

# **The Economic Contributions of Recreational Visitation at Rainwater Basin Wetlands Management District**

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This paper establishes the economic contribution baseline for recreational visitation at Rainwater Basin Wetlands Management District (District). The paper addresses the levels of District recreational activities and the economic effects of District 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, Rainwater Basin Wetlands Management District 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 District 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 District would address all applicable economic effects associated with the use of District-produced goods and services. However, some of the major contributions of the District 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 District’s total social impacts.

## **District Description**

Rainwater Basin Wetland Management District was established in 1963 to provide habitat for migrating waterfowl, shorebirds, and other wetland/grassland dependent species traveling through the Central Flyway. Purchased mostly with Duck Stamp dollars, the Rainwater Basin WMD is comprised of nearly 25,000 fee title acres distributed among 62 Waterfowl Production Areas (WPAs) and 2,135 easement acres across 13 counties.

The habitat of Rainwater Basin WMD consists of tall and mixed grass prairies and temporal wetlands. Native plant resources provide critical nutrition required to maintain healthy populations of the annual 10-20 million migrants. The Central Flyway corridor centers on the Rainwater Basin Region of central Nebraska. Over 329 species of birds utilize the flyway.

While critical for migratory waterfowl, habitat in the Rainwater Basin WMD also plays a vital role in the lifecycle of the monarch butterfly, many other native pollinators, amphibians, reptiles, and several resident species.

WPA’s are open for public use opportunities. These include hunting, fishing, wildlife observation and photography, environmental education and interpretation.

## Activity Levels

Table 1 shows the recreation visits for the District. The District had about 54,000 recreational visits in 2017 which contributed to the economic effect of the District. Hunting accounted for about 48,000 visits with residents comprising 77 percent of District visitation.

**Table 1. Rainwater Basin WMD: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	500	500	1,000
Auto Tour	1,500	1,500	3,000
Boat Trail/Launch	-	-	-
Bicycle	-	-	-
Photography	600	600	1,200
Interpretation	160	40	200
Other Recreation	38	13	50
Visitor Center	160	40	200
<b>Hunting:</b>			
Big Game	1,600	400	2,000
Small Game	24,000	6,000	30,000
Migratory Birds	12,800	3,200	16,000
<b>Fishing:</b>	-	-	-
<b>Total Visitation</b>	<b>41,358</b>	<b>12,293</b>	<b>53,650</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the District is the 15-county area of Adams, Clay, Fillmore, Cuming, Dodge, Hall, Hamilton, Saline, Seward, York, Franklin, Gosper, Kearney, Phelps and Polk Counties in Nebraska. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.6 million with non-residents accounting for \$1.0 million or 58 percent of total expenditures. Expenditures on hunting activities accounted for 88 percent of all expenditures.

Spending in the local area generates and supports economic activity within the 15 county area (Table 3). The contribution of recreational spending in local communities was associated with about 19 jobs, \$865,000 in employment income, \$142,000 in total tax revenue, and \$2.2 million in economic output.

**Table 2. Rainwater Basin WMD: Visitor Recreation Expenditures (2017 \$,000)**

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$40.5	\$153.4	\$193.9
Hunting	\$653.5	\$792.4	\$1,445.9
Fishing	\$0.0	\$0.0	\$0.0
<b>Total Expenditures</b>	<b>\$694.0</b>	<b>\$945.8</b>	<b>\$1,639.8</b>

**Table 3. Rainwater Basin WMD: Local Economic Contributions Associated with Recreation Visits (2017 \$,000)**

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$961.6	\$1,283.9	\$2,245.5
Jobs	8	11	19
Job Income	\$391.3	\$473.3	\$864.6
State and Local Tax Revenue	\$54.7	\$86.8	\$141.5

## 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

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.