# Kāwā Resources Management Plan

## Final

"Kāwā was a place where you can feed your family so we took care of it...It was mostly a place to fish for subsistence. We wouldn't take much...From Friday to Sunday we'd be there, dry our fish down there."

-Kupuna of Nā'ālehu

# KĀWĀ

# RESOURCES MANAGEMENT PLAN

## FINAL

JULY 2017

PREPARED FOR:

PREPARED BY:

TOWNSCAPE INC

***I kekahi la nae, hiki maikai iho la***
***ka nalu o Maliu a me***
***Kapaelauhala, olioli iho la ke keiki***
***haehae poko o***
***Naalehu,***
***ka heenalu lala o Kawa.***

One day when the waves of Maliu and Kapaelauhala
were rolling in magnificently, the cut-worm tearing son
of Naalehu resolved to show the
skill he had got through
practice [in surfing] on the bent wave of Kawa.

"Ka Moolelo o Kamehameha I"
S.M. Kamakau, 1867

## ACKNOWLEDGEMENTS

Mahalo nui to the Kaʻū community for welcoming the planning team into their community, and to all who shared their manaʻo and contributed to this management plan.

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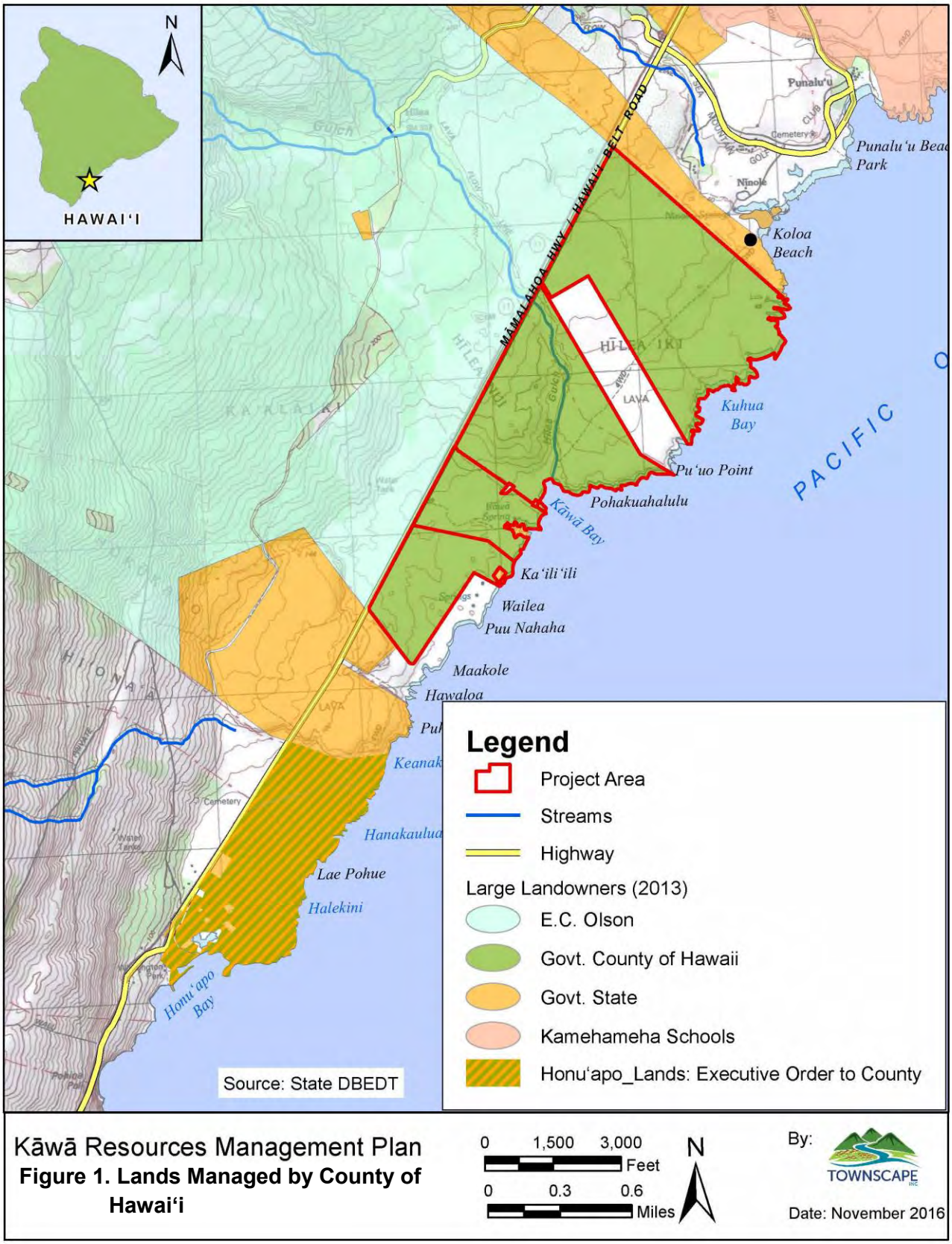
# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AIS | Archaeological Inventory Survey |
| CBSFA | Community-based Subsistence Fishing Area |
| DAR | Department of Aquatic Resources |
| DLNR | Department of Land and Natural Resources |
| DOFAW | Division of Forestry and Wildlife |
| DPR | Department of Parks and Recreation |
| HAR | Hawai‘i Administrative Rules |
| HCFD | Hawai‘i County Fire Department |
| HIHTRP | Hawai‘i Island Hawksbill Turtle Recovery Project |
| HRS | Hawai‘i Revised Statutes |
| HWF | Hawai‘i Wildlife Fund |
| LLCP | Legacy Land Conservation Program |
| MHI | Main Hawaiian Islands |
| MOU | Memorandum of Understanding |
| NMFS | National Marine Fisheries Service |
| PONC | Public Access, Open Space, and Natural Resources Preservation Commission |
| RLA | Recovery Land Acquisition |
| SHPD | State Historic Preservation Division |
| TMA | Three Mountain Alliance |
| TMK | Tax Map Key |
| UH | University of Hawai‘i |
| USFWS | U.S. Fish and Wildlife Service |


N
HAWAI'I
MĀMALAHOA HWY / HAWAI'I BELT ROAD
Punalu'u
Punalu'u Beach Park
Ninole
Koloa Beach
Kuhua Bay
Pu'uo Point
Pohakuahalulu
Kāwā Bay
Ka'ili'ili
Wailea
Puu Nahaha
Maakole
Hawaloa
Keanak
Hanakaulua
Lae Pohue
Halekini
Honu'apo Bay
PACIFIC
Legend
Project Area
Streams
Highway
Large Landowners (2013)
E.C. Olson
Govt. County of Hawaii
Govt. State
Kamehameha Schools
Honu'apo_Lands: Executive Order to County
Source: State DBEDT
Kāwā Resources Management Plan
Figure 1. Lands Managed by County of Hawai'i
0 1,500 3,000 Feet
0 0.3 0.6 Miles
N
By:
TOWNSCAPE INC
Date: November 2016

# EXECUTIVE SUMMARY

Kāwā is a treasured wahi pana, not only for the people of Kaʻū, but also for residents from other regions of Hawaiʻi Island. At Kāwā, one will find the picturesque Kāwā Bay, that serves as a popular surfing spot for Kaʻū residents, fresh water springs that feed an estuary once serving as a fishpond, Hīlea Stream, one of the largest intact heiau in the region, and numerous Hawaiian cultural sites that provide a glimpse into what was once home to generations of Hawaiian families.

This historically and culturally rich place is also home to a diversity of native plants and animals, including a number of threatened and endangered[1] species. Kāwā provides habitat for the federally listed endangered hawksbill turtle (*Eretmochelys imbricata*), the threatened green turtle (*Chelonia mydas*), and the endangered Hawaiian monk seal (*Monachus schauinslandi*). Suitable wetland habitat for the endangered Hawaiian coot (*Fulica alai*) can be found in Kāwā's estuaries and marsh area; and the mouth of Hīlea Stream provides habitat for an endangered insect called the orange-black Hawaiian damselfly (*Megalagrion xanthomelas*). It is crucial that this special place be protected and preserved for its historic and cultural significance as well as for the important role it plays in the overall ecosystem of the island.

[1] The Federal Endangered Species Act of 1973 defines federally endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range," while a federally threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future through all or a significant portion of its range."

Recognizing the importance of this place, the County of Hawaiʻi (hereinafter referred to as "County") purchased the first phase of these Kāwā lands, a 234-acre parcel fronting Kāwā Bay, in 2008. The County then acquired the second phase, consisting of three parcels, in 2011. Together, these four undeveloped, coastal parcels, located within the ahupuaʻa of Kaʻalāiki, Hīlea Nui, and Hīlea Iki, total approximately 785 acres.

The County purchased these lands by using funds from the Public Access, Open Space, and Natural Resources Preservation Commission (PONC) program and by leveraging funds from state and federal sources [the State Department of Land and Natural Resources Legacy Land Conservation Program and the U.S. Fish and Wildlife Service Recovery Land Acquisition (RLA) program]. As set forth in the RLA Grant Agreement No. E-17-RL-1 and in the *"Agreement to Subgrant between County of Hawaiʻi and the State of Hawaiʻi"* dated September 7, 2011, the County is required to develop this resources management plan for the Kāwā lands. This resources management plan is also intended to provide management guidance for the County to manage the Kāwā lands and to help protect, restore, and perpetuate the cultural heritage and natural resources of the place.

The County also manages 222.7 acres of Kaʻū coastal lands located to the south of the Kāwā acreage. Now known as "Honuʻapo Park," these lands were purchased by the State in 2006 and were set aside to the County by Executive Order No. 4164. With the more recent acquisition of the Kāwā lands, the County now has the opportunity – and the

responsibility – of planning for and managing approximately 1,000 acres of coastal Kaʻū lands.

This management plan describes the cultural heritage and natural resources of Kāwā; outlines specific management actions to ensure resources within the County's property are properly cared for, including habitat for native, threatened, and endangered plants and animals; and discusses a management approach for Kāwā.

The overall management theme for Kāwā is that this very special place must be protected for future generations and should not be developed; these lands should remain open and wild—"less is more." This management plan assumes that there will be no significant infrastructure improvements as it is recognized that improved amenities and access would alter the undeveloped, natural landscape of Kāwā and ultimately impact the spirit of this wahi pana. The desired outcome is a safe environment for all to use and enjoy. The sense of place that is uniquely Kāwā is maintained. The demand for recreational areas is balanced with the need to protect the natural environment from overuse. Native plants and animals are protected and can exist in harmony with human activities. Cultural practices and knowledge are perpetuated, existing landscape and viewplanes are intact, and natural and cultural resources are cared for.

While there is a wide array of native flora and fauna present at Kāwā, protection for four federally listed species is emphasized in this managemend plan, as specified in the RLA Grant Agreement and the *Kāwā Bay Acquisition and Habitat Restoration Project* (Hawaiʻi DLNR-DOFAW, 2007). These four species are: Hawksbill sea turtle, Green sea turtle, Hawaiian coot, and Orange-black Hawaiian damselfly. One important benefit is that management of habitat for these four species will also protect important habitat for many of the other common, native, rare, threatened, and endangered species that may be found at Kāwā. In general, most natural resources management activities tend to act synergistically to improve the overall health of an ecosystem, which in turn has direct and indirect benefits for all native species in the ecosystem.

Management strategies for the protection of the natural resources, cultural heritage and overall ecosystem at Kāwā are presented in this plan. These strategies relate to: maintaining sense of place, minimizing human impacts, vegetation management, and predator control.

