

The Economic Contributions of Recreational Visitation at Keālia Pond National Wildlife Refuge

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This paper establishes the economic contribution baseline for recreational visitation at Kealia Pond 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, Kealia Pond 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

Keālia Pond National Wildlife Refuge is a hidden wetland treasure transitioning the urban development and agriculture fields. Established in 1992, Keālia Pond National Wildlife Refuge encompasses approximately 700 acres and is one of the few natural wetlands remaining in the Hawaiian Islands and is home to the endangered Hawaiian coot (ae'o) and Hawaiian coot ('alae ke oke'o). The Refuge is adjacent to Kealia Beach, which is a nesting ground for the endangered Hawksbill sea turtle. During certain times of the year, the Refuge supports at least half of the Hawaiian stilt population. The seasonal conditions that occur at the Refuge make it a notable place for people to observe Hawai‘i's endangered wetland birds, along with a diversity of feathered visitors from as far away as Alaska and Canada, and occasionally from Asia.

Keālia Pond NWR is one of two refuges in Hawaii that is open to the public and it has a visitor center, main Pond wildlife viewing area, and a 2,200-foot-long elevated boardwalk. The Keālia Pond Visitor Center includes exhibits that portray the cultural history, ecology, and biology of the Refuge, and include three-dimensional hands-on displays. Visitors can also access the Keālia Coastal Boardwalk at Mā‘alaea Flats, which has interpretive panels and three kiosks that tell the story of the wetland and its ecological and biological functions.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 53,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for all visits with residents comprising 43 percent of Refuge visitation. Interpretive programs vary but focus on native species, habitat, conservation, connecting to nature, interconnectedness of wetland species.

Table 1. Kealia Pond NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	12,400	18,600	31,000
Auto Tour	400	600	1,000
Boat Trail/Launch	-	-	-
Bicycle	100	-	100
Photography	4,000	4,000	8,000
Interpretation	2,100	900	3,000
Other Recreation	-	-	-
Visitor Center	4,000	6,000	10,000
Hunting:			
Big Game	-	-	-
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	-	-	-
Total Visitation	23,000	30,100	53,100

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Maui County, Hawaii. It is assumed that visitor expenditures occur primarily within this county. Visitor recreation expenditures for 2017 are shown in Table 2. Total expenditures were \$1.6 million with non-residents accounting for \$1.4 million or 89 percent of total expenditures. Expenditures on non-consumptive activities accounted for all expenditures.

Spending in the local area generates and supports economic activity within Maui County (Table 3). The contribution of recreational spending in local communities was associated with about 18 jobs, \$620,000 in employment income, \$189,000 in total tax revenue, and \$2.2 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$176.5	\$1,376.6	\$1,553.0
Hunting	-	-	-
Fishing	-	-	-
Total Expenditures	\$176.5	\$1,376.6	\$1,553.0

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

	Residents	Non-Residents	Total
Economic Output	\$245.6	\$1,921.5	\$2,167.1
Jobs	2	16	18
Job Income	\$74.4	\$546.0	\$620.4
State and Local Tax Revenue	\$20.2	\$169.1	\$189.3

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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