

The Economic Contributions of Recreational Visitation at Hart Mountain National Antelope Refuge

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This paper establishes the economic contribution baseline for recreational visitation at Hart Mountain National Antelope 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, Hart Mountain National Antelope 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

Hart Mountain National Antelope Refuge, located in southeast Lake County, Oregon, was established in 1936 as a range for remnant herds of American pronghorn. Since that time, management of the Refuge has broadened to include conservation of all wildlife species characteristic of this high desert habitat and restoration of native ecosystems for the public's enjoyment, education, and appreciation.

The Refuge lies on a massive fault block ridge that ascends abruptly nearly three-quarters of a mile above the Warner Valley floor in a series of rugged cliffs, steep slopes, and knife-like ridges. Visitors experience spectacular views of the beautiful Warner Valley Wetlands while ascending the west side entrance road to the Refuge headquarters. The west face of the mountain is cut by Hart, Potter, DeGarmo, and other canyons, the most rugged of which extend from the valley floor to the top of the main ridge. The east side of the mountain is less precipitous, descending in a series of rolling hills and low ridges to sagebrush-grasslands typical of southeastern Oregon and the Great Basin.

The rugged diversity of the terrain creates a rich mix of habitat types, home to more than 300 species of wildlife. Featured species include pronghorn, Greater sage grouse, California bighorn sheep, mule deer, and redband trout. Along with its refuge complex companion, Sheldon National Wildlife Refuge, the 278,000-acre refuge is one of the most expansive wildlife habitats in the arid West free of domestic livestock and feral horses.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 15,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 12,000 visits with residents comprising 60 percent of Refuge visitation. Other recreation includes activities incidental to use of private land inholdings and rock collecting which is an authorized public use within the Refuge.

Table 1. Hart Mountain NAR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	225	150	375
Auto Tour	2,100	1,400	3,500
Boat Trail/Launch	-	-	-
Bicycle	-	-	-
Photography	45	30	75
Interpretation	300	200	500
Other Recreation	2,800	1,200	4,000
Visitor Center	2,100	1,400	3,500
Hunting:			
Big Game	960	1,440	2,400
Small Game	95	5	100
Migratory Birds	-	-	-
Fishing:	80	20	100
Total Visitation	8,705	5,845	14,550

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Lake County, Oregon. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$897.4 million with non-residents accounting for \$723.7 million or 81 percent of total expenditures. Expenditures on hunting activities accounted for 41 percent of all expenditures.

Spending in the local area generates and supports economic activity within Lake County (Table 3). The contribution of recreational spending in local communities was associated with about 11 jobs, \$237,000 in employment income, \$60,000 in total tax revenue, and \$897,000 in economic output.

Table 2. Hart Mountain NAR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$127.0	\$398.7	\$525.7
Hunting	\$44.5	\$323.7	\$368.2
Fishing	\$2.2	\$1.3	\$3.5
Total Expenditures	\$173.7	\$723.7	\$897.4

Table 3. Hart Mountain NAR: Local Economic Contributions Associated with Recreation Visits (2017 \$,000)

	Residents	Non-Residents	Total
Economic Output	\$173.7	\$723.7	\$897.4
Jobs	2	9	11
Job Income	\$51.4	\$185.1	\$236.5
State and Local Tax Revenue	\$9.9	\$49.6	\$59.5

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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