

The Economic Contributions of Recreational Visitation at Kirwin National Wildlife Refuge

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

Kirwin National Wildlife Refuge was established in 1954 as the first national wildlife refuge in Kansas. It comprises 10,778 acres and is located in Phillips County, west of the town of Kirwin.

Habitats on Kirwin National Wildlife Refuge consist of prairie grassland, cropland, open water, shoreline, wetlands, and wooded riparian areas. The Refuge lies in an area where the tallgrass prairies of the East meet the short-grass plains of the West. Because of this merging of prairies and plains, grasses and wildlife common to both habitats occur on the Refuge.

Visitors to the Refuge enjoy recreational activities such as hunting, fishing, wildlife observation, and wildlife photography. Each year, between 40,000 to 90,000 people recreate at the refuge, depending on the water level and the fishing quality. Hunting is permitted in season for waterfowl, dove, pheasant, quail, turkey, prairie chicken, snipe, coot, cottontail rabbit, fox squirrel, and white-tailed deer. During a typical day in hunting season, the Refuge attracts about 100 people.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 134,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 74,000 visits with residents comprising 33 percent of Refuge visitation.

Table 1. Kirwin NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	500	2,000	2,500
Auto Tour	12,000	48,000	60,000
Boat Trail/Launch	1,650	3,850	5,500
Bicycle	4	36	40
Photography	1,250	1,250	2,500
Interpretation	380	20	400
Other Recreation	80	20	100
Visitor Center	1,000	1,500	2,500
Hunting:			
Big Game	300	200	500
Small Game	2,500	2,500	5,000
Migratory Birds	12,315	3,035	15,350
Fishing:	12,000	28,000	40,000
Total Visitation	43,979	90,411	134,390

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Phillips County, Kansas. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$7.2 million with non-residents accounting for \$6.3 million or 88 percent of total expenditures. Expenditures on fishing activities accounted for 53 percent of all expenditures.

Spending in the local area generates and supports economic activity within Phillips County (Table 3). The contribution of recreational spending in local communities was associated with about 82 jobs, \$1.9 million in employment income, \$636,000 in total tax revenue, and \$7.3 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$173.1	\$2,467.7	\$2,640.8
Hunting	\$250.9	\$462.6	\$713.5
Fishing	\$430.6	\$3,390.7	\$3,821.2
Total Expenditures	\$854.6	\$6,320.9	\$7,175.5

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

	Residents	Non-Residents	Total
Economic Output	\$979.8	\$6,320.9	\$7,300.7
Jobs	13	69	82
Job Income	\$308.4	\$1,620.6	\$1,929.1
State and Local Tax Revenue	\$89.4	\$546.3	\$635.7

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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