procedures for the future study include non-response surveys for marina slip renters who did not return the questionnaires and for boat ramp and non-boating visitors that decline to be interviewed onsite, and expansion of the sampling frame to include marinas that depend on waterway

improvements of the ports but are not currently included in the sampling frame. These refinements would allow for checking non-response bias and make the survey results more indicative of the total port population.

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Appendix A

Mailback Questionnaire

OREGON PORT VISITOR RECREATION EXPENDITURE SURVEY

PART 1: TRIP SPENDING

Instructions

Please fill in the blanks below for spending on your party's most recent boating trip (trip includes any time away from home) to the marina at the **Port of «Port»**. The amounts in COLUMNS A and B should add up to the total amount of money your party spent for that item.

Example

Let's say the people in your party (e.g., in the same boat) spent \$52 at hotels within 30 miles of the marina and spent zero on lodging anywhere else. You would enter \$52 in COLUMN A and "0" in COLUMN B for this item. In addition, if your group spent \$60 at restaurants during the trip, of which \$22 was spent within 30 miles of the marina, you would enter \$22 in COLUMN A and \$38 in COLUMN B for this item.

	<u>within 30 miles</u> (Column A)	<u>beyond 30 miles</u> (Column B)
1. Hotels, motels, cabins, B&B, rental homes	\$ <u>52</u>	\$ <u>0</u>
2. Restaurants, bars, and other eating and drinking places	\$ <u>22</u>	\$ <u>38</u>

Please enter 0 if you spent nothing: DON'T LEAVE BLANKS!

START HERE (record spending for all people in your party on your most recent trip)

	<u>Spending within</u> <u>30 miles of the marina</u> (Column A)	<u>Spending beyond</u> <u>30 miles</u> (Column B)
LODGING		
1. Hotels, motels, cabins, B&B, rental homes	\$ _____	\$ _____
2. Campground fees (including hookups)	\$ _____	\$ _____
FOOD AND BEVERAGES		
1. Restaurants, bars, and other eating and drinking places	\$ _____	\$ _____
2. Groceries, and take-out food including alcohol and tobacco	\$ _____	\$ _____
TRANSPORTATION		
1. Gas and oil for auto, boat, RV, etc.	\$ _____	\$ _____
2. Other auto expenses (rentals, repairs, parking, tolls, etc.)	\$ _____	\$ _____
3. Other boat expenses (rentals, repairs, launching fees, etc. <i>excluding boating equipment; including slip fees only if you paid on a per-trip basis</i>)	\$ _____	\$ _____
RECREATION		
1. Attractions, entertainment, admissions, fees, etc.	\$ _____	\$ _____
2. Sporting goods (<i>excluding boating equipment</i>)	\$ _____	\$ _____
OTHER EXPENSES (clothing, souvenirs, maps, books, etc.)	\$ _____	\$ _____

IN TOTAL, approximately what percent of the trip spending (everything above) was spent in Oregon? _____ %

After recording your expenses, please answer these questions.

- Including yourself, how many people were in your party on this trip? _____ Total People
- What recreation activities did the people in your party participate in during this trip? (check all that apply)

<input type="checkbox"/> Boating (private boat)	<input type="checkbox"/> Boating (public cruise)	<input type="checkbox"/> Boating (charter)
<input type="checkbox"/> Fishing from shore	<input type="checkbox"/> Fishing from boat	<input type="checkbox"/> Kayaking / Canoeing / Sailboating
<input type="checkbox"/> Water / Jet skiing	<input type="checkbox"/> Kite flying	<input type="checkbox"/> Windsurfing / Kiteboard sailing
<input type="checkbox"/> Diving	<input type="checkbox"/> Hiking/walking/biking	<input type="checkbox"/> Wildlife viewing
<input type="checkbox"/> Picnicking	<input type="checkbox"/> Clamming	<input type="checkbox"/> Crabbing
<input type="checkbox"/> Camping	<input type="checkbox"/> Sightseeing	<input type="checkbox"/> Shopping
<input type="checkbox"/> Swimming	<input type="checkbox"/> Other (please specify): _____	
- What was your primary recreation activity on this trip? _____
- In total, how many *nights* did you spend away from home on this trip? _____ Nights
- How many *nights* did you spend within 30 miles of the marina? _____ Nights
 If you spent nights within 30 miles of the marina, what type of lodging were you using in the local area? (check one)

<input type="checkbox"/> Campground	<input type="checkbox"/> Rental home	<input type="checkbox"/> Hotel/motel/lodge/cabin
<input type="checkbox"/> Boat	<input type="checkbox"/> Home of friends/family	<input type="checkbox"/> Second home
- How many *days* did you actually use your boat on this trip? _____ Days

(OVER, PLEASE)

PART 2: INFORMATION ABOUT THE BOAT USED ON YOUR LAST TRIP

Please answer the following questions about the boat that you used on your most recent trip to the marina. Answer these questions based on one boat even you have multiple boats.

- 1. Approximately how much did you pay for the boat? \$ _____ []Check here if it was a gift
2. When you purchased or acquired the boat, was it new or used? []New []Used
3. In what year was the boat purchased or acquired? _____
->If the boat was acquired/purchased in 2001, was it acquired within the past 12 months? []Yes []No
4. Was the boat purchased or acquired from within 30 miles of the marina where it is currently kept? []Yes []No
5. Was the boat purchased or acquired in Oregon? []Yes []No
6. What is the length of your boat? _____(feet) What depth does it draw? _____ (feet)
7. How much did you spend in total on boating equipment in the past 12 months? \$ _____
->Percent of this spending that was spent within 30 miles of the marina and in Oregon _____%
->Percent of this spending that was spent beyond 30 miles and in Oregon..... _____%
->Percent of this spending that was spent outside of Oregon _____%
8. How much did you spend for slip rentals in the past 12 months?
At this marina..... _____
At all other places (in Oregon) _____
Outside of Oregon..... _____
9. How much did you spend for storage fees other than slip rental fees in the past 12 months? \$ _____ (skip to question 10 if there was no spending on additional storage fees)
-> Was the boat stored within 30 miles of the marina? []Yes []No
-> Was the boat stored in Oregon? []Yes []No
10. How much did you spend for insurance on this boat in the past 12 months? \$ _____

Sum to 100%

PART 3: YOUR ACCESS TO THE MARINA

- 1. What is your best estimate of the one-way mileage from your permanent residence to the marina? _____
2. What is the ZIP code of your permanent home? _____
3. Do you have a seasonal residence within 30 miles of the marina? []Yes []No
4. How long did you have your boat moored at the marina during the past 12 months? (check one)
[] I am a transient slip or boat ramp user (paid slip fees on a per-trip basis)
[] I am a monthly moorage holder and moored at this marina for less than 3 months
[] I am a monthly or seasonal moorage holder and moored at this marina for 3 months to 6 months
[] I am a seasonal or annual moorage holder and moored at this marina for more than 6 months
5. What is the total number of trips made by you or other people using your boat in the past 12 months?
To this marina _____
To all other places _____

Please put this form into the pre-addressed/postage-paid envelope and drop it into a mailbox. Thank you!



US Army Corps of Engineers
of Engineers
Portland District

U.S. Army Corps of Engineers, OMB Control Number: 0710-0001, Expires 03/2003

Appendix B

Onsite Survey Questionnaire

for Boaters

PART 3: TRIP SPENDING

Instructions

Please fill in the blanks below, estimating the money you have spent so far on this trip (trip includes any time away from home). Report expenditures for everyone in your party (in the same boat or same vehicle). The amounts in COLUMNS A and B should add up to the total amount of money your party spent for that item.

Example

Let's say the people in your party spent \$52 at hotels within 30 miles of the survey site and spent zero on lodging anywhere else. You would enter \$52 in COLUMN A and "0" in COLUMN B for this item. In addition, if your group spent \$60 at restaurants during the trip, of which \$22 was spent within 30 miles of the survey site, you would enter \$22 in COLUMN A and \$38 in COLUMN B for this item.

	<u>within 30 miles</u> (Column A)	<u>beyond 30 miles</u> (Column B)
1. Hotels, motels, cabins, B&B, rental homes	\$ <u>52</u>	\$ <u>0</u>
2. Restaurants, bars, and other eating and drinking places	\$ <u>22</u>	\$ <u>38</u>

Please enter 0 if you spent nothing: DON'T LEAVE BLANKS!

START HERE (report money you have spent so far on this trip for everyone in your party)

	<u>Spending within 30 miles of the site</u> (Column A)	<u>Spending beyond 30 miles</u> (Column B)
LODGING (please include charges made to this point)		
1. Hotels, motels, cabins, B&B, rental homes	\$ _____	\$ _____
2. Campground fees (including hookups)	\$ _____	\$ _____
FOOD AND BEVERAGES		
1. Restaurants, bars, and other eating and drinking places	\$ _____	\$ _____
2. Groceries, and take-out food including alcohol and tobacco	\$ _____	\$ _____
TRANSPORTATION		
1. Gas and oil for auto, boat, RV, etc.	\$ _____	\$ _____
2. Other auto expenses (rentals, repairs, parking, tolls, etc.)	\$ _____	\$ _____
3. Other boat expenses (rentals, repairs, launching fees, etc. <i>excluding boating equipment</i>)	\$ _____	\$ _____
RECREATION		
1. Attractions, entertainment, and recreation fees	\$ _____	\$ _____
2. Sporting goods	\$ _____	\$ _____
OTHER EXPENSES (clothing, souvenirs, maps, books, etc.)	\$ _____	\$ _____

IN TOTAL, approximately what percent of the total trip spending (everything above) was spent in Oregon? _____%

ADDITIONAL SPENDING: How much more money are you planning to spend on this trip? \$ _____

Thank you for your participation and have a nice day!

FILLED OUT BY PORT STAFF ONLY		ID # : _____ - _____
_____	Record time distributed _____	(military time)
Port		
_____	DATE: _____ / _____	
Recreation Area Name	MM	DD
<input type="checkbox"/> Boat Ramp	<input type="checkbox"/> Marina Slip	



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Expires 03/2003

Appendix C

Onsite Survey Questionnaire for Non-Boating Visitors

OREGON PORT VISITOR RECREATION EXPENDITURE SURVEY

PART 1: GENERAL INFORMATION *(trip includes any time away from home)*

1. Including yourself, how many people are in your party (same vehicle/boat) on this trip? _____
2. How many miles (one-way) did you travel from your home to this site? _____
3. Are you combining a trip to this port with other destinations, or is this your sole destination?
 I'm combining my port trip with other destinations
 The port is the sole destination of my trip **(please proceed to Question 5)**
4. If you're here as part of a longer trip, what percentage of your trip spending is devoted to your activities to this port? About _____ percent
5. If this port had not been available, would you still have made your overall trip?
 yes no
6. Have you spent or do you plan to spend any nights away from your home while on this trip?

YES

NO



- 6.a. How many nights have you spent away from home so far on this trip? _____
 - 6.b. How many of these nights have you spent within 30 miles of this place? _____
 - 6.c. What type of lodging are you using in the local area? (check one)
 Campground Rental home
 Hotel/motel/lodge/cabin Boat
 Home of friends/family Second home
 - 6.d. How many additional nights do you plan to spend away from home? _____
 - 6.e. How many of these nights will be within 30 miles of this place? _____

Please proceed to Question 7.

6.f. How many hours have you spent on this trip so far? _____

6.g. How many additional hours do you plan to spend on this trip today? _____

Please proceed to Question 7.

7. What recreation activities have the people in your party participated in, or will they participate in, during this trip? (check all that apply)

1. <input type="checkbox"/> Boating (private boat)	2. <input type="checkbox"/> Boating (public cruise)	3. <input type="checkbox"/> Boating (charter)
4. <input type="checkbox"/> Fishing from shore	5. <input type="checkbox"/> Fishing from boat	6. <input type="checkbox"/> Kayaking/Canoeing/Sailboating
7. <input type="checkbox"/> Water/Jet skiing	8. <input type="checkbox"/> Kite flying	9. <input type="checkbox"/> Windsurfing/Kiteboard sailing
10. <input type="checkbox"/> Diving	11. <input type="checkbox"/> Hiking/walking/biking	12. <input type="checkbox"/> Wildlife viewing
13. <input type="checkbox"/> Picnicking	14. <input type="checkbox"/> Clamming	15. <input type="checkbox"/> Crabbing
16. <input type="checkbox"/> Camping	17. <input type="checkbox"/> Sightseeing	18. <input type="checkbox"/> Shopping
19. <input type="checkbox"/> Swimming	20. <input type="checkbox"/> Other (please specify): _____	
8. What is your primary recreation activity on this trip today? _____
9. Including this trip, how many times have you visited this site during the past 12 months? _____
10. What is the ZIP code of your permanent home? _____



US Army Corps of Engineers[®]
Portland District

U.S. Army Corps of Engineers, OMB Control Number: 0710-0001, Expires 03/2003

PART 2: TRIP SPENDING

Instructions

Please fill in the blanks below, estimating the money you have spent so far on this trip (trip includes any time away from home). Report expenditures for everyone in your party (in the same boat or same vehicle). The amounts in COLUMNS A and B should add up to the total amount of money your party spent for that item.

Example

Let's say the people in your party spent \$52 at hotels within 30 miles of the survey site and spent zero on lodging anywhere else. You would enter \$52 in COLUMN A and "0" in COLUMN B for this item. In addition, your group spent \$60 at restaurants during the trip, of which \$22 was spent within 30 miles of the survey site, you would enter \$22 in COLUMN A and \$38 in COLUMN B for this item.

	<u>within 30 miles</u> (Column A)	<u>beyond 30 miles</u> (Column B)
1. Hotels, motels, cabins, B&B, rental homes	\$ <u>52</u>	\$ <u>0</u>
2. Restaurants, bars, and other eating and drinking places	\$ <u>22</u>	\$ <u>38</u>

Please enter 0 if you spent nothing: DON'T LEAVE BLANKS!

