

The Economic Contributions of Recreational Visitation at San Luis National Wildlife Refuge

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This paper establishes the economic contribution baseline for recreational visitation at San Luis 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, San Luis 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

The San Luis National Wildlife Refuge – located in the northern San Joaquin Valley of California in Merced County – encompasses over 26,800 acres of wetlands, riparian woodlands, native grasslands, and vernal pools. A thriving population of the endemic tule elk is showcased by one of three auto tour routes. The Refuge is host to significant assemblages of birds, mammals, reptiles, amphibians, fish, insects, and plants; some of which, such as the California tiger salamander, the long-horned fairy shrimp, and San Joaquin kit fox, are endangered species.

The Refuge is a major wintering ground and migratory stopover point for large concentrations of waterfowl, shorebirds, and other waterbirds. Thousands upon thousands of waterfowl use this Refuge from September through March. Large flocks of green-winged teal, mallard, gadwall, northern pintail, and snow, Ross’, and white-fronted geese swarm over the mosaic of seasonal and permanent wetlands that comprise a quarter of the Refuge. Waterfowl generally remain until late March before beginning their journey north to breeding areas.

Shorebirds including sandpipers and plovers can be found in the tens of thousands from autumn through spring. Large flocks of dunlin, long-billed dowitchers, least sandpipers, and western sandpipers can be seen feeding in shallow seasonal wetlands, whereas flocks of long-billed curlews are found using both wetlands and grasslands. More than 25 species of shorebirds have been documented at the San Luis NWR.

The San Luis NWR provides visitors a variety of ways to observe and experience the diverse assortment of wildlife. The award-winning visitor center is a focal point of visitation and features an interactive

exhibit hall and environmental education room for conducting school visits. Auto tour routes allow visitors to remain in their vehicles while observing wildlife throughout the various habitats. Auto tour routes and nature trails also include elevated observation decks with spotting scopes that allow even closer views of wildlife, and interpretive panels that provide information about wildlife, habitats, and refuge management to further enhance visitors' experiences.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 105,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 93,000 visits with residents comprising 51 percent of Refuge visitation.

Table 1. San Luis NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	2,750	2,250	5,000
Auto Tour	39,050	31,950	71,000
Boat Trail/Launch	260	390	650
Bicycle	-	-	-
Photography	220	880	1,100
Interpretation	510	340	850
Other Recreation	-	-	-
Visitor Center	4,200	9,800	14,000
Hunting:			
Big Game	-	-	-
Small Game	53	98	150
Migratory Birds	2,825	5,246	8,070
Fishing:	3,900	-	3,900
Total Visitation	53,767	50,953	104,720

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the five-county area of Fresno, Madera, Merced, San Joaquin, and Stanislaus Counties in California. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$3.9 million with non-residents accounting for \$2.7 million or 68 percent of total expenditures. Expenditures on non-consumptive activities accounted for 82 percent of all expenditures.

Spending in the local area generates and supports economic activity within the five county area (Table 3). The contribution of recreational spending in local communities was associated with about 46 jobs, \$1.7 million in employment income, \$469,000 in total tax revenue, and \$5.9 million in economic output.

Table 2. San Luis NWR: Visitor Recreation Expenditures (2017 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$1,032.1	\$2,196.5	\$3,228.5
Hunting	\$96.3	\$484.9	\$581.3
Fishing	\$114.4	\$0.0	\$114.4
Total Expenditures	\$1,242.8	\$2,681.4	\$3,924.2

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

	Residents	Non-Residents	Total
Economic Output	\$1,829.4	\$4,118.6	\$5,947.9
Jobs	15	30	46
Job Income	\$551.1	\$1,157.3	\$1,708.4
State and Local Tax Revenue	\$145.1	\$323.5	\$468.5

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

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