

The Economic Contributions of Recreational Visitation at Dale Bumpers White River National Wildlife Refuge

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This paper establishes the economic contribution baseline for recreational visitation at Dale Bumpers White 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, Dale Bumpers White 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

Dale Bumpers White River National Wildlife Refuge was established in 1935 for the protection of migratory birds. The refuge lies in the floodplain of the White River near where it meets the Mississippi River. Dale Bumpers White River NWR is one of the largest remaining bottomland hardwood forests in the Mississippi River Valley.

Approximately two-thirds of the bird species found in Arkansas can be seen at Dale Bumpers White River NWR. Many of these are neotropical migratory songbirds that use the refuge as a stopping point on their journey to and from Central and South America. Arriving in early autumn and usually peaking in late December, mallards along with gadwalls, American widgeon, and greenwing teal find their way along that highway in the sky the Mississippi Flyway. During some years, up to 350,000 birds will winter in these flooded bottomland hardwood forests.

One of the popular sites to visit on Dale Bumpers White River NWR is the State Champion Cypress Tree. A short hiking trail will lead visitors to this majestic tree. Dale Bumpers White River NWR is known worldwide for waterfowl hunting and is on many hunters bucket list to hunt the flooded timber in Arkansas.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 410,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 256,000 visits with residents comprising 73 percent of Refuge visitation.

Table 1. Dale Bumpers White River NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	3,000	750	3,750
Auto Tour	85,200	56,800	142,000
Boat Trail/Launch	80,100	8,900	89,000
Bicycle	113	13	125
Photography	725	725	1,450
Interpretation	42	168	210
Other Recreation	5,400	12,600	18,000
Visitor Center	585	1,365	1,950
Hunting:			
Big Game	9,975	4,275	14,250
Small Game	11,220	1,980	13,200
Migratory Birds	12,800	19,200	32,000
Fishing:	89,775	4,725	94,500
Total Visitation	298,935	111,501	410,435

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the four-county area of Arkansas, Desha, Monroe, and Phillips 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 \$12.8 million with non-residents accounting for \$7.8 million or 61 percent of total expenditures. Expenditures on non-consumptive activities accounted for 57 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 153 jobs, \$4.8 million in employment income, \$1.2 million in total tax revenue, and \$15.0 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$1,611.2	\$5,650.9	\$7,262.1
Hunting	\$838.9	\$2,005.5	\$2,844.4
Fishing	\$2,555.7	\$176.6	\$2,732.3
Total Expenditures	\$5,005.8	\$7,833.0	\$12,838.8

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

	Residents	Non-Residents	Total
Economic Output	\$5,803.0	\$9,273.7	\$15,076.6
Jobs	61	92	153
Job Income	\$1,829.7	\$2,966.5	\$4,796.2
State and Local Tax Revenue	\$458.0	\$737.1	\$1,195.1

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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