START HERE (report money you have spent so far on this trip for everyone in your party)

	<u>Spending within</u> <u>30 miles of the site</u> (Column A)	<u>Spending beyond</u> <u>30 miles</u> (Column B)
LODGING (please include charges made to this point)		
1. Hotels, motels, cabins, B&B, rental homes	\$ _____	\$ _____
2. Campground fees (including hookups)	\$ _____	\$ _____
FOOD AND BEVERAGES		
1. Restaurants, bars, and other eating and drinking places	\$ _____	\$ _____
2. Groceries, and take-out food including alcohol and tobacco	\$ _____	\$ _____
TRANSPORTATION		
1. Gas and oil for auto, boat, RV, etc.	\$ _____	\$ _____
2. Other auto expenses (rentals, repairs, parking, tolls, etc.)	\$ _____	\$ _____
3. Other boat expenses (rentals, repairs, launching fees, etc.)	\$ _____	\$ _____
RECREATION		
1. Attractions, entertainment, and recreation fees	\$ _____	\$ _____
2. Sporting goods	\$ _____	\$ _____
OTHER EXPENSES (clothing, souvenirs, maps, books, etc.)	\$ _____	\$ _____

IN TOTAL, approximately what percent of the total trip spending (everything above) was spent in Oregon? _____%

ADDITIONAL SPENDING: How much more money are you planning to spend on this trip? \$ _____

IS THIS SITE the final destination of your trip? [] Yes [] No

Thank you for your participation and have a nice day!

FILLED OUT BY PORT STAFF ONLY ID #: ____ - ____ - ____

_____ **Record time distributed** _____ (military time)

Port

_____ **DATE:** ____ / ____

Recreation Area Name MM DD

Appendix D

Onsite Survey Report

Final Report – Oregon Port Recreation Survey

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Oregon State University

This final report summarizes the Oregon Port Recreation Survey that was conducted from Memorial Day through Labor Day during the summer of 2002 for the U.S. Army Corps of Engineers. Oregon State University was responsible for project sampling design, direct surveying, and data entry. These three items will be summarized below, followed by results and observations.

Sampling design

To determine the minimum number of survey days to spend at each port site, annual trip information was used to estimate the expected number of surveys per hour. To reach the goal of 400 surveys for each port, as requested by the U.S. Army Corps of Engineers, a minimum of 101 survey days were needed (Table D1). At low-use sites, such as Cascade Locks (259 annual trips) it was assumed that student surveyors could achieve a completion rate of two surveys per hour. At high-use sites, such as Siuslaw and Garibaldi, the assumption was that student surveyors could obtain four surveys per hour. These assumptions were based on prior recreation surveys that Oregon State University has conducted on the Oregon Coast. There were some concerns about being able to reach 400 surveys for Cascade Locks, given its low use levels.

Two full-time student surveyors worked during Memorial Day weekend and June 17 - September 2, 2002. Several methods were used to gain a representative sample of recreation visitors to Oregon Ports.

Table D1 OSMB Boating Visits at the Surveyed Ports (1999)					
Port	Trips (OSMB, 1999)	Estimated Surveys/Hour	Estimated Surveys/Day	Estimated Survey Days	Estimated Total Surveys
Hood River	8,088	3	24	17	408
Cascade Locks	259	2	16	25	400
Garibaldi	28,046	4	32	12.5	400
Newport	8,879	3	24	17	408
Siuslaw	19,979	4	32	12.5	400
Gold Beach	16,898	3	24	17	408
Min. Survey Days Needed				101	

First, the schedule was set according to geographical location, starting with a randomly selected port, with consideration given for weekend and holiday coverage (i.e., schedule was adjusted if a single port was scheduled to be surveyed on Memorial Day, Fourth of July, and Labor Day at the expense of not surveying holiday visitors at another port). The typical survey schedule was six days working followed by two days off, and then four days working followed by two days off. This spread surveying efforts throughout the summer, and helped minimize travel time and assure adequate weekend/weekday coverage. Time off fluctuated between Tuesday and Thursday, except for rare occasions. Each student surveyor covered three ports – Northern Ports (Hood River, Cascade Locks, and Garibaldi) and Southern Ports (Newport, Siuslaw, and Gold Beach). When possible, the faculty research assistant assisted the student surveyors with data collection. The schedule was affected by emergency time off, which was granted once each to the student surveyors.

Second, the time of day that the student surveyors were onsite was randomly selected to ensure that efforts were spread throughout the day. Student surveyors worked a 6am-3pm, 7am-4pm, 8am-5pm, or 9pm-6pm shift with a 1-hour lunch break. Especially for weekdays, this allowed surveyors to contact a diversity of visitors who work in the local area, are retired in the local area, or were vacationing from outside the local area.

Third, the starting location at the port was randomly selected. Student surveyors then sampled locations in proportion to the amount of use reported by port managers, given the amount of time that they were at the port (Table D2). The Port of Cascade Locks provided proportions that added to more than 100 percent, so they were evenly adjusted from 40/15/40/15 percent to 37/13/37/13 percent.

As an example, a student surveyor could be scheduled at the Port of Cascade Locks for two days (6am-3pm one day and 8am-5pm the other day), with the random starting point at the transient slip. Following the sampling plan, the student surveyor would spend from 6am-8am at the transient slip, then from

8am-11am and 12pm-3pm at the parking lot. The following day, the student surveyor would spend 8am-10am at the campground, and then 10am-11am and 12pm-5pm at the boat ramp.

Direct surveying

Student surveyors received 6 hr of training in survey administration. They were instructed to contact visitors as they were leaving the port facility and verbally recruit them to participate in the study. Only visitors who appeared to be over 18 years of age were contacted. This was also passively checked through the recruitment script (Figure D1). The recruitment script was provided to student surveyors as a guide to help them explain the survey. The human subjects institutional review board of OSU approved the script. Student surveyors were to approach every visitor possible. Once a questionnaire was complete, they were to contact the next available visitor. Occasionally, visitors left the facility without being surveyed because the student surveyor was occupied administering the survey to another group. Participation in the study was not restricted by gender, ethnicity, or economic status. Student surveyors recorded time of day and location on the questionnaire after the respondents finished. Refusals were recorded on a separate tally sheet.

Port	Site	% of Time
Hood River	Event Site	30
	The Hood	20
	Cruise Dock	10
	Spit	10
	Parking Lot	10
	Transient Slip	10
	Boat Ramp	10
Cascade Locks	Boat Ramp	37
	Transient Slip	13
	Parking Lot	37
	Campground	13
Garibaldi	Boat Ramp	50
	Parking Lot	30
	Campground	20
Newport	Boat Ramp	40
	Marina Office	15
	Fishing Pier	15
	Campground	30
	North Site	10
Siuslaw	Boat Ramp	25
	Cushman	25
	C&D Dock	25
	Maple Lane	25
Gold Beach	Boat Ramp	50
	Parking Lot	20
	Campground	30

Data entry

Surveys were returned to Oregon State University every two weeks, where a data entry employee entered them into the spreadsheet. In addition to entering the raw data, this employee assigned each survey a number. Periodically, throughout the process, a select number of original surveys were compared to the spreadsheet entries to check for accuracy. Upon entering all surveys, survey responses were checked for data entry errors by consulting the original survey if the dataset had an unusual response to a question. Data entry typos (such as entering “11” instead of “1”) were corrected. However, responses that seemed illogical but matched the original survey were left in the dataset (for example, one respondent stated that he launched 200 times from the port in question and 200 times from other ports, all in the last year).

Hello, my name is _____. I am a student at Oregon State University working on a project for the Oregon Economic and Community Development Department, U.S. Army Corps of Engineers, and the Port. We are surveying visitors to find out about their recreational use of the port and how their expenditures affect the region's economy. This information will help us make better decisions about the future management of this port. Your participation in the survey is important, as it will help us find out how visitors use the port. You are being approached because you are using the port facility.

We have a brief questionnaire that takes about five minutes to fill out. Your answers are voluntary and anonymous. We do not ask for your name or address. Would you be willing to fill out this brief, 5-minute questionnaire?

If YES, continue with informed consent process.

If NO, thank visitor for his/her time. STOP HERE. Tally the number of refusals.

We expect to contact 2,400 people this summer. There are no foreseeable risks to participating in this research project. There may be no personal benefit for participating in this study. However, society may benefit from this study by understanding more about Oregon port visitors. Taking part in this research study is voluntary. You may choose not to take part at all. If you agree to participate in this study, you may stop participating at any time. You are free to skip any questions on the questionnaire that you prefer not to answer. You must be 18 years or older to participate. By agreeing to participate, you acknowledge that you are over 18 years of age.

If you have any questions about this research project, please feel free to ask them now. We also have a written copy of this script available for you to keep for reference of your informed consent. That copy has the contact information for my OSU supervisor and the Institutional Review Board who handles your rights as a participant.

Do you still wish to participate?

If YES, hand questionnaire to visitor.

If NO, thank visitor for his/her time. STOP HERE. Tally the number of refusals.

OSU Supervisor: Jessica Leahy, Dept. of Forest Resources, 280 Peavy Hall, Corvallis, OR 97331.

ph: 541-737-9123. e-mail: jessica.leahy@orst.edu.

Figure D1. Recruitment script for onsite survey

Results and observations

Surveyors (students, faculty research assistant, and volunteers) were available onsite at the ports for a total of 132 days. Two-thirds of these days were weekends or holidays, and one-third were weekdays (Table D3). The survey days allocated to each port were met, and in most cases, exceeded.

Table D3 Survey Days at Each Port						
Month	Hood River		Cascade Locks		Garibaldi	
	Wknd/H	Wkdy	Wknd/H	Wkdy	Wknd/H	Wkdy
May	1	0	3	0	2	0
June	3	1	3	2	1	1
July	6	1	6	6	2	2
August	3	4	6	1	8	6
September	2	0	0	0	0	0
Total	15	6	18	9	13	9
	Newport		Siuslaw		Gold Beach	
	Wknd/H	Wkdy	Wknd/H	Wkdy	Wknd/H	Wkdy
May	1	0	1	0	1	0
June	3	1	1	2	3	0
July	5	3	6	3	2	1
August	4	0	5	4	8	6
September	0	0	2	0	0	0
Total	13	4	15	9	14	7
All Ports						
	Wknd/H	Wkdy				
May	9	0				
June	14	7				
July	27	16				
August	34	21				
September	4	0				
Total	88	44				

Over the course of the summer, a total of 3,146 visitors were asked to complete the Oregon Port Survey (Table D4). Approximately 26 percent of these visitors refused to participate in the study. However, with the highest number of surveys being collected at the Port of Garibaldi (n=533) and the lowest being collected at the Port of Siuslaw (n=257), a total of 2,327 visitors completed the survey. Refusal rates were lower at the northern sites (19 percent at Hood River, 22 percent at Cascade Locks, and 19 percent at Garibaldi) and higher at the southern sites (35 percent at Newport, 36 percent at Siuslaw, and 32 percent at

Table D4 Surveys Completed at Each Port							
Category	Hood River	Cascade Locks	Garibaldi	Newport	Siuslaw	Gold Beach	Total
Completed	441	467	533	340	257	289	2,327
Refusals	106	131	121	186	142	133	819
Total Contacted	547	598	654	526	399	422	3,146
Avg. Completed per day	21	17	24	20	11	14	19
Avg. Completed per hour	2.6	2.1	3.0	2.5	1.4	1.8	2.4
Avg. Refusals per day	5	5	6	11	6	6	7
Refusal Rate	19%	22%	19%	35%	36%	32%	26%

Gold Beach). On an average day, 19 surveys were completed and 7 groups refused to participate. This means the surveyors contacted, on average, 3.25 people per hour, with 2.38 actually completing the survey.

Anecdotally, the refusal rate tended to be higher at the ports with more boat use. Boaters often refused the survey because they were interested in minimizing their time on the boat ramp or at the loading dock. This was the case when boaters were either moving their boats in or out of the water. Furthermore, use levels at the port facilities did not appear to match the reported numbers in some cases. For example, Cascade Locks reported 259 visits in the Oregon Marine Board report, but use was clearly higher this year, as 467 surveys were collected and nearly 600 visitors were contacted. Gold Beach reported a significant amount of use, but actual use at the port at the time of day that surveyors were present (8-hr shifts scheduled between 6 am and 6 pm) during the summer months did not reflect that use. When other ports are surveyed in the future, it will be important to factor in the predominant type of use that occurs at the ports and the possibility of inaccurate reported use levels. Results from this study can be used in future studies to determine the amount of survey effort needed to achieve desired sample sizes, by comparing the new ports to results from these six diverse ports.

Appendix E

Data Cleaning and Editing

Data Cleaning and Editing

Variable definitions

- a.* Resident: based on ZIP code information and miles traveled from home. Respondents with ZIP code within the study region and/or one-way mileage away from home less than 30 miles were coded as resident.
- b.* Marina slip renters: Respondents who identified themselves as moorage holders.
- c.* Transient dock or boat ramp users: Respondents who identified themselves as so and reported paying slip fees on a per-trip basis.
- d.* Non-boating visitors: Respondents who did not engage in any boating activities other than taking public cruises.

Data verification

- a.* One-way mileage away from home was double-checked by using respondent's ZIP code.
- b.* Total number of nights spent locally should not exceed total number of nights for the entire trip.
- c.* Total number of hours (for day visitors) spent locally should not exceed total number of hours spent on the entire trip.
- d.* Days boat was used should not exceed total number of days away from home for the same trip.
- e.* Total number of boating trips taken last year (regardless where they were taken) should not exceed 365.
- f.* Spending on lodging was zeroed out if the respondent was identified as a day user.

