

The Economic Contributions of Recreational Visitation at Kofa National Wildlife Refuge

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This paper establishes the economic contribution baseline for recreational visitation at Kofa 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, Kofa 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 Kofa Mountains rise abruptly from the plains of the Sonoran Desert, reaching a height of 4,877 feet atop Signal Peak. This desert refuge is over 80 percent designated wilderness in the driest part of the Sonoran desert and was created for the protection of desert bighorn sheep other native wildlife and their habitat. With luck visitors may see desert bighorn sheep while hiking, or get a glimpse of endangered Sonoran pronghorn that are being reintroduced to the area.

The Refuge’s visitor center is located in Yuma, about 50 miles south of the refuge. Visitors can stop by for brochures and information about seasonal interpretive programs. The staff and volunteers can also offer assistance in planning your trip to the Refuge.

Palm Canyon Trail is a half-mile National Recreation Trail located at the end of Palm Canyon Road. The rocky, steep trail leads to a viewpoint for California fan palms, the only native palm species in Arizona. While Palm Canyon Trail is the only designated trail on Kofa National Wildlife Refuge, visitors are welcome to hike anywhere on the refuge so long as hikers do not enter mines or any posted closed area. Camping and backpacking are popular activities during the cooler months of the year.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 95,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 92,000 visits with residents comprising 75 percent of Refuge visitation. Interpretation activities

include guided hikes or walks on the Refuge as well as presentations or hikes on the Refuge for specific groups. Visitors may camp on the Refuge up to 14 days within any 12-month period, and much of the overnight camping is associated with upland game and big game hunting. Other recreation includes visitors hiking, driving the more than 300 miles of unpaved roads, enjoying the scenery, and visiting historic buildings.

Table 1. Kofa NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	6,750	2,250	9,000
Auto Tour	55,897	18,632	74,529
Boat Trail/Launch	-	-	-
Bicycle	-	-	-
Photography	3,000	1,000	4,000
Interpretation	81	81	162
Other Recreation	3,375	1,125	4,500
Visitor Center	160	53	213
Hunting:			
Big Game	1,350	150	1,500
Small Game	1,200	300	1,500
Migratory Birds	-	-	-
Fishing:	-	-	-
Total Visitation	71,813	23,592	95,404

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is the two-county area of La Paz and Yuma Counties in Arizona. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.1 million with non-residents accounting for \$523,000 or 48 percent of total expenditures. Expenditures on non-consumptive activities accounted for 86 percent of all expenditures.

Spending in the local area generates and supports economic activity within the two county area (Table 3). The contribution of recreational spending in local communities was associated with about 17 jobs, \$502,000 in employment income, \$117,000 in total tax revenue, and \$1.7 million in final demand.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$476.9	\$463.1	\$940.0
Hunting	\$90.1	\$59.6	\$149.8
Fishing	-	-	-
Total Expenditures	\$567.0	\$522.8	\$1,089.8

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

	Residents	Non-Residents	Total
Final Demand	\$922.3	\$769.8	\$1,692.1
Jobs	10	7	17
Job Income	\$290.4	\$211.3	\$501.7
State and Local Tax Revenue	\$53.8	\$63.4	\$117.2

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).

Final Demand: 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. Final demand 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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