

The Economic Contributions of Recreational Visitation at Reelfoot National Wildlife Refuge

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

Reelfoot Lake was formed by the great earthquake of 1812, which caused the Mississippi River to flow backwards creating a sunken forest and forming the present day lake. Reelfoot National Wildlife Refuge was established in 1941 to manage the northern third of Reelfoot Lake as a refuge for migratory birds. Additional lands acquired in Southwestern Kentucky expanded the Refuge to its current 10,450 acres. The proximity of Reelfoot Lake and the refuge to the Mississippi river has always made the area a major stopover and wintering ground for migratory waterfowl and bald eagles.

Reelfoot Refuge is famous for the more than 250 migratory bird species that use the refuge for migration, wintering, or breeding. The Refuge provides migration and wintering habitat for waterfowl, shorebirds, songbirds, and raptors. The Refuge and adjacent lands are known to be important wintering and stop-over areas for a large portion of the Mississippi Flyway mallard population. Under optimum conditions, peak waterfowl numbers may exceed 250,000 including mallards, black ducks, gadwall, pintail, teal, wigeon, wood duck, ring-necked duck, and hooded merganser. Located just 35 miles north of Dyersburg, TN and 15 miles west of Union City, TN, Reelfoot Refuge is visited each year by those who come to enjoy and learn about these sensitive natural resources.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 278,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 255,000 visits with residents comprising 57 percent of Refuge visitation.

Table 1. Reelfoot NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	40,300	21,700	62,000
Auto Tour	48,750	26,250	75,000
Boat Trail/Launch	4,250	4,250	8,500
Bicycle	158	68	225
Photography	25,200	16,800	42,000
Interpretation	1,967	656	2,622
Other Recreation	-	-	-
Visitor Center	26,000	39,000	65,000
Hunting:			
Big Game	595	255	850
Small Game	618	33	650
Migratory Birds	-	-	-
Fishing:	10,500	10,500	21,000
Total Visitation	158,337	119,511	277,847

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the three-county area of Lake and Obion Counties in Tennessee and Fulton County, Kentucky. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$7.3 million with non-residents accounting for \$5.8 million or 80 percent of total expenditures. Expenditures on non-consumptive activities accounted for 92 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 96 jobs, \$2.9 million in employment income, \$738,000 in total tax revenue, and \$9.1 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$1,200.7	\$5,505.4	\$6,706.1
Hunting	\$22.3	\$19.7	\$42.0
Fishing	\$239.1	\$314.0	\$553.1
Total Expenditures	\$1,462.1	\$5,839.1	\$7,301.2

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

	Residents	Non-Residents	Total
Economic Output	\$1,870.0	\$7,222.9	\$9,092.8
Jobs	20	75	96
Job Income	\$606.6	\$2,271.4	\$2,878.0
State and Local Tax Revenue	\$147.1	\$591.0	\$738.1

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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