On-site presence and enforcement of rules are critical elements of future management—for the protection of resources and visitor safety, and to maintain the sense of place that is uniquely Kāwā. A co-management approach for Kāwā is recommended since it is understood that the County currently does not have the capacity to adequately manage and maintain the 700+ acres of land at Kāwā without assistance from the community.

Implementation of management strategies identified in this plan will require partnership amongst state and county agencies, community organizations, and lineal descendants to carry out many of the actions outlined. A collective effort is key to successfully execute the actions described in this plan, as it is a task beyond the capacity of just one organization or government agency.

# 1 INTRODUCTION

Kāwā is a treasured wahi pana, not only for the people of Kaʻū, but also for residents from other regions of Hawaiʻi Island. For many, Kāwā connects the past to the present and evokes memories of Old Hawaiʻi and what it means to be Hawaiian. In the past, it was one of the places people would access for fishing in Kaʻū. It was not only important for survival, but the practice often involved camping at the beach for several days which facilitated families spending time together. During this time, core Hawaiian values, such as mālama, kōkua, aloha and were learned and lived out through taking care of resources and each other. For others, Kāwā serves as a puʻu honua, or place of refuge. Hidden from the main highway are two pāhoehoe roads intertwined through shrubland which lead to breathtaking views of the coastline and natural landscape. At Kāwā, one will find the picturesque Kāwā Bay, that serves as a popular surfing spot for Kaʻū residents; fresh water springs that feed an estuary once serving as a fishpond; Hīlea Stream; one of the largest intact heiau in the region; and numerous Hawaiian cultural sites that provide a glimpse into what was once home to generations of Hawaiian families.

This historically and culturally rich place is also home to a diversity of native plants and animals, including a number of threatened and endangered[2] species. Kāwā provides habitat for the federally listed endangered hawksbill turtle (*Eretmochelys imbricata*), the threatened green turtle (*Chelonia mydas*), and the endangered Hawaiian monk seal (*Monachus schauinslandi*). Suitable wetland habitat for the endangered Hawaiian coot (*Fulica alai*) can be found in Kāwāʼ s estuaries and marsh area; and the mouth of Hīlea Stream provides habitat for an endangered insect called the orange-black Hawaiian damselfly (*Megalagrion xanthomelas*). It is crucial that this special place be protected and preserved for its historic and cultural significance as well as for the important role it plays in the overall ecosystem of the island.

Located within the ahupuaʻa of Kaʻalāiki, Hīlea Nui and Hīlea Iki, District of Kaʻū, island of Hawaiʻi, these Kāwā lands consist of four undeveloped, coastal parcels totaling approximately 785 acres. The County of Hawaiʻi (hereinafter referred to as "County") acquired the first phase of the Kāwā lands in 2008 and the second phase in 2011 using funds from the Public Access, Open Space, and Natural Resources Preservation Commission[3] (PONC) program to eliminate the threat of development. In addition to funds from the PONC program, State and

[2] The Federal Endangered Species Act of 1973 defines federally endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range," while a federally threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future through all or a significant portion of its range."

[3] Hawaiʻi County Code Chapter 2, Article 42, Section 2-214; Hawaiʻi County Charter, Section 10-1

Federal funds were also used to purchase the Kāwā lands. The County also manages 222.7 acres of Kaʻū coastal lands located to the south of the Kāwā acreage (Figure 1). Now known as "Honuʻapo Park," these lands were purchased by the State in 2006 and were set aside to the County by Executive Order No. 4164. In 2009 to 2010, Townscape, Inc., under contract with the County, developed the *Honuʻapo Park Resources Management Plan* for these lands. The plan included several adjacent small parcels, including the County's existing Whittington Beach Park. The overall goal of the plan was "to provide land use guidance to help protect and restore the important natural and cultural resources of the property while providing integrated and respectful recreational and educational opportunities for the Kaʻū community." With the more recent acquisition of the Kāwā lands, the County now has the opportunity – and the responsibility – of planning for and managing approximately 1,000 acres of coastal Kaʻū lands.

This management plan describes the cultural heritage and natural resources of Kāwā; outlines specific management actions to ensure resources within the County's property are properly cared for, including habitat for native, threatened, and endangered plants and animals; and discusses a management approach for Kāwā. The plan reflects values important to kūpuna and residents of the Kaʻū community. It also provides a guide for the County to coordinate management and stewardship activities for this treasured wahi pana for the benefit of Hawaiʻi Island families and future generations.

## 1.1 BACKGROUND

### 1.1.1 Overview of the PONC Program

The PONC program (also known as the Open Space or 2% Fund) was established in 2006, and receives funding for land conservation from two percent of the County's annual real property tax revenues. The PONC program is currently administered and managed by the County's Finance Department, Property Management Division.

The PONC program provides monies to purchase or acquire lands and easements in the County for:

- Public outdoor recreation and education, including access to beaches and mountains;
- Preservation of historic or culturally important land areas and sites;
- Protection of natural resources, significant habitat or eco-systems, including buffer zones;
- Preservation of forests, beaches, coastal areas, natural beauty and agricultural lands; and
- Protection of watershed lands to preserve water quality and water supply.

In order for a property to be acquired using the PONC funds, the public must nominate a property that they believe should be purchased and preserved to the Commission[6]. Once a property is submitted, the Commission reviews the property based on factors such as historic and culturally important features; opportunities for outdoor recreation and education; public access to beaches or mountains; preservation of forests, beaches, coastal areas, and natural beauty; and the overall benefit the property provides to the public. The Commission develops a list of priority projects for conservation every year, which is submitted to the mayor for comments and recommendations. After comments and recommendations are provided by the mayor, the list is then submitted to the County Council for consideration.

**Table 1. Properties Acquired with PONC funds (as of 01/2017)**

| PROPERTY | LOCATION | ACREAGE | ACQUISITION YEAR | OTHER FUNDING SOURCE |
|---|---|---|---|---|
| Waipi'o Valley Lookout Parcel | Hāmākua | 1.804 | 2007 | – |
| Kāwā | Ka'ū | 234.293 | 2008 | State-DLNR LLCP |
| Kaiholena (north) | North Kohala | 151.615 | 2010 | — |
| Pa'o'o | North Kohala | 10.61 | 2010 | State – DLNR LLCP |
| Kāwā | Ka'ū | 550.871 | 2011 | State-DLNR LLCP; Federal USFWS RLA |
| 'O'oma | North Kona | 217.566 | 2013 | Private Donation |
| Kipapa Park/White Sands Mauka | North Kona | 16.7865 | 2014 | — |
| Hāwī Banyan Trees Property | North Kohala | 0.911 | 2015 | – |
| Kaiholena (south) | North Kohala | 76.615 | 2013, 2015 | State-DLNR LLCP |
| Kahua Olohu | Ka'ū | 13.000 | 2016 | — |
| Pohoiki Bay | Puna | 26.762 | 2015 | — |
| Kahuku Coastal Property | Ka'ū | 3,127.95 | 2016 | State-DLNR LLCP; Federal USFWS RLA |

[6] The Commission consists of nine members, appointed by the mayor and confirmed by the County Council. One member must reside in each County Council district. Members serve staggered terms of five years. (Hawai'i County Code Chapter 2, Article 42, Section 2-215)

Since the inception of the PONC program, more than 4,430 acres have been preserved for open space using funds from the PONC program (Table 1). The first property purchased using the PONC funds was the Waipiʻo Lookout in Hāmākua in 2007, followed by the first phase of Kāwā a year later. Other PONC properties include Kaiholena and Paʻoʻo in North Kohala, and Kipapa Park, White Sand Mauka, and ʻOʻoma in North Kona. Several of the PONC properties, including Kāwā, were acquired by leveraging funds with state and federal sources: the State Department of Land and Natural Resources (DLNR) Legacy Land Conservation Program (LLCP) and the U.S. Fish and Wildlife Service (USFWS) Recovery Land Acquisition (RLA) program.

Lands acquired using the PONC funds contain a restrictive covenant in their recorded deeds of conveyance that states:

> *"This land was acquired with moneys from the Public Access, Open Space, and Natural Resources Preservation Fund. It shall be held in perpetuity for the use and enjoyment of the people of Hawaiʻi County and may not be sold, mortgaged, traded or transferred in any way."*

### 1.1.2 Public Access, Open Space, and Natural Resources Preservation Maintenance Fund

A charter amendment in 2012 established a public access, open space, and natural resources preservation maintenance fund (hereinafter "maintenance fund"), which sets aside 0.25 percent of annual real property tax revenues (in addition to the two percent to purchase lands), to provide funding for maintaining properties acquired by the PONC fund. The maintenance fund is administered and managed by the County's Department of Parks and Recreation.

The maintenance fund ensures that money is dedicated to preserve the land, promote public safety, and maintain healthy stewardship. Monies from the maintenance fund may be used solely for public safety maintenance and preservation of lands and easements acquired by the PONC fund. Hawaiʻi County Charter, Article 10, Section 10-16 outlines permitted uses of the maintenance fund, which may include expenditures relating to:

(1) Reparation (fixing, mending, repair work, and servicing);
(2) Preservation (damage control, salvaging, safekeeping, and safeguarding);
(3) Conservation of soil, forests, shorelines, native wildlife, streams, wetlands, watershed, and floodways;
(4) Restoration (replacement, reclamation, reconditioning, and remediation);
(5) Wildlife and fire prevention;
(6) Repair of existing buildings to meet the current code requirements, if the

building is deemed reasonable to save;
(7) Replacing signs to meet the current code requirements;
(8) Installation, repair, or replacement fencing and gate or access mechanisms;
(9) Installation or repair of cattle guards;
(10) Mitigation of flooding problems including repair or restoration of existing culverts, drainage features, or other similar flood control mitigation;
(11) Archaeological survey and buffering of historical or cultural sites after appropriate consultation with Native Hawaiian descendants and cultural practitioners;
(12) Biological studies for the protection of Native Hawaiian species of plants and animals; or
(13) Mitigation of Americans with Disabilities Act compliance issues that may arise during the course of public safety maintenance and preservation.

501(c)3 nonprofits or organizations operating under the umbrella of a 501(c)3 nonprofit may apply for stewardship grants issued from the maintenance fund for uses outlined above. Grants are awarded annually. The first stewardship grant was awarded in 2016 to Pohala I Ka Lani, a non-profit organization, to protect, preserve, and restore the 1.8-acre Waipi‘o Valley Lookout property.

### 1.1.3 Purchase of Kāwā Lands

For many years, Kāwā was identified as a top priority for protection because of its outstanding natural and cultural resources, including providing habitat for at least four federally threatened and endangered species. In 2008, the County purchased the first phase of the Kāwā lands, a 234-acre parcel [Tax Map Key (TMK) 9-5-017: 007; Table 2] fronting Kāwā Bay from the Edmund Olson Trust using funds from PONC and the State DLNR LLCP. In 2011, the County acquired the second phase of the Kāwā lands, which consisted of three parcels (TMKs 9-5-017: 005 and 9-5-016: parcels 006 and 025) totaling approximately 550 acres. Matching funds from the State DLNR LLCP and the USFWS RLA Program were used to acquire the second phase of the Kāwā lands.

Together, these four parcels will be collectively referred to as “the Property,” or simply “Kāwā” (Figure 2).

