

# Sport Fishing Expenditures and Economic Impacts on Public Lands in Oregon

*For:*  
**Northwest Sportfishing Industry Association**

*By:*  
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## Summary

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Angler spending and economic impacts were estimated for Oregon statewide and for each of seven travel regions recognized by the State of Oregon.<sup>1</sup> In 2011, anglers spent a total of \$680.6 million on trip-related and equipment purchases in Oregon. Overall, approximately 65.2% of boating-related outdoor recreation occurs on public lands in Oregon.<sup>2</sup> After accounting for differences in fishing activity across the nine travel regions in Oregon, an estimated \$444.0 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 7,204 jobs and \$249.7 million of income statewide. Additionally, the total economic activity supported by fishing on public lands results in \$47.2 million in state and local taxes and \$59.9 million in federal taxes. The breakdown for each travel region is shown in the summary table below.

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

	Retail Sales (\$millions)	Economic Output (\$millions)	Labor Income (\$millions)	State & Local Taxes (\$millions)	Federal Taxes (\$millions)	Jobs
Central	\$65.2	\$112.4	\$36.7	\$6.9	\$8.8	1,058
Central Coast	\$69.6	\$120.0	\$39.2	\$7.4	\$9.4	1,130
Eastern	\$53.2	\$91.7	\$29.9	\$5.7	\$7.2	864
North Coast	\$64.3	\$110.8	\$36.2	\$6.8	\$8.7	1,043
South Coast	\$32.4	\$55.8	\$18.2	\$3.4	\$4.4	525
Mt. Hood/Gorge	\$33.7	\$58.1	\$19.0	\$3.6	\$4.5	547
Portland Metro	\$9.0	\$15.5	\$5.0	\$1.0	\$1.2	146
Southern	\$66.2	\$114.0	\$37.2	\$7.0	\$8.9	1,074
Willamette	\$50.3	\$86.7	\$28.3	\$5.4	\$6.8	816
<b>Statewide Total</b>	<b>\$444.0</b>	<b>\$764.9</b>	<b>\$249.7</b>	<b>\$47.2</b>	<b>\$59.9</b>	<b>7,204</b>

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<sup>1</sup> Dean Runyan Associates. May 2009. Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon: 2008 State and County Expenditure Estimates.

<sup>2</sup> Outdoor Industry Association. 2012 Survey of Outdoor Recreation.

