

The Economic Contributions of Recreational Visitation at Laguna Atascosa National Wildlife Refuge

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Division of Economics
U.S. Fish & Wildlife Service

This paper establishes the economic contribution baseline for recreational visitation at Laguna Atascosa 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, Laguna Atascosa 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

Laguna Atascosa National Wildlife Refuge is located at the southern tip of Texas next to the Gulf of Mexico. Rare wildlife, such as endangered ocelots and aplomado falcons, find a haven within the refuge, the largest federally protected habitat remaining in the Lower Rio Grande Valley. A vibrant mix of habitats, including subtropical forests, coastal prairies, freshwater wetlands and barrier island, support a mix of wildlife found nowhere else in the world.

Laguna Atascosa NWR has an impressive 410 species of birds that occur during migration, winter, or the breeding season. This is a higher diversity of bird species than any other National Wildlife Refuge, drawing birders from around the world. Several tropical species reach their northernmost range in south Texas, and the Central and Mississippi Flyways converge here.

Situated near South Padre Island, the area is highly visited by Mexican Nationals, retirees and families on vacation. At Laguna Atascosa NWR visitors can connect with nature through a variety of activities including fishing, hunting, wildlife observation and photography, bicycling, hiking and interpretive tours and programs. A Visitor Center with exhibits, restrooms, and a nature store is available.

The Refuge includes the Adolph Thome Jr. County Park, which offers camping, fishing piers and is the busiest boat launch in south Texas. Boaters primarily fish the adjacent Laguna Madre, known for red drum, flounder and speckled trout. The Refuge issues nearly 1000 hunt permits annually and provides opportunities for hunting big game such as white tailed deer, nilgai antelope and feral hogs. In 2017, the Refuge began offering hunts through the Texas Parks and Wildlife on-line public drawn hunts system, and now draws hunters from across the nation.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 485,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 282,000 visits with residents comprising 39 percent of Refuge visitation. Interpretation activities include bird tours, bird walks, and habitat tram tours.

Table 1. Laguna Atascosa NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	3,774	8,806	12,580
Auto Tour	-	-	-
Boat Trail/Launch	96,000	144,000	240,000
Bicycle	2,264	2,264	4,528
Photography	2,865	6,684	9,549
Interpretation	395	2,236	2,631
Other Recreation	-	-	-
Visitor Center	5,093	7,639	12,732
Hunting:			
Big Game	606	2,425	3,031
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	80,000	120,000	200,000
Total Visitation	190,996	294,055	485,051

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Cameron County, Texas. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$30.0 million with non-residents accounting for \$23.0 million or 77 percent of total expenditures. Expenditures on non-consumptive activities accounted for 50 percent of all expenditures.

Spending in the local area generates and supports economic activity within Cameron County (Table 3). The contribution of recreational spending in local communities was associated with about 412 jobs, \$12.1 million in employment income, \$4.6 million in total tax revenue, and \$43.3 million in economic output.

Table 2. Laguna Atascosa NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$2,758.8	\$12,226.1	\$14,984.9
Hunting	\$27.1	\$457.9	\$485.0
Fishing	\$4,264.1	\$10,354.2	\$14,618.3
Total Expenditures	\$7,050.0	\$23,038.2	\$30,088.2

Table 3. Laguna Atascosa NWR: Local Economic Contributions Associated with Recreation Visits (2017 \$,000)

	Residents	Non-Residents	Total
Economic Output	\$10,078.0	\$33,239.0	\$43,317.0
Jobs	109	304	412
Job Income	\$2,839.6	\$9,268.1	\$12,107.6
State and Local Tax Revenue	\$1,134.9	\$3,428.2	\$4,563.1

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

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