

# **The Economic Contributions of Recreational Visitation at Waccamaw National Wildlife Refuge**

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

Waccamaw National Wildlife Refuge was established on December 1, 1997. The purposes for which the Refuge was established are (1) protect and manage diverse habitat components within an important coastal river ecosystem for the benefit of endangered and threatened species, freshwater and anadromous fish, migratory birds, and forest wildlife, including a wide array of plants and animals associated with bottomland hardwood habitats; and (2) provide compatible wildlife-dependent recreational activities including hunting, fishing, wildlife observation, photography, and environmental education and interpretation for the of present and future generations.

Located in portions of Horry, Georgetown, and Marion County, the Refuge’s acquisition boundary spans over 55,000 acres and includes large sections of the Waccamaw and Great Pee Dee Rivers and a small section of the Little Pee Dee River. The U.S. Fish and Wildlife Service is actively acquiring lands within this acquisition boundary from willing sellers and presently Refuge lands total nearly 35,000 acres. Notable recent acquisitions have included the 9,100-acre Sandy Island Preserve (largest protected freshwater island on the east coast), a 240-acre addition to the Cox Ferry Lake Recreation with additional trails, lakes, and boardwalks, and Blackwater Recreation Area (canoe/kayak launch site near downtown Conway, SC).

Waccamaw NWR is one of four refuges in the South Carolina Lowcountry Refuges Complex. The others include Ace Basin NWR, Cape Romain NWR, & Santee NWR.

## Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 509,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 114,000 visits with residents comprising 92 percent of Refuge visitation.

**Table 1. Waccamaw NWR: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	72,000	48,000	120,000
Auto Tour	0	0	0
Boat Trail/Launch	60,000	15,000	75,000
Bicycle	1,600	400	2,000
Photography	126,000	14,000	140,000
Interpretation	100,000	25,000	125,000
Other Recreation	2,800	700	3,500
Visitor Center	4,000	1,000	5,000
<b>Hunting:</b>			
Big Game	3,325	175	3,500
Small Game	75	0	75
Migratory Birds	206	19	225
<b>Fishing:</b>	21,000	14,000	35,000
<b>Total Visitation</b>	<b>391,006</b>	<b>118,294</b>	<b>509,300</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the Refuge is the two-county area of Horry and Georgetown Counties in South Carolina. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$10.3 million with non-residents accounting for \$6.1 million or 59 percent of total expenditures. Expenditures on non-consumptive activities accounted for 91 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 148 jobs, \$4.0 million in employment income, \$1.2 million in total tax revenue, and \$14.4 million in final demand.

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

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$3,684.6	\$5,698.9	\$9,383.5
Hunting	\$43.5	\$7.5	\$51.0
Fishing	\$478.3	\$418.6	\$896.9
<b>Total Expenditures</b>	<b>\$4,206.3</b>	<b>\$6,125.0</b>	<b>\$10,331.4</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Final Demand	\$5,963.3	\$8,468.3	\$14,431.6
Jobs	64	84	148
Job Income	\$1,659.4	\$2,326.4	\$3,985.8
State and Local Tax Revenue	\$454.3	\$697.4	\$1,151.8

## 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).

**Final Demand:** 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. Final demand 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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