Filtered cases

- a.* Respondents who stayed for more than 30 days were excluded from the trip spending analysis, since they would have an upward bias to the average per-trip spending.
- b.* Cases were excluded when the reported party sizes were more than 30 people. This was done to eliminate the group tours that would distort the average per-party spending.

Detection of outliers

- a.* Survey responses were examined on a case-by-case basis for any single entry of trip spending that was more than \$500 for any item. The corresponding per-day and per-person expenses were reviewed, so large spending figures were not categorized as outliers simply because the visitors stayed longer in the region.
- b.* Survey responses were examined on a case-by-case basis for any single entry of boat-related expenditures that were among the top 10 percent for any item. The corresponding boat length and type of moorage were reviewed to decide whether the expenditures were reasonable.

Appendix F

Visitor Spending Profiles for Boaters by Boat Length

**Table F1
Average Trip Spending by Boat Length and Lodging Segments for Marina Slip Renters,
All Oregon Ports (2002, per Party-Day)**

Category	Under 16'		16 to 26'		26' and Larger	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per Party Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 3.60	\$ -	\$ 11.23	\$ -	\$ 17.75
Campground fees	\$ -	\$ 12.92	\$ -	\$ 8.96	\$ -	\$ 4.57
Restaurants	\$ 27.69	\$ 12.76	\$ 27.06	\$ 17.33	\$ 22.98	\$ 24.45
Groceries	\$ 27.69	\$ 10.88	\$ 27.95	\$ 14.59	\$ 20.42	\$ 20.41
Gas and oil for auto, boat, RV	\$ 30.62	\$ 6.30	\$ 31.11	\$ 15.72	\$ 24.58	\$ 25.99
Other auto expenses	\$ 0.77	\$ 0.85	\$ 4.53	\$ 2.14	\$ 10.72	\$ 2.53
Other boat expenses	\$ 44.46	\$ 3.27	\$ 39.23	\$ 11.94	\$ 32.72	\$ 19.51
Recreation and entertainment fees	\$ 7.69	\$ 3.34	\$ 1.24	\$ 2.41	\$ 1.35	\$ 3.86
Sporting goods	\$ 53.08	\$ 4.74	\$ 24.05	\$ 6.86	\$ 11.92	\$ 9.71
Other expenses	\$ 7.00	\$ 4.30	\$ 4.27	\$ 4.51	\$ 4.77	\$ 7.19
Total spending	\$ 199.00	\$ 62.96	\$ 159.45	\$ 95.69	\$ 129.46	\$ 135.97
Percent Error ¹	39%	20%	10%	5%	15%	8%
Per Party Day Spending, Total Trip Spending (Both Within and Outside 30 Miles of the Port)						
Hotels, motels, cabins, B&B	\$ -	\$ 3.24	\$ -	\$ 11.88	\$ -	\$ 14.42
Campground fees	\$ -	\$ 11.80	\$ -	\$ 8.90	\$ -	\$ 3.61
Restaurants	\$ 28.08	\$ 13.29	\$ 31.20	\$ 18.07	\$ 24.61	\$ 21.40
Groceries	\$ 28.08	\$ 11.12	\$ 29.94	\$ 15.67	\$ 24.83	\$ 16.98
Gas and oil for auto, boat, RV	\$ 33.31	\$ 8.39	\$ 35.60	\$ 19.03	\$ 29.48	\$ 23.27
Other auto expenses	\$ 0.77	\$ 2.79	\$ 5.70	\$ 2.41	\$ 10.72	\$ 3.22
Other boat expenses	\$ 44.46	\$ 5.76	\$ 42.07	\$ 11.66	\$ 33.17	\$ 18.75
Recreation and entertainment fees	\$ 7.69	\$ 3.82	\$ 1.50	\$ 2.86	\$ 1.35	\$ 3.80
Sporting goods	\$ 56.92	\$ 5.14	\$ 27.99	\$ 7.98	\$ 14.95	\$ 9.33
Other expenses	\$ 7.00	\$ 5.30	\$ 4.54	\$ 4.81	\$ 6.59	\$ 7.31
Total spending	\$ 206.31	\$ 70.66	\$ 178.55	\$ 103.29	\$ 145.70	\$ 122.08
Percent Error ¹	37%	22%	9%	5%	14%	8%
Sample size	13	30	215	472	71	352
¹ Percent Error = Standard Error / Mean. Two standard errors yield a 95-percent confidence interval.						

Table F2 Average Costs on Durable Goods and Annual Spending for Marina Slip Renters			
Costs	Under 16'	16 to 26'	26' and Larger
About the Boat			
Cost of new boat (in 2002 dollars)	\$ 6,075	\$ 30,129	\$150,072
Cost of used boat (in 2002 dollars)	\$ 3,604	\$ 12,336	\$ 60,666
Percent of boats purchased in the past 12 months	14%	9%	14%
Percent of boaters who purchased new boats in the past 12 months	6%	3%	3%
Percent of boats acquired in Oregon	74%	82%	59%
Percent of boats acquired within 30 miles of the marina	25%	30%	29%
Average boat length (ft)	14.26	20.76	33.68
Depth boat will draw (ft)	1.32	2.33	4.34
Percent of boaters who lived in Oregon	87%	93%	86%
Other Annual Costs on Boating-Related Expenditures			
Total amount spent on boat equipment	\$ 1,334	\$ 1,146	\$ 4,172
Within 30 miles of the marina	\$ 551	\$ 394	\$ 1,487
All other places in Oregon	\$ 562	\$ 293	\$ 1,249
Outside Oregon	\$ 221	\$ 459	\$ 1,437
Total amount spent on insurance	\$ 103	\$ 245	\$ 767
Total amount spent on slip rental	\$ 150	\$ 429	\$ 1,071
At this marina	\$ 135	\$ 374	\$ 739
All other places in Oregon	\$ 12	\$ 44	\$ 167
Outside Oregon	\$ 2	\$ 11	\$ 164
Total amount spent on storage fees ¹	\$ 27	\$ 54	\$ 60
Within 30 miles of the marina	\$ 20	\$ 34	\$ 41
All other places in Oregon	\$ 6	\$ 7	\$ 12
Outside Oregon	\$ 1	\$ 13	\$ 7
Sample Size	53	756	471
¹ For application purpose, average storage fees are based on all boaters. The average storage fee for boaters who paid storage fees in the past 12 months was \$365.			

**Table F3
Average Trip Spending by Boat Length and Lodging Segments for Boat Ramp and Transient Dock Users, All Oregon Ports¹ (2002, per Party-Day)**

Category	Under 16'		16 to 26'		26' and Larger	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per Party Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 26.79	\$ -	\$ 12.24	\$ -	\$ -
Campground fees	\$ -	\$ 9.18	\$ -	\$ 10.46	\$ -	\$ 5.70
Restaurants	\$ 3.28	\$ 14.12	\$ 13.35	\$ 16.20	\$ 2.25	\$ 9.32
Groceries	\$ 5.00	\$ 11.85	\$ 10.77	\$ 16.49	\$ 5.39	\$ 14.87
Gas and oil for auto, boat, RV	\$ 7.21	\$ 6.67	\$ 14.51	\$ 10.95	\$ 21.62	\$ 9.95
Other auto expenses	\$ -	\$ 0.21	\$ 0.31	\$ 0.98	\$ -	\$ -
Other boat expenses	\$ 2.96	\$ 1.48	\$ 4.74	\$ 4.70	\$ 13.37	\$ 3.52
Recreation and entertainment fees	\$ 0.09	\$ 2.61	\$ 11.47	\$ 1.50	\$ -	\$ -
Sporting goods	\$ 2.69	\$ 3.68	\$ 11.09	\$ 6.42	\$ 11.42	\$ 2.77
Other expenses	\$ -	\$ 4.66	\$ 1.12	\$ 3.16	\$ 1.16	\$ 2.45
Total spending	\$ 21.22	\$ 81.25	\$ 67.37	\$ 83.11	\$ 55.21	\$ 48.58
Percent Error ²	12%	36%	14%	7%	49%	29%
Per Party Day Spending, Total Trip Spending (Both Within and Outside 30 Miles of the Port)						
Hotels, motels, cabins, B&B	\$ -	\$ 24.33	\$ -	\$ 12.77	\$ -	\$ -
Campground fees	\$ -	\$ 11.91	\$ -	\$ 10.43	\$ -	\$ 3.30
Restaurants	\$ 3.53	\$ 13.07	\$ 14.09	\$ 16.59	\$ 2.25	\$ 5.54
Groceries	\$ 6.12	\$ 13.35	\$ 13.75	\$ 21.12	\$ 5.66	\$ 11.15
Gas and oil for auto, boat, RV	\$ 10.15	\$ 10.04	\$ 22.13	\$ 17.71	\$ 35.99	\$ 10.17
Other auto expenses	\$ 2.77	\$ 0.33	\$ 0.31	\$ 1.86	\$ -	\$ -
Other boat expenses	\$ 2.99	\$ 1.35	\$ 5.28	\$ 4.66	\$ 13.37	\$ 2.03
Recreation and entertainment fees	\$ 0.09	\$ 2.37	\$ 11.74	\$ 1.71	\$ -	\$ 0.07
Sporting goods	\$ 2.76	\$ 4.38	\$ 11.37	\$ 6.55	\$ 11.42	\$ 2.32
Other expenses	\$ -	\$ 4.23	\$ 1.12	\$ 3.10	\$ 1.16	\$ 1.42
Total spending	\$ 28.41	\$ 85.37	\$ 79.80	\$ 96.50	\$ 69.85	\$ 35.98
Percent Error ²	15%	31%	12%	6%	45%	22%
Sample size	101	47	403	313	8	15
¹ Results for boat ramp and non-boating visitors are weighted averages based on port visitation of the six surveyed ports. ² Percent Error = Standard Error / Mean. Two standard errors yield a 95-percent confidence interval.						

Table F4 Average Costs on Durable Goods and Annual Spending for Boat Ramp and Transient Dock Users¹			
Costs	Under 16'	16 to 26'	26' and Larger
About the Boat			
Cost of new boat (in 2002 dollars)	\$ 9,259	\$ 21,755	\$ 53,561
Cost of used boat (in 2002 dollars)	\$ 6,199	\$ 12,321	\$ 46,392
Percent of boats purchased in the past 12 months	17%	16%	12%
Percent of boaters who purchased new boats in the past 12 months	4%	7%	2%
Percent of boats acquired in Oregon	89%	85%	47%
Percent of boats acquired within 30 miles of the marina	28%	15%	9%
Average boat length (ft)	14.08	18.78	31.95
Depth boat will draw (ft)	1.12	1.46	3.30
Percent of boaters who live in Oregon	90%	87%	79%
Other Annual Costs on Boating-Related Expenditures			
Total amount spent on boat equipment	\$ 989	\$ 1,157	\$ 5,683
Within 30 miles of the marina	\$ 227	\$ 362	\$ 1,568
All other places in Oregon	\$ 674	\$ 431	\$ 3,459
Outside Oregon	\$ 88	\$ 364	\$ 656
Sample Size	148	719	23
¹ Results for boat ramp visitors are weighted averages based on port visitation of the six surveyed ports listed in Table 1.			

Appendix G

Economic Effects at the Port Level

This section details economic effects associated with recreation spending at the port level. Only spending within 30 miles of the port would be included to estimate the effects on the local area. Port-specific spending profiles were created for all surveyed ports (Tables G1 to G5). However, state averages were applied to estimate total spending and economic effects when sample size was too small or not available (as specified). State average on percentage of boaters who purchased boats during the past year was used to compute the total spending on purchases of new and used boats, as this percentage tends to fluctuate from year to year for any given port. Therefore, the state average will better capture the real trends of these purchases.

**Table G1
Average Trip Spending by Lodging Segments for Marina Slip Renters for All 18 Ports**

Category	Alsea		Arlington		Astoria	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 300.00		\$ -	\$ -	\$ 14.67
Campground fees	\$ -	\$ -		\$ -	\$ -	\$ 1.71
Restaurants	\$ 2.50	\$ 56.67		\$ 25.00	\$ 12.57	\$ 27.52
Groceries	\$ 11.88	\$ 55.00		\$ -	\$ 23.78	\$ 21.03
Gas and oil for auto, boat, RV	\$ 28.75	\$ 45.00		\$ -	\$ 29.32	\$ 20.70
Other auto expenses	\$ -	\$ -		\$ -	\$ 5.32	\$ 3.21
Other boat expenses	\$ 4.38	\$ -		\$ -	\$ 33.92	\$ 22.26
Recreation and entertainment fees	\$ -	\$ -		\$ -	\$ 0.54	\$ 4.30
Sporting goods	\$ 2.50	\$ 15.00		\$ -	\$ 23.78	\$ 8.72
Other expenses	\$ -	\$ 13.33		\$ -	\$ 1.12	\$ 8.34
Total spending	\$ 50.00	\$ 485.00		\$ 25.00	\$ 130.36	\$ 132.45
Percent error ¹	32%	42%		-	21%	12%
Party size	3.0	5.3		5.0	3.2	3.2
Length of stay (w/30 miles)	1.0	4.3		1.0	1.0	3.8
Sample size	8	3	0	1	40	106
Category	Bandon		Brookings Harbor		Cascade Locks	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 51.28	\$ -	\$ 18.67	\$ -	\$ 13.89
Campground fees	\$ -	\$ 7.77	\$ -	\$ 8.75	\$ -	\$ -
Restaurants	\$ 40.00	\$ 40.17	\$ 28.15	\$ 21.25	\$ 5.00	\$ 26.39
Groceries	\$ 43.00	\$ 22.67	\$ 26.04	\$ 18.96	\$ 55.00	\$ 18.33
Gas and oil for auto, boat, RV	\$ 32.00	\$ 16.16	\$ 35.66	\$ 19.96	\$ 10.00	\$ 19.44
Other auto expenses	\$ 5.00	\$ 0.28	\$ 12.90	\$ 3.31	\$ 1.13	\$ 14.03
Other boat expenses	\$ 57.16	\$ 6.16	\$ 41.50	\$ 20.92	\$ -	\$ 16.39
Recreation and entertainment fees	\$ -	\$ 22.63	\$ 1.46	\$ 3.19	\$ -	\$ 12.92
Sporting goods	\$ 40.00	\$ 10.51	\$ 29.51	\$ 8.39	\$ -	\$ 55.56
Other expenses	\$ 9.00	\$ 9.84	\$ 7.12	\$ 5.44	\$ -	\$ 15.42
Total spending	\$ 226.16	\$ 187.48	\$ 182.33	\$ 128.85	\$ 71.13	\$ 192.36
Percent Error ¹	22%	21%	20%	10%	57%	55%
Party Size	4.6	4.3	2.6	3.7	2.7	4.6
Length of stay (w/30 miles)	1.0	3.3	1.0	6.1	1.0	5.1
Sample Size	5	14	71	135	3	7
<i>(Sheet 1 of 3)</i>						
¹ Percent Error = Standard Error / Mean. Two standard errors yield a 95-percent confidence interval.						

