

The Economic Contributions of Recreational Visitation at Chincoteague National Wildlife Refuge

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

Chincoteague National Wildlife Refuge is a 14,032-acre refuge on the Maryland-Virginia border. It encompasses the southern end of Assateague Island, a mid-Atlantic, coastal barrier island, and includes several other units on other islands in the vicinity. The Refuge was established in 1943 to provide wintering and migration habitat for migratory birds. Its mission now includes preservation of endangered species, maintenance of indigenous species, and wildlife-oriented public use. The area is a popular tourist destination for birding, wildlife, sandy beaches, and home to the “Chincoteague Ponies.” It is within a short drive of the Baltimore-Washington metro area and several beach resorts.

The Refuge encompasses ocean beach, dune, maritime forest, tidal marsh, and freshwater moist soil habitats. Its diverse biota presents unique management challenges. Over 1.4 million visitors come to enjoy the beach and its wildlands aspects. The National Park Service operates the recreational beach section of the refuge. An auto route is closed to automobiles part of each day to permit use by bicyclists and pedestrians. Several nature trails are available. Off-road vehicles are tightly restricted but are permitted on parts of the beach in some seasons. Surf casting is a popular activity and crabbing is permitted in tidal ditches. Hunts for white-tailed deer, sika (a small, oriental elk species introduced to the island) and waterfowl occur in the fall and winter.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 7 million recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 6.0 million visits with residents comprising 14 percent of Refuge visitation.

Table 1. Chincoteague NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	104,507	940,563	1,045,070
Auto Tour	278,685	1,114,742	1,393,427
Boat Trail/Launch	-	-	-
Bicycle	34,836	313,520	348,356
Photography	41,803	794,253	836,056
Interpretation	2,353	76,085	78,438
Other Recreation	418,028	2,368,826	2,786,854
Visitor Center	34,772	312,944	347,716
Hunting:			
Big Game	304	202	506
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	41,803	97,540	139,343
Total Visitation	957,406	6,018,711	6,976,117

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the two-county area of Accomack County, Virginia and Worcester County, Maryland. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$301.6 million with non-residents accounting for \$293.5 million or 97 percent of total expenditures. Expenditures on non-consumptive activities accounted for 98 percent of all expenditures.

Spending in the local area generates and supports economic activity within the two county area (Table 3). The contribution of recreational spending in local communities was associated with about 3,647 jobs, \$119.4 million in employment income, \$34.1 million in total tax revenue, and \$390.8 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$7,195.1	\$288,620.4	\$295,815.4
Hunting	\$9.8	\$8.4	\$18.3
Fishing	\$883.0	\$4,844.2	\$5,727.2
Total Expenditures	\$8,087.9	\$293,473.0	\$301,560.9

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

	Residents	Non-Residents	Total
Economic Output	\$10,567.9	\$380,250.0	\$390,817.9
Jobs	112	3,535	3,647
Job Income	\$3,421.2	\$115,945.7	\$119,366.9
State and Local Tax Revenue	\$800.4	\$33,281.1	\$34,081.5

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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