

# **The Economic Contributions of Recreational Visitation at Bill Williams River 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 Bill Williams River 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, Bill Williams River 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**

Bill Williams River National Wildlife Refuge was established in 1941 as part of the Havasu Lake NWR. Later, in 1993, it was split out as Bill Williams River NWR due to its uniqueness and diversity of habitat. It consists of 6,100 acres and represents the last native cottonwood-willow gallery forest in the Lower Colorado River ecosystem.

The Refuge straddles the transition between the Mojave and Sonoran deserts and as a result, harbors ecological diversity of both deserts. This lush riparian habitat in the desert attracts a variety of neotropical migratory bird species, as well as many resident species, to the tune of over 350 species. This makes the Refuge one of the most avian-diverse of all the refuges in the United States.

## **Activity Levels**

Table 1 shows the recreation visits for the Refuge. The Refuge had about 326,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for about 306,000 visits with residents comprising 34 percent of Refuge visitation. Interpretation activities includes guided tours and/or walks for visitors at the Refuge or self-guided walks using the existing signs and interpretive panels. Other recreation includes hiking, motorized boating, auto tours, and picnicking.

**Table 1. Bill Williams River NWR: 2017 Recreation Visits**

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
<b>Non-Consumptive:</b>			
Pedestrian	24,000	24,000	48,000
Auto Tour	1,632	3,808	5,440
Boat Trail/Launch	1,301	3,037	4,338
Bicycle	4	8	12
Photography	13,050	30,450	43,500
Interpretation	20	20	40
Other Recreation	56,100	130,900	187,000
Visitor Center	5,400	12,600	18,000
<b>Hunting:</b>			
Big Game	1	-	1
Small Game	9	1	10
Migratory Birds	3	-	3
<b>Fishing:</b>	10,000	10,000	20,000
<b>Total Visitation</b>	<b>111,520</b>	<b>214,824</b>	<b>326,344</b>

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 Mohave 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 \$9.1 million with non-residents accounting for \$7.7 million or 84 percent of total expenditures. Expenditures on non-consumptive activities accounted for 92 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 113 jobs, \$2.9 million in employment income, \$1.0 million in total tax revenue, and \$11.3 million in economic output.

**Table 2. Bill Williams River NWR: Visitor Recreation Expenditures (2017 \$,000)**

<b>Activity</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Non-Consumptive	\$1,165.3	\$7,262.7	\$8,428.1
Hunting	\$0.2	\$0.1	\$0.3
Fishing	\$266.5	\$431.4	\$697.9
<b>Total Expenditures</b>	<b>\$1,432.1</b>	<b>\$7,694.2</b>	<b>\$9,126.3</b>

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

	<b>Residents</b>	<b>Non-Residents</b>	<b>Total</b>
Economic Output	\$1,792.8	\$9,552.5	\$11,345.3
Jobs	21	92	113
Job Income	\$494.3	\$2,449.9	\$2,944.2
State and Local Tax Revenue	\$131.8	\$831.7	\$963.5

## 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 8 activity visits to the refuge; yet, they are only four visitors.

## References

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