**Table 2. Parcels of the County’s Kāwā Property**

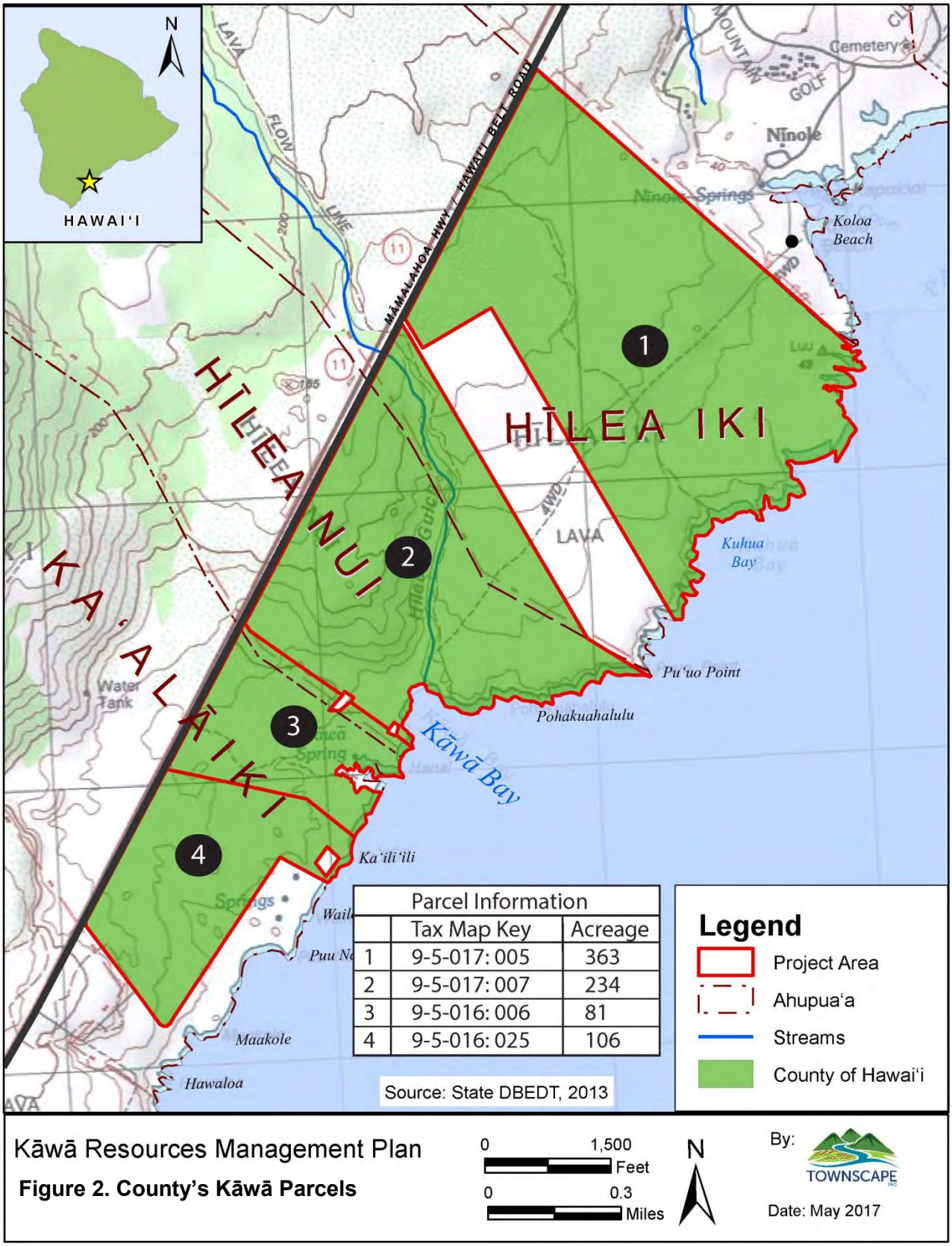
| | TAX MAP KEY | YEAR COUNTY ACQUIRED | ACREAGE |
|---|---|---|---|
| 1 | 9-5-017:005 | 2011 | 363.2 |
| 2 | 9-5-017:007 | 2008 | 234.3 |
| 3 | 9-5-016:006 | 2011 | 81.3 |
| 4 | 9-5-016:025 | 2011 | 106.4 |
| | Total Property Area | | 785.2 |

### 1.1.4 Surrounding Landowners

The Property is bordered by Māmalahoa Highway to the west, a State-owned parcel to the north (Punalu‘u side), and a private parcel to the south (Honu‘apo side). The Property also surrounds three privately-owned parcels and two State-owned parcels. Mauka of the section of Māmalahoa Highway that borders the Kāwā lands are large parcels of land owned by the E.C. Olson Trust (Figure 3). Further south of the Property are approximately 222.7 acres of Ka‘ū coastal lands owned by the State but set aside to the County under Executive Order No. 4164, now known as “Honu‘apo Park.” Table 3 provides more information about the parcels that are surrounded by the County’s Kāwā lands.

**Table 3. Parcels Surrounded by County’s Kāwā lands**

| TAX MAP KEY | LAND OWNER | DESCRIPTION | ACREAGE |
|---|---|---|---|
| 9-5-016: 007 | State of Hawai‘i | Former school grant | 1.147 |
| 9-5-016: 030 | State of Hawai‘i | Encompasses Kāwā pond and springs | 2.13 |
| 9-5-017: 006 | Private | Former kuleana parcel awarded to Maluae as LCAw. 10190 in 1848 | 0.65 |
| 9-5-017: 011 | Private | LCAw. 7733:1 | 0.25 |
| 9-5-017: 012 | Private | Flag lot that extends from Highway 11 to the coast in Hīlea Iki ahupua‘a | 100 |


N
HAWAI'I
HĪLEA IKI
HĪLEA NUI
KA'ALĀIKI
1
2
3
4
Nīnole
Koloa Beach
Kuhua Bay
Pu'uo Point
Pohakuahalulu
Kāwā Bay
Ka'ili'ili
Maakole
Hawaloa
Water Tank
Parcel Information
Tax Map Key
Acreage
1 9-5-017: 005 363
2 9-5-017: 007 234
3 9-5-016: 006 81
4 9-5-016: 025 106
Source: State DBEDT, 2013
Legend
Project Area
Ahupua'a
Streams
County of Hawai'i
Kāwā Resources Management Plan
Figure 2. County's Kāwā Parcels
0 1,500 Feet
0 0.3 Miles
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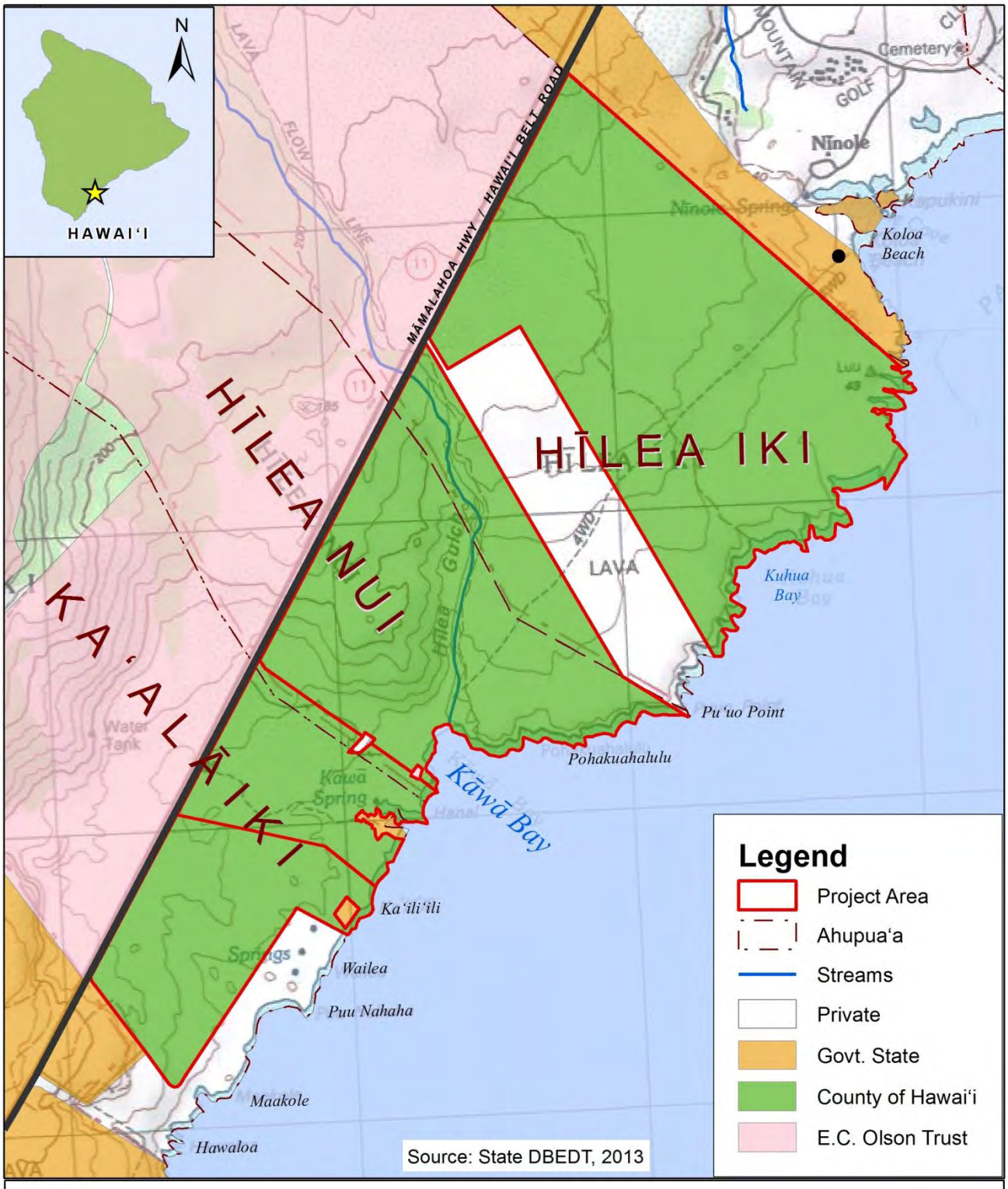
By: TOWNSCAPE
Date: May 2017




Kāwā Resources Management Plan

**Figure 3. Surrounding Landowners**

0 1,500 Feet

0 0.3 Miles

N

By: TOWNSCAPE INC

Date: June 2017

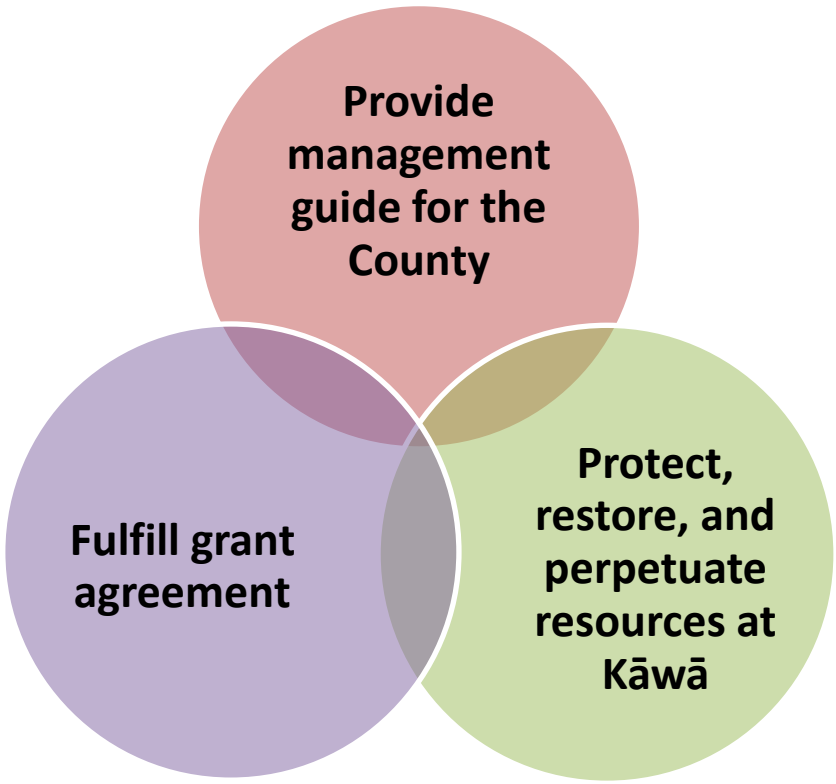
## 1.2 PURPOSE OF THE MANAGEMENT PLAN

The purpose of this management plan is to provide management guidance for the County to manage the Kāwā lands. The Kāwā lands were acquired with "the goal to protect the land in perpetuity as a conservation area; to protect habitat for native, threatened, and endangered plants and animals, coastal open space, cultural resources, and coastal resources; and for passive public recreation."

