

Sport Fishing Expenditures and Economic Impacts on Public Lands in Washington

For:
Northwest Sportfishing Industry Association

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Summary

Angler spending and economic impacts were estimated for Washington statewide and for each of seven management regions defined by the Washington Department of Fish and Wildlife. In 2011, anglers spent a total of \$1,186.3 million on trip-related and equipment purchases in Washington. Overall, approximately 65.2% of boating-related outdoor recreation occurs on public lands in Washington.¹ After accounting for differences in fishing activity across the seven regions in Washington, an estimated \$773.9 million of the angler spending is estimated to be related to fishing that takes place on public lands. Including the statewide economic multiplier effects, this spending supports 10,575 jobs and \$407.9 million of income statewide. Additionally, the total economic activity supported by fishing on public lands results in \$78.0 million in state and local taxes and \$98.0 million in federal taxes. The breakdown for each region is shown in the summary table below.

Summary: Estimated fishing-related economic impacts on public lands in Washington by resident and nonresident anglers, 2011.

	Retail Sales (\$millions)	Economic Output (\$millions)	Labor Income (\$millions)	State & Local Taxes (\$millions)	Federal Taxes (\$millions)	Jobs
Eastern	\$154.1	\$254.2	\$81.2	\$15.5	\$19.5	2,106
North Central	\$240.2	\$396.1	\$126.6	\$24.2	\$30.4	3,283
South Central	\$47.6	\$78.5	\$25.1	\$4.8	\$6.0	651
North Puget Sound	\$132.6	\$218.7	\$69.9	\$13.4	\$16.8	1,812
Southwest	\$74.7	\$123.2	\$39.4	\$7.5	\$9.5	1,021
Coastal	\$124.6	\$205.4	\$65.6	\$12.6	\$15.8	1,702
Statewide Total	\$773.9	\$1,276.2	\$407.9	\$78.0	\$98.0	10,575

¹ Outdoor Industry Association. 2012 Survey of Outdoor Recreation.

Public Lands in the Washington Regions

Angler spending and economic impacts were estimated for Washington statewide and for each of seven regions recognized by the State of Washington. Figure 1 shows the location of each of these regions and Table 1 details the county assignments to the regions.