## Public Lands in the Oregon Travel Regions

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

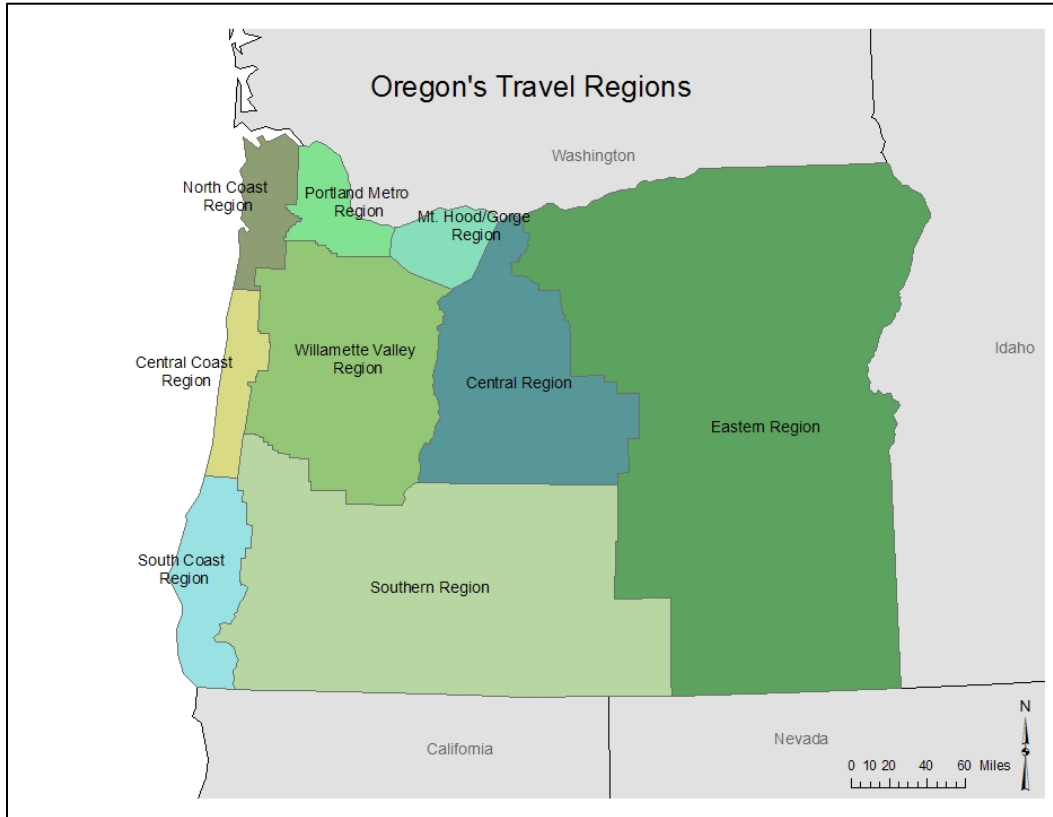
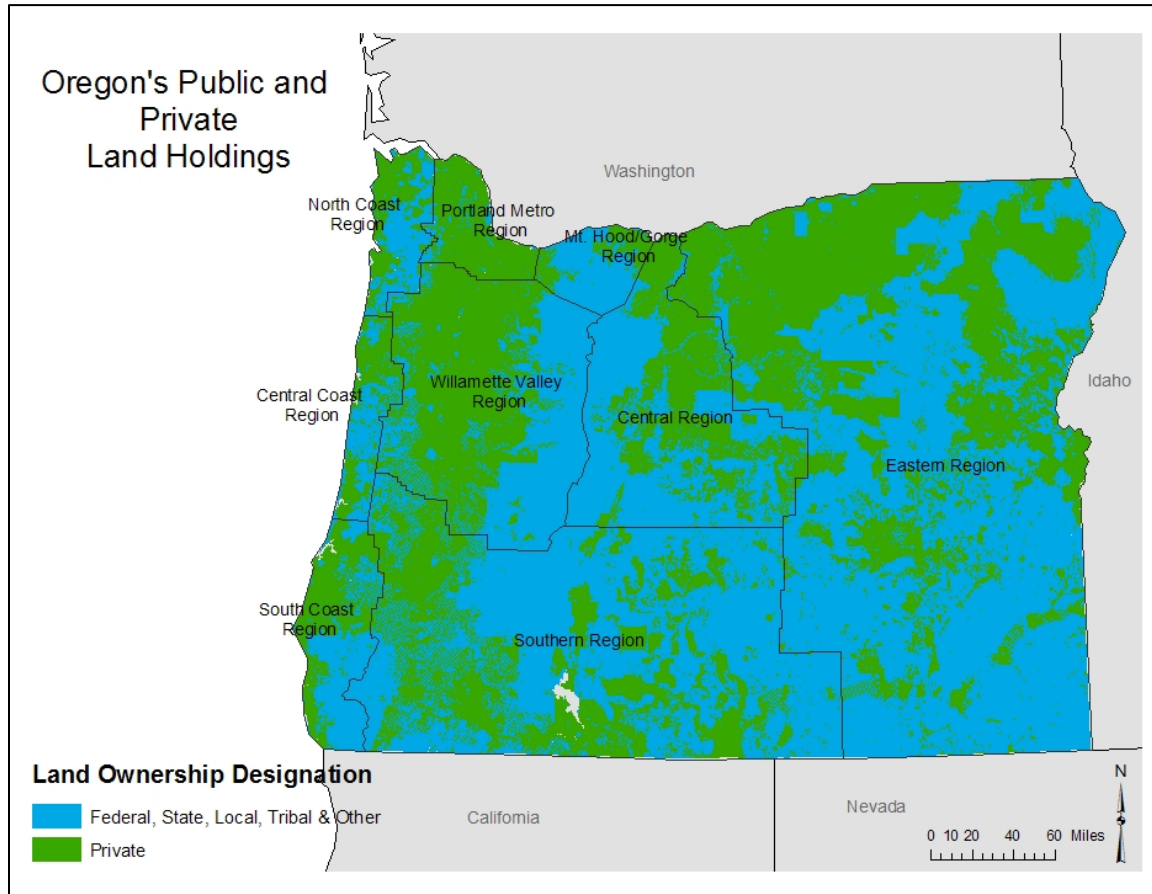