This management plan also fulfills the RLA Grant Agreement (No. E-17-RL-1) for usage of funds from the USFWS RLA Program. The RLA Grant Agreement (and in the "*Agreement to Subgrant between County of Hawai'i and the State of Hawai'i*" dated September 7, 2011, states that the County shall:

a. Support the conservation of threatened and endangered species according to the respective priorities and planning documents listed within the Recovery Land Acquisition Grant Proposal
b. Create an integrated Management Plan for restoring the wetland habitat and coastal strand areas of the Property;
c. Incorporate into the Management Plan the protection of threatened or endangered species habitat, including:
    i. The goals, objectives, and implementation steps for predator control on the Property;
    ii. The goals, objectives, and implementation steps for invasive species removal on the Property;

**Figure 4. Purpose of the Management Plan**



d. Seek external funding for implementation of the Management Plan;
e. Implement the Management Plan;
f. Manage, conduct, and oversee the restoration efforts specified in the Management Plan;
g. Restore the wetlands habitat by removing invasive species in the wetlands and buffer areas;
h. Control predators through exclusion or eradication;
i. Work with local community and cultural groups to create an archaeological conservation plan; and
j. Implement the archaeological conservation plan, which may include the preservation and restoration of archaeological features of the site including heiau and burial areas.

Lastly, and most importantly, this resources management plan is intended to help protect, restore, and perpetuate the cultural heritage and natural resources of the place. This plan provides an opportunity to engage in early action to ensure resources are properly cared for before irreversible consequences compromise the ability of future generations to enjoy this special place.

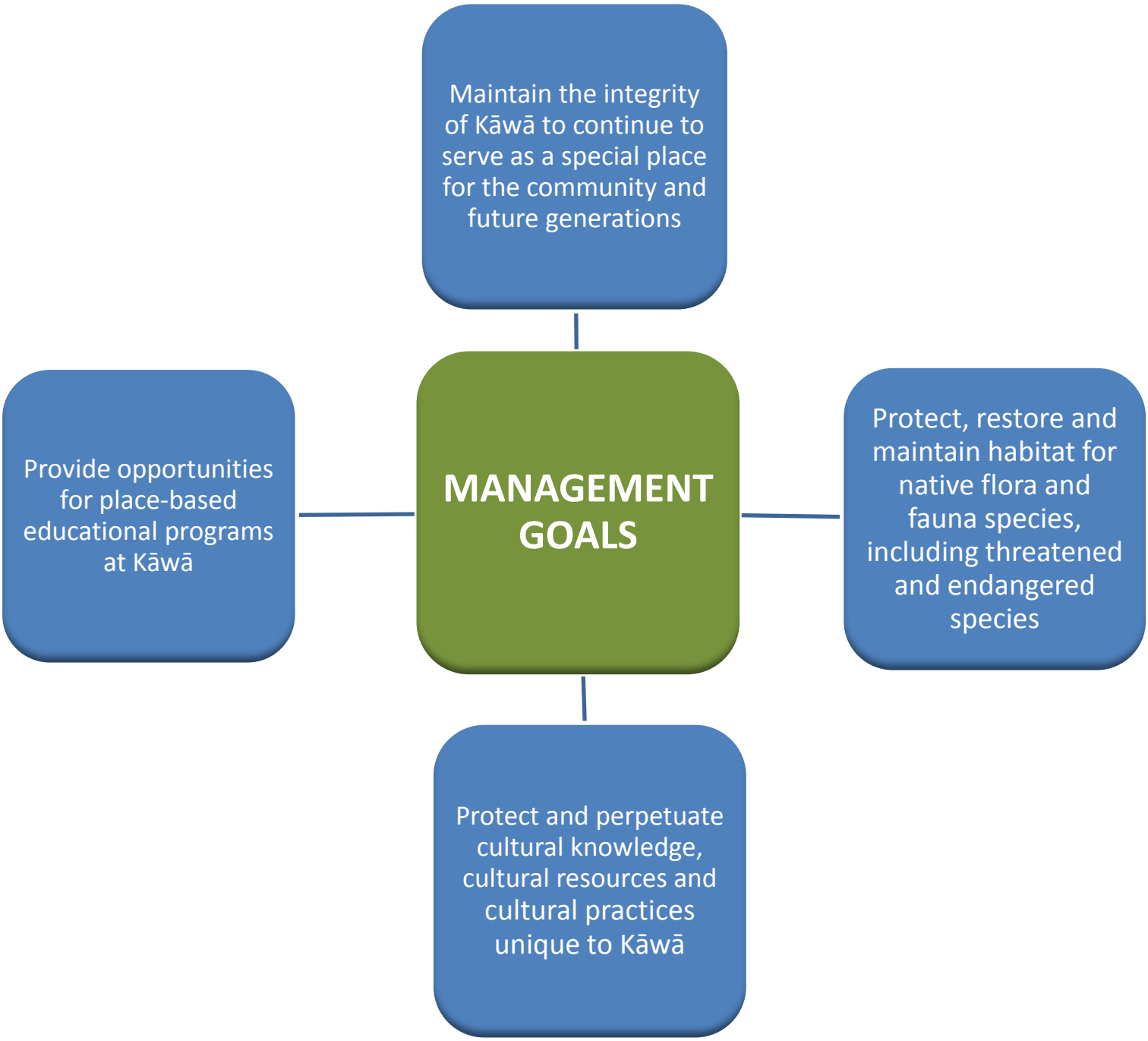
## 1.3 GOALS

In recognition of the role of Kāwā as a valuable heritage of Kaʻū that must be protected and managed for the benefit of current and future generations, the goals of this resources management plan are thus to:

- Maintain the integrity of Kāwā to continue to serve as a special place for the community and future generations;
- Protect, restore and maintain habitat for native flora and fauna species, including threatened and endangered species;
- Protect and perpetuate cultural knowledge, cultural resources and cultural practices unique to Kāwā; and
- Provide opportunities for place-based educational programs at Kāwā.

Kāwā should not be developed; these lands should remain open and wild—**"less is more."** This management plan assumes that there will be no significant infrastructure improvements as it is recognized that improved amenities and access would alter the undeveloped, natural landscape of Kāwā and ultimately impact the feel of this wahi pana. The desired outcome is a safe environment for all to use and enjoy. The sense of place that is uniquely Kāwā is maintained. The demand for recreational areas is balanced with the need to protect the natural environment from overuse. Native plants and animals are protected and can exist in harmony with human activities. Cultural practices and knowledge are perpetuated, existing landscape and viewplanes are intact, and natural and cultural resources are cared for.

**Figure 5. Management Goals**



## 1.4 PLAN DEVELOPMENT METHODOLOGY

This management plan was developed based on field visits and consultations with Kaʻū community members who are knowledgeable about the place, and with agencies and organizations involved in the management of resources specific to Kāwā. Community members included kūpuna, lineal and cultural descendants, community organizations, fisherfolks, surfers, educators, scientists and professional experts. Community input was gathered in small talk story sessions and a public meeting. A summary of the community consultation describing the value of Kāwā, vision for the place, wahi pana, moʻolelo, cultural practices and resources of the place is provided in Appendix A.

## 1.5 PUBLIC ACCESS

### Easements

Landowners must provide the general public reasonable access to Kāwā Bay and the adjacent shoreline along several rights-of-way as described in the Findings of Fact and Conclusions of Law, dated October 14, 1980, in Barba v. Okuna, Civil No. 4590, Third Circuit Court. The rights-of-way include a "10-foot vehicular, equestrian and pedestrian easement along the Corral Gate Road" and a "3-foot wide pedestrian easement along the Hīlea Trail." Refer to Appendix B for specific details provided in the court decision.

### Public Access Shoreline Hawaiʻi (PASH) Decision

The Hawaiʻi Supreme Court determined in Public Access Shoreline Hawaii v. Hawaiʻi County Planning Commission (1995) that for the purpose of practicing traditional and customary rights, practitioners may gather anywhere that those rights have been traditionally and customarily exercised in that manner—on land that is less than "fully developed." As summarized in *Hoʻahana Aku, a Hoʻōla Aku: A Legal Primer for Traditional and Customary Rights in Hawaiʻi*, the PASH ruling stands for the following:

(1) Hoaʻāina can gather anywhere that such rights have been customarily and traditionally exercised in that manner;
(2) Hoaʻāina can gather what is needed for traditional and customary subsistence, cultural and religious purposes;
(3) Hoaʻāina can gather on land that is less than fully developed;
(4) The government cannot regulate traditional and customary rights out of existence;
(5) The interests of the property owner and hoaʻāina must be balanced; and
(6) The balance weighs in favor of the property owner against hoaʻāina who exercise otherwise valid customary rights in an unreasonable manner.

Thus, practitioners must be able to exercise their traditional and customary rights at Kāwā in a manner that is consistent with the PASH decision.

In 2008, PASH rights specifically for resources at Kāwā Bay was determined in a

Partial Stipulated Final Judgment, Decree, and Order of Conveyance in Trust between the Basil ʻĀpiki PASH rights descendants and the County of Hawaiʻi. Refer to Appendix B for specific details provided in the court order.

## 1.6 RELEVANT PROJECTS

### 1.6.1 Māmalahoa Highway Drainage Improvements at Kāwā Flats

Drainage improvements are planned for a section of Māmalahoa Highway (State Route 11) fronting the Kāwā property by the Hawaii State Department of Transportation. Improvements will impact approximately 3,700 feet of the highway located near Corral Gate Road. A section of the highway's surface would be raised a maximum of about 10 feet, which would place the road surface approximately two feet above the 50-year flood level. Improvements will also include installation of a reinforced concrete box culvert beneath the highway to provide for adequate drainage capacity. The project will include work outside of the right-of-way on adjacent properties on both sides of the highway, including the County's Kāwā property.

According to the Final Environmental Assessment (July 2012), the public will continue to have access to the shoreline via the trails and roads referenced in the Civil Case No. 4590. However, the existing access to Corral Gate Road from the highway will no longer be accessible because the road will be raised as part of the drainage improvements. Therefore, a 20-feet gravel frontage road connecting to the Corral Gate Road is proposed on the County's property. No changes to the wetlands or coastal ecosystems are anticipated, as the proposed project will not change the quantity or sediment characteristics of the flood waters.