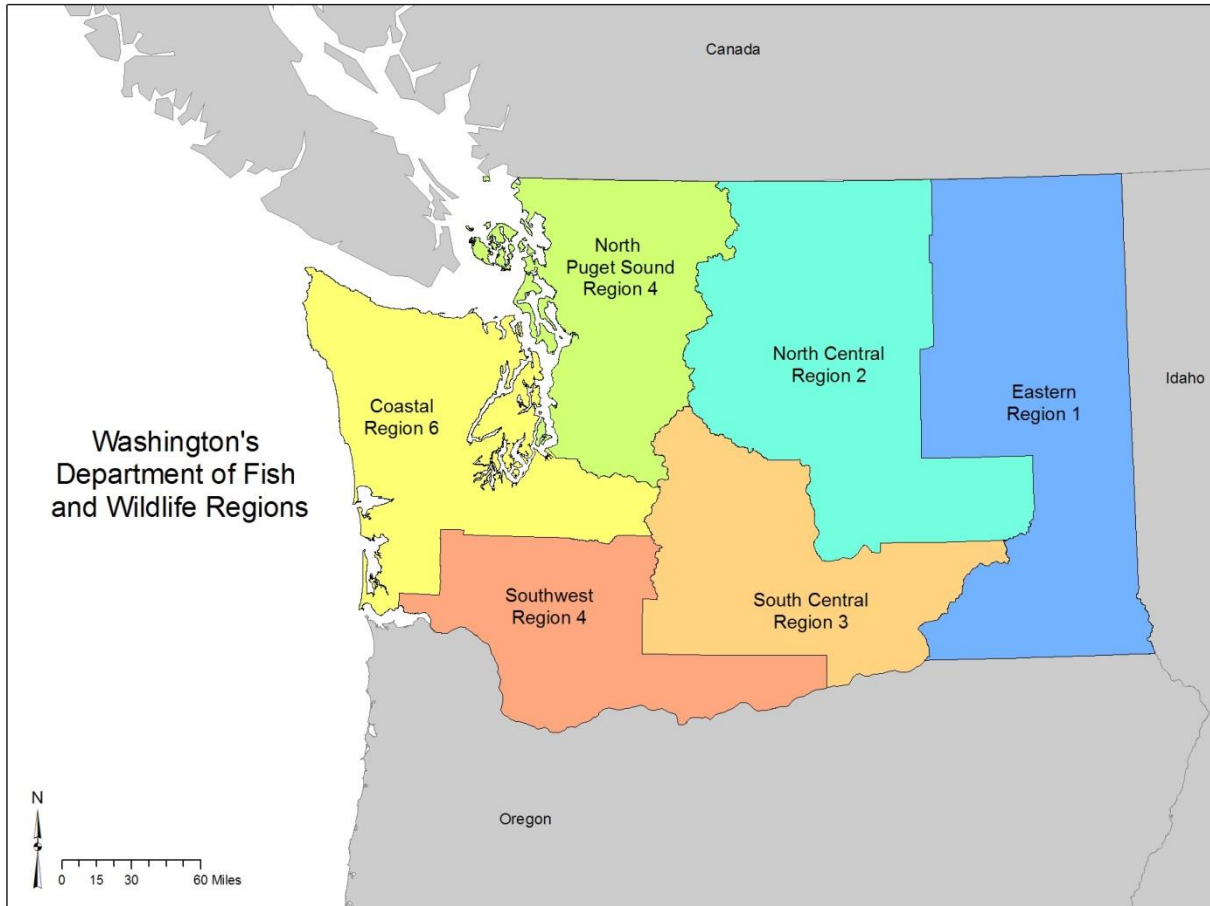
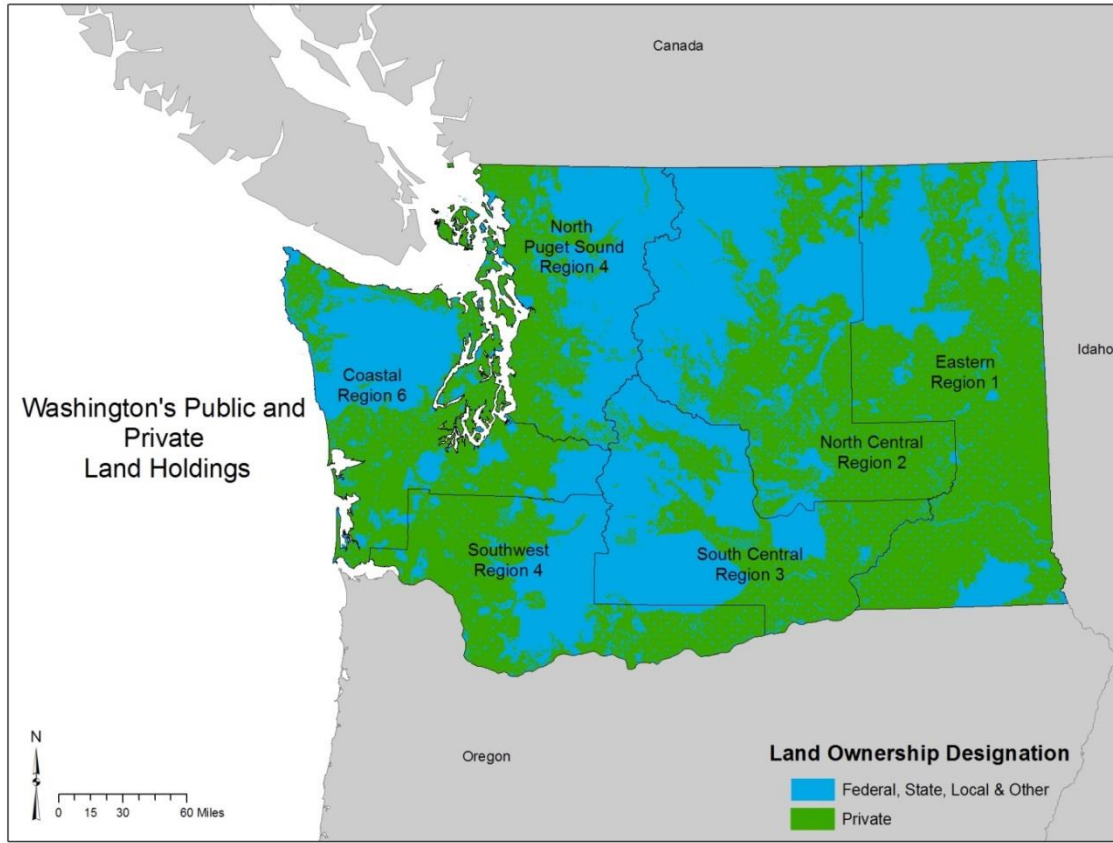


Figure 1. Washington regions

Table 1. County assignments to regions

Coastal	North Puget Sound	North Central
Clallam	Island	Adams
Grays Harbor	King	Chelan
Jefferson	San Juan	Douglas
Kitsap	Skagit	Grant
Mason	Snohomish	Okanogan
Pacific	Whatcom	
Pierce		Eastern
Thurston	South Central	Asotin
Southwest	Benton	Columbia
Clark	Franklin	Ferry
Cowlitz	Kittitas	Garfield
Klickitat	Yakima	Lincoln
Lewis		Pend Oreille
Skamania		Spokane
Wahkiakum		Stevens
		Walla Walla
		Whitman

The percentage of public and private land in each region was estimated using geospatial data from Washington’s Department of Forestry. The layer identified land ownership for public entities such as a Federal, State, Local & Tribal governments as well as private entities such as homeowners and forest management companies. Figure 2 overlays the geographic distribution of the regions and the land ownership layer. Table 2 presents the estimated distribution of private versus public land ownership within each region.



