

The Economic Contributions of Recreational Visitation at Cache River National Wildlife Refuge

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

Cache River National Wildlife Refuge was established in 1986 to protect significant wetland habitats and provide feeding and resting areas for migrating waterfowl. As one of the few remaining areas in the Lower Mississippi River Valley not drastically altered by channelization and drainage, the Cache River basin contains a variety of wetland communities including some of the most intact and least disturbed bottomland hardwood forests in the Mississippi Valley region. These unique and valuable wetlands have been protected by the RAMSAR Convention as a Wetland of International Importance. The Refuge has been identified as the most important wintering area for Mallard ducks in North America and is a critical component of the Arkansas’s “Big Woods” – the largest tract of bottomland hardwood forest in the Lower Mississippi River Valley. The Refuge is nationally acclaimed as a waterfowl hunting and wildlife observation area.

At present the Refuge currently encompasses over 73,000 acres located in numerous non-contiguous tracts in Jackson, Woodruff, Monroe and Prairie counties in east central Arkansas. The boundary of this refuge changes frequently as land acquisition continues along the Cache River, White River and Bayou DeView.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 474,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 141,000 visits with residents comprising 87 percent of Refuge visitation.

Table 1. Cache River NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	180	20	200
Auto Tour	270	30	300
Boat Trail/Launch	114,750	20,250	135,000
Bicycle	5	1	6
Photography	3,150	350	3,500
Interpretation	171	9	180
Other Recreation	1,235	65	1,300
Visitor Center	630	270	900
Hunting:			
Big Game	58,900	3,100	62,000
Small Game	34,200	3,800	38,000
Migratory Birds	56,713	24,038	80,750
Fishing:	144,400	7,600	152,000
Total Visitation	414,604	59,532	474,136

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the four-county area of Woodruff, Prairie, Monroe, and Jackson Counties in Arkansas. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$16.7 million with non-residents accounting for \$5.7 million or 34 percent of total expenditures. Expenditures on hunting activities accounted for 46 percent of all expenditures.

Spending in the local area generates and supports economic activity within the four county area (Table 3). The contribution of recreational spending in local communities was associated with about 228 jobs, \$5.3 million in employment income, \$1.7 million in total tax revenue, and \$18.1 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$2,166.1	\$2,418.5	\$4,584.6
Hunting	\$4,659.8	\$3,016.9	\$7,676.8
Fishing	\$4,110.7	\$284.1	\$4,394.8
Total Expenditures	\$10,936.7	\$5,719.5	\$16,656.2

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

	Residents	Non-Residents	Total
Economic Output	\$11,989.1	\$6,125.8	\$18,114.9
Jobs	155	72	228
Job Income	\$3,540.9	\$1,758.9	\$5,299.8
State and Local Tax Revenue	\$1,119.8	\$570.5	\$1,690.2

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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