

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

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This paper establishes the economic contribution baseline for recreational visitation at Minnesota 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, Minnesota 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. One of the Refuge’s congressionally established purposes and key services is environmental education. In 2017, over 10,000 school children visited the Refuge. 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**

Minnesota Valley National Wildlife Refuge spans 13 units along 70 miles of the Minnesota River from the city bustle near the Mall of America to the pastoral farmland near Henderson, Minnesota. First protected at the urging of locals in 1976 and grown through willing sellers and donations, these river wetlands, forest, and upland prairies support diverse wildlife and plants.

The Minneapolis-Saint Paul metropolitan area residents and visitors alike find abundant opportunities for catching sight of over 290 species of birds, north woods wildlife, or a much needed escape from the hectic pace of urban life on the over 30 miles of refuge trails. More rural units of the Refuge offer game and waterfowl hunting while the river and some lakes offer fishing. Find out more about this refuge at [https://www.fws.gov/refuge/minnesota\\_valley/](https://www.fws.gov/refuge/minnesota_valley/).

## Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 275,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 256,000 visits with residents comprising 93 percent of Refuge visitation. Interpretive programs include on-refuge informal roving interpretation, guided walks, illustrated programs and recreation demonstrations, special events (Bat Festival, Urban Bird Festival, etc.) as well as birding and animal tracking programs. Other recreation includes winter wildlife-based recreation of cross-country skiing and snowshoeing.

**Table 1. Minnesota Valley NWR: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	165,600	14,400	180,000
Auto Tour	-	-	-
Boat Trail/Launch	-	-	-
Bicycle	22,540	460	23,000
Photography	1,457	93	1,550
Interpretation	11,514	480	11,994
Other Recreation	1,683	17	1,700
Visitor Center	35,814	2,286	38,100
<b>Hunting:</b>			
Big Game	4,753	97	4,850
Small Game	3,773	77	3,850
Migratory Birds	7,994	81	8,075
<b>Fishing:</b>	1,495	31	1,525
<b>Total Visitation</b>	<b>256,623</b>	<b>18,021</b>	<b>274,644</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the Refuge is the seven-county area of Carver, Dakota, Hennepin, Le Seur, Scott, Sibley, and Ramsey Counties in Minnesota. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were about \$2.6 million with residents accounting for \$2.2 million or 85 percent of total expenditures. Expenditures on non-consumptive activities accounted for 86 percent of all expenditures.

Spending in the local area generates and supports economic activity within the seven county area (Table 3). The contribution of recreational spending in local communities was associated with about 31 jobs, \$1.4 million in employment income, \$269,000 in total tax revenue, and \$4.2 million in economic output.

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

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$1,832.8	\$357.3	\$2,190.0
Hunting	\$325.8	\$12.8	\$338.6
Fishing	\$20.4	\$1.0	\$21.4
<b>Total Expenditures</b>	<b>\$2,178.9</b>	<b>\$371.2</b>	<b>\$2,550.1</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$3,590.1	\$616.3	\$4,206.4
Jobs	27	4	31
Job Income	\$1,183.9	\$199.1	\$1,382.9
State and Local Tax Revenue	\$228.0	\$40.8	\$268.8

## 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).

**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

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.