Source: Washington Department of Forestry.

Figure 2. Washington land ownership types and regions

Table 2. Estimated distribution of public and private lands, by region.

Regions	Land Ownership		Total
	% Private	% Public	
Coastal	51.2%	48.8%	100.0%
Eastern	66.2%	33.8%	100.0%
North Central	44.9%	55.1%	100.0%
North Puget Sound	39.8%	60.2%	100.0%
South Central	37.8%	62.2%	100.0%
Southwest	58.8%	41.2%	100.0%
Statewide Total	50.9%	49.1%	100.0%

Angler Expenditures and Impacts Statewide

Based on data from the U.S. Fish and Wildlife Service, anglers in Washington spent \$1,186.2 million in 2011 on trip-related purchases and expenditures for fishing and related equipment (Table 3).

Table 3. Fishing-related expenditures in Washington by resident and nonresident anglers, 2011.

Economic Impact Category	Impact Amount
Trip-related	
Food and lodging	\$160,994,288
Transportation	\$170,218,577
Other trip expenses	\$207,822,514
Fishing rods, reels and tackle	\$214,677,466
Other fishing-related equipment	\$432,563,051
Total	\$1,186,275,897

As a result of the economic multiplier effect, the \$1,186.2 million of fishing expenditures in Washington produced additional rounds of economic activity throughout the state's economy. These indirect expenditures, combined with the initial direct fishing purchases, produced a total of \$1.9 billion in economic output statewide. This output supported 16,211 jobs with a total labor income of \$625.2 million. This output also produced \$119.6 million of state/local tax revenue and \$150.3 million of federal tax revenue (Table 4).

Table 4. Fishing-related economic impacts in Washington by resident and nonresident anglers, 2011.

Economic Impact Category	Impact Amount
Retail Sales	\$1,186,275,897
Economic Output	\$1,956,335,653
Labor Income	\$625,222,636
State & Local Taxes	\$119,631,627
Federal Taxes	\$150,271,880
Jobs	16,211

Angler Expenditures and Impacts by Region

The \$680.6 million of statewide fishing expenditures and associated economic impacts were allocated to each of the six regions based on where the fishing occurred (to allocate trip-related spending) and where fishing-related retail spending takes place in Washington (to allocate equipment spending). The proportions of direct fishing expenditures that occur on public lands by region were then estimated by weighting the regional spending allocations by the percentage of public land area in each region (Table 2), and then applying an adjustment factor (65.2%) based on the estimate of water-based recreation (primarily boating) that occurs on public lands in Washington.² The resulting allocations by region are shown in Table 5.

Table 5. Distribution of fishing expenditures by region

Travel Regions	Travel-Generated Expenditures (millions)	Equipment Expenditures (millions)	Percent of State Expenditures on Public Lands
Eastern	\$70.0	\$84.1	13.0%
North Central	\$109.2	\$131.1	20.2%
South Central	\$21.6	\$26.0	4.0%
North Puget Sound	\$60.3	\$72.4	11.2%
Southwest	\$34.0	\$40.8	6.3%
Coastal	\$56.6	\$68.0	10.5%
Statewide Total	\$351.6	\$422.2	65.2%

Expenditures and economic impacts at the regional level were estimated by applying the regional allocations to the statewide estimates (Table 6).

Table 6. Estimated fishing-related economic impacts on all lands in Washington regions by resident and nonresident anglers, 2011.

	Retail Sales (\$millions)	Economic Output (\$millions)	Labor Income (\$millions)	State & Local Taxes (\$millions)	Federal Taxes (\$millions)	Jobs
Eastern	\$236.3	\$389.7	\$124.5	\$23.8	\$29.9	3,229
North Central	\$368.2	\$607.3	\$194.1	\$37.1	\$46.6	5,032
South Central	\$73.0	\$120.3	\$38.5	\$7.4	\$9.2	997
North Puget Sound	\$203.3	\$335.3	\$107.2	\$20.5	\$25.8	2,778
Southwest	\$114.5	\$188.9	\$60.4	\$11.6	\$14.5	1,565
Coastal	\$190.9	\$314.9	\$100.6	\$19.3	\$24.2	2,609
Statewide Total	\$1,186.3	\$1,956.3	\$625.2	\$119.6	\$150.3	16,211

² Outdoor Industry Association. 2012 Survey of Outdoor Recreation.

Public land spending and impacts by region were estimated by applying the public land allocation (Table 5) to the statewide estimates. The spending and impacts estimated for each region are shown in Table 7.

