

The Economic Contributions of Recreational Visitation at Fort Niobrara National Wildlife Refuge

May 2019
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This paper establishes the economic contribution baseline for recreational visitation at Fort Niobrara 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, Fort Niobrara 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

Fort Niobrara National Wildlife Refuge is 19,131 acres in size and is located 4 miles east of the city of Valentine along the Niobrara River in Nebraska. The Refuge contains the Fort Niobrara Wilderness Area and part of the Niobrara National Scenic River. This region of the country is the point of convergence of six distinct ecosystems. The plant communities include sandhills prairie, mixed prairie, Rocky Mountain coniferous forest, eastern deciduous forest, and northern boreal forest. This habitat diversity explains the unique diversity of plants and animals found here.

A stopover spot for numerous neo-tropical migrants, the Refuge hosts some 225 species of birds and 13 commonly seen species of mammals. A prairie dog town on the Refuge covers more than 100 acres, and offers excellent viewing opportunities.

Approximately 350 head of buffalo and free ranging elk can be found on the Refuge. Also, numerous species of reptiles, plants, and insects can be seen at Fort Niobrara NWR. The rolling sandhills and breaks along the Niobrara River canyon are home to a great variety of wildlife. In the winter, bald and golden eagles can be seen along the river. Wild turkeys can be spotted among the birch, burr oak, and Ponderosa pine.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 99,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 98,000 visits with residents comprising 26 percent of Refuge visitation.

Table 1. Fort Niobrara NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	5,445	11,055	16,500
Auto Tour	18,400	27,600	46,000
Boat Trail/Launch	525	9,975	10,500
Bicycle	6	6	12
Photography	1,005	19,095	20,100
Interpretation	24	72	96
Other Recreation	-	-	-
Visitor Center	255	4,845	5,100
Hunting:			
Big Game	44	231	275
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	7	20	27
Total Visitation	25,711	72,899	98,610

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Cherry County, Nebraska. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$3.1 million with non-residents accounting for \$2.9 or 95 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 Cherry County (Table 3). The contribution of recreational spending in local communities was associated with about 32 jobs, \$748,000 in employment income, \$237,000 in total tax revenue, and \$3.1 million in economic output.

Table 2. Fort Niobrara NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$164.6	\$2,906.0	\$3,070.6
Hunting	\$1.4	\$40.1	\$41.5
Fishing	\$0.1	\$0.6	\$0.7
Total Expenditures	\$166.1	\$2,946.6	\$3,112.7

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

	Residents	Non-Residents	Total
Economic Output	\$184.3	\$2,946.8	\$3,131.1
Jobs	2	30	32
Job Income	\$48.4	\$699.5	\$747.8
State and Local Tax Revenue	\$13.7	\$223.6	\$237.3

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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