*AT THE MOUTH OF HĪLEA STREAM*

# 2 KĀWĀ RESOURCES

## 2.1 CULTURAL HERITAGE

The landscape at Kāwā has a rich cultural heritage of Kaʻū that should be preserved for present and future generations. Traditionally, Native Hawaiians were the caretakers of resources and ecosystems that lie within or adjacent to their communities. Five basic principles of Hawaiian stewardship and use of natural and cultural resources, which are also relevant to sustaining the well-being of Native Hawaiians, are identified by McGregor et al. (2003). First, the ahupuaʻa is the basic unit of Hawaiian cultural resource management. Second, the natural elements (land, air, water, and ocean) are interconnected and interdependent. Third, of all the natural elements, fresh water is the most important for life and needs to be considered in every aspect of land use and planning. Fourth, Hawaiian ancestors studied the land and the natural elements and became very familiar with its features and assets. Ancestral knowledge of the land was recorded and passed down through place names, chants which name the winds, rains, and features of a particular district, and legends. Fifth, an inherent aspect of Hawaiian stewardship and use of resources is the practice of malama ʻāina to ensure the sustainability of resources for present and future generations.

Thus, this section examines the wahi pana, moʻolelo, traditional cultural practices, and cultural sites of Kāwā, which provides a foundation for developing the management strategies presented in Chapter 3.

As described in the *South Kona-Kaʻū Coastal Conservation Task Force Report (2006)*, Kāwā was "once a Hawaiian village, where an entire community wrested a living from a place where rain and soil were precious commodities. There was taro, bananas, and other crops. The estuaries were used as fishponds, and water was drawn from a sweet spring that still flows from a pool near the ponds. There, in caves located mauka from the shore, are the ʻiwi."

### 2.1.1 Wahi Pana

The project area overlaps the ahupuaʻa of Hīlea Nui and Hīlea Iki on the northern section of the property and Kaʻalāiki to the south. Hīlea is described by Mary Kawena Pukui as: "village, gulch, and land division, Honu-ʻapo qd." in Kaʻū. It translates literally as, "careless or shiftless" named for the people of Hīlea village who were known for having dirty taro as told in the ʻōlelo noʻeau, "Hīlea ʻekaʻeka; Hīlea of the dirty taro," which referred to anyone who is careless or inefficient in their work.

Hīlea Stream rises at 4,600 feet elevation within Hīlea Nui ahupuaʻa and flows to Kāwā Bay which is described as a bay, springs, and an ancient surfing area near Hīlea. Kāwā translates literally as "distance" and it appears in an ʻōlelo noʻeau, ʻiliʻili hānau o Kō-loa, ka nalu haʻi o Kāwā; birth pebbles of Kō-loa, breaking waves of Kāwā." Two general variations of the name of the bay, "Kāwā" and "Kawaʻa", appear in the literature. Pukui, widely regarded as the authority on Hawaiian place names, lists

both alternative spellings in the publication *Place Names of Hawai'i*, however, notes attributed to Pukui in the Bishop Museum Archive holdings state that the place name is Kāwā not Kawa'a. For the purposes of this project, Kāwā is the name applied to the bay, ponds, and springs, as well as the general name used for the project area throughout this report.

Adjacent to Hīlea Nui is Ka'alāiki ahupua'a or Ka-'alā-iki, which translates literally as, "small lava rock." A large red stone in the middle of the pond that is the kū ula, or fish god, is mentioned by Marion Kelly (1980). The seaward boundary between Ka'alāiki and Hīlea Nui ahupua'a is said to be a large rock in the sea called Kapohakumoi, and then a line running to "Kahalehuki, an oioina, an ahua nui, mauka of Kauhale of Kaawaa." The seaward boundary between Hīlea Nui and Hīlea Iki ahupua'a is said to be at a point called Puuainako, and then a line running "across 'a'ā to Keahupuaa at the government road, thence to Ahupoho." The boundary between Hīlea Iki and Nīnole ahupua'a is said to be "at an ana kai between the point of Ahunui on Nīnole and Kapukini, a point on Hileaiki (Kokoaahu is a point on Ninole near the boundary); thence mauka to Pohaku a Kamamalu, a rock at the road where Kamamalu slept; thence mauka to Puunahaha."

### 2.1.2 Mo'olelo

The lands associated with the project area have various mo'olelo suggesting that the area was once well-populated. The following section shares mo'olelo associated with Kāwā.

In *Majestic Ka'ū: Mo'olelo of Nine Ahupua'a,* Marion Kelly describes the people of Ka'ū as independent and known for their dignity. Even though ruled by various ali'i, the people of Ka'ū were known to overthrow rulers that were abusive. Three chiefs whose deaths were attributed to the abuse of their people are: Koihala, Halaea, and Kohā-i-ka-lani. The last is directly associated with the project area. A version of the story is told by Kelly of an oppressive ali'i who ordered the people from Punalu'u and Hīlea to carry thousands of baskets of pebbles from beaches of Koloa in Nīnole, to Makanau plateau in the mauka region of the ahupua'a of Hīlea.

> A chief living in the district of Ka'ū directed that a large temple be built and dedicated to the gods to increase his mana. It was built on the top of a high promontory, Makanau, about three miles from the shore. All the men in the district were conscripted to transport stones from Koloa beach at Nīnole. They formed a human chain and passed the stones up to the site in baskets. The taboo for building such a structure was strict. Not a word could be spoken. If a stone dropped, it could not be picked up. This work took several weeks. When the structure was completed, without giving the men time to tend to their food crops, the chief insisted on erecting a wooden image to be carved from the biggest tree in the forest several miles away. The men became angry but they cut down the tree and dragged it from the forest to the temple site. Instead of allowing it to be brought up the low sloping side of the hill, the chief insisted it be brought up the steepest side.

> This last demand was too unreasonable. Together with the priest in charge of the construction, the people planned a course of action. Placing the great log heading up the steep incline and securing ropes on it so that the people at the top of the hill might pull it up, the priest then asked the chief to stand under the bottom end of the log and place his hands on it so his great mana as a powerful chief would flow into the log and make it easy for the tired people to pull it to the top.
>
> Blinded by his own ego, the chief took the fatal position. The log was hauled up a few feet. The priest giving the signal, the ropes were cut. The thoughtless chief came to his end.

**Kūmauna, Kū of the Mountain**

Ku-mauna (Kū of the mountain), according to Beckwith (1970), is one of the forest gods banished by Pele for refusing to destroy Lohiau at her bidding. He is said to have lived as a banana planter in the valley above Hi'ilea in Ka'ū where he incurred the wrath of Pele. Today, the large boulder of lava which retains his shape in the bed of the valley is worshiped as a rain god. Tangarō (2005) further explains that Kūmauna is the local deity of rain in the Hīlea area. Kūmauna is known for growing the iholena variety of banana and an extensive plantation of iholena banana remains at the base of Pu'u Kaiholena that perhaps were the remains of Kūmauna's plantation.

**Pu'u 'Enuhe**

The mo'olelo of Pu'u 'Enuhe, or Caterpillar Hill, is thought to have originated in the vicinity of the project area and is told by Pukui (in Handy and Handy, 1970) in the following account:

> In Ka'ū, Hawaiians never burned the fields because it was believed that an epidemic of caterpillars would follow. Pu'u 'Enuhe, or Caterpillar Hill, is a hill in Ka'ū where Kumuhea, the caterpillar god lived. Because of his cruel treatment of his wife, whose only food was sweet potato leaves (which is the food of caterpillars), his father cut him up and made little caterpillars of him. It was because Kumuhea chose to live in Ka'ū, that his district was the home of caterpillars. Ka'ū has ever been subject to caterpillar epidemics, when the caterpillars swarm over everything, eating grass, the foliage of taro and potatoes, and even stripping the trees. It is because of this that Ka'ū has been a land of periodic famines.

It is believed that the 'enuhe were forms (kino lau) of Kumuhea and kapu to certain families, thus, when a farmer in Ka'ū finds the first caterpillar on his sweet potato patch, he plucks the caterpillar off the leaf and carries it to the corner of his patch, lays it on a mound of sweet potatoes and says to the caterpillar:

> O Kumu-hea, eat all you want [of the leaves],
> Leave your excrement for me, the human being,
>
> That I may have life and those of my household,

> That the animals may have food and the strangers that may come to our house.

"Excrement" referred to the sweet potato in the mounds. Pukui also adds that when the fat green caterpillars came, they were not killed. A caterpillar plague was said to have occurred in December of 1900 which lasted for one week and "there were millions moving down the slopes to seaward, leaving destruction in the fields" (In Handy and Handy, 1970:146).

**Nu‘uanupa‘ahu**

In 1867, the newspaper, Kū‘oko‘a, featured a story by Samuel Kamakau about Nu‘uanupa‘ahu, a chief of Ka‘ū known for his surfing skills. The following is an excerpt from this mo‘olelo where Kamakau referred to Nu‘uanupa‘ahu as "the cut-worm tearing son of Nā‘ālehu," a direct reference to the famous mo‘olelo of Pu‘u ‘Enuhe and notes that the chief learned his surfing skills at Kāwā:

> I kekahi la nae, hiki maimai iho la ka nalu o Maliu a me
>
> Kapaelauhala, olioli iho la ke keiki

*SURF BREAK AT KĀWĀ*

haehae poko o

Naalehu, ka heenalu lala o Kawa;

One day when the waves of Maliu and Kapelauhala

Were rolling in magnificently, the cut-worm tearing son

Of Nāʻālehu resolved to show the skill he had got through

Practice [in surfing] on the best wave of Kāwā.

The moʻolelo tells of how Nuʻuanupaʻahu traveled to the district of Kohala where he became a threat to Kalaniʻōpuʻu, high chief of Hawaiʻi Island. Kalaniʻōpuʻu challenged Nuʻuanupaʻahu to surf at Kauhola in Halaʻula. Nuʻuanupaʻahu won the admiration and respect of Kalaniʻōpuʻu but he died shortly thereafter in Pololū from shark wounds.

***Hoʻi i Hīlea i kalo ʻekaʻeka. Go to Hīlea of the dirty taro.*** An ʻōlelo noʻeau, said of a careless person which suggests the prevalence of kalo in the culture of Hīlea. Once, Kohāikalani, a chief of Kaʻū, was living at Punaluʻu. Poi was brought for him from various parts of the district, and a tiny speck of taro peeling was found in the poi from Hīlea. The makers of the poi were put to death. To say that someone hails from Hīlea is to say that he is unclean.

**Nānaele, Chiefess of Kaʻalāiki**

Pukui and Green (1995) tell the story of Nāhele, a beautiful and favored chiefess of Kaʻalāiki who became married to Nānaele, a promiscuous chief from Kohala. The couple was married at Kaʻalāiki and the event was celebrated with a great feast. The couple returned to Kohala and soon after, Nānaele returned to his promiscuous ways leaving Nānaele at home with no food. Her body wasted away until she was nothing but bone. One day, a man found her passed out among a herd of pigs so he took her home and his wife cared for Nānaele. Rumor of the chiefess had reached the people of Kaʻalāiki and Kāwā so they went and returned their chiefess home. Pukui and Green (1995) wrote that:

> Some went from Kahuku, some from Kona, still others from Kohala. Two of them went to the place where Nānaele was staying, taking a mānele in which she was placed and then borne with care some distance to a place where other men were waiting to relieve the weary bearers of their burden. Thus was she taken by relays until she reached Kaʻalāiki. After a year had passed, Nāliko heard that Nānaele had recovered her health, that she was twice as beautiful as before, and that many suitors from the mountains to the sea were seeking her favor. So this neglectful husband arose and started out to take his wife back to Kohala. Some of the retainers of Nānaele, perceiving his movements, ran to report them to her parents. Nānaele was removed to Kāwā and there concealed. Meanwhile, a great feast was prepared at Kaʻalāiki for Nāliko. When he arrived there, he was welcomed by his parents-in-laws and informed that his wife and her woman attendants had gone bathing in the sea and would return late that evening.

