

The Economic Contributions of Recreational Visitation at Two Rivers 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 Two Rivers 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, Two Rivers 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

Two Rivers National Wildlife Refuge was established in 1958 to protect and enhance habitat for migratory birds. Located between the Mississippi River and Illinois River, the Refuge encompasses 9,225 acres of riverine and floodplain habitat scattered around the confluence of the rivers. The mosaic of wetlands, open water, bottomland forests and prairies provides habitat for numerous mammals, amphibians, reptiles, fish and nearly three hundred bird species.

The Refuge offers opportunities for hiking and biking trails, canoeing and kayaking on Swan Lake, bank fishing, hunting and family friendly programs and events. In conjunction with the Urban Refuge Initiative, staff participates in a variety Environmental Education programs in the City of St. Louis.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 21,000 recreation visits in 2017 which contributed to economic effects of the Refuge. Non-consumptive recreation accounted for about 19,000 visits with residents comprising 60 percent of Refuge visitation. The Refuge hosts several activities such as Every Kid in a Park Programming, Fall Wildlife Festival, Family Eagle Watching Day, and Outdoor Explorers camp.

Table 1. Two Rivers NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	1,840	1,840	3,680
Auto Tour	2,900	2,900	5,800
Boat Trail/Launch	1,946	1,946	3,891
Bicycle	8	11	19
Photography	147	220	367
Interpretation	2,196	549	2,745
Other Recreation	12	3	15
Visitor Center	2,274	569	2,843
Hunting:			
Big Game	35	15	50
Small Game	25	3	28
Migratory Birds	19	2	21
Fishing:	1,373	588	1,961
Total Visitation	12,774	8,646	21,420

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the three-county area of Calhoun, Greene, and Jersey Counties in Illinois. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$298,000 with non-residents accounting for \$188,000 or 63 percent of total expenditures. Expenditures on non-consumptive activities accounted for 80 percent of all expenditures.

Spending in the local area generates and supports economic activity within the three county area (Table 3). The contribution of recreational spending in local communities was associated with about 4 jobs, \$83,000 in employment income, \$32,000 in total tax revenue, and \$333,000 in economic output.

Table 2. Two Rivers NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$79.9	\$157.1	\$237.0
Hunting	\$1.3	\$0.9	\$2.2
Fishing	\$28.1	\$30.2	\$58.3
Total Expenditures	\$109.2	\$188.2	\$297.5

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

	Residents	Non-Residents	Total
Economic Output	\$123.5	\$209.9	\$333.4
Jobs	2	3	4
Job Income	\$30.9	\$52.0	\$82.9
State and Local Tax Revenue	\$11.2	\$20.5	\$31.7

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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