Table G1 (Continued)						
Category	Coos Bay		Garibaldi		Gold Beach	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending for Marina Slip Renters, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 11.97	\$ -	\$ 16.80	\$ -	\$ 2.87
Campground fees	\$ -	\$ 3.48	\$ -	\$ 4.67	\$ -	\$ 13.13
Restaurants	\$ 34.06	\$ 22.28	\$ 34.53	\$ 21.88	\$ 40.00	\$ 12.72
Groceries	\$ 40.28	\$ 20.65	\$ 24.70	\$ 17.41	\$ 55.00	\$ 12.28
Gas and oil for auto, boat, RV	\$ 26.72	\$ 28.77	\$ 31.85	\$ 18.20	\$ 27.67	\$ 7.31
Other auto expenses	\$ -	\$ 2.70	\$ 1.20	\$ 1.40	\$ -	\$ 2.91
Other boat expenses	\$ 24.01	\$ 21.27	\$ 27.33	\$ 11.91	\$ -	\$ 3.62
Recreation and entertainment fees	\$ 2.22	\$ 2.39	\$ 1.83	\$ 3.06	\$ 8.33	\$ 2.93
Sporting goods	\$ 1.33	\$ 5.16	\$ 20.26	\$ 10.86	\$ 31.67	\$ 5.69
Other expenses	\$ 3.06	\$ 6.14	\$ 6.47	\$ 5.43	\$ 16.67	\$ 3.41
Total spending	\$ 131.68	\$ 124.82	\$ 148.18	\$ 111.61	\$ 179.33	\$ 66.86
Percent error ¹	28%	18%	19%	12%	76%	17%
Party size	2.7	3.5	2.9	3.7	2.7	3.1
Length of stay (w/30 miles)	1.0	5.2	1.0	5.1	1.0	17.3
Sample size	19	58	33	107	3	23
Category	Hood River		Newport		Port Orford	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending for Marina Slip Renters, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 0.57	\$ -	\$ 15.05	\$ -	\$ 109.33
Campground fees	\$ -	\$ 0.03	\$ -	\$ 11.94	\$ -	\$ 29.33
Restaurants	\$ 26.32	\$ 25.83	\$ 15.41	\$ 20.32	\$ -	\$ 40.00
Groceries	\$ 21.05	\$ 21.54	\$ 10.47	\$ 12.77	\$ 30.00	\$ 32.50
Gas and oil for auto, boat, RV	\$ 14.05	\$ 12.30	\$ 30.41	\$ 24.11	\$ 22.00	\$ 31.67
Other auto expenses	\$ 3.13	\$ 0.26	\$ 0.88	\$ 1.54	\$ -	\$ 13.33
Other boat expenses	\$ 13.16	\$ 0.78	\$ 10.76	\$ 13.99	\$ 18.00	\$ 4.17
Recreation and entertainment fees	\$ 1.05	\$ 1.96	\$ -	\$ 2.57	\$ -	\$ 8.33
Sporting goods	\$ 4.11	\$ 1.62	\$ 15.41	\$ 7.76	\$ 18.00	\$ 15.00
Other expenses	\$ 1.05	\$ 12.10	\$ 11.94	\$ 5.50	\$ -	\$ 45.83
Total spending	\$ 83.92	\$ 76.99	\$ 95.29	\$ 115.55	\$ 88.00	\$ 329.50
Percent error ¹	32%	29%	19%	7%	-	48%
Party size	3.2	3.5	3.2	3.6	3.0	10.0
Length of stay (w/30 miles)	1.0	3.0	1.0	4.5	1.0	3.0
Sample size	20	25	17	208	1	2
<i>(Sheet 2 of 3)</i>						

Table G1 (Concluded)						
Category	Siuslaw		St. Helens		The Dalles	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending for Marina Slip Renters, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 5.18	\$ -	\$ 6.90	\$ -	\$ -
Campground fees	\$ -	\$ 15.38	\$ -	\$ 1.18	\$ -	\$ -
Restaurants	\$ 19.58	\$ 11.30	\$ 23.54	\$ 19.86	\$ 31.00	\$ 10.20
Groceries	\$ 11.25	\$ 14.25	\$ 27.27	\$ 26.90	\$ 62.67	\$ 28.24
Gas and oil for auto, boat, RV	\$ 32.54	\$ 10.86	\$ 27.50	\$ 24.32	\$ 38.00	\$ 21.67
Other auto expenses	\$ 1.75	\$ 0.61	\$ 5.25	\$ 4.08	\$ 2.80	\$ 0.69
Other boat expenses	\$ 93.75	\$ 4.67	\$ 45.04	\$ 16.60	\$ 43.40	\$ 12.37
Recreation and entertainment fees	\$ -	\$ 2.09	\$ -	\$ 0.62	\$ 6.67	\$ 2.00
Sporting goods	\$ 10.75	\$ 4.52	\$ 54.83	\$ 7.53	\$ 26.20	\$ 0.67
Other expenses	\$ 1.33	\$ 3.37	\$ 3.47	\$ 2.38	\$ 3.67	\$ 6.93
Total spending	\$ 170.96	\$ 72.23	\$ 186.89	\$ 110.37	\$ 214.40	\$ 82.77
Percent error ¹	27%	10%	28%	24%	27%	26%
Party size	2.7	3.1	2.8	3.4	5.8	2.9
Length of stay (w/30 miles)	1.0	5.6	1.0	3.0	1.0	4.7
Sample size	13	77	29	29	15	17
Category	Toledo		Umatilla		Umpqua	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending for Marina Slip Renters, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10.62
Campground fees	\$ -	\$ -	\$ -	\$ 1.53	\$ -	\$ 4.94
Restaurants	\$ 40.00	\$ 100.00	\$ 26.82	\$ 18.09	\$ 50.62	\$ 17.64
Groceries	\$ 10.00	\$ 100.00	\$ 23.41	\$ 14.94	\$ 14.62	\$ 9.66
Gas and oil for auto, boat, RV	\$ 25.00	\$ 200.00	\$ 23.64	\$ 21.57	\$ 27.38	\$ 10.15
Other auto expenses	\$ -	\$ 50.00	\$ -	\$ 3.90	\$ 17.69	\$ 0.19
Other boat expenses	\$ 250.00	\$ 50.00	\$ -	\$ 9.71	\$ 100.38	\$ 12.74
Recreation and entertainment fees	\$ -	\$ -	\$ 5.91	\$ 3.00	\$ 1.54	\$ 1.50
Sporting goods	\$ -	\$ -	\$ 10.45	\$ 9.10	\$ 25.62	\$ 6.24
Other expenses	\$ -	\$ -	\$ 0.91	\$ 9.07	\$ 3.08	\$ 2.48
Total spending	\$ 325.00	\$ 500.00	\$ 91.14	\$ 90.91	\$ 240.92	\$ 76.16
Percent error ¹	77%	-	24%	21%	29%	25%
Party size	3.0	1.0	2.7	2.7	2.9	2.9
Length of stay (w/30 miles)	1.0	1.0	1.0	3.5	1.0	4.6
Sample size	2	1	11	20	14	37

(Sheet 3 of 3)

**Table G2
Average Trip Spending by Lodging Segments for Boat Ramp and Transient Dock Users**

Category	Cascade Locks		Garibaldi		Gold Beach	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending for Boat Ramp and Transient Dock Users, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 8.59	\$ -	\$ 37.89	\$ -	\$ 7.54
Campground fees	\$ -	\$ 14.63	\$ -	\$ 6.97	\$ -	\$ 9.37
Restaurants	\$ 1.41	\$ 8.75	\$ 6.05	\$ 10.80	\$ 24.17	\$ 15.70
Groceries	\$ 1.41	\$ 10.92	\$ 3.72	\$ 13.14	\$ 9.76	\$ 13.50
Gas and oil for auto, boat, RV	\$ 4.37	\$ 3.98	\$ 14.81	\$ 5.24	\$ 7.30	\$ 6.93
Other auto expenses	\$ -	\$ 0.14	\$ -	\$ 0.21	\$ -	\$ 0.20
Other boat expenses	\$ -	\$ 1.79	\$ 4.86	\$ 6.93	\$ 0.21	\$ 0.49
Recreation and entertainment fees	\$ 9.30	\$ 9.42	\$ 6.18	\$ 14.12	\$ 2.99	\$ 5.45
Sporting goods	\$ -	\$ 0.87	\$ 8.56	\$ 4.70	\$ 5.22	\$ 8.00
Other expenses	\$ 1.27	\$ 1.74	\$ 0.64	\$ 3.00	\$ 0.15	\$ 3.66
Total spending	\$ 17.76	\$ 60.83	\$ 44.82	\$ 103.00	\$ 49.80	\$ 70.84
Percent error ¹	34%	14%	10%	10%	22%	7%
Party size	2.1	4.6	3.0	3.7	2.4	3.2
Length of stay (w/30 miles)	1.0	4.6	1.0	4.9	1.0	6.6
Sample size	12	34	145	204	143	107
Category	Hood River		Newport		Siuslaw	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending for Boat Ramp and Transient Dock Users, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 7.39	\$ -	\$ 17.12	\$ -	\$ 2.18
Campground fees	\$ -	\$ 3.75	\$ -	\$ 11.16	\$ -	\$ 13.68
Restaurants	\$ 4.49	\$ 20.33	\$ 9.79	\$ 20.48	\$ 6.89	\$ 15.10
Groceries	\$ 4.62	\$ 14.90	\$ 8.20	\$ 16.32	\$ 13.31	\$ 15.09
Gas and oil for auto, boat, RV	\$ 10.54	\$ 7.47	\$ 13.88	\$ 15.75	\$ 15.92	\$ 7.22
Other auto expenses	\$ -	\$ 0.16	\$ 0.17	\$ 1.66	\$ 0.63	\$ 0.04
Other boat expenses	\$ 1.57	\$ 0.03	\$ 9.21	\$ 8.93	\$ 5.26	\$ 1.40
Recreation and entertainment fees	\$ 52.18	\$ 12.17	\$ 0.15	\$ 1.97	\$ 0.53	\$ 2.65
Sporting goods	\$ 2.49	\$ 21.78	\$ 15.20	\$ 8.63	\$ 6.92	\$ 3.40
Other expenses	\$ 1.12	\$ 3.22	\$ 1.91	\$ 5.00	\$ 0.12	\$ 3.72
Total spending	\$ 77.01	\$ 91.19	\$ 58.51	\$ 107.00	\$ 49.58	\$ 64.49
Percent error ¹	44%	26%	13%	7%	7%	7%
Party size	2.8	2.7	2.9	3.5	2.6	3.6
Length of stay (w/30 miles)	1.0	5.5	1.0	4.5	1.0	5.8
Sample size	30	45	119	119	148	75
¹ Percent Error = Standard Error / Mean. Two standard errors yield a 95-percent confidence interval.						

