

The Economic Contributions of Recreational Visitation at Canaan Valley National Wildlife Refuge

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

Canaan Valley National Wildlife Refuge is the 500th refuge located in eastern Tucker County, West Virginia. The Refuge was established in 1994 to ensure the ecological integrity of Canaan Valley and the continued availability of its wetland, botanical, and wildlife resources of West Virginia and the United States. Currently the Refuge consists of 17,002 acres that sits in the Canaan Valley, 3200 feet above sea level in the Allegheny Mountains.

Canaan Valley is 14 miles long and 3 miles wide, and the highest valley of its size east of the Rocky Mountains. This particular valley contains a wetland complex of about 8,400 acres, making it the largest wetlands system in West Virginia. Of these total wetlands, 5,573 acres are located within the refuge. The headwaters of the little Blackwater River, 13 miles of the Blackwater River, and many miles of other tributaries are also within the refuge boundaries.

Canaan Valley National Wildlife Refuge showcases the largest contiguous, high elevation wetland complex in West Virginia and harbors a vast assemblage of rare plants and animals normally associated with more northern latitudes. The Refuge conserves, protects, and manages a mosaic of wetland, forested, and early successional habitat that supports migratory birds and threatened and endangered species. As an integral part of the surrounding community, the Refuge provides high quality, safe, wholesome, and diverse opportunities for education and recreation, especially hunting and wildlife observation. The Refuge experience fosters public interest in the beauty and unique character of Canaan Valley, an appreciation of fish and wildlife ecology, plant ecology, and stewardship of the natural world. Visitors develop a greater understanding and appreciation for the mission of the National Wildlife Refuge

System and refuge management programs, and for the importance of protecting lands for wildlife conservation.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 74,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 71,000 visits with residents comprising 58 percent of Refuge visitation.

Table 1. Canaan Valley NWR: 2017 Recreation Visits

| Activity | Residents | Non-Residents | Total |
|-------------------------|---------------|---------------|---------------|
| Non-Consumptive: | | | |
| Pedestrian | 11,325 | 16,987 | 28,312 |
| Auto Tour | - | - | - |
| Boat Trail/Launch | 64 | 96 | 160 |
| Bicycle | 4,789 | 2,053 | 6,842 |
| Photography | 17,500 | 7,500 | 25,000 |
| Interpretation | 511 | 341 | 852 |
| Other Recreation | 1,679 | 1,679 | 3,358 |
| Visitor Center | 5,675 | 631 | 6,305 |
| Hunting: | | | |
| Big Game | 740 | 1,110 | 1,850 |
| Small Game | 47 | 111 | 158 |
| Migratory Birds | 90 | 184 | 274 |
| Fishing: | 273 | 117 | 390 |
| Total Visitation | 42,693 | 30,808 | 73,501 |

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Tucker County, West Virginia. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$2.5 million with non-residents accounting for \$2.0 million or 80 percent of total expenditures. Expenditures on non-consumptive activities accounted for 95 percent of all expenditures.

Spending in the local area generates and supports economic activity within Tucker County (Table 3). The contribution of recreational spending in local communities was associated with about 33 jobs, \$705,000 in employment income, \$251,000 in total tax revenue, and \$2.7 million in economic output.

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

| Activity | Residents | Non-Residents | Total |
|---------------------------|------------------|----------------------|------------------|
| Non-Consumptive | \$479.3 | \$1,899.8 | \$2,379.1 |
| Hunting | \$21.2 | \$81.8 | \$103.0 |
| Fishing | \$8.7 | \$8.7 | \$17.4 |
| Total Expenditures | \$509.1 | \$1,990.4 | \$2,499.5 |

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

| | Residents | Non-Residents | Total |
|-----------------------------|------------------|----------------------|--------------|
| Economic Output | \$569.7 | \$2,087.6 | \$2,657.3 |
| Jobs | 8 | 26 | 33 |
| Job Income | \$153.6 | \$550.8 | \$704.5 |
| State and Local Tax Revenue | \$52.6 | \$197.9 | \$250.5 |

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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