

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

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

For thousands of years, Native American tribes came here to harvest salt. They hunted the birds and animals drawn to the salt plain and the nearby wetlands. Today, the Salt Plains National Wildlife Refuge conserves that historic legacy, as well as habitat for fish and wildlife. In northwest Oklahoma, the vast salt plain also attracts visitors to dig for crystals containing hour glass shapes that are found nowhere else in the world.

The 10,000-acre salt flat forms one-third of the Refuge that also embraces the Great Salt Plains Lake, wetlands, prairies, woodlands and farm fields. This impressive habitat diversity within the 32,000-acre refuge adds to its significance for wildlife, particularly migratory and nesting birds. Salt Plains NWR is designated an Important Bird Area, a site on the Western Hemisphere Shorebird Reserve Network, and critical habitat for endangered Whooping Cranes. Congress designated the Salt Plains National Wildlife Refuge in 1930 for its significance to migratory waterfowl, and in doing so preserved a significant cultural area as well.

Whether climbing up an observation tower for sweeping views or fishing from a boat in the Great Salt Plains Lake, the Refuge offers people a chance to witness breathtaking numbers of birds, both common and rare. The great flocks of birds that swirl into Salt Plains NWR give visitors a sense of the wildlife and culturally rich past that was tied to the coveted resource of salt.

## Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 84,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 83,000 visits with residents comprising 20 percent of Refuge visitation. Examples of interpretation activities are the Refuge’s guided trail walks and eagle watch events. Other recreation visits are the selenite crystal digging.

**Table 1. Salt Plains NWR: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	942	8,475	9,417
Auto Tour	608	11,549	12,157
Boat Trail/Launch	-	-	-
Bicycle	-	-	-
Photography	8	147	155
Interpretation	75	75	150
Other Recreation	15,000	45,000	60,000
Visitor Center	40	760	800
<b>Hunting:</b>			
Big Game	16	140	156
Small Game	3	14	17
Migratory Birds	54	472	526
<b>Fishing:</b>	122	30	152
<b>Total Visitation</b>	<b>16,866</b>	<b>66,664</b>	<b>83,530</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the Refuge is Alfalfa County, Oklahoma. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$2.0 million with non-residents accounting for \$1.9 million or 92 percent of total expenditures. Expenditures on non-consumptive activities accounted for 97 percent of all expenditures.

Spending in the local area generates and supports economic activity within Alfalfa County (Table 3). The contribution of recreational spending in local communities was associated with about 21 jobs, \$564,000 in employment income, \$174,000 in total tax revenue, and \$2.1 million in economic output.

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

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$169.8	\$1,852.1	\$2,022.0
Hunting	\$1.7	\$55.9	\$57.6
Fishing	\$2.4	\$1.0	\$3.4
<b>Total Expenditures</b>	<b>\$174.0</b>	<b>\$1,909.0</b>	<b>\$2,083.0</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$214.7	\$1,909.0	\$2,123.7
Jobs	2	19	21
Job Income	\$63.5	\$501.0	\$564.4
State and Local Tax Revenue	\$16.6	\$156.9	\$173.5

## 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 8 activity visits to the refuge; yet, they are only four visitors.

## References

Minnesota IMPLAN Group, Inc. *IMPLAN System (2015 data and software)*.

U. S. Department of the Interior, U.S. Fish and Wildlife Service, Division of Federal Aid. 2013. *2011 National Survey of Fishing, Hunting, and Wildlife Associated Recreation*. Washington, D.C.

U.S. Department of the Interior, U.S. Fish and Wildlife Service, National Wildlife Refuge System. *Refuge Annual Performance Plan 2017*. Washington, D.C. Unpublished.

Varian, Hal R. 2010. *Intermediate Microeconomics: A Modern Approach*. 8<sup>th</sup> ed. New York: W.W. Norton & Company.