**Table G3
Average Trip Spending by Lodging Segments for Non-Boating Visitors**

Category	Cascade Locks		Garibaldi		Gold Beach	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 27.40	\$ -	\$ 18.25	\$ -	\$ 19.73
Campground fees	\$ -	\$ 6.02	\$ -	\$ 8.98	\$ -	\$ 2.82
Restaurants	\$ 5.17	\$ 12.31	\$ 18.30	\$ 14.22	\$ 55.06	\$ 13.90
Groceries	\$ 5.52	\$ 5.03	\$ 12.18	\$ 12.22	\$ 71.28	\$ 10.20
Gas and oil for auto, boat, RV	\$ 3.69	\$ 4.12	\$ 5.01	\$ 3.78	\$ 4.57	\$ 4.03
Other auto expenses	\$ 0.97	\$ 0.42	\$ 0.48	\$ 0.59	\$ -	\$ -
Other boat expenses	\$ 0.30	\$ 0.15	\$ 4.39	\$ 0.55	\$ -	\$ 0.04
Recreation and entertainment fees	\$ 23.86	\$ 21.26	\$ 1.34	\$ 3.57	\$ 4.57	\$ 17.03
Sporting goods	\$ 1.76	\$ 1.26	\$ 1.20	\$ 2.27	\$ -	\$ 1.09
Other expenses	\$ 5.25	\$ 8.51	\$ 1.26	\$ 3.84	\$ 20.56	\$ 9.40
Total spending	\$ 46.52	\$ 86.51	\$ 44.16	\$ 68.26	\$ 156.03	\$ 78.25
Percent error ¹	10%	10%	11%	12%	28%	19%
Party size	2.9	2.7	2.6	3.3	2.3	3.4
Length of stay (w/30 miles)	1.0	3.5	1.0	4.4	1.0	4.9
Sample size	206	191	43	104	8	16
Category	Hood River		Newport		Siuslaw	
	Day Trip	Overnight	Day Trip	Overnight	Day Trip	Overnight
Per-Party-Day Spending, Within 30 Miles of the Port						
Hotels, motels, cabins, B&B	\$ -	\$ 15.90	\$ -	\$ 11.93	\$ -	\$ -
Campground fees	\$ -	\$ 5.85	\$ -	\$ 18.55	\$ -	\$ 14.96
Restaurants	\$ 6.41	\$ 22.28	\$ 69.02	\$ 19.24	\$ 32.15	\$ 38.75
Groceries	\$ 3.18	\$ 13.24	\$ 7.17	\$ 21.39	\$ 20.36	\$ 19.93
Gas and oil for auto, boat, RV	\$ 3.86	\$ 4.70	\$ 7.09	\$ 5.34	\$ 11.79	\$ 8.92
Other auto expenses	\$ 2.73	\$ 0.63	\$ -	\$ 0.33	\$ -	\$ 0.08
Other boat expenses	\$ -	\$ 0.09	\$ 0.52	\$ 2.13	\$ 0.43	\$ 0.08
Recreation and entertainment fees	\$ 38.59	\$ 6.99	\$ 3.01	\$ 4.73	\$ -	\$ 0.41
Sporting goods	\$ 30.07	\$ 36.45	\$ 4.96	\$ 5.05	\$ 3.22	\$ 3.00
Other expenses	\$ 10.43	\$ 9.26	\$ 7.22	\$ 8.45	\$ 13.40	\$ 1.27
Total spending	\$ 95.26	\$ 115.39	\$ 98.98	\$ 97.14	\$ 81.34	\$ 87.42
Percent error ¹	19%	8%	51%	8%	40%	24%
Party size	2.1	2.8	3.0	3.1	3.1	3.2
Length of stay (w/30 miles)	1.0	7.1	1.0	4.2	1.0	4.5
Sample size	122	202	28	64	8	11

¹ Percent Error = Standard Error / Mean. Two standard errors yield a 95-percent confidence interval.

**Table G4
Average Costs on Durable Goods and Annual Spending for Marina Slip Renters¹ (2002)**

Category	Alsea	Arlington	Astoria	Bandon	Brookings Harbor	Cascade Locks
Average Annual and Fixed Expenditures in Local Areas that are Attributable to the Ports						
Purchases of new boats	111.79	0.00	979.43	807.71	461.36	582.32
Purchases of used boats	107.14	109.79	1,145.53	663.69	515.03	994.20
Boat equipment	441.54	0.00	1,084.01	2,271.14	949.61	415.38
Insurance	73.92	52.50	264.88	422.37	205.41	45.38
Slip rental	24.50	135.00	444.47	434.07	609.96	508.50
Storage fees	0.00	0.00	35.85	8.50	38.24	23.40
Total Spending	\$ 758.89	\$ 297.29	\$ 3,954.17	\$ 4,607.47	\$ 2,779.61	\$ 2,569.17
Sample Size	13	2	161	20	243	10
Category	Coos Bay	Garibaldi	Gold Beach	Hood River	Newport	Port Orford
Purchases of new boats	528.18	287.22	94.93	387.01	536.91	486.92
Purchases of used boats	649.69	615.03	779.41	794.84	1,152.52	413.40
Boat equipment	2,217.94	951.84	716.45	449.88	1,276.35	1,280.00
Insurance	322.51	191.02	130.67	210.42	47.94	91.25
Slip rental	661.82	436.55	221.52	509.93	476.62	439.67
Storage fees	74.76	35.24	122.14	25.65	13.56	95.83
Total Spending	\$ 4,454.90	\$ 2,516.89	\$ 2,065.12	\$ 2,377.74	\$ 3,503.90	\$ 2,807.08
Sample Size	89	159	30	50	237	4
Category	Siuslaw	St. Helens	The Dalles	Toledo	Umatilla	Umpqua
Purchases of new boats	281.33	267.01	252.01	0.00	476.11	812.66
Purchases of used boats	239.19	550.82	538.53	110.04	630.31	578.41
Boat equipment	351.24	1,446.79	438.03	533.33	479.87	1,329.55
Insurance	48.54	378.71	230.82	175.00	146.09	163.20
Slip rental	84.54	847.59	667.97	250.00	575.43	591.04
Storage fees	38.48	18.29	18.18	110.00	7.84	47.50
Total Spending	\$ 1,043.32	\$ 3,509.22	\$ 2,145.54	\$ 1,178.37	\$ 2,315.65	\$ 3,522.35
Sample Size	93	66	38	3	38	55
¹ Spending per boat. Includes only spending within 30 miles of the ports where individuals have their boats moored.						

**Table G5
Average Costs on Durable Goods and Annual Spending for Boat Ramp and Transient Dock Users¹ (2002)**

Category	Cascade Locks	Garibaldi	Gold Beach	Hood River	Newport	Siuslaw
Average Annual and Fixed Expenditures in Local Areas that are Attributable to the Ports						
Purchases of new boats	341.92	249.16	217.66	285.20	256.76	211.21
Purchases of used boats	220.93	188.72	209.20	266.65	218.61	168.64
Boat equipment	11.76	554.25	202.70	144.43	527.40	224.15
Insurance	18.10	37.30	83.69	100.59	31.84	69.10
Total Spending	\$592.71	\$1,029.43	\$713.25	\$796.87	\$1,034.62	\$673.10
Sample Size	46	352	251	75	239	225
¹ Spending per boat. Includes only spending within 30 miles of the ports where individuals were interviewed.						

Port of Alsea

No onsite survey was conducted at this port and the sample size for the marina slip renter segment was too small to be generalized. The state average spending in Tables 13 and 15 was used to estimate the total spending and economic effects.

Economic effects of trip spending

Total visitation to the Port of Alsea was 12,594 (in party days) in 2002. Visitors in the area spent \$1,032,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$711,000 in direct sales to tourism-related firms. These sales generated \$298,000 in direct personal income and supported 17 direct jobs. With multiplier effects, visitor spending resulted in \$957,000 total sales, \$380,000 in total personal income, and supported 21 jobs.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Alsea was 129 in 2002. Boat owners in this area spent \$102,000 on boat-related annual and fixed expenditures in the region. Of this spending, 32 percent was captured by the local economy, yielding \$33,000 in direct sales to related industries. These sales generated \$15,000 in direct personal income and supported one direct job. With multiplier effects, visitor spending resulted in \$44,000 total sales, \$18,000 in total personal income, and supported one job.

**Table G6
Economic Effects of Visitor Trip Spending to the Port of Alsea¹
(2002)**

Sector/Spending category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$1,032			
Direct Effects				
Motel, hotel, cabin, or B&B	53.89	1.13	20.30	31.61
Camping fees	31.11	0.65	11.72	18.25
Restaurants & bars	227.38	5.75	87.26	123.30
Groceries, take-out food/drinks	3.93	0.02	0.54	1.06
Gas & oil	0.01	-	-	-
Other auto expenses	12.18	0.15	4.08	6.71
Other boat expenses	39.70	0.60	17.21	24.02
Entertainment and recreation fees	170.98	4.51	74.51	111.45
Sporting goods	2.62	0.02	0.60	1.06
Souvenirs and other expenses	0.79	0.01	0.19	0.30
Retail trade	156.54	4.04	76.97	125.79
Wholesale trade	11.70	0.13	4.84	7.99
Total	710.84	17.02	298.23	451.55
Total (multiplier) effects	\$957	21	\$380	\$603

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

**Table G7
Economic Effects of Boat-Related Expenditures Associated with the
Port of Alsea¹ (2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$102			
Direct Effects				
Purchases of new boats	0.08	0.00	0.02	0.02
Purchases of used boats	0.00	0.00	0.00	0.00
Boat equipment	1.28	0.01	0.29	0.52
Insurance	1.37	0.01	0.47	0.82
Slip rental	3.19	0.03	0.81	1.28
Storage fees	0.23	0.00	0.07	0.09
Retail trade	21.76	0.56	10.70	17.49
Wholesale trade	5.53	0.06	2.29	3.77
Total	\$33.43	0.68	\$14.64	\$23.99
Total (multiplier) effects	\$44	1	\$18	\$31

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Arlington

No onsite survey was conducted at this port and the sample size for the marina slip renter segment was too small to be generalized. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects.

Economic effects of trip spending

Total visitation to the Port of Arlington was 1,443 (in party days) in 2002. Visitors in the area spent \$133,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$92,000 in direct sales to tourism-related firms. These sales generated \$36,000 in direct personal income and supported three direct jobs. With multiplier effects, visitor spending resulted in \$114,000 total sales, \$43,000 in total personal income, and supported three jobs.

Table G8 Economic Effects of Visitor Trip Spending to the Port of Arlington¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$133			
Direct Effects				
Motel, hotel, cabin, or B&B	12.53	0.31	4.47	6.96
Camping fees	7.57	0.19	2.70	4.20
Restaurants & bars	26.14	0.77	9.16	12.94
Groceries, take-out food/drinks	0.56	0.00	0.08	0.15
Gas & oil	-	-	-	-
Other auto expenses	1.92	0.02	0.64	1.05
Other boat expenses	10.82	0.20	4.39	6.16
Entertainment and recreation fees	11.63	0.43	4.83	7.23
Sporting goods	0.18	0.00	0.05	0.09
Souvenirs and other expenses	0.01	0.00	0.00	0.00
Retail trade	18.59	0.55	9.14	14.93
Wholesale trade	2.11	0.03	0.86	1.42
Total	\$ 92.06	2.51	\$ 36.31	\$ 55.14
Total (multiplier) effects	\$114	03	\$ 43	\$68
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Arlington was 18 in 2002. Boat owners in this area spent \$25,000 on boat-related annual and fixed expenditures in the region. Of this spending, 36 percent was captured by the local economy, yielding \$9,000 in direct sales to related industries. These sales generated \$4,000 in direct personal income and supported 0.2 direct jobs. With multiplier effects, visitor spending resulted in \$10,000 total sales, \$4,000 in total personal income, and supported 0.2 jobs.

**Table G9
Economic Effects of Boat-Related Expenditures Associated with
the Port of Arlington¹ (2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$25			
Direct Effects				
Purchases of new boats	-	-	-	-
Purchases of used boats	-	-	-	-
Boat equipment	0.17	0.00	0.05	0.09
Insurance	0.21	0.00	0.06	0.10
Slip rental	2.75	0.02	0.89	1.41
Storage fees	0.20	0.00	0.07	0.09
Retail trade	4.17	0.12	2.05	3.35
Wholesale trade	1.04	0.02	0.42	0.70
Total	\$8.54	0.16	3.53	5.73
Total (multiplier) effects	\$10	0.2	\$04	\$07
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Astoria

Since no onsite survey was conducted at the Port of Astoria, the spending profiles are only available for marina slip renters. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Astoria was 26,180 (party days) in 2002. Visitors in the area spent \$2,939,000 on trip-related expenditures to the port. Of this spending, 68 percent was captured by the local economy, yielding \$2,001,000 in direct sales to tourism-related firms. These sales generated \$831,000 in direct personal income and supported 45 direct jobs. With multiplier effects, visitor spending resulted in \$2,700,000 total sales, \$1,077,000 in total personal income, and supported 56 jobs.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Astoria was 408 in 2002. Boat owners in this area spent \$1,180,000 on boat-related annual and fixed expenditures in the region. Of this spending, 29 percent was captured by the local economy, yielding \$345,000 in direct sales to related industries. These sales generated \$143,000 in direct personal income and supported five direct jobs.

With multiplier effects, visitor spending resulted in \$464,000 total sales, \$186,000 in total personal income, and supported seven jobs.

Table G10 Economic Effects of Visitor Trip Spending to the Port of Astoria¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$2,939			
Direct Effects				
Motel, hotel, cabin, or B&B	238.77	5.34	88.26	137.44
Camping fees	55.17	1.23	20.38	31.74
Restaurants & bars	555.90	13.83	215.05	303.86
Groceries, take-out food/drinks	13.14	0.07	1.80	3.54
Gas & oil	-	-	-	-
Other auto expenses	67.87	0.86	22.51	36.98
Other boat expenses	437.76	6.74	188.83	263.28
Entertainment and recreation fees	171.07	6.09	71.48	106.93
Sporting goods	3.53	0.03	0.97	1.82
Souvenirs and other expenses	0.16	0.00	0.04	0.06
Retail trade	412.60	10.23	202.86	331.55
Wholesale trade	44.75	0.51	18.52	30.56
Total	\$2,000.68	44.93	\$ 830.71	\$1,247.76
Total (multiplier) effects	\$2,700	56	\$1,077	\$1,684

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Table G11 Economic Effects of Boat-Related Expenditures Associated with the Port of Astoria¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$1,180			
Direct Effects				
Purchases of new boats	2.77	0.02	0.92	1.07
Purchases of used boats	1.03	0.01	0.34	0.40
Boat equipment	4.96	0.04	1.35	2.55
Insurance	10.46	0.14	2.78	4.83
Slip rental	123.56	0.76	42.29	66.70
Storage fees	9.97	0.09	3.19	4.33
Retail trade	157.95	3.92	77.66	126.93
Wholesale trade	34.66	0.39	14.34	23.66
Total	345.37	5.37	142.88	230.47
Total (multiplier) effects	\$464	7	\$186	\$305

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Bandon

Since no onsite survey was conducted at the Port of Bandon, the state average spending in Tables 13 and 15 was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors. Due to the low sample size for the marina slip renters, averages of the port-specific spending profiles and the state averages were used to estimate the port level effects for this segment.

Economic effects of trip spending

Total visitation to the Port of Bandon was 36,753 (party days) in 2002. Visitors in the area spent \$4,002,000 on trip-related expenditures to the port. Of this spending, 73 percent was captured by the local economy, yielding \$2,907,000 in direct sales to tourism-related firms. These sales generated \$1,166,000 in direct personal income and supported 74 direct jobs. With multiplier effects, visitor spending resulted in \$4,052,000 total sales, \$1,569,000 in total personal income, and supported 91 jobs.