Figure 1. Oregon travel regions

Table 1. County assignments to travel regions

<b>Coast</b>	<b>Mt. Hood/Gorge</b>	<b>Southern</b>	<b>Eastern</b>
<i>North</i>	Clackamas (northeast)	Douglas (east)	Baker
Clatsop	Multnomah (east)	Jackson	Gilliam
Tillamook	Hood River	Josephine	Grant
<i>Central</i>	Wasco (north)	Klamath	Harney
Douglas (west)		Lake	Malheur
Lincoln	<b>Willamette Valley</b>		Morrow
Lane (west)	Benton	<b>Central</b>	Sherman
<i>South</i>	Clackamas (south)	Crook	Umatilla
Coos	Lane (east)	Deschutes	Union
Curry	Linn	Jefferson	Wallowa
<b>Portland Metro</b>	Marion	Wasco (south)	Wheeler
Clackamas (northwest)	Polk		
Columbia	Yamhill		
Multnomah (west)			
Washington			

The percentage of public and private land in each region was estimated using geospatial data from Oregon'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 travel regions and the land ownership layer. Table 2 presents the estimated distribution of private versus public land ownership within each region.



Source: Oregon Department of Forestry.

**Figure 2. Oregon land ownership types and travel regions**

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

Travel Regions	Land Ownership		Total
	% Private	% Public	
Central	41.5%	58.5%	100.0%
Central Coast	51.6%	48.4%	100.0%
Eastern	39.5%	60.5%	100.0%
North Coast	48.7%	51.3%	100.0%
South Coast	50.8%	49.2%	100.0%
Mt. Hood/Gorge	29.4%	70.6%	100.0%
Portland Metro	90.1%	9.9%	100.0%
Southern	36.0%	64.0%	100.0%
Willamette	56.5%	43.5%	100.0%
<b>Statewide Total</b>	<b>42.4%</b>	<b>57.6%</b>	<b>100.0%</b>

## Angler Expenditures and Impacts Statewide

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Based on data from the U.S. Fish and Wildlife Service, anglers in Oregon spent \$680.6 million in 2011 on trip-related purchases and expenditures for fishing and related equipment (Table 3).

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

Trip-related		
Food and lodging	\$	148,761,418
Transportation	\$	95,819,808
Other trip expenses	\$	114,099,148
Fishing rods, reels and tackle	\$	68,013,441
Other fishing-related equipment	\$	253,942,317
<b>Total</b>	<b>\$</b>	<b>680,636,132</b>

As a result of the economic multiplier effect, the \$680.6 million of fishing expenditures in Oregon 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 \$1.2 billion in economic output statewide. This output supported 11,043 jobs with a total labor income of \$383 million. This output also produced \$72 million of state/local tax revenue and \$92 million of federal tax revenue (Table 4).

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

<b>Economic Impact Category</b>	<b>Impact Amount</b>
Retail Sales	\$680,636,132
Economic Output	\$1,172,481,577
Labor Income	\$382,802,979
State & Local Taxes	\$72,381,359
Federal Taxes	\$91,781,493
Jobs	11,043

## **Angler Expenditures and Impacts by Travel Region**

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The \$680.6 million of statewide fishing expenditures and associated economic impacts were allocated to each of the nine travel region were based on data collected in a 2008 study by Dean Runyan Associates.<sup>3</sup> The proportions of direct fishing expenditures that occur on public lands by region were then estimated by weighting the Runyan 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 Oregon.<sup>4</sup> The resulting allocations by travel region are shown in Table 5.

<sup>3</sup> Dean Runyan Associates. May 2009. Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon: 2008 State and County Expenditure Estimates.

<sup>4</sup> Outdoor Industry Association. 2012 Survey of Outdoor Recreation.

