

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

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

Whittlesey Creek National Wildlife Refuge was established in 1999 to protect, restore, and manage coastal wetland and spring-fed stream habitat in Bayfield County near Ashland, WI. The Refuge is part of an extensive wetland and floodplain complex on the south shore of Lake Superior. Restoration of native coaster brook trout is a focus of the Refuge and its numerous partners. Migratory birds and many other fish and wildlife species also benefit from protection and restoration of habitat on the Refuge and adjacent lands.

The Service is a partner in the multi-agency Northern Great Lakes Visitor Center which offers many opportunities for the public to become more connected with the natural world. The Center serves as headquarters for the Refuge and hosts approximately 100,000 visitors annually. Diverse special events, educational programs and interpretive offerings are very well-attended.

## Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 105,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for nearly all visits with residents comprising 67 percent of Refuge visitation.

**Table 1. Whittlesey Creek: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	229	76	305
Auto Tour	-	-	-
Boat Trail/Launch	-	-	-
Bicycle	71	24	95
Photography	53	18	70
Interpretation	8,248	1,455	9,703
Other Recreation	-	-	-
Visitor Center	61,750	33,250	95,000
<b>Hunting:</b>			
Big Game	61	7	68
Small Game	-	-	-
Migratory Birds	80	20	100
<b>Fishing:</b>	-	-	-
<b>Total Visitation</b>	<b>70,491</b>	<b>34,850</b>	<b>105,341</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the Refuge is Bayfield County, Wisconsin. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.2 million with non-residents accounting for \$638,000 or 54 percent of total expenditures. Expenditures on non-consumptive activities accounted for 99 percent of all expenditures.

Spending in the local area generates and supports economic activity within Bayfield County (Table 3). The contribution of recreational spending in local communities was associated with about 14 jobs, \$331,000 in employment income, \$96,000 in total tax revenue, and \$1.2 million in economic output.

**Table 2. Whittlesey Creek: Visitor Recreation Expenditures (2017 \$,000)**

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$532.2	\$636.4	\$1,168.6
Hunting	\$3.4	\$2.1	\$5.5
Fishing	\$0.0	\$0.0	\$0.0
<b>Total Expenditures</b>	<b>\$535.6</b>	<b>\$638.4</b>	<b>\$1,174.0</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$535.6	\$638.4	\$1,174.0
Jobs	7	7	14
Job Income	\$156.2	\$174.4	\$330.6
State and Local Tax Revenue	\$44.2	\$51.8	\$96.0

## 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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