Table G12				
Economic Effects of Visitor Trip Spending to the Port of Bandon¹				
(2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$4,002			
Direct Effects				
Motel, hotel, cabin, or B&B	430.92	9.50	159.98	249.11
Camping fees	152.75	3.37	56.71	88.30
Restaurants & bars	863.25	24.49	310.75	439.09
Groceries, take-out food/drinks	15.05	0.08	2.06	4.06
Gas & oil	0.32	-	-	-
Other auto expenses	47.78	0.52	16.46	27.04
Other boat expenses	205.87	3.69	84.66	119.21
Entertainment and recreation fees	506.44	16.98	213.68	319.63
Sporting goods	24.37	0.21	5.44	9.72
Souvenirs and other expenses	3.26	0.04	0.65	1.04
Retail trade	569.78	14.36	280.14	457.86
Wholesale trade	86.96	1.04	35.91	59.25
Total	\$2,906.75	74.27	\$1,166.45	\$1,774.30
Total (multiplier) effects	\$4,052	91	\$1,569	\$2,471
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Bandon was 181 in 2002. Boat owners in this area spent \$477,000 on boat-related annual and fixed expenditures in the region. Of this spending, 38 percent was captured by the local economy, yielding \$180,000 in direct sales to related industries. These sales generated \$72,000 in direct personal income and supported three direct jobs. With multiplier effects, visitor spending resulted in \$247,000 total sales, \$96,000 in total personal income, and supported four jobs.

Table G13 Economic Effects of Boat-Related Expenditures Associated with the Port of Bandon¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$477			
Direct Effects				
Purchases of new boats	0.29	0.00	0.07	0.09
Purchases of used boats	0.10	0.00	0.03	0.03
Boat equipment	14.06	0.12	3.14	5.61
Insurance	3.96	0.04	1.21	2.10
Slip rental	51.16	0.41	15.17	23.92
Storage fees	2.41	0.02	0.75	1.02
Retail trade	85.82	2.16	42.19	68.96
Wholesale trade	22.25	0.27	9.19	15.16
Total	180.05	3.02	71.75	116.88
Total (multiplier) effects	\$247	04	\$96	\$158
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Brookings Harbor

Since no onsite survey was conducted at the Port of Brookings Harbor, spending profiles are only available for marina slip renters. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Brookings Harbor was 121,087 (party days) in 2002. Visitors in the area spent \$15,728,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$10,917,000 in direct sales to tourism-related firms. These sales generated \$4,317,000 in direct personal income and supported 262 direct jobs. With multiplier effects, visitor spending resulted in \$14,631,000 total sales, \$5,580,000 in total personal income, and supported 320 jobs.

**Table G14
Economic Effects of Visitor Trip Spending to the Port of Brookings Harbor¹ (2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$15,728			
Direct Effects				
Motel, hotel, cabin, or B&B	1,534.38	38.79	544.04	847.15
Camping fees	740.09	18.71	262.41	408.62
Restaurants & bars	2,607.02	73.24	943.98	1,333.83
Groceries, take-out food/drinks	64.96	0.35	8.91	17.51
Gas & oil	-	-	-	-
Other auto expenses	574.20	7.47	189.16	310.72
Other boat expenses	2,655.94	50.39	1,073.94	1,507.33
Entertainment and recreation fees	491.36	14.86	210.46	314.81
Sporting goods	22.49	0.21	4.38	7.82
Souvenirs and other expenses	0.67	0.01	0.15	0.26
Retail trade	2,031.31	55.97	998.73	1,632.30
Wholesale trade	195.01	2.21	80.71	133.17
Total	10,917.43	262.20	4,316.85	6,513.53
Total (multiplier) effects	\$14,631	320	\$5,580	\$8,818

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Brookings Harbor was 1,085 in 2002. Boat owners in this area spent \$2,389,000 on boat-related annual and fixed expenditures in the region. Of this spending, 41 percent was captured by the local economy, yielding \$970,000 in direct sales to related industries. These sales generated \$365,000 in direct personal income and supported 16 direct jobs. With multiplier effects, visitor spending resulted in \$1,369,000 total sales, \$526,000 in total personal income, and supported 22 jobs.

**Table G15
Economic Effects of Boat-Related Expenditures Associated with the Port of Brookings Harbor¹ (2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$2,389			
Direct Effects				
Purchases of new boats	1.17	0.01	0.35	0.41
Purchases of used boats	0.44	0.00	0.13	0.15
Boat equipment	21.03	0.20	4.09	7.31
Insurance	14.00	0.10	4.73	8.24
Slip rental	437.34	3.71	124.10	195.65
Storage fees	27.42	0.25	8.50	11.52
Retail trade	373.66	10.30	183.72	300.26
Wholesale trade	94.86	1.07	39.26	64.78
Total	969.92	15.64	364.87	588.31
Total (multiplier) effects	\$1,369	22	\$526	\$846

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Cascade Locks

Both onsite and mailback surveys were conducted for the Port of Cascade Locks. However, due to the low sample size issue, the state average spending in Tables 13 and 15 was used to estimate the total spending and economic effects for marina slip renters, while the averages of port spending and state average were applied to estimate visitor trip spending for boat ramp and transient dock users.

Economic effects of trip spending

Total visitation to the Port of Cascade Locks was 8,111 (party days) in 2002. Visitors in the area spent \$747,000 on trip-related expenditures to the port. Of this spending, 76 percent was captured by the local economy, yielding \$569,000 in direct sales to tourism-related firms. These sales generated \$196,000 in direct personal income and supported 13 direct jobs. With multiplier effects, visitor spending resulted in \$712,000 total sales, \$268,000 in total personal income, and supported 16 jobs.

Table G16 Economic Effects of Visitor Trip Spending to the Port of Cascade Locks¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$747			
Direct Effects				
Motel, hotel, cabin, or B&B	37.53	0.80	14.06	21.89
Camping fees	14.35	0.31	5.38	8.37
Restaurants & bars	116.27	3.19	42.71	60.35
Groceries, take-out food/drinks	30.47	0.17	4.44	7.89
Gas & oil	-	-	-	-
Other auto expenses	20.25	0.25	6.75	11.09
Other boat expenses	111.99	0.70	18.66	30.65
Entertainment and recreation fees	107.14	4.59	43.28	64.74
Sporting goods	4.91	0.05	0.94	1.68
Souvenirs and other expenses	0.78	0.01	0.15	0.24
Retail trade	99.52	2.43	48.93	79.97
Wholesale trade	25.88	0.36	10.61	17.51
Total	569.08	12.84	195.91	304.39
Total (multiplier) effects	\$712	16	\$268	\$427
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Cascade Locks was 48 in 2002. Boat owners in this area spent \$117,000 on boat-related annual and fixed expenditures in the region. Of this spending, 38 percent was captured by the local economy, yielding \$44,000 in direct sales to related industries. These sales generated \$15,000 in direct personal income and supported one direct job. With multiplier effects, visitor spending resulted in \$62,000 total sales, \$22,000 in total personal income, and supported one job.

Table G17 Economic Effects of Boat-Related Expenditures Associated with the Port of Cascade Locks¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$117			
Direct Effects				
Purchases of new boats	0.00	-	-	-
Purchases of used boats	0.00	-	-	-
Boat equipment	3.60	0.03	0.69	1.24
Insurance	0.45	0.00	0.16	0.29
Slip rental	18.69	0.19	4.43	6.99
Storage fees	1.33	0.01	0.38	0.52
Retail trade	15.74	0.38	7.74	12.64
Wholesale trade	3.75	0.05	1.54	2.53
Total	43.55	0.68	14.95	24.21
Total (multiplier) effects	\$62	01	\$22	\$36

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Coos Bay

Since no onsite survey was conducted at the Port of Coos Bay, the spending profiles are only available for marina slip renters. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors. Due to the low sample size for the day-use marina slip renters, the average of the port visitor trip spending and the state average was used to estimate the port level effects for this segment.

Economic effects of trip spending

Total visitation to the Port of Coos Bay was 31,372 (party days) in 2002. Visitors in the area spent \$3,730,000 on trip-related expenditures to the port. Of this spending, 67 percent was captured by the local economy, yielding \$2,506,000 in direct sales to tourism-related firms. These sales generated \$1,010,000 in direct personal income and supported 58 direct jobs. With multiplier effects, visitor spending resulted in \$3,453,000 total sales, \$1,342,000 in total personal income, and supported 72 jobs.

Table G18 Economic Effects of Visitor Trip Spending to the Port of Coos Bay¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$3,730			
Direct Effects				
Motel, hotel, cabin, or B&B	279.29	6.15	103.69	161.45
Camping fees	93.29	2.06	34.63	53.93
Restaurants & bars	705.16	20.00	253.84	358.68
Groceries, take-out food/drinks	18.49	0.10	2.53	4.98
Gas & oil	0.69	-	-	-
Other auto expenses	72.79	0.78	25.08	41.18
Other boat expenses	601.34	10.79	247.30	348.22
Entertainment and recreation fees	128.76	4.32	54.33	81.26
Sporting goods	9.82	0.08	2.19	3.91
Souvenirs and other expenses	1.96	0.02	0.39	0.62
Retail trade	509.85	12.85	250.68	409.70
Wholesale trade	84.55	1.01	34.91	57.61
Total	2,505.98	58.18	1,009.57	1,521.55
Total (multiplier) effects	\$3,453	72	\$1,342	\$2,099

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Coos Bay was 292 in 2002. Boat owners in this area spent \$1,034,000 on boat-related annual and fixed expenditures in the region. Of this spending, 44 percent was captured by the local economy, yielding \$453,000 in direct sales to related industries. These sales generated \$178,000 in direct personal income and supported seven direct jobs. With multiplier effects, visitor spending resulted in \$625,000 total sales, \$240,000 in total personal income, and supported 10 jobs.

Table G19 Economic Effects of Boat-Related Expenditures Associated with the Port of Coos Bay¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$1,034			
Direct Effects				
Purchases of new boats	0.44	0.00	0.11	0.13
Purchases of used boats	0.18	0.00	0.05	0.05
Boat equipment	36.03	0.30	8.05	14.37
Insurance	6.74	0.07	2.05	3.57
Slip rental	138.98	1.11	41.21	64.98
Storage fees	15.70	0.14	4.91	6.65
Retail trade	200.60	5.06	98.63	161.20
Wholesale trade	54.76	0.65	22.61	37.31
Total	453.44	7.34	177.61	288.26
Total (multiplier) effects	\$625	10	\$240	\$394

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Garibaldi

Both onsite and mailback surveys were conducted for the Port of Garibaldi. The sample sizes were sufficient for all visitor segments and the port-specific spending profiles were applied to estimate total spending and economic effects of port recreation users to the local economy.

Economic effects of trip spending

Total visitation to the Port of Garibaldi was 64,350 (party days) in 2002. Visitors in the area spent \$6,747,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by local economy, yielding \$4,666,000 in direct sales to tourism-related firms. These sales generated \$1,847,000 in direct personal income and supported 118 direct jobs. With multiplier effects, visitor spending resulted in \$6,446,000 total sales, \$2,453,000 in total personal income, and supported 143 jobs.

Table G20 Economic Effects of Visitor Trip Spending to the Port of Garibaldi¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$6,747			
Direct Effects				
Motel, hotel, cabin, or B&B	998.62	24.76	356.55	555.20
Camping fees	260.84	6.47	93.13	145.02
Restaurants & bars	1,296.97	36.76	467.16	660.09
Groceries, take-out food/drinks	29.35	0.16	4.02	7.91
Gas & oil	0.21	-	-	-
Other auto expenses	64.96	0.75	22.02	36.17
Other boat expenses	758.84	13.34	314.43	441.51
Entertainment and recreation fees	300.25	9.61	127.56	190.82
Sporting goods	6.96	0.06	1.90	3.58
Souvenirs and other expenses	0.30	0.00	0.07	0.12
Retail trade	875.82	24.63	430.61	703.78
Wholesale trade	72.94	1.02	29.89	49.32
Total	4,666.06	117.56	1,847.35	2,793.52
Total (multiplier) effects	\$6,446	143	\$2,453	\$3,850
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Garibaldi was 619 in 2002. Boat owners in this area spent \$1,127,000 on boat-related annual and fixed expenditures in the region. Of this spending, 39 percent was captured by the local economy, yielding \$434,000 in direct sales to related industries. These sales generated \$168,000 in direct personal income and supported eight direct jobs. With multiplier effects, visitor spending resulted in \$589,000 total sales, \$223,000 in total personal income, and supported 11 jobs.

Table G21 Economic Effects of Boat-Related Expenditures Associated with the Port of Garibaldi¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$1,127			
Direct Effects				
Purchases of new boats	0.31	0.00	0.07	0.09
Purchases of used boats	0.14	0.00	0.03	0.04
Boat equipment	9.19	0.07	2.51	4.73
Insurance	13.15	0.10	4.43	7.71
Slip rental	142.00	1.42	34.82	54.89
Storage fees	11.46	0.11	3.43	4.65
Retail trade	203.77	5.73	100.19	163.74
Wholesale trade	53.79	0.75	22.04	36.37
Total	433.82	8.19	167.53	272.23
Total (multiplier) effects	\$589	11	\$223	\$367
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Gold Beach

Both onsite and mailback surveys were conducted for the Port of Gold Beach. However, due to the low sample size issue, the averages of port spending and state average were applied to estimate total trip spending and economic effects for overnight marina slip renters and other non-boating visitors, while the state average spending was used to estimate the total spending and economic effects for day use marina slip renters and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Gold Beach was 27,969 (party days) in 2002. Visitors in the area spent \$2,279,000 on trip-related expenditures to the port. Of this spending, 70 percent was captured by the local economy, yielding \$1,596,000 in direct sales to tourism-related firms. These sales generated \$627,000 in direct personal income and supported 41 direct jobs. With multiplier effects, visitor spending resulted in \$2,157,000 total sales, \$816,000 in total personal income, and supported 50 jobs.

