

The Economic Contributions of Recreational Visitation at Neal Smith National Wildlife Refuge

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This paper establishes the economic contribution baseline for recreational visitation at Neal Smith 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, Neal Smith 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

Located about 20 miles east of Des Moines, Iowa, Neal Smith National Wildlife Refuge was established in 1990 as Walnut Creek NWR. The name was changed by Congress in 1998 to honor Congressman Neal Smith, whose support was instrumental in establishment of the Refuge. The U.S. Fish and Wildlife Service is authorized to acquire 11,000 acres of land within the Walnut Creek watershed to reconstruct a piece of the tallgrass prairie ecosystem essentially “from scratch” on former farmland. About 6,000 acres have been acquired so far. Although the tallgrass prairie ecosystem once covered much of the central United States and Canada, it is now globally endangered. Less than one percent of this historic mosaic of prairie, savanna, and wetlands remains today. Many prairie-dependent wildlife species are declining range-wide.

Refuge restoration efforts already have provided for a diversity of life on the Refuge including hundreds of native plant species, over 200 bird species, and dozens of mammals, reptiles, amphibians, and butterflies, including the monarch and regal fritillary butterflies. Prescribed fire and grazing are used to emulate historic processes that maintained the diversity of the landscape. The Refuge is substantially involved with the national Monarch Initiative, and has developed a Zoo Park Partnership with Blank Park Zoo in Des Moines.

Visitors come to the Refuge each year to enjoy the prairie environment, to learn about the Refuge and the tallgrass heritage of central Iowa, and to participate in wildlife-related outdoor activities. The Refuge Visitor Center is a major environmental education facility that includes exhibits, meeting rooms, theater,

laboratory-classroom, bookstore, and research facilities. With the close proximity to Des Moines, Neal Smith National Wildlife Refuge has been designated an Urban Refuge.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 285,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 284,000 visits with residents comprising 60 percent of Refuge visitation.

Table 1. Neal Smith NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	10,360	6,907	17,267
Auto Tour	90,158	60,106	150,264
Boat Trail/Launch	-	-	-
Bicycle	4,010	1,003	5,013
Photography	37,537	25,025	62,562
Interpretation	8,560	5,706	14,266
Other Recreation	48	3	50
Visitor Center	20,762	13,841	34,603
Hunting:			
Big Game	742	186	928
Small Game	441	23	464
Migratory Birds	20	-	20
Fishing:	-	-	-
Total Visitation	172,638	112,799	285,437

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the two-county area of Jasper and Polk Counties in Iowa. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$2.6 million with non-residents accounting for \$1.6 million or 62 percent of total expenditures. Expenditures on non-consumptive activities accounted for 99 percent of all expenditures.

Spending in the local area generates and supports economic activity within the two county area (Table 3). The contribution of recreational spending in local communities was associated with about 34 jobs, \$1.4 million in employment income, \$218,000 in total tax revenue, and \$4.2 million in economic output.

Table 2. Neal Smith NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$971.2	\$1,590.8	\$2,562.0
Hunting	\$16.4	\$6.8	\$23.2
Fishing	\$0.0	\$0.0	\$0.0
Total Expenditures	\$987.6	\$1,597.6	\$2,585.2

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

	Residents	Non-Residents	Total
Economic Output	\$1,605.1	\$2,553.1	\$4,158.2
Jobs	14	20	34
Job Income	\$537.2	\$826.0	\$1,363.2
State and Local Tax Revenue	\$78.6	\$139.1	\$217.7

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 eight activity visits to the refuge; yet, they are only four visitors.

References

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