

The Economic Contributions of Recreational Visitation at Ohio River Islands National Wildlife Refuge

May 2019
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This paper establishes the economic contribution baseline for recreational visitation at Ohio River Islands 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, Ohio River Islands 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 Ohio River Islands National Wildlife Refuge, the first refuge in West Virginia, began with the purchase of eight islands by the US Fish and Wildlife Service in 1990. Today, the Refuge includes a total of twenty-two islands and four mainland properties stretched over approximately 362 miles of Ohio River. All but four of the islands are located in West Virginia with two each in Pennsylvania and Kentucky.

The Ohio River today has little in common with the wild, free-flowing river of 200 years ago. Industrial expansion, dam building, sand and gravel dredging, pollution, and other human influences have reduced both the quantity and quality of the river's wildlife habitat. The Refuge helps safeguard a future for wildlife on over 3,400 acres of land and aquatic habitats. The Refuge works to protect, restore, and enhance habitat for wildlife native to the river and its floodplain. Our wildlife emphasis is on freshwater mussels and migratory birds (particularly song birds that depend on riparian forest habitat). We also focus on invasive plant management and erosion management on the islands.

The Refuge's headquarters includes a visitor center located two miles outside Williamstown, WV. Visitors can explore exhibits displaying refuge wildlife, history, and recreation opportunities. During the busy season, the visitor center is open seven days per week. There are approximately two miles of forest trails on lands surrounding the visitor center. Interpretive walks, education programs for area schools, and special events mostly occur at and around the visitor center. There are also several miles of hiking trails on Middle Island, located a twenty minute drive from the visitor center. The remaining islands are only accessible by boat, and those with beaches are a popular destination.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 67,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 44,000 visits with residents comprising 85 percent of Refuge visitation.

Table 1. Ohio River Islands NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	16,856	887	17,743
Auto Tour	776	137	913
Boat Trail/Launch	38	2	40
Bicycle	641	34	675
Photography	4,370	771	5,141
Interpretation	1,229	137	1,366
Other Recreation	12,000	3,000	15,000
Visitor Center	2,854	713	3,567
Hunting:			
Big Game	1,117	59	1,176
Small Game	26	1	27
Migratory Birds	1,172	62	1,234
Fishing:	16,000	4,000	20,000
Total Visitation	57,079	9,803	66,882

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is spread across a 13-county area. The visitor center is located in Wood County, West Virginia. The Refuge's most visited island (car, bike, and pedestrian) visitation is at Middle Island in Pleasants County, West Virginia. Additional land and islands are in Lewis County, Kentucky; Beaver County, Pennsylvania; and Mason, Jackson, Tyler, Wetzel, Marshall, Ohio, Cabell, Brooke, and Hancock Counties in West Virginia. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.2 million with non-residents accounting for \$440,000 million or 38 percent of total expenditures. Expenditures on fishing activities accounted for 69 percent of all expenditures.

Spending in the local area generates and supports economic activity within the 13 county area (Table 3). The contribution of recreational spending in local communities was associated with about 17 jobs, \$476,000 in employment income, \$128,000 in total tax revenue, and \$1.5 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$165.2	\$136.5	\$301.7
Hunting	\$50.1	\$5.1	\$55.2
Fishing	\$507.0	\$298.0	\$805.0
Total Expenditures	\$722.2	\$439.6	\$1,161.8

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

	Residents	Non-Residents	Total
Economic Output	\$920.3	\$576.3	\$1,496.6
Jobs	11	6	17
Job Income	\$303.6	\$172.6	\$476.2
State and Local Tax Revenue	\$78.3	\$49.4	\$127.7

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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