Table G22 Economic Effects of Visitor Trip Spending to the Port of Gold Beach¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$6,747			
Direct Effects				
Motel, hotel, cabin, or B&B	170.31	4.31	60.39	94.03
Camping fees	205.96	5.21	73.03	113.71
Restaurants & bars	537.27	15.09	194.54	274.89
Groceries, take-out food/drinks	10.86	0.06	1.49	2.93
Gas & oil	-	-	-	-
Other auto expenses	41.55	0.54	13.69	22.48
Other boat expenses	146.82	2.79	59.37	83.33
Entertainment and recreation fees	148.54	4.49	63.62	95.17
Sporting goods	3.31	0.03	0.64	1.15
Souvenirs and other expenses	0.12	0.00	0.03	0.05
Retail trade	301.91	8.32	148.44	242.61
Wholesale trade	28.93	0.33	11.97	19.75
Total	1,595.58	41.16	627.20	950.09
Total (multiplier) effects	\$2,157	50	\$816	\$1,297
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Garibaldi was 619 in 2002. Boat owners in this area spent \$1,127,000 on boat-related annual and fixed expenditures in the region. Of this spending, 39 percent was captured by the local economy, yielding \$434,000 in direct sales to related industries. These sales generated \$168,000 in direct personal income and supported eight direct jobs. With multiplier effects, visitor spending resulted in \$589,000 total sales, \$223,000 in total personal income, and supported 11 jobs.

Table G23 Economic Effects of Boat-Related Expenditures Associated with the Port of Gold Beach¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$460			
Direct Effects				
Purchases of new boats	0.20	0.00	0.06	0.07
Purchases of used boats	0.12	0.00	0.04	0.04
Boat equipment	4.08	0.04	0.79	1.42
Insurance	3.09	0.02	1.04	1.82
Slip rental	31.75	0.27	9.01	14.20
Storage fees	17.51	0.16	5.42	7.35
Retail trade	73.07	2.01	35.93	58.72
Wholesale trade	18.47	0.21	7.65	12.62
Total	148.29	2.71	59.94	96.24
Total (multiplier) effects	\$205	04	\$81	\$132
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Hood River

Both onsite and mailback surveys were conducted for the Port of Hood River. However, due to the low sample size issue, the averages of port spending and state average were applied to estimate total trip spending and economic effects for marina slip renters and day use of other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Hood River was 42,139 (party days) in 2002. Visitors in the area spent \$4,139,000 on trip-related expenditures to the port. Of this spending, 74 percent was captured by the local economy, yielding \$3,044,000 in direct sales to tourism-related firms. These sales generated \$1,210,000 in direct personal income and supported 81 direct jobs. With multiplier effects, visitor spending resulted in \$4,229,000 total sales, \$1,611,000 in total personal income, and supported 98 jobs.

Table G24 Economic Effects of Visitor Trip Spending to the Port of Hood River¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$4,139			
Direct Effects				
Motel, hotel, cabin, or B&B	279.26	5.64	106.35	165.59
Camping fees	115.79	2.34	44.09	68.66
Restaurants & bars	678.60	18.72	248.41	351.00
Groceries, take-out food/drinks	130.14	0.73	18.95	33.70
Gas & oil	-	-	-	-
Other auto expenses	55.16	0.66	18.57	30.50
Other boat expenses	94.67	1.63	39.50	55.37
Entertainment and recreation fees	786.62	31.26	322.42	482.32
Sporting goods	68.45	0.66	13.12	23.44
Souvenirs and other expenses	3.97	0.05	0.76	1.21
Retail trade	698.45	17.31	343.41	561.26
Wholesale trade	133.07	1.86	54.53	89.98
Total	3,044.20	80.84	1,210.11	1,863.04
Total (multiplier) effects	\$4,229	98	\$1,611	\$2,558
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Hood River was 404 in 2002. Boat owners in this area spent \$440,000 on boat-related annual and fixed expenditures in the region. Of this spending, 33 percent was captured by the local economy, yielding \$145,000 in direct sales to related industries. These sales generated \$52,000 in direct personal income and supported two direct jobs. With multiplier effects, visitor spending resulted in \$201,000 in total sales, \$73,000 in total personal income, and supported three jobs.

**Table G25
Economic Effects of Boat-Related Expenditures Associated with the
Port of Hood River¹ (2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$440			
Direct Effects				
Purchases of new boats	0.00	-	-	-
Purchases of used boats	0.00	-	-	-
Boat equipment	10.91	0.10	2.09	3.74
Insurance	6.20	0.03	2.30	3.99
Slip rental	54.39	0.54	13.35	21.04
Storage fees	2.74	0.03	0.81	1.09
Retail trade	58.41	1.45	28.72	46.94
Wholesale trade	12.61	0.18	5.17	8.52
Total	145.26	2.33	52.43	85.33
Total (multiplier) effects	\$201	03	\$73	\$119
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Newport

Both onsite and mailback surveys were conducted for the Port of Newport. The sample sizes were sufficient for most visitor segments and the port-specific spending profiles were applied to estimate total spending and economic effects of port recreation users to the local economy. The only exceptions are for the day-use marina slip renters and other non-boating visitors, where the averages of port trip spending and state spending were used due to low sample sizes.

Economic effects of trip spending

Total visitation to the Port of Newport was 64,220 (party days) in 2002. Visitors in the area spent \$6,591,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$4,540,000 in direct sales to tourism-related firms. These sales generated \$1,861,000 in direct personal income and supported 100 direct jobs. With multiplier effects, visitor spending resulted in \$6,103,000 in total sales, \$2,380,000 in total personal income, and supported 122 jobs.

Table G26 Economic Effects of Visitor Trip Spending to the Port of Newport¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$6,591			
Direct Effects				
Motel, hotel, cabin, or B&B	743.75	15.60	280.20	436.30
Camping fees	603.15	12.65	227.23	353.82
Restaurants & bars	1,255.57	31.74	481.86	680.85
Groceries, take-out food/drinks	24.15	0.13	3.31	6.51
Gas & oil	0.12	-	-	-
Other auto expenses	82.15	1.00	27.54	45.24
Other boat expenses	721.55	10.88	312.87	436.49
Entertainment and recreation fees	163.67	4.32	71.32	106.68
Sporting goods	9.01	0.07	2.05	3.66
Souvenirs and other expenses	3.59	0.04	0.87	1.39
Retail trade	865.55	22.36	425.57	695.53
Wholesale trade	67.41	0.77	27.89	46.02
Total	4,539.67	99.56	1,860.72	2,812.49
Total (multiplier) effects	\$6,103	122	\$2,380	\$3,777

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Newport was 925 in 2002. Boat owners in this area spent \$1,918,000 on boat-related annual and fixed expenditures in the region. Of this spending, 35 percent was captured by the local economy, yielding \$671,000 in direct sales to related industries. These sales generated \$270,000 in direct personal income and supported 12 direct jobs. With multiplier effects, visitor spending resulted in \$893,000 in total sales, \$346,000 in total personal income, and supported 16 jobs.

Table G27 Economic Effects of Boat-Related Expenditures Associated with the Port of Newport¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$1,918			
Direct Effects				
Purchases of new boats	0.84	0.01	0.22	0.26
Purchases of used boats	0.40	0.00	0.11	0.12
Boat equipment	21.46	0.18	4.88	8.72
Insurance	3.39	0.02	1.17	2.03
Slip rental	190.65	1.84	48.47	76.43
Storage fees	5.42	0.05	1.58	2.14
Retail trade	357.51	9.24	175.78	287.28
Wholesale trade	91.75	1.05	37.96	62.63
Total	671.42	12.39	270.16	439.61
Total (multiplier) effects	\$893	16	\$346	\$576

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Port Orford

No onsite survey was conducted at this port and the sample size for the marina slip renter segment was too small to be generalized. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects.

Economic effects of trip spending

Total visitation to the Port of Port Orford was 2,360 (party days) in 2002. Visitors in the area spent \$179,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$123,000 in direct sales to tourism-related firms. These sales generated \$50,000 in direct personal income and supported three direct jobs. With multiplier effects, visitor spending resulted in \$167,000 total sales, \$64,000 in total personal income, and supported four jobs.

Table G28 Economic Effects of Visitor Trip Spending to the Port of Port Orford¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$179			
Direct Effects				
Motel, hotel, cabin, or B&B	14.32	0.36	5.08	7.91
Camping fees	8.71	0.22	3.09	4.81
Restaurants & bars	37.10	1.04	13.43	18.98
Groceries, take-out food/drinks	0.75	0.00	0.10	0.20
Gas & oil	-	-	-	-
Other auto expenses	1.32	0.02	0.43	0.71
Other boat expenses	7.10	0.13	2.87	4.03
Entertainment and recreation fees	25.17	0.76	10.78	16.13
Sporting goods	0.40	0.00	0.08	0.14
Souvenirs and other expenses	0.01	0.00	0.00	0.00
Retail trade	25.99	0.72	12.78	20.88
Wholesale trade	2.42	0.03	1.00	1.65
Total	123.27	3.29	49.64	75.44
Total (multiplier) effects	\$167	04	\$64	\$102
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Port Orford was 39 in 2002. Boat owners in this area spent \$27,000 on boat-related annual and fixed expenditures in the region. Of this spending, 30 percent was captured by the local economy, yielding \$8,000 in direct sales to related industries. These sales generated \$4,000 in direct personal income and supported 0.19 direct jobs. With multiplier effects, visitor spending resulted in \$11,000 total sales, \$5,000 in total personal income, and supported 0.24 jobs.

Table G29 Economic Effects of Boat-Related Expenditures Associated with the Port of Port Orford¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$27			
Direct Effects				
Purchases of new boats	0.03	0.00	0.01	0.01
Purchases of used boats	-	-	-	-
Boat equipment	0.35	0.00	0.07	0.12
Insurance	0.31	0.00	0.10	0.18
Slip rental	-	-	-	-
Storage fees	-	-	-	-
Retail trade	6.14	0.17	3.02	4.94
Wholesale trade	1.57	0.02	0.65	1.07
Total	8.40	0.19	3.85	6.32
Total (multiplier) effects	\$11	0.24	\$05	\$08
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Siuslaw

Both onsite and mailback surveys were conducted for the Port of Siuslaw. However, due to low sample sizes for some segments, the state average spending in Tables 13 and 15 was used to estimate the total spending and economic effects for day-use marina slip renters and other non-boating visitors, while the average of port and state average were applied to estimate visitor trip spending for overnight non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Siuslaw was 40,581 (party days) in 2002. Visitors in the area spent \$2,857,000 on trip-related expenditures to the port. Of this spending, 75 percent was captured by the local economy, yielding \$2,148,000 in direct sales to tourism-related firms. These sales generated \$811,000 in direct personal income and supported 45 direct jobs. With multiplier effects, visitor spending resulted in \$3,318,000 in total sales, \$1,250,000 in total personal income, and supported 61 jobs.

Table G30 Economic Effects of Visitor Trip Spending to the Port of Siuslaw¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$2,857			
Direct Effects				
Motel, hotel, cabin, or B&B	108.63	2.42	40.18	62.56
Camping fees	359.50	8.02	132.96	207.03
Restaurants & bars	515.34	13.49	194.25	274.47
Groceries, take-out food/drinks	223.82	1.31	29.07	51.71
Gas & oil	6.24	-	-	-
Other auto expenses	27.89	0.29	9.66	15.87
Other boat expenses	284.15	4.98	117.74	165.76
Entertainment and recreation fees	105.48	4.60	42.43	63.48
Sporting goods	3.60	0.03	0.72	1.29
Souvenirs and other expenses	0.81	0.01	0.15	0.23
Retail trade	405.15	9.13	199.21	325.57
Wholesale trade	107.74	1.00	44.92	74.12
Total	2,148.35	45.30	811.29	1,242.08
Total (multiplier) effects	\$3,318	61	\$1,250	\$1,943
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Siuslaw was 629 in 2002. Boat owners in this area spent \$432,000 on boat-related annual and fixed expenditures in the region. Of this spending, 33 percent was captured by the local economy, yielding \$143,000 in direct sales to related industries. These sales generated \$61,000 in direct personal income and supported two direct jobs. With multiplier effects, visitor spending resulted in \$218,000 total sales, \$91,000 in total personal income, and supported three jobs.

Table G31 Economic Effects of Boat-Related Expenditures Associated with the Port of Siuslaw¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$432			
Direct Effects				
Purchases of new boats	0.39	0.00	0.10	0.12
Purchases of used boats	0.05	0.00	0.01	0.02
Boat equipment	4.03	0.04	0.81	1.44
Insurance	14.98	0.11	5.02	8.73
Slip rental	13.72	0.11	4.04	6.37
Storage fees	6.25	0.05	2.01	2.72
Retail trade	83.34	1.88	40.98	66.97
Wholesale trade	20.00	0.19	8.34	13.76
Total	142.77	2.39	61.31	100.13
Total (multiplier) effects	\$218	03	\$91	\$146
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of St. Helens

Since no onsite survey was conducted at the Port of St. Helens, spending profiles are only available for marina slip renters. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of St. Helens was 38,914 (party days) in 2002. Visitors in the area spent \$3,874,000 on trip-related expenditures to the port. Of this spending, 65 percent was captured by the local economy, yielding \$2,504,000 in direct sales to tourism-related firms. These sales generated \$993,000 in direct personal income and supported 73 direct jobs. With multiplier effects, visitor spending resulted in \$3,236,000 in total sales, \$1,228,000 in total personal income, and supported 83 jobs.

