

The Economic Contributions of Recreational Visitation at Mingo National Wildlife Refuge

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

Located in the Bootheel region of southeast Missouri, Mingo National Wildlife Refuge consists of a 21,592-acre basin formed by an ancient abandoned channel of the Mississippi River. The Refuge contains an approximately 14,000-acre remnant of bottomland hardwoods – the largest remaining tract in Missouri of what was once 2.5 million acres of coverage. The Refuge was established in 1944 under the authority of the Migratory Bird Treaty Act as a resting and overwintering area for waterfowl and other migratory birds and to preserve the unique bottomland hardwood forest. Winter populations of as many as 125,000 mallards and 75,000 Canada Geese have been recorded. Early Bald Eagle recovery efforts were conducted on the refuge in the 1980s, and pairs have been successfully nesting on the Refuge since 1985. The Refuge contains a designated Missouri Natural Area (the only one found on federal land) and is listed on the Missouri Birding Trail. It is recognized as an Important Bird Area by the Audubon Society.

On swamp land that was once logged for timber and drained in an attempt to develop farmland, the Refuge has been transformed back into quality habitat that supports high biodiversity. The Refuge also contains a 7,730-acre Wilderness Area, designated in 1976. The Refuge contains seven research natural areas, six within the Wilderness Area, that represent a variety of ecosystems. In addition to bottomland hardwood forest, the refuge contains 1,000 acres of upland forests, 1,275 acres of cropland and moist soil units, 700 acres of grasslands, and 4,700 acres of marsh and water.

Recreation opportunities abound on the Refuge, and visitors hunt, fish, canoe, hike, drive auto tour routes, and observe and photograph wildlife. Refuge staff also hosts numerous environmental education field trips and interpretive programs, as well as providing community outreach.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 129,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 115,000 visits with residents comprising 77 percent of Refuge visitation.

Table 1. Mingo NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	6,419	2,140	8,559
Auto Tour	60,610	20,203	80,813
Boat Trail/Launch	470	83	553
Bicycle	626	70	695
Photography	7,492	2,497	9,989
Interpretation	1,605	178	1,783
Other Recreation	-	-	-
Visitor Center	9,276	3,092	12,368
Hunting:			
Big Game	921	163	1,084
Small Game	652	115	767
Migratory Birds	1,463	163	1,625
Fishing:	9,939	1,104	11,043
Total Visitation	99,472	29,807	129,279

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the two-county area of Stoddard and Wayne Counties in Missouri. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.3 million with non-residents accounting for \$537,000 or 43 percent of total expenditures. Expenditures on non-consumptive activities accounted for 88 percent of all expenditures.

Spending in the local area generates and supports economic activity within the two county area (Table 3). The contribution of recreational spending in local communities was associated with about 15 jobs, \$388,000 in employment income, \$90,000 in total tax revenue, and \$1.3 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$611.5	\$500.9	\$1,112.4
Hunting	\$43.8	\$16.9	\$60.8
Fishing	\$67.8	\$18.9	\$86.7
Total Expenditures	\$723.1	\$536.7	\$1,259.8

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

	Residents	Non-Residents	Total
Economic Output	\$723.1	\$549.5	\$1,272.6
Jobs	9	6	15
Job Income	\$228.3	\$160.0	\$388.3
State and Local Tax Revenue	\$50.0	\$40.1	\$90.2

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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