A feast was held in celebration while the men of Kaʻalāiki planned to kill Nāliko and

hide his body in a secret cave. However, Nāliko was warned by an old man who helped him escape by traversing an underground cave, until they reached the Kapāpala stock ranch where they ran along between the mountains of Hualālai and Maunaloa until Nāliko could go on his own district. Nānaele was happy to be reunited again with her loving parents and her own people.

### 2.1.3 Traditional Cultural Practices

This sub-section describes cultural practices shared during consultations for this project. Consultations indicated that Kāwā was and continues to be accessed by Native Hawaiians for various traditional cultural practices. These include fishing, surfing, salt gathering, and religious practices. A kupuna explained:

> Families would "go down" to Kāwā for kids to surf and some would go fishing and gathering. Plantation workers who used to work further mauka, would also go down there.

Of these practices, salt gathering is not as commonly practiced though salt was once gathered at Kāwā. A kupuna who frequented Kāwā recalled gathering salt from Punalu'u all the way down to South Point. "We'd scoop salt with the large 'opihi shells and just go along the coast and scoop," she reminisced as she identified salt pans along the pāhoehoe rocks of Kāwā where she gathered salt from as a child.

**Fishing.** Historically, fishing was an important activity at Kāwā and was accessed by residents of nearby towns and plantation villages for fish. "We Hawaiians, we went there to get food. We went there for a purpose," a kupuna said who explained that the primary purpose of families going to Kāwā was for fish. Fishing involved families camping at the beach for several days where fish would be processed and dried. She shared the following memories of fishing at Kāwā:

> Kāwā was a small beach. Mostly, the Ka'alāiki people [would] get good stuff from down there: the limu, pīpīpī, everything you can think of. Used to have 'ōhua, wana, hā'uke'uke… The land was not like now. Was all rocks. Kāwā never had sand. The bay was all rocks all the way up and in the 1930s, the place had boulders.

Another kupuna recalled fishing from Kāwā Pond using cast nets drawn from one side of the pond to the other. A salt water pond was also identified more towards the South Point side of the Property where she remembered fishing for 'opihi, wana, crabs,

*SALT PANS AT KĀWĀ*

and "all kinds of fish." She also explained that eating turtle was normal back then but her grandfather stopped them from catching turtles. She fondly reminisced about those days they spent at the beach as a child and how her grandfather taught her and her siblings how to fish.

Though fishing is not as prominent for survival today as in the past, people still access Kāwā for fish, particularly for net fishing. A lineal descendent of Kāwā remembered that the old Filipino men, who used to work in the sugar plantations nearby, were good fishermen who mostly threw net at Kāwā. "These guys were really good. They knew where to go get fish," he said. He added that fishermen from Kaʻū preferred going to South Point where ocean conditions are more favorable particularly for line fishing. Nevertheless, he himself explained that he also learned to fish at Kāwā where he spent his summers away from his home in Hilo. Another participant explained that every one of her uncles was a fisherman who used to throw-net at Kāwā.

**Surfing.** Today, Kāwā is reported to be accessed most frequently by surfers as it has one of the few accessible surfing breaks in the Kaʻū District which is generally referred to as Kāwā. "Only surfers go there [now], explained a kupuna. Several informants in their mid to late twenties who frequently surf at Kāwā explained that a second surf break called Windmills, breaks off of Kāwā Pond during large surf events. A young surfer shared that his wife and kids would swim at the springs while he surfs.

**Religious Practices.** Consultations did not collect much information pertaining to religious practices at Kāwā except to suggest that Native Hawaiian families still practice protocol of paying their respects to their ancestors, as well as the significance of Keʻekū Heiau.

Other resources unique to Kāwā include freshwater springs, Hīlea Stream, and Kāwā Pond.

**Kāwā Pond and Freshwater Springs.** Consultations indicated that Kāwā Pond is one of the most significant features at Kāwā and, historically, provided a source of freshwater for nearby residents and visitors to Kāwā. The brackish pond (and a former fishpond) is fed by numerous freshwater springs located around the pond. Informants noted that there are many underwater freshwater springs all along the coastline of Kaʻū that includes Kāwā and Hīlea Stream. Geometrician Associates (2008) describe this area as containing the second largest freshwater spring system on the Big Island. It is also noted in the *South Kona-Kaʻū Coastal Conservation Task Force Report (2006)* that "Hawaiians living in this area were experts in diving to the bottom of the ocean and would fill an empty gourd with fresh water from the undersea springs offshore. Springs at Kaʻalāiki-Hīlea supported the cultivation of wetland taro as well as mullet."

A kupuna explained that when they would visit Kāwā, they only brought poi and chili pepper water with them to the beach. "We never had to bring our own water," she said. "My grandparents taught us how to gather." He also taught them how to gather freshwater for drinking from the brackish water ponds. She explained that in those days, there were many brackish water ponds so Kāwā was a beautiful place to be. She recalled that the existing pond was larger and it used to have islets where they

could swim to from the banks as children. She also remembered a pond adjacent to the Kāwā Pond that had a coconut tree growing in it and it was their "drinking" pond where her uncles would dive down to get freshwater.

**Hīlea Stream**. An informant explained that Hīlea Gulch originates in the mountain regions at Puʻu One and carries water down into the ocean at Kāwā, therefore, Hīlea Stream changes depending on the rain and also on ocean swells. Consultations also indicated that Kāwā Bay is in a flood inundation zone and that Kāwā now floods but never used to in the past. It was observed that the water during flooding events at Kāwā, originate in Kaʻalāiki mauka. ʻOʻopu, shrimp, and various species of fish, particularly juvenile fish, were reported to be found at and around the mouth of Hīlea Stream. A kupuna remembered that there used to be tilapia at Hīlea Gulch.

*DIFFERENT VIEWS OF KEʻEKŪ HEIAU, LOCATED ON THE CLIFF TO THE NORTHEAST OF KĀWĀ BEACH.*

### 2.1.4 Cultural Sites

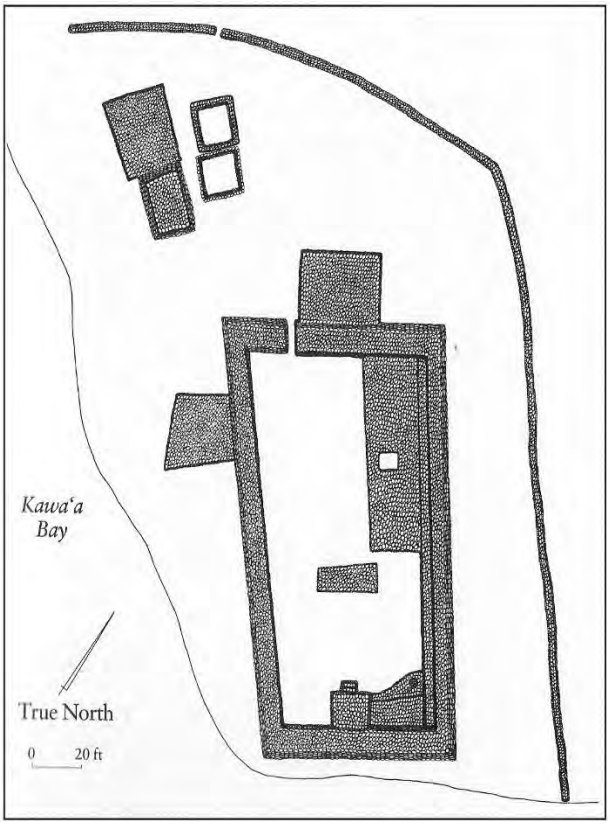
A number of cultural surveys and studies have been conducted for Kāwā, including several studies by the Bishop Museum in the 1960s. The most recent survey is the *Archaeological Reconnaissance Survey of the County of Hawai'i Kāwā Property (TMKs: 3-9-5-16:006 and 025, 3-9-5-17:005 and 007) Hīlea Nui, Hīlea Iki, Ka'alāiki Ahupua'a, Ka'ū District, Island of Hawai'i* prepared by Rechtman Consulting, LLC., 2013. For more detailed information on the cultural sites at Kāwā, refer to the study prepared by Rechtman Consulting, LLC.

**Ke'ekū Heiau** is a prominent feature at Kāwā that continues to stand on the outcropping of cliffs north of the surf at Kāwā. It is described as "a very large and heavy-walled structure, with several platforms. A major heiau of human sacrifice. Well-preserved. Should be a historical monument (Emory, 1970)." Some describe Ke'ekū Heiau as the piko of Kāwā and feel it is an important part of the history of Ka'ū, therefore, believe the heiau should be restored and preserved.

**Ala Loa Trail** is an ancient lateral trail that traversed the entire island of Hawai'i and enabled people to travel along the coast and around the island. Early inhabitants were able to traverse the rough terrain of Ka'ū using mauka-makai trails that enabled people living in the mountain regions to access the coast. The Ala Loa Trail currently runs through the ahupua'a of Hīlea Nui and Hīlea Iki. This trail was particularly important for trading between mauka and makai inhabitants where those from the mountains would bring their crops and vegetables to trade with fish and seafood from those along the coast. Trading often happened along this trail.

In 2000, the remaining known portions of the Ala Loa were designated as part of the Ala Kahakai National Historic Trail (NHT) by the National Park Service (NPS); "Ala Kahakai" meaning "trail by the sea." The Ala Kahakai NHT runs through more than 200 ahupua'a and stretches 175 miles along the coast. While Kāwā is located outside of the "priority area" for implementing NPS's *Ahupua'a Trail System Plan* for maintaining the Ala Kahakai NHT over the next 15 years (NPS, 2009), proper management and care should be taken to protect the integrity of the trail, as well as to protect all of Kāwā's varied cultural resources.

**Figure 6. Plan View of Ke'ekū Heiau**




*(from Stokes and Dye, 1991)*

Previous studies (1961 and 1967) conducted by Bishop Museum identified a significant number of cultural sites at Kāwā, including approximately 97 sites in Kaʻalāiki ahupuaʻa, nine sites in Hīlea Nui ahupuaʻa, and fourteen sites Hīlea Iki ahupuaʻa. Of these 120 sites, the majority of the sites are located within the coastal areas of the project area. Table 4 provides a description of cultural sites located within the project area with their assigned Statewide Inventory of Historic Places (SIHP)[7] numbers. Locations of the sites are shown in Figure 7 (last 4-digits of the SIHP site numbers are shown on the map).

**Kaʻalāiki Ahupuaʻa**

Of the 97 sites found in Kaʻalāiki ahupuaʻa, 60 of the sites are located within the southwestern boundary of the project area. These sites include Kāwā Springs, a well, 20 house sites, six agricultural sites, 23 burial sites (containing a minimum of 24 burial features), 5 platforms of unspecified use, an enclosure, a pen, a fisherman's shelter, and a shelter cave (on TMKs 3-9-5-16: 005 and 025).

**Hīlea Nui Ahupuaʻa**

Of the 9 sites found in Hīlea Nui ahupuaʻa, 8 are clustered around Kāwā Bay on TMK 3-9-5-17: 007. These sites include Keʻekū Heiau, five house sites, a burial in a stone-lined pit, and a petroglyph.