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$3,874			
Direct Effects				
Motel, hotel, cabin, or B&B	148.94	3.31	55.13	85.84
Camping fees	68.58	1.53	25.38	39.52
Restaurants & bars	712.91	21.22	248.95	351.77
Groceries, take-out food/drinks	17.48	0.10	2.40	4.71
Gas & oil	0.61	-	-	-
Other auto expenses	78.39	0.89	26.72	43.89
Other boat expenses	453.04	8.99	179.84	254.01
Entertainment and recreation fees	347.46	20.91	128.66	192.49
Sporting goods	7.64	0.06	2.09	3.93
Souvenirs and other expenses	3.26	0.04	0.56	0.90
Retail trade	612.65	15.19	301.22	492.31
Wholesale trade	52.81	0.67	21.74	35.87
Total	2,503.78	72.91	992.69	1,505.24
Total (multiplier) effects	\$3,236	83	\$1,228	\$1,959
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of St. Helens was 440 in 2002. Boat owners in this area spent \$608,000 on boat-related annual and fixed expenditures in the region. Of this spending, 39 percent was captured by the local economy, yielding \$239,000 in direct sales to related industries. These sales generated \$93,000 in direct personal income and supported four direct jobs. With multiplier effects, visitor spending resulted in \$307,000 in total sales, \$115,000 in total personal income, and supported five jobs.

Table G33 Economic Effects of Boat-Related Expenditures Associated with the Port of St. Helens¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$608			
Direct Effects				
Purchases of new boats	0.08	0.00	0.03	0.03
Purchases of used boats	0.02	0.00	0.01	0.01
Boat equipment	5.12	0.04	1.40	2.63
Insurance	3.89	0.03	1.35	2.35
Slip rental	86.45	0.83	22.07	34.79
Storage fees	1.87	0.02	0.60	0.82
Retail trade	112.12	2.78	55.13	90.10
Wholesale trade	29.80	0.38	12.27	20.24
Total	239.34	4.07	92.85	150.97
Total (multiplier) effects	\$307	05	\$115	\$193
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of The Dalles

Since no onsite survey was conducted at the Port of The Dalles, spending profiles are only available for marina slip renters. Due to the low sample size issue, the average of port spending and state average was used for the marina slip renter's trip and durable goods spending. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of The Dalles was 35,915 (party days) in 2002. Visitors in the area spent \$3,278,000 on trip-related expenditures to the port. Of this spending, 73 percent was captured by the local economy, yielding \$2,386,000 in direct sales to tourism-related firms. These sales generated \$934,000 in direct personal income and supported 58 direct jobs. With multiplier effects, visitor spending resulted in \$3,293,000 in total sales, \$1,241,000 in total personal income, and supported 71 jobs.

**Table G34
Economic Effects of Visitor Trip Spending to the Port of The Dalles¹
(2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$3,278			
Direct Effects				
Motel, hotel, cabin, or B&B	141.57	2.86	53.91	83.95
Camping fees	84.33	1.70	32.11	50.00
Restaurants & bars	639.50	17.64	234.10	330.78
Groceries, take-out food/drinks	160.97	0.90	23.44	41.69
Gas & oil	-	-	-	-
Other auto expenses	43.83	0.52	14.75	24.23
Other boat expenses	297.31	5.12	124.03	173.88
Entertainment and recreation fees	380.92	15.14	156.13	233.57
Sporting goods	30.70	0.29	5.89	10.51
Souvenirs and other expenses	2.40	0.03	0.46	0.73
Retail trade	501.41	12.42	246.53	402.92
Wholesale trade	102.97	1.44	42.19	69.62
Total	2,385.91	58.07	933.55	1,421.89
Total (multiplier) effects	\$3,293	71	\$1,241	\$1,955

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of The Dalles was 455 in 2002. Boat owners in this area spent \$516,000 on boat-related annual and fixed expenditures in the region. Of this spending, 39 percent was captured by the local economy, yielding \$203,000 in direct sales to related industries. These sales generated \$75,000 in direct personal income and supported three direct jobs. With multiplier effects, visitor spending resulted in \$281,000 total sales, \$103,000 in total personal income, and supported five jobs.

**Table G35
Economic Effects of Boat-Related Expenditures Associated with the
Port of The Dalles¹ (2002)**

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$516			
Direct Effects				
Purchases of new boats	0.00	-	-	-
Purchases of used boats	0.00	-	-	-
Boat equipment	22.13	0.21	4.24	7.58
Insurance	7.36	0.03	2.73	4.74
Slip rental	60.59	0.61	14.87	23.44
Storage fees	2.79	0.03	0.82	1.12
Retail trade	87.88	2.18	43.21	70.62
Wholesale trade	21.98	0.31	9.00	14.86
Total	202.73	3.36	74.87	122.35
Total (multiplier) effects	\$281	05	\$103	\$169

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Toledo

No onsite survey was conducted at this port and the sample size for the marina slip renter segment was too small to be generalized. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects.

Economic effects of trip spending

Total visitation to the Port of Toledo was 7,133 (party days) in 2002. Visitors in the area spent \$676,000 on trip-related expenditures to the port. Of this spending, 67 percent was captured by the local economy, yielding \$456,000 in direct sales to tourism-related firms. These sales generated \$191,000 in direct personal income and supported 10 direct jobs. With multiplier effects, visitor spending resulted in \$610,000 total sales, \$242,000 in total personal income, and supported 12 jobs.

Table G36 Economic Effects of Visitor Trip Spending to the Port of Toledo¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$676			
Direct Effects				
Motel, hotel, cabin, or B&B	37.91	0.79	14.28	22.24
Camping fees	22.90	0.48	8.63	13.43
Restaurants & bars	133.39	3.37	51.19	72.33
Groceries, take-out food/drinks	2.85	0.02	0.39	0.77
Gas & oil	0.01	-	-	-
Other auto expenses	12.73	0.15	4.27	7.01
Other boat expenses	73.05	1.10	31.67	44.19
Entertainment and recreation fees	65.32	1.72	28.47	42.58
Sporting goods	1.42	0.01	0.32	0.58
Souvenirs and other expenses	0.38	0.00	0.09	0.15
Retail trade	98.35	2.54	48.36	79.03
Wholesale trade	7.64	0.09	3.16	5.21
Total	455.95	10.29	190.83	287.52
Total (multiplier) effects	\$610	12	\$242	\$382
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Toledo was 87 in 2002. Boat owners in this area spent \$122,000 on boat-related annual and fixed expenditures in the region. Of this spending, 34 percent was captured by the local economy, yielding \$42,000 in direct sales to related industries. These sales generated \$16,000 in direct personal income and supported one direct job. With multiplier effects, visitor spending resulted in \$57,000 in total sales, \$21,000 in total personal income, and supported one job.

Table G37 Economic Effects of Boat-Related Expenditures Associated with the Port of Toledo¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$122			
Direct Effects				
Purchases of new boats	0.06	0.00	0.02	0.02
Purchases of used boats	0.02	0.00	0.00	0.01
Boat equipment	1.15	0.01	0.26	0.47
Insurance	1.26	0.01	0.43	0.75
Slip rental	13.56	0.13	3.45	5.44
Storage fees	0.96	0.01	0.28	0.38
Retail trade	20.25	0.52	9.96	16.27
Wholesale trade	5.04	0.06	2.09	3.44
Total	42.30	0.74	16.48	26.77
Total (multiplier) effects	\$57	01	\$21	\$36
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

Port of Umatilla

Since no onsite survey was conducted at the Port of Umatilla, spending profiles are only available for marina slip renters. Due to the low sample size issue, the average of port spending and the state average were used for the marina slip renter's trip and durable goods spending. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Umatilla was 13,752 (party days) in 2002. Visitors in the area spent \$1,261,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$871,000 in direct sales to tourism-related firms. These sales generated \$338,000 in direct personal income and supported 21 direct jobs. With multiplier effects, visitor spending resulted in \$1,168,000 in total sales, \$441,000 in total personal income, and supported 25 jobs.

Table G38 Economic Effects of Visitor Trip Spending to the Port of Umatilla¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$1,261			
Direct Effects				
Motel, hotel, cabin, or B&B	58.35	1.31	21.52	33.51
Camping fees	34.53	0.78	12.73	19.82
Restaurants & bars	260.59	7.49	93.09	131.53
Groceries, take-out food/drinks	58.93	0.34	8.17	14.52
Gas & oil	-	-	-	-
Other auto expenses	20.85	0.24	7.06	11.60
Other boat expenses	116.16	2.31	46.09	65.05
Entertainment and recreation fees	101.22	2.99	43.50	65.06
Sporting goods	1.99	0.02	0.54	1.03
Souvenirs and other expenses	0.06	0.00	0.01	0.02
Retail trade	194.71	4.82	95.73	156.47
Wholesale trade	24.08	0.31	9.91	16.36
Total	871.47	20.60	338.35	514.96
Total (multiplier) effects	\$1,168	25	\$441	\$693

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Umatilla was 196 in 2002. Boat owners in this area spent \$306,000 on boat-related annual and fixed expenditures in the region. Of this spending, 36 percent was captured by the local economy, yielding \$111,000 in direct sales to related industries. These sales generated \$44,000 in direct personal income and supported two direct jobs. With multiplier effects, visitor spending resulted in \$146,000 total sales, \$57,000 in total personal income, and supported two jobs.

Table G39 Economic Effects of Boat-Related Expenditures Associated with the Port of Umatilla¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$306			
Direct Effects				
Purchases of new boats	0.08	0.00	0.02	0.03
Purchases of used boats	0.03	0.00	0.01	0.01
Boat equipment	1.78	0.01	0.49	0.92
Insurance	4.91	0.03	1.70	2.95
Slip rental	44.54	0.32	14.05	22.15
Storage fees	1.80	0.02	0.57	0.77
Retail trade	46.27	1.14	22.75	37.18
Wholesale trade	11.23	0.14	4.62	7.63
Total	110.64	1.67	44.21	71.64
Total (multiplier) effects	\$146	02	\$57	\$93

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Port of Umpqua

Since no onsite survey was conducted at the Port of Umpqua, spending profiles are only available for marina slip renters. Due to the low sample size issue, the average of port spending and state average was used for the marina slip renter's trip spending. The state average spending in Tables 13 and 15 in the main text was used to estimate the total spending and economic effects for boat ramp and transient dock users and other non-boating visitors.

Economic effects of trip spending

Total visitation to the Port of Umatilla was 13,752 (party days) in 2002. Visitors in the area spent \$1,261,000 on trip-related expenditures to the port. Of this spending, 69 percent was captured by the local economy, yielding \$871,000 in direct sales to tourism-related firms. These sales generated \$338,000 in direct personal income and supported 21 direct jobs. With multiplier effects, visitor spending resulted in \$1,168,000 in total sales, \$441,000 in total personal income, and supported 25 jobs.

Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$8,036			
Direct Effects				
Motel, hotel, cabin, or B&B	686.11	17.27	243.64	379.39
Camping fees	384.23	9.67	136.44	212.46
Restaurants & bars	1,612.92	45.02	586.25	828.37
Groceries, take-out food/drinks	29.90	0.16	4.10	8.06
Gas & oil	-	-	-	-
Other auto expenses	202.09	2.48	67.57	111.00
Other boat expenses	1,492.78	26.84	614.39	862.03
Entertainment and recreation fees	300.56	9.33	128.27	191.86
Sporting goods	10.48	0.08	2.67	4.77
Souvenirs and other expenses	0.60	0.01	0.14	0.22
Retail trade	963.40	25.50	473.68	774.16
Wholesale trade	153.10	2.16	62.70	103.46
Total	5,836.17	138.53	2,319.85	3,475.79
Total (multiplier) effects	\$8,134	171	\$3,146	\$4,903

¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.

Economic effects of durable goods and annual costs

The total number of boats associated with the Port of Umpqua was 745 in 2002. Boat owners in this area spent \$2,064,000 on boat-related annual and fixed expenditures in the region. Of this spending, 40 percent was captured by the local economy, yielding \$821,000 in direct sales to related industries. These sales generated \$313,000 in direct personal income and supported 14 direct jobs. With multiplier effects, visitor spending resulted in \$1,147,000 in total sales, \$437,000 in total personal income, and supported 19 jobs.

Table G41 Economic Effects of Boat-Related Expenditures Associated with the Port of Umpqua¹ (2002)				
Sector/Spending Category	Sales \$000's	Jobs	Income \$000's	Value Added \$000's
Total Spending	\$2,064			
Direct Effects				
Purchases of new boats	7.79	0.07	2.24	2.61
Purchases of used boats	1.99	0.02	0.57	0.67
Boat equipment	17.97	0.13	4.58	8.17
Insurance	14.98	0.08	5.39	9.37
Slip rental	302.22	2.84	78.78	124.20
Storage fees	24.29	0.22	7.45	10.10
Retail trade	360.89	9.55	177.44	290.00
Wholesale trade	90.40	1.28	37.02	61.09
Total	820.53	14.19	313.46	506.22
Total (multiplier) effects	\$1,147	19	\$437	\$710
¹ Economic effects include only spending within 30 miles of the port to the local economy. Port regions are as defined in Table 1.				

REPORT DOCUMENTATION PAGE

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14. ABSTRACT This report documents the regional economic significance of recreational use associated with 18 Oregon coastal and river ports in 2002. Recreation use, visitor spending and regional economic effects were estimated using visitor surveys and regional economic input-output models. This study found that in 2002, over 700,000 recreation visits (in party-days) occurred at the 18 surveyed Oregon ports, resulting in \$75 million in trip spending and \$31 million in purchases of boat-related durable goods and other fixed costs. The spending by Port visitors was a significant economic factor to the State of Oregon, resulting in \$109 million in sales, \$41 million in personal income, and 1,670 jobs to the State's economy.					
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