**Table 5. Distribution of fishing expenditures by travel region**

<b>Travel Regions</b>	<b>Total Trip Expenditures (millions)</b>	<b>Percent of Total Expenditures</b>	<b>Percent of Expenditures on Public Lands</b>
Central	\$42.7	12.5%	9.6%
Central Coast	\$55.1	16.1%	10.2%
Eastern	\$33.7	9.9%	7.8%
North Coast	\$48.0	14.1%	9.5%
South Coast	\$25.2	7.4%	4.7%
Mt. Hood/Gorge	\$18.3	5.4%	4.9%
Portland Metro	\$34.7	10.2%	1.3%
Southern	\$39.6	11.6%	9.7%
Willamette	\$44.3	12.9%	7.4%
<b>Statewide Total</b>	<b>\$341.6</b>	<b>100.00%</b>	<b>65.23%</b>

Expenditures and economic impacts at the regional level were estimated by applying the Runyan regional allocations to the statewide estimates (Table 6). It should be noted that this allocation assumes that statewide travel and equipment expenditures occur at the same proportion by region.

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

	<b>Retail Sales (\$millions)</b>	<b>Economic Output (\$millions)</b>	<b>Labor Income (\$millions)</b>	<b>State &amp; Local Taxes (\$millions)</b>	<b>Federal Taxes (\$millions)</b>	<b>Jobs</b>
Central	\$85.1	\$146.6	\$47.9	\$9.0	\$11.5	1,380
Central Coast	\$109.8	\$189.1	\$61.7	\$11.7	\$14.8	1,781
Eastern	\$67.1	\$115.7	\$37.8	\$7.1	\$9.1	1,089
North Coast	\$95.6	\$164.8	\$53.8	\$10.2	\$12.9	1,552
South Coast	\$50.2	\$86.5	\$28.2	\$5.3	\$6.8	815
Mt. Hood/Gorge	\$36.5	\$62.8	\$20.5	\$3.9	\$4.9	592
Portland Metro	\$69.1	\$119.1	\$38.9	\$7.4	\$9.3	1,122
Southern	\$78.9	\$135.9	\$44.4	\$8.4	\$10.6	1,280
Willamette	\$88.3	\$152.1	\$49.6	\$9.4	\$11.9	1,432
<b>Statewide Total</b>	<b>\$680.6</b>	<b>\$1,172.5</b>	<b>\$382.8</b>	<b>\$72.4</b>	<b>\$91.8</b>	<b>11,043</b>

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 Oregon travel regions by resident and nonresident anglers, 2011.**

	<b>Retail Sales (\$millions)</b>	<b>Economic Output (\$millions)</b>	<b>Labor Income (\$millions)</b>	<b>State &amp; Local Taxes (\$millions)</b>	<b>Federal Taxes (\$millions)</b>	<b>Jobs</b>
Central	\$65.2	\$112.4	\$36.7	\$6.9	\$8.8	1,058
Central Coast	\$69.6	\$120.0	\$39.2	\$7.4	\$9.4	1,130
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## Bureau of Land Management Sandy River ACEC/Oregon National Historic Trail – A Case Study

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The economic returns from public land investments for conservation and recreation are further highlighted by the recent acquisition of the Sandy River Area of Critical Environmental Concern (Oregon National Historic Trail). In 2013, Land and Water Conservation Funds were used to acquire and conserve land along the Sandy River. The **Sandy River ACEC** offers exceptional recreational opportunities for fishing, hiking, wildlife viewing, nature study, and non-motorized boating or floating. The project is easily accessible from the Portland Metro area, the Northwest's second largest population center. The 29,000-acre Sandy River ACEC project contains the route of the historic Barlow Road, the western segment of the Oregon National Historic Trail, and shares a common boundary with the Salmon-Huckleberry Wilderness, administered by the U.S. Forest Service. PGE recently completed removal of their Bull Run hydroelectric project, including dams on both the Sandy and Little Sandy Rivers. Dam removal has restored the free flowing character of the Sandy River and will result in the eventual transfer of up to 1,272 acres of PGE lands within the Sandy River project area into Federal ownership.

