

The Economic Contributions of Recreational Visitation at Wheeler National Wildlife Refuge

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

Wheeler National Wildlife Refuge, located along the Tennessee River between Huntsville and Decatur, Alabama, was established in 1938 to provide habitat for wintering and migrating birds. Considered the easternmost refuge in the Mississippi flyway, this 35,000 acre refuge attracts thousands of wintering waterfowl and sandhill cranes each year. The Refuge is also a winter home to the endangered whooping crane who first arrived in 2004. The Refuge manages and protects habitats for 13 federally listed endangered or threatened species.

The Refuge is comprised of diverse habitat types including bottomland hardwoods, wetlands, pine uplands, shoreline or riparian woodlands, agricultural fields, and back water embayments. These habitats provide excellent feeding, resting, and roosting sites for wintering waterfowl, sandhill and whooping cranes, as well as nesting sites for migratory songbirds and many species of resident wildlife.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 1.4 million recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 695,000 visits with residents comprising 82 percent of Refuge visitation. Other recreation includes activities such as horseback riding, swimming, and geocaching.

Table 1. Wheeler NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	220,505	24,501	245,005
Auto Tour	88,205	9,801	98,005
Boat Trail/Launch	132,305	14,701	147,005
Bicycle	86,405	9,601	96,005
Photography	15,151	15,151	30,302
Interpretation	7,561	2,520	10,081
Other Recreation	12,000	8,000	20,000
Visitor Center	31,850	17,150	49,000
Hunting:			
Big Game	68,254	22,751	91,005
Small Game	29,254	9,751	39,005
Migratory Birds	-	-	-
Fishing:	451,204	112,801	564,005
Total Visitation	1,142,691	246,727	1,389,418

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the three-county area of Madison, Morgan, and Limestone Counties in Alabama. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$33.3 million with non-residents accounting for \$12.0 million or 21.3 percent of total expenditures. Expenditures on fishing activities accounted for 61 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 405 jobs, \$13.2 million in employment income, \$3.0 million in total tax revenue, and \$43.9 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$3,944.5	\$4,887.1	\$8,831.6
Hunting	\$1,939.8	\$2,079.9	\$4,019.6
Fishing	\$15,413.7	\$5,059.2	\$20,473.0
Total Expenditures	\$21,298.0	\$12,026.2	\$33,324.2

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

	Residents	Non-Residents	Total
Economic Output	\$27,993.9	\$15,893.3	\$43,887.2
Jobs	267	139	405
Job Income	\$8,583.7	\$4,639.4	\$13,223.1
State and Local Tax Revenue	\$1,943.2	\$1,090.6	\$3,033.9

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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