Table 7. Fishing-related economic impacts on public lands in Washington regions by resident and nonresident anglers, 2011.

	Retail Sales (\$millions)	Economic Output (\$millions)	Labor Income (\$millions)	State & Local Taxes (\$millions)	Federal Taxes (\$millions)	Jobs
Eastern	\$154.1	\$254.2	\$81.2	\$15.5	\$19.5	2,106
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Lake Chelan National Recreation Area – A Case Study

The economic returns from public land investments for conservation and recreation are further highlighted by examining the economic returns from recreational activity in a specific case. With participation from Land and Water Conservation Fund, Lake Chelan National Recreation Area (NRA) encompasses 61,958 acres including the northern end of Lake Chelan, the surrounding area of the Stehekin Valley and part of the Stehekin River. There are no roads connecting Lake Chelan NRA to the outside. Access to the recreation area and the small town of Stehekin within its borders is by float plane, ferry or hiking trails.

The Lake Chelan National Recreation Area (NRA) offers exceptional nature-based recreational opportunities. Activities within the park include fishing, hunting, hiking, camping, wildlife viewing, horseback riding, mountain climbing, cross-country skiing, and boating. In addition to their enjoyment of the outdoors, recent studies have highlighted the economic contributions that recreation participants have as a result of their spending during recreational trips and for equipment that they use to engage in outdoor recreation (e.g., boats, bicycles, coolers, clothing).

In recent years, approximately 40,000 visitors have made their way into the area. In 2013, the National Park Service recorded 27,544 day visitors, 5,620 overnight visitors who stayed at a lodge in the park, and 4,151 campers who spent a night at one of the park's many backcountry campsites. While the Park Service maintains detailed records of visitor numbers, less is known about the outdoor recreation activities of these visitors while in the park or the amount of money that they spend as part of their trip.

To estimate the economic contributions of Lake Chelan NRA visitors, we utilized estimates of participation in various outdoor recreation activities and associated spending from a survey of outdoor recreation in the northwest that was part of a larger national study. Table 8 provides a summary of the types of recreation and average expenditures made by people who participate in outdoor activities of the type that take place in the Lake Chelan NRA. The estimates are based on the typical distribution of outdoor activities in this area and average spending per visitor-day.

Using average spending profiles for each activity and taking into account that not all visitors spend alike, it is estimated that the 37,314 visitors to Lake Chelan NRA in 2013 spent approximately \$4.8 million during their trip to the area (Table 8). This figure does not take into account the spending that is associated with equipment used for outdoor recreation. Because most recreation equipment has uses well beyond one trip, it is not reasonable to associate equipment spending to a single visit to a specific area. Nevertheless, it is worth noting that people who engage in these activities spend an estimated \$3.2 million each year on their respective outdoor recreation equipment. Some portion of that spending could reasonably be attributed to activity in Lake Chelan NRA.

Table 8. Average participation rates and expenditures for expected recreation activity at Lake Chelan NRA.

Activity	Visitors	Spending
Day Hiking	5,870	\$429,470
Backpacking	3,518	\$257,381
Horseback Riding	786	\$57,525
Kayaking	644	\$54,136
Rafting	1,999	\$168,058
Canoeing	1,324	\$111,328
Swimming	4,346	\$365,356
Fishing	4,500	\$288,515
Wildlife Viewing	4,556	\$452,309
Overnight camping/lodging	9,771	\$2,586,310
Total	37,314	\$4,770,387

Source: Southwick Associates, based on survey data collected for the Outdoor Industry Association.

These visitors and their trip-related spending generate economic activity that has real benefits to the Washington economy beyond the local area. Table 10 shows that the total visitor spending of \$4.8 million directly supports 47 jobs and \$1.4 million of income. Those jobs and incomes produce \$343,700 of state and local tax revenues and \$333,200 of federal tax revenues. The visitor spending, however, has additional impacts as it ripples across the statewide economy. An input-output model of the Washington economy was used to estimate the multiplier effect of the visitor spending. The model shows that the \$4.4 million of spending results \$7.3 million of total economic activity in Washington including 70 jobs that provide nearly \$2.5 million of income. Additionally, the total tax impact includes \$495,000 of state and local revenues and \$586,000 of federal tax revenues.

Table 10. Estimated annual economic contributions of recreation activity at Lake Chelan NRA*

	Direct Spending	Multiplier Effect	Total Impacts
Sales	\$4,770,387	\$2,544,536	\$7,314,923
Employment	47	23	70
Wages	\$1,404,901	\$1,045,380	\$2,450,281
State & Local Taxes	\$343,755	\$151,494	\$495,249
Federal Taxes	\$333,276	\$253,002	\$586,278

Source: Southwick Associates, based on survey data collected for the Outdoor Industry Association and the National Fish and Wildlife Foundation.

References

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