Table 8 provides a summary of participation rates among the general population in Oregon for selected recreation activities available at the Sandy River ACEC project. The table also provides the average expenditures made by people who participate in these activities.

**Table 8. Average participation rates and expenditures for selected recreation activities in Oregon.**

Recreation Activity	Participation Rate	Avg Day Trips	Avg Overnight Trips	Avg Day Trip Spending	Avg Overnight Trip Spending	Avg Annual Equipment Spending
Day Hiking	33.4%	5.3	3.0	\$143	\$607	\$338
Fishing	24.0%	5.6	4.5	\$64	n.a.	\$525
Canoeing	7.3%	2.7	2.0	\$162	\$507	\$243
Kayaking	5.9%	4.5	2.5	\$162	\$507	\$243
Rafting	7.3%	2.8	7.4	\$162	\$507	\$243
Swimming	39.7%	7.3	4.9	\$162	\$507	\$243
Wildlife Viewing	22.3%	4.5	2.4	\$99	n.a.	\$995

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

The Sandy River ACEC is only one of many opportunities for outdoor recreation that are available to residents of the region. Within 200 miles of the Sandy River location are more than 16,500,000 acres of public lands. For example, the nearby Wildwood Recreation Site includes 550 acres and offers a variety of outdoor recreation activities ranging from nature hikes to group picnics to children’s playgrounds. It is beyond the scope of this study to measure the amount of outdoor recreation that might occur at the Sandy River ACEC. However, it is possible to gauge the level of activity and associated economic contributions from outdoor recreation ***under an assumption of the relative popularity of the Sandy River ACEC as a destination for selected types of outdoor recreation.*** Under the assumptions that the Sandy River ACEC will attract 5% of selected water-related outdoor recreation within 100 miles, Table 9 provides estimates of potential day and overnight trips for selected activities.

The estimated numbers of participants and trips for which the Sandy River ACEC project is a potential destination are based on average participation rates in the Pacific Census region for each type of recreation activity.<sup>5</sup> The estimates are modified by: 1) the distance that people are willing to travel for day and overnight trips to participate in each activity, 2) the preferred landscape of participants for each listed activity and the landscape available at the Sandy River ACEC project, and 3) the preferred terrain (vertical topography) for each activity and the average terrain of the Sandy River ACEC project.

**Table 9. Potential recreation activity at the Sandy River ACEC location\***

<b>Recreation Activity</b>	<b>Potential Day Trips</b>	<b>Potential Overnight Trips</b>
Day Hiking	2,512	782
Fishing	4,640	1,888
Canoeing	673	382
Kayaking	845	361
Rafting	2,740	3,867
Swimming	3,522	1,136
Wildlife Viewing	1,973	425

*\*Assumes that the site attracts 5% of the selected activity within 100 miles.  
Source: Southwick Associates, based on survey data collected for the National Fish and Wildlife Foundation.*

<sup>5</sup> Southwick Associates, “National Fish and Wildlife Foundation Economic Assessment Tool (NEAT) for the estimation of Conservation-Related Recreation and Economic Impacts, 2013.

Based on the assumed participation, the resulting statewide economic contributions from recreation at the Sandy River ACEC is estimated based on the number of visitors and their average trip-related and equipment expenditures. Table 10 shows that visitors would generate \$3.0 million of sales *annually* statewide in Oregon. Combined with the multiplier effect of that spending, the recreation-related spending would support 51 jobs and \$1.6 million of income each year going forward (in 2011 dollars). The total economic activity would generate \$336,000 in state and local taxes and \$388,000 in federal taxes.

**Table 10. Estimated annual economic contributions of recreation activity at the Sandy River ACEC location\***

	<b>Direct Spending</b>	<b>Multiplier Effect</b>	<b>Total Impacts</b>
Sales	\$3,049,198	\$1,605,686	\$4,654,884
Employment	32	18	51
Wages	\$883,039	\$726,862	\$1,609,901
State & Local Taxes	\$210,156	\$125,866	\$336,022
Federal Taxes	\$212,837	\$175,157	\$387,994

*\*Assumes that the site attracts 5% of the selected activity within 100 miles.*

*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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Dean Runyan Associates. May 2009. Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon: 2008 State and County Expenditure Estimates.

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