

The Economic Contributions of Recreational Visitation at Steigerwald Lake National Wildlife Refuge

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This paper establishes the economic contribution baseline for recreational visitation at Steigerwald Lake National Wildlife Refuge (Refuge). The paper addresses the levels of Refuge recreational activities and the economic effects of Refuge recreational activities. The analysis is followed by a glossary of terms. For more information regarding the methodology, please refer to “Banking on Nature – The Economic Contributions to Local Communities of National Wildlife Refuge Visitation” at <https://www.fws.gov/economics/divisionpublications/divisionpublications.asp>.

From an economic perspective, Steigerwald Lake National Wildlife Refuge provides a variety of environmental and natural resource goods and services used by people either directly or indirectly. The use of these goods and services may result in economic effects to both local and state economies. The various services the Refuge provides can be grouped into five broad categories: (1) maintenance and conservation of environmental resources, services and ecological processes; (2) protection of natural resources such as fish, wildlife, and plants; (3) protection of cultural and historical sites and objects; (4) provision of educational and research opportunities; and (5) outdoor and wildlife-related recreation. A comprehensive economic profile of the Refuge would address all applicable economic effects associated with the use of refuge-produced goods and services. However, some of the major contributions of the Refuge to the natural environment, such as watershed protection, maintenance and stabilization of ecological processes, and the enhancement of biodiversity are beyond the scope of this paper. Therefore, this paper focuses on economic effects associated with recreational visitation. As a result, benefits represent conservative estimates and do not represent the Refuge’s total social impacts.

Refuge Description

Partially located within the Columbia River Gorge National Scenic Area, Steigerwald Lake National Wildlife Refuge is a mosaic of wetlands, pastures, and woodland habitats along the lower Columbia River. Purchased by Army Corp. of Engineers (and later transferred to the U.S. Fish & Wildlife Service) – this land was designated for fish and wildlife mitigation for habitat loss due to the construction of the second powerhouse at Bonneville Dam in the late 1970’s/ early 1980’s. In 1987, the original boundary for the Refuge was established and since then smaller pieces of land have been added to create what is now the Steigerwald Lake NWR.

In 2009, the Refuge also became a place for people. The Refuge’s unique Gibbon’s Creek Wildlife Art Trail is just one of three art trails in the National Wildlife Refuge System allowing visitors to engage through art installations along the trail. With the addition of a short trail system, thousands of visitors now come with their families, as part of educational groups, on guided walks, and on their own to experience the year round abundance of wildlife that call this area home. Two-hundred of the three-hundred bird species observed in Clark County have been spotted at the Refuge; turtles basking in the sun are plentiful on a hot day, and the nearby river attracts many raptors, including: Northern Harriers, Osprey, and Bald Eagles.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 145,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for all visits with residents comprising 85 percent of Refuge visitation.

Table 1. Steigerwald Lake NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	78,193	13,799	91,992
Auto Tour	-	-	-
Boat Trail/Launch	-	-	-
Bicycle	3,468	183	3,650
Photography	39,097	6,899	45,996
Interpretation	2,705	142	2,847
Other Recreation	-	-	-
Visitor Center	-	-	-
Hunting:			
Big Game	-	-	-
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	-	-	-
Total Visitation	123,462	21,023	144,485

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Clark County, Washington. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$2.6 million with non-residents accounting for \$1.4 million or 51 percent of total expenditures. Expenditures on non-consumptive activities accounted for all expenditures.

Spending in the local area generates and supports economic activity within Clark County (Table 3). The contribution of recreational spending in local communities was associated with about 25 jobs, \$1.0 million in employment income, \$336,200 in total tax revenue, and \$3.5 million in economic output.

Table 2. Steigerwald Lake NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$1,286.1	\$1,354.1	\$2,640.2
Hunting	-	-	-
Fishing	-	-	-
Total Expenditures	\$1,286.1	\$1,354.1	\$2,640.2

Table 3. Steigerwald Lake NWR: Local Economic Contributions Associated with Recreation Visits (2017 \$,000)

	Residents	Non-Residents	Total
Economic Output	\$1,696.5	\$1,759.1	\$3,455.6
Jobs	14	14	28
Job Income	\$485.8	\$497.8	\$983.6
State and Local Tax Revenue	\$164.4	\$171.8	\$336.2

Glossary

Economic Contribution: The economic activity generated in a region by residents and non-resident recreation spending.

Expenditures: The spending by recreational visitors when visiting refuges. Expenditure categories include food, lodging, transportation, and other. Expenditure information is based on the 2011 National Survey of Fishing, Hunting and Wildlife Associated Recreation (NSFHWR).

Economic Output: The total spending by final consumers on all goods. The amount reported in this study is the change in spending by final consumers in the region attributable to refuge visitation. Economic output includes spending by people who earn income from refuge visitors' activities as well as spending by refuge visitors themselves.

Impact: The new economic activity generated in a region as a refuge attracts non-residents to the area. This figure represents economic activity that would be lost if the refuge were not there.

IMPLAN: An economic modeling software package that applies input-output analysis techniques to regional economies.

Jobs: Full and part time jobs.

Job Income: Income to households from labor including wages and salaries.

Resident/Non-Resident: People living more than 50 miles from the refuges are considered non-residents for this study.

Tax Revenue: Local, county and state taxes: sales tax, property tax, and income tax

Visitors: A visitor is someone who comes to the refuge and participates in one or more of the activities available at the refuge.

Visits (visitation): A visit is not the same as a visitor. One visitor could be responsible for several visits on a refuge. For example, if a family of four went fishing in the morning and hiked a short nature trail in the afternoon, they would have contributed 8 activity visits to the refuge; yet, they are only four visitors.

References

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