

# **The Economic Contributions of Recreational Visitation at Port Louisa National Wildlife Refuge**

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This paper establishes the economic contribution baseline for recreational visitation at Port Louisa 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, Port Louisa 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**

Port Louisa National Wildlife Refuge is located in southeastern Iowa and protects 8,375 acres on the Mississippi River and 10,000 acres on the Iowa River. Although the U.S. Fish and Wildlife Service (Service) managed lands as early as the 1940s, it was not formally designated as a national wildlife refuge until 1958. The Refuge provides important migration and nesting habitat for more than 278 species of birds, and millions of birds pass through the Refuge each year on their annual migrations. The Mississippi Flyway is one of the most important migration corridors in North America. The Refuge is managed by the Service to conserve and enhance the quality and diversity of fish and wildlife and their habitats, and to restore floodplain functions in the river corridor.

Refuge staff and partners work to conserve and enhance the natural habitat and diversity of the Mississippi and Iowa rivers to benefit wildlife. Management activities focus on restoring or mimicking the natural cycles of the rivers and their floodplains for migratory birds. Levees were built to separate the Mississippi and the Iowa rivers from their floodplains so that lands could be farmed. Later, the U.S. Army Corps of Engineers acquired some of these lands for the construction of the Mississippi River lock and dam system of the 1930s and 1940s and through a subsequent agreement with the U.S. Fish and Wildlife Service, they became the Louisa, Big Timber, and Keithsburg Divisions of the Refuge. Following the Flood of 1993, a fourth division, Horseshoe Bend, was acquired from a struggling agricultural levee district along the Iowa River as were another 10,000 acres of land further upstream on the river, commonly referred to as the Iowa River Corridor Project.

## Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 31,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 10,000 visits with residents comprising 81 percent of Refuge visitation.

**Table 1. Port Louisa NWR: 2017 Recreation Visits**

Activity	Residents	Non-Residents	Total
<b>Non-Consumptive:</b>			
Pedestrian	490	210	700
Auto Tour	154	66	220
Boat Trail/Launch	4,500	500	5,000
Bicycle	76	4	80
Photography	75	25	100
Interpretation	1,350	150	1,500
Other Recreation	400	100	500
Visitor Center	1,200	300	1,500
<b>Hunting:</b>			
Big Game	1,650	550	2,200
Small Game	4,500	1,500	6,000
Migratory Birds	2,860	340	3,200
<b>Fishing:</b>	8,000	2,000	10,000
<b>Total Visitation</b>	<b>25,255</b>	<b>5,745</b>	<b>31,000</b>

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

## Regional Economic Analysis

The economic area for the Refuge is Louisa County, Iowa. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$609,000 with non-residents accounting for \$221,000 or 36 percent of total expenditures. Expenditures on hunting activities accounted for 44 percent of all expenditures.

Spending in the local area generates and supports economic activity within Louisa County (Table 3). The contribution of recreational spending in local communities was associated with about 9 jobs, \$159,000 in employment income, \$48,000 in total tax revenue, and \$659,000 in economic output.

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

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$117.9	\$48.5	\$166.4
Hunting	\$161.5	\$103.6	\$265.1
Fishing	\$109.1	\$68.4	\$177.5
<b>Total Expenditures</b>	<b>\$388.5</b>	<b>\$220.6</b>	<b>\$609.0</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$431.5	\$227.5	\$658.9
Jobs	6	3	9
Job Income	\$105.0	\$53.7	\$158.7
State and Local Tax Revenue	\$30.0	\$17.6	\$47.6

## 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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