

The Economic Contributions of Recreational Visitation at Loess Bluffs National Wildlife Refuge

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Division of Economics
U.S. Fish & Wildlife Service

This paper establishes the economic contribution baseline for recreational visitation at Loess Bluffs 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, Loess Bluffs 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

Loess Bluffs National Wildlife Refuge was established in 1935 by President Franklin D. Roosevelt as a refuge and breeding ground for migratory birds and other wildlife. It is located in Holt County in northwest Missouri, midway between Kansas City, Missouri, and Omaha, Nebraska. The Refuge comprises 7,440 acres along the eastern edge of the Missouri River floodplain which includes wetlands, grasslands, and riparian habitats. The Refuge is rich in wildlife diversity with 37 species of mammals, almost 40 species of amphibians and reptiles, and over 300 species of birds. During peak migration, there have been over 1,000,000 snow geese, over 200,000 other waterfowl, over 1,000 trumpeter swans, over 100,000 shorebirds, and more than 300 bald eagles which is a sight to behold!

The Refuge offers excellent viewing opportunities to enjoy wildlife and scenery along a ten-mile auto tour route. Along the route are observation towers, spotting scopes, and a viewing boardwalk. Four hiking trails in the loess hills provide scenic views of the refuge. On a clear day, visitors can see parts of Kansas and Nebraska. Viewing for wildlife, especially for snow geese, waterfowl and bald eagles, is best during spring and fall migration.

Special events such as the Refuge’s Annual Eagle Days, which is always the first full weekend in December, attracts many visitors to see America’s national symbol up close during live eagle programs, see the refuge and bald eagles in the wild through guided bus tours, and see the special exhibits in the refuge auditorium for Eagle Days. Other programs include the Summer Junior Naturalist program, Family Day as a celebration of National Wildlife Refuge Week in October, and helping refuge staff collect prairie

seed for prairie restoration projects and monarch butterfly tagging in the fall. Spring time brings a plethora of shorebirds and the opportunity to find wildflowers and morels in the loess hills for those that have a keen eye!

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 137,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 137,000 visits with residents comprising 40 percent of Refuge visitation. Other recreation events include morel and berry picking, and special events such as Eagle Days, Family Day, and others.

Table 1. Loess Bluffs NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	1,800	1,200	3,000
Auto Tour	39,200	58,800	98,000
Boat Trail/Launch	-	-	-
Bicycle	95	5	100
Photography	7,840	11,760	19,600
Interpretation	999	111	1,110
Other Recreation	3,760	5,640	9,400
Visitor Center	1,800	4,200	6,000
Hunting:			
Big Game	16	-	16
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	100	-	100
Total Visitation	55,610	81,716	137,326

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Holt County, Missouri. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were about \$2.0 million with non-residents accounting for \$1.6 million or 79 percent of total expenditures. Expenditures on non-consumptive activities accounted for nearly all expenditures.

Spending in the local area generates and supports economic activity within Holt County (Table 3). The contribution of recreational spending in local communities was associated with about 23 jobs, \$483,000 in employment income, \$126,000 in total tax revenue, and \$2.0 million in economic output.

Table 2. Loess Bluffs NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$425.7	\$1,570.7	\$1,996.4
Hunting	\$0.4	\$0.0	\$0.4
Fishing	\$1.4	\$0.0	\$1.4
Total Expenditures	\$427.5	\$1,570.7	\$1,998.2

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

	Residents	Non-Residents	Total
Economic Output	\$427.5	\$1,570.7	\$1,998.2
Jobs	5	18	23
Job Income	\$113.3	\$369.3	\$482.6
State and Local Tax Revenue	\$26.9	\$99.1	\$126.0

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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