

The Economic Contributions of Recreational Visitation at Madison Wetlands Management District

May 2019
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This paper establishes the economic contribution baseline for recreational visitation at Madison 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, Madison 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

Madison Wetland Management District was established in 1969 to help restore and preserve high quality wetlands and grasslands unique to the Prairie Pothole Region (PPR). Nearly half of all ducks produced in the continental U.S. are hatched in the PPR. Headquartered in Madison, South Dakota, the staff manages 222 (over 39,000 acres) waterfowl production areas (WPAs) in a 9-county area within the PPR. Purchased using funds from the sale of Federal Duck Stamps, WPAs provide important habitat for breeding waterfowl and other migratory birds.

The Madison WMD does more than provide habitat for wildlife. The District also provides wildlife-dependent recreational opportunities for people. All WPAs are open to hunting, fishing, trapping, wildlife observation, and wildlife photography. The District contains the largest population density in the state making it a popular destination for these activities.

Activity Levels

Table 1 shows the recreation visits for the District. The District had about 131,000 recreational visits in 2017 which contributed to the economic effect of the District. Non-consumptive recreation accounted for about 114,000 visits with residents comprising 92 percent of District visitation.

Table 1. Madison WMD: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	9,440	2,360	11,800
Auto Tour	172	74	245
Boat Trail/Launch	6,225	2,075	8,300
Bicycle	376	94	470
Photography	1,218	1,218	2,435
Interpretation	3,040	760	3,800
Other Recreation	1,728	432	2,160
Visitor Center	114	76	190
Hunting:			
Big Game	15,050	1,672	16,722
Small Game	10,232	15,347	25,579
Migratory Birds	21,089	5,272	26,361
Fishing:	19,920	13,280	33,200
Total Visitation	88,602	42,660	131,262

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the District is the nine-county area of Brookings, Deuel, Hamlin, Kingsbury, Lake, McCook, Minnehaha, Miner and Moody Counties in South Dakota. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$4.6 million with non-residents accounting for \$2.9 million or 63 percent of total expenditures. Expenditures on hunting activities accounted for 59 percent of all expenditures.

Spending in the local area generates and supports economic activity within the nine county area (Table 3). The contribution of recreational spending in local communities was associated with about 57 jobs, \$2.2 million in employment income, \$351,000 in total tax revenue, and \$7.0 million in economic output.

Table 2. Madison WMD: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$299.6	\$412.8	\$712.5
Hunting	\$1,023.0	\$1,690.8	\$2,713.9
Fishing	\$357.4	\$804.1	\$1,161.4
Total Expenditures	\$1,680.0	\$2,907.8	\$4,587.8

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

	Residents	Non-Residents	Total
Economic Output	\$2,618.8	\$4,404.2	\$7,023.0
Jobs	22	35	57
Job Income	\$849.8	\$1,355.4	\$2,205.2
State and Local Tax Revenue	\$118.7	\$232.0	\$350.6

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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