**Hīlea Iki Ahupuaʻa**

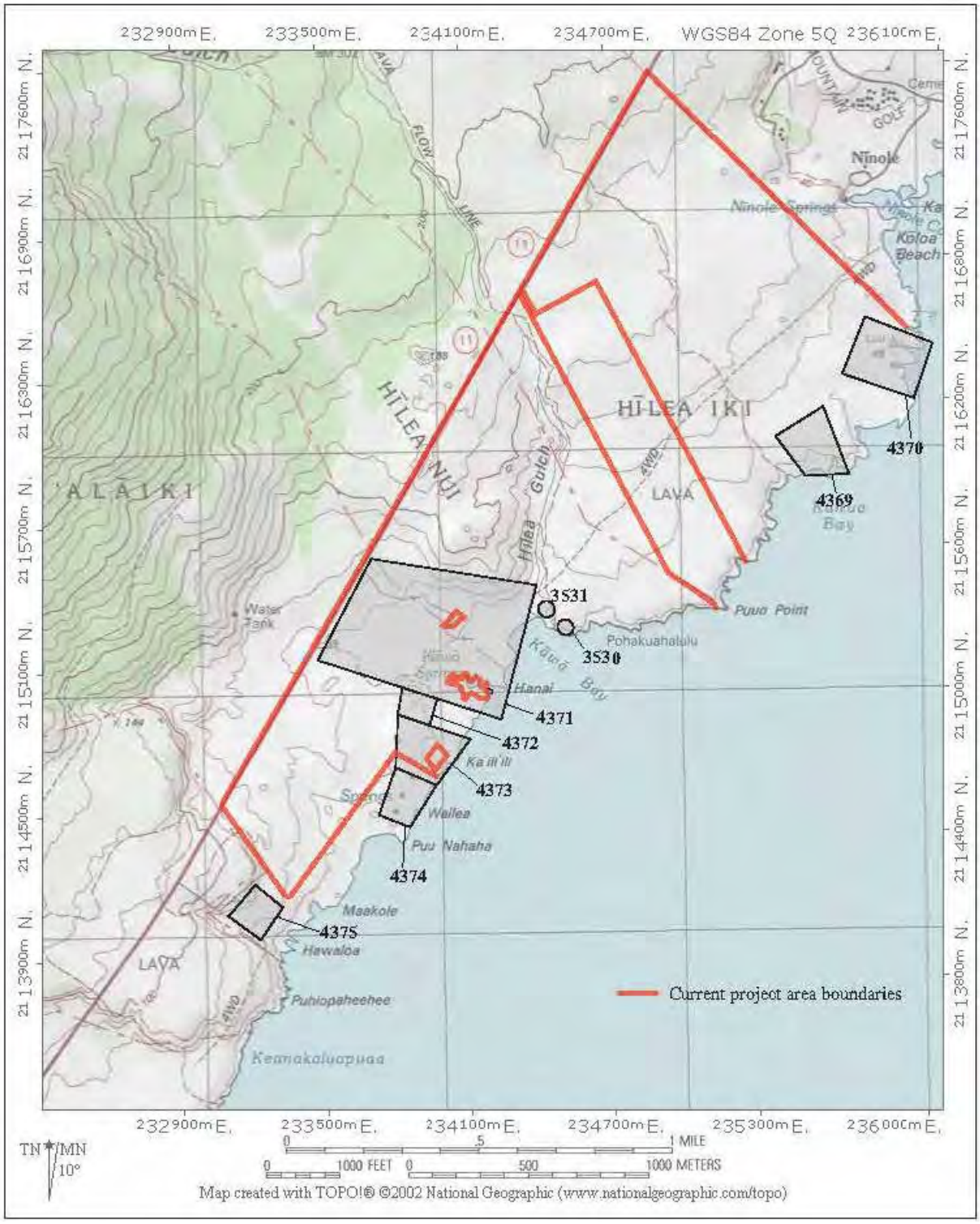
Fourteen sites were found in Hīlea Iki ahupuaʻa, which consisted of three trails, two platforms, two house sites, two campsites, a 3-sided wall structure, a circular walled pen, a large rectangular leveled area, a large boulder with stone walls, and a small shelter cave (all located on TMK 3-9-5-17: 005).

[7] The State Parks Division of the Department of Land and Natural Resources documented the historic resources of the Kaʻū District in June 1973. The documentation included a visual inspection of mostly coastal areas and the preparation of brief written descriptions of the encountered sites and features, along with the assigning of SIHP site numbers.

**Table 4. List of SIHP Sites in the Project Area**

| SIHP NUMBER | NAME | DESCRIPTION |
|---|---|---|
| 50-10-74-3530 | Keʻekū Heiau | A very large and heavy-walled enclosure, with several platforms. A major heiau of human sacrifice, well-preserved. Should be a historical monument. |
| 50-10-74-3531 | House Site | --- |
| 50-10-74-4369 | Kuhua Bay Complex | Features, in good condition, constructed in ʻāʻā; likely a habitation complex for people of a lower social status than those at Koloa. |
| 50-10-68-4370 | Luu Complex | Features are between 100 and 200 feet from the sea. Sites consist of low walled enclosures, cleared areas in the lava, ili ili midden areas, cupboards, trails and shelters. Well-used habitation area. Likely pre-historic. Recommended to State Register. |
| 50-10-74-4371 | Kawaa Complex: | A series of house compounds, enclosures, and possible burial platforms to the south of Kāwā Bay. May be older than inland sites and probably damaged by the 1868 tsunami and earthquake. |
| 50-10-74-4372 | Kaalaiki Complex 1 or Kailiili (Inland) Complex 1 | A complex of dwellings situated over pāhoehoe overlooking Kāwā Spring to the north east and the sea to the south. Appears to date from the late 19th century to early 20th century from bottle glass fragments and informant data. |
| 50-10-74-4373 | Kaalaiki Complex II or Kailiili (Seaward) Complex II: | Site record missing from file at DLNR-SHPD |
| 50-10-74-4374 | Wailea Complex I | Located at Wailea in an area of a group of natural springs. Consists of enclosures, house sites, and burials. Recommended to be placed in the reserve classification because of its significant value for studying of Hawaiian cultural history particularly to understand historic period construction techniques. |

**Figure 7. Map showing site locations recorded during the 1973 Statewide Inventory of Historic Places**




*(from Rechtman Consulting, LLC., 2013)*

## 2.2 NATURAL RESOURCES

Kāwā is home to a diversity of native plants and animals, including a number of threatened and endangered species. Kāwā provides habitat for the federally listed endangered hawksbill turtle, the threatened green turtle, and the endangered Hawaiian monk seal. There is suitable wetland habitat for the endangered Hawaiian coot in Kāwā's estuaries and marsh area. An endangered insect called the orange-black Hawaiian damselfly inhabits the habitat at the mouth of Hīlea Stream. There is also suitable habitat for other threatened and endangered species that could be present at Kāwā but have not necessarily been documented, including the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), an endangered species of yellow-faced bee (*Hylaeus anthracinus*), and native migratory shorebirds. Table 5 provides a detailed list of species that are known or suspected to be periodically present at Kāwā.

### 2.2.1 Sea turtles

*Hawksbill Sea Turtles*

The beaches at Kāwā, including Kāwā Beach and Kaʻiliʻili Beach, are well-documented nesting beaches for the endangered Hawksbill sea turtles or honuʻea. Hawksbills are the rarest of all sea turtle species in the entire Pacific and were the first marine turtle species to be listed under the Endangered Species Act.

While little is known about the home range sizes and migratory patterns of Hawksbills in Hawaiʻi (or globally), they spend almost their entire lives in the ocean foraging primarily for sponges. Gravid females only come ashore to dig nests on beaches to lay their eggs. After hatching, Hawksbill hatchlings find their way to the ocean, not to reach sexual maturity for at least 20 years. The majority of documented hawksbill nests in the Hawaiian Islands are found in the Kaʻū District.

*HAWKSBILL TURTLES COME ON LAND ONLY TO NEST*

*Photo Credit: www.tinybubblesscuba.com*

*A GREEN TURTLE FORAGING ON LIMU*

*Photo Credit: www.turtles.org*

*Green Sea Turtles*

The federally threatened green sea turtles or honu are commonly seen in the nearshore waters around the Property as well as resting on the beach at Kāwā or Kaʻiliʻili. Green sea turtles do not typically nest in the Main Hawaiian Islands (MHI), but they can be found foraging for limu (seaweed) and algae in shallow waters and hauling out onto beaches to rest or bask in the sun throughout the MHI. Unlike the global trend, Hawaiʻi's population of honu has been increasing since they became federally protected.

### 2.2.2 Birds

There is a diversity of native bird species that are known or suspected to be periodically present at Kāwā for foraging, nesting, or for simply flying over as they go to and from the sea, including multiple threatened and endangered species. Some species have not been recently seen at Kāwā, yet it is likely that they are at least occasionally present because they are known to be in the area and/or there is suitable habitat at Kāwā.

*Waterbirds*

Notable are several native waterbird species. The federally endangered and endemic Hawaiian coot or ʻalae keʻokeʻo has been recorded at nearby Punaluʻu and therefore may use habitat at Kāwā. Terry et al. (2014) recorded the presence of a black-crowned night-heron (ʻAukuʻu; *Nycticorax nycticorax hoactli*), an indigenous wetland bird that forages in ponds associated with marshes and Hīlea Stream at Kāwā. The federally endangered Black-necked stilt (aeʻo; *Himantopus mexicanus knudseni*) and the federally endangered Hawaiian goose (nēnē; *Branta sandvicensis*) have not recently been observed but could also conceivably be present at Kāwā (Terry et al., 2014). There is also suitable habitat for migratory waterfowl such as northern pintails (*Anas acuta*) and northern shovelers (*Anas americana*).

*KĀWĀ HAS SUITABLE HABITAT FOR THE ENDANGERED HAWAIIAN COOT*

*Photo Credit: U.S. Fish and Wildlife Service*

*Shorebirds*

Shorebirds at Kāwā include the indigenous Pacific golden-plovers (kōlea; *Pluvialis fulva*), a relatively common migratory shorebird that is present in Hawaiʻi from August through April, and spends its summers foraging and breeding in Alaska. Other shorebirds that likely make use of the Property but have not been recently documented include the wandering tattler (*Heteroscelus incanus*), ruddy turnstone (*Arenaria interpres*), bristle-thighed curlew (*Numenius tahitiensis*), sanderling (*Calidris alba*), and various other sandpipers (Terry et al. 2014).

