

# **The Economic Contributions of Recreational Visitation at Hatchie National Wildlife Refuge**

May 2019  
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This paper establishes the economic contribution baseline for recreational visitation at Hatchie 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, Hatchie 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**

The Hatchie National Wildlife Refuge includes 11,556 acres along the Scenic Hatchie River and is located about four miles south of Brownsville, Tennessee. The Refuge was established in 1964, primarily to provide habitat (food, water and shelter) for migrating and wintering waterfowl. The habitat of Hatchie NWR is mostly composed of bottomland hardwoods, moist soil impoundments, flooded riverine habitats, and oxbow lakes. This mixture of habitats creates ideal conditions for migratory birds and wintering waterfowl.

The Refuge is famous for the more than 200 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 120,000 including mallards, black ducks, gadwall, pintail, teal, wigeon, wood duck, ring-necked duck, and hooded merganser. Situated between Jackson, TN and Memphis, TN and within 50 miles of more than 1 million people, Hatchie Refuge is visited each year by more than 69,600 people 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 59,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 47,000 visits with residents comprising 72 percent of Refuge visitation.

**Table 1. Hatchie NWR: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	300	75	375
Auto Tour	26,600	11,400	38,000
Boat Trail/Launch	1,488	263	1,750
Bicycle	-	-	-
Photography	1,625	875	2,500
Interpretation	722	38	760
Other Recreation	-	-	-
Visitor Center	3,000	1,000	4,000
<b>Hunting:</b>			
Big Game	1,250	1,250	2,500
Small Game	750	250	1,000
Migratory Birds	946	129	1,075
<b>Fishing:</b>	5,950	1,050	7,000
<b>Total Visitation</b>	<b>42,631</b>	<b>16,329</b>	<b>58,960</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the Refuge is Haywood County, Tennessee. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.13 million with non-residents accounting for \$685,000 or 62 percent of total expenditures. Expenditures on non-consumptive activities accounted for 69 percent of all expenditures.

Spending in the local area generates and supports economic activity within Haywood County (Table 3). The contribution of recreational spending in local communities was associated with about 15 jobs, \$326,000 in employment income, \$95,000 in total tax revenue, and \$1.2 million in economic output.

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

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$212.2	\$543.6	\$755.7
Hunting	\$70.0	\$110.1	\$180.1
Fishing	\$135.5	\$31.4	\$166.9
<b>Total Expenditures</b>	<b>\$417.6</b>	<b>\$685.1</b>	<b>\$1,102.7</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$445.7	\$725.3	\$1,171.0
Jobs	6	9	15
Job Income	\$128.4	\$197.4	\$325.8
State and Local Tax Revenue	\$35.3	\$60.1	\$95.4

## 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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