

The Economic Contributions of Recreational Visitation at Hanalei National Wildlife Refuge

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

Picturesque Hanalei NWR was established in 1972 under the Endangered Species Act to recover threatened and endangered species, including the endangered koloa (Hawaiian duck), ‘alae ke‘oke‘o (Hawaiian coot), ‘alae ‘ula (Hawaiian moorhen), ae‘o (Hawaiian stilt), and nēnē (Hawaiian goose). The U.S. Fish and Wildlife Service manages the 917-acre refuge to conserve endangered Hawaiian waterbird populations and provide high quality nesting and feeding habitat; protect the native plant community and riverine ecosystem; and provide opportunities for wildlife observation, interpretation, and environmental education. Hanalei NWR is one of two refuges in the State where habitat to support all of the life-history needs of the five endangered Hawaiian waterbirds is available year-round. In addition, the Refuge is one of the only places where the threat of hybridization of koloa maoli with feral mallards can be managed, and nonhybridized, pure koloa maoli can thrive. The Refuge also provides habitat for the endangered ‘ōpe‘ape‘a (Hawaiian hoary bat, *Lasiurus cinereus semotus*) and other native species, including migratory waterfowl and shorebirds.

Nestled deep in the heart of Hanalei River Valley, in the shadow of the waterfall-draped walls of Nāmoloakama, the Hanalei National Wildlife Refuge is part of the Kaua‘i National Wildlife Refuge Complex. The Refuge is in a relatively flat river valley ranging in elevation from 20 to 40 feet above sea level and includes some steep wooded hillsides reaching up to 1,600 feet. A portion of the Hanalei River, which is a designated American Heritage River, runs through the Refuge. Hawai‘i’s waterbirds, found nowhere else in the world, thrive and migratory waterbirds from both Asia and the Americas coningle, as they have since time immemorial. The rivers that drive and feed these systems thrive and support the ancient ahupua‘a (or ridge to sea) watershed management. Old Hawai‘i can still be experienced where

kalo, the ancestor of all Native Hawaiians, is cultivated and cared for and supports the life history requirements and recovery of endangered waterbirds. Together, many hands harmoniously work together to restore a place where native wildlife is plentiful and where knowledge and culture are shared and respected. Through a vibrant environmental interpretation program, locals and visitors alike recognize the Refuge’s role in the island’s rich cultural and natural history, wetland ecology, and native wildlife.

Fishing opportunities are available along the Hanalei River. ‘Ōhiki Road, a narrow County-maintained public road easement which parallels the river, bisects the Refuge. A portion of the State’s ‘Ōkolehao Trail crosses through the Refuge and is popular amongst locals and visitors alike. The Hanalei Valley, which is one of the most photographed spots on the island, can be observed from a scenic highway overlook located on Refuge land. In addition to a panoramic view of the Refuge, the overlook provides interpretive panels that explain Refuge management activities. The Hanalei Valley Scenic Overlook is also included within the historic district of the North Shore section of the Kaua‘i Belt Road (Kūhi‘ō Highway), which was added to the National Register of Historic Places in 2004.

Activity Levels

Table 1 shows the recreation visits for the Refuge. The Refuge had about 407,000 recreational visits in 2017 which contributed to the economic effect of the Refuge. Non-consumptive recreation accounted for nearly all visits with residents comprising 4 percent of Refuge visitation. Interpretation consisted of walks associated with National Wildlife Refuge Week and speakers associated with the Volunteer program. Other recreation consists of hikers that utilize the Okolehao Trail (the trailhead and parking area are located on the Refuge).

Table 1. Hanalei NWR: 2017 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	1,278	548	1,825
Auto Tour	-	-	-
Boat Trail/Launch	-	-	-
Bicycle	238	13	250
Photography	12,045	389,455	401,500
Interpretation	43	2	45
Other Recreation	2,590	1,110	3,700
Visitor Center	-	-	-
Hunting:	-	-	-
Big Game	-	-	-
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	120	0	120
Total Visitation	16,313	391,127	407,440

Source: Refuge Annual Performance Plan 2017 and Refuge Staff

Regional Economic Analysis

The economic area for the Refuge is Kaua'i 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 \$8.6 million with non-residents accounting for \$8.5 million or 99 percent of total 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 107 jobs, \$3.7 million in employment income, \$1.1 million in total tax revenue, and \$12.5 million in economic output.

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

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$76.3	\$8,513.7	\$8,590.1
Hunting	-	-	-
Fishing	\$0.8	-	\$0.8
Total Expenditures	\$77.2	\$8,513.7	\$8,590.9

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

	Residents	Non-Residents	Total
Economic Output	\$111.8	\$12,343.2	\$12,454.9
Jobs	1	105	107
Job Income	\$36.7	\$3,670.5	\$3,707.3
State and Local Tax Revenue	\$9.2	\$1,084.7	\$1,093.9

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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