**Table 5. List of Threatened and Endangered Species known to be present at Kāwā**

| | Taxon Description | Species Name | Scientific Name | Federal Status | Confirmed at Kāwā? | Notes/Description of Critical Habitat at Kāwā |
|---|---|---|---|---|---|---|
| Species Highlighted in the RLA grant agreement | Sea turtle | Hawksbill sea turtles (honu'ea) | *Eretmochelys imbricata* | Endangered | YES | Nesting habitat on Ka'ili'ili and Kāwā Beaches; Well-documented but |
| | Sea turtle | Green sea turtle (honu) | *Chelonia mydas* | Threatened | YES | Nearshore waters around the project area as well as resting on the beach at Kāwā or Ka'ili'ili; frequently |
| | Bird - Waterbird | Hawaiian coot ('alae ke'oke'o) | *Fulica alai* | Endangered | *No* | Habitat in pond and stream estuaries; known in area (Punalu'u) |
| | Invertebrate | Orange-black Hawaiian damselfly (pinao'ula) | *Megalagrion xanthomelas* | Endangered | YES | Fresh/brakish streams (found at mouth of Hīlea Stream) |
| Other Species Protected by RMP | Invertebrate | Yellow-faced bee | *Hylaeus flavipes* | *Not listed* | YES | Confirmed at Kāwā (Terry et al. |
| | Invertebrate | Yellow-faced bee | *Hylaeus anthracinus* | Endangered | *No* | Another species present (*H. flavipes* ); known in Ka'ū (South |
| | Mammal - Bat | Hawaiian hoary bat ('ōpe'ape'a) | *Lasiurus cinereus semotus* | Endangered | *No* | Known in area (Punalu'u) |
| | Mammal - Marine | Hawaiian monk seal ('ilio holo i ka uaua) | *Neomonachus schauinslandi* | Endangered | YES | Nearshore waters around the project area as well as resting on the |
| | Invertebrate | Blackburn's sphinx moth | *Manduca blackburni* | Endangered | *No* | Known in W. Hawaii; tentatively seen at Kāwā; some host plants |
| | Bird - Waterbird | Hawaiian goose (nēnē) | *Branta sandvicensis* | Endangered | *No* | Known to be nearby at Punalu'u |
| | Plant | Maiapilo | *Capparis sandwichiana* | *Not listed* | YES | Found on lava flows in northern two parcels (Terry et al. 2014); rare in |
| | Bird - Bird of Prey | Hawaiian hawk ('io) | *Buteo solitaries* | Endangered | *No* | Known in area; no ideal habitat at Kāwā but may hunt on Property |
| | Bird - Bird of Prey | Hawaiian short-eared owl (pueo) | *Asio flammeus sandwichensis* | Threatened | *No* | Known in area; no ideal habitat at Kāwā but may hunt on Property |
| | Bird - Seabird | Newell's shearwater ('a'o) | *Puffinus newelli* | Threatened | *No* | Likely fly over Kāwā |
| | Bird - Seabird | Band-rumped storm-petrel ('akē'akē) | *Oceanodroma castro* | Candidate | *No* | Possibly fly over Kāwā |
| | Bird - Seabird | Hawaiian petrel ('ua'u) | *Pterodroma sandwichensis* | Endangered | *No* | Likely fly over Kāwā |
| | Bird - Waterbird | Black-necked stilt (ae'o) | *Himantopus mexicanus knudseni* | Endangered | *No* | Marsh/esturary areas; not confirmed at Kāwā |
| | Plant | 'Ohai | *Sesbania tomentosa* | Endangered | *No* | Historically present; suitable coastal habitat at Kāwā |
| | Bird - Seabird | Black noddies (noio) | *Anous minutus melanogenys* | *Not listed* | YES | Observed by Terry et al. (2014) |
| | Bird - Shorebird | Pacific golden-plovers (kōlea) | *Pluvialis fulva* | *Not listed* | YES | Migratory; present in Hawai'i from August to April |
| | Bird - Waterbird | Black-crowned Night-heron ('Auku'u) | *Nycticorax nycticorax hoactli* | *Not listed* | YES | Wetland habitat such as at Hīlea Stream and Kāwā Pond; observed by |
| | Bird - Seabird | Boobies | *Sula spp.* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Seabird | Great frigatebirds ('iwa) | *Fregata minor palmerstoni* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Seabird | White-tailed tropicbirds (koa'e kea) | *Phaethon lepturus dorotheae* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Shorebird | Bristle-thighed curlew | *Numenius tahitiensis* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Shorebird | Ruddy turnstone | *Arenaria interpres* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Shorebird | Sanderling | *Calidris alba* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Shorebird | Wandering tattler | *Heteroscelus incanus* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Shorebird | Various other sandpipers | *N/A* | *Not listed* | *No* | Likely present at Kāwā |
| | Bird - Waterbird | Northern pintails | *Anas acuta* | *Not listed* | *No* | Migratory; possibly present at Kāwā |
| | Bird - Waterbird | Northern shovelers | *Anas americana* | *Not listed* | *No* | Migratory; possibly present at Kāwā |

*THE MIGRATORY PACIFIC GOLDEN PLOVER USES HABITAT AT KĀWĀ*

*Photo Credit: Audubon Society*

*Birds of Prey*

Native birds of prey that are known in the area and are presumably present at times in Kāwā include the federally endangered Hawaiian hawk or ʻio (*Buteo solitaries*) and the federally threatened Hawaiian short-eared owl or pueo (*Asio flammeus sandwichensis*). However, much of the habitat at Kāwā is not ideal for these birds, as ʻio generally nest in tall ʻōhia trees and pueo prefer extensive grasslands as their prime habitat (Terry et al. 2014).

*Seabirds*

There are also several types of seabirds that may fly over Kāwā. The federally endangered Hawaiian petrel (ʻuaʻu; *Pterodroma sandwichensis*) and the federally threatened Hawaiian subspecies of Newell's shearwater (ʻaʻo; *Puffinus newelli*) likely utilize the airspace above Kāwā at night as they fly to the ocean from their high mountain burrows. However, no suitable nesting habitat for either of these seabird species is present on the Property (Terry et al., 2014). Additionally, the band-rumped storm-petrel (ʻakēʻakē; *Oceanodroma castro*), a candidate for listing under the Endangered Species Act, may also fly over the area as it flies out to sea, but there is again no suitable habitat at Kāwā. Other seabirds that may be seen within or flying over the Property include black noddies (noio; *Anous minutus melanogenys*), white-tailed tropicbirds (koaʻe kea; *Phaethon lepturus dorotheae*), great frigatebirds (ʻiwa; *Fregata minor palmerstoni*), and boobies (*Sula spp.*). Of these, only black noddies were observed during the survey conducted by Terry et al. (2014).

*ENDANGERED HAWAIIAN PETRELS LIKELY USE THE AIRSPACE OVER KĀWĀ TO FLY TO AND FROM THE SEA*

*Photo Credit: U.S. Fish and Wildlife Service*

### 2.2.3 Mammals

The only native land mammal in Hawaiʻi, the federally endangered Hawaiian hoary bat or ʻōpeʻapeʻa (*Lasiurus cinereus semotus*), is ubiquitous in Kaʻū and is undoubtedly present at Kāwā. The Hawaiian monk seal or ʻīlio holo i ka uaua (*Neomonachus schauinslandi*), also federally endangered, is known to occasionally rest on

*ENDANGERED HAWAIIAN HOARY BATS ARE LIKELY PRESENT AT KĀWĀ*

*Photo Credit: U.S. Geological*

the beach at Kāwā. Both the Hawaiian hoary bat and the Hawaiian monk seal are endemic to the Hawaiian Islands, meaning that they are native and found nowhere else on earth. Monk seals spend most of their time at sea, but come ashore to rest on beaches, sometimes for days at a time. Seals often return to the same beaches to rest.

*HAWAIIAN MONK SEAL RESTING NEAR KĀWĀ BEACH ON DECEMBER 21, 2016*

*Photo Credit: M. Lamson/HWF*

### 2.2.4 Invertebrates

Kāwā's unique environment provides habitat for a multitude of invertebrate species, including two endangered insect species: the orange-black Hawaiian damselfly (pinao'ula) and Hawai'i's yellow-faced bee.

The orange-black Hawaiian damselfly was once one of the most abundant and widespread of the endemic Hawaiian damselflies. Historically present on the six largest Hawaiian Islands, today it is no longer abundant on any island and is limited to the remaining suitable coastal, dry or mesic aquatic habitat on just a few islands. At Kāwā, it was found in the low, brackish pond at the mouth of Hīlea Stream.

There are numerous species of Hawaiian yellow-faced bees (*Hylaeus spp.*). At Kāwā, there is suitable coastal and lowland dry forest habitat for the endangered, endemic species, *H. anthracinus*. Although it can sometimes be found in moderate numbers, the bee's suitable habitat has been significantly diminished on all islands, making it very rare. Terry et al. (2014) documented and observed another species of yellow-faced bee, *H. flavipes*, along the four-wheel drive access road and at Kāwā Beach. According to Terry, there is an abundance of native and nonnative host plants for *Hylaeus* at Kāwā, making it likely that additional species are present but not yet documented.

There is also at least one unknown species of shrimp in the brackish estuary formed at the mouth of Hīlea Stream.

*THE ENDANGERED ORANGE-BLACK HAWAIIAN DAMSELFLY IS FOUND AT KĀWĀ IN THE BRACKISH ESTUARY FORMED AT MOUTH OF HĪLEA STREAM*

*Photo Credit: Karl Magnacca*

*AN ENDANGERED SPECIES OF HAWAIIAN YELLOW-FACED BEE,* HYLAEUS ANTHRACINUS*, HAS NOT BEEN DOCUMENTED AT KĀWĀ BUT MAY BE PRESENT SINCE THERE IS SUITABLE HABITAT AND OTHER SPECIES OF HYLAEUS ARE PRESENT*

*Photo Credit: Karl Magnacca*

### 2.2.5 Fishes

Many different types of native fish utilize the estuary (or more commonly referred to as "Kāwā Pond" by the local people) and the nearshore waters around the Property. The State DLNR Division of Aquatic Resources (DAR) staff referred to the aquatic areas surrounding the mouth of Hīlea Stream and including the coastline of Kāwā Bay, as well as the areas surrounding Kāwā Pond, as estuarine environments because of the presence of freshwater. They indicated that estuaries provide important habitats for certain fauna and flora and serve as important breeding grounds for juvenile fish. The DAR initially considered Kāwā for an island-wide estuarine study for juvenile sport fish but excluded the site because Kāwā Bay and Kāwā Pond were too small for a cast-net methodology necessary for the study.

However, a survey was conducted by DAR in 2013 that provided a "snapshot" of the juenvile fish species composition of Kāwā Bay and the estuary. The following native fish were observed: āholehole (*Kuhlia xenura*); manini (*Acanthurus triostegus*); oʻopu ʻakupa (*Eleotris sandwicensis*); ʻapi (*Acanthurus guttatus*); ʻama ʻama (*Mugil cephalus*); ʻoʻopu nōpili (*Sicyopterus stimpsoni*). The introduced Kanda mullet (*Moolgarda engeli*) and Malaysian live bearing snail (*Melanoides tuberculata*) were also observed. Based on DAR's survey[8], it reported that āholehole accounted for 73 percent, while manini accounted for 15 percent of the total catch. In addition to the fishes listed above, other fish species observed by Hawaiʻi Wildlife Fund and Hawaiʻi Fish Habitat Partnership include: kikakapu (*Chaetodon lunula*)*;* kōkala (*Diodon holocanthus*); mamo (*Abudefduf abdominalis and Abudefduf vaigiensis*); ʻōmilu (*Caranx melampygus*); oʻopu nakea (*Awaous stamineus*); oʻopu naniha (*Stenogobius hawaiiensis*); puhi kāpā (*Echidna nebulosa*); toʻau (*Lutjanus fulvus*); weke (*Mulloidichthys flavolineatus*); wekeʻā (*Mulloidichthys vanicolensis*); and ʻulae (*Synodus species*).

[8] Small meshed cast nets and random sampling methods were used. DAR reported that the high winds, boulder shoreline and rough surf conditions made small mesh cast net sampling quite challenging for this area.

*IMAGES OF MANINI (TOP) AND ʻĀHOLEHOLE (BOTTOM)*

*Photo Credit: Lindsey Kramer*

### 2.2.6 Vegetation

Since much of the land on the Property consists of lava rock, there are a limited number of plant species that are well adapted. Of the plants that do manage to grow, many of the native species are out-competed by non-natives such as koa haole (*Leucaena leucocephala*) and Christmasberry (*Schinus terebinthifolius*), and invasive grasses such as Guinea grass (*Megathyrsus maximus*). The non-native seashore paspalum (*Paspalum vaginatum*) can be found along the banks of the pond and the non-native California grass (*Brachiaria mutica*) can be found growing densely within the pond itself and along the banks.

The biological survey conducted by Terry et al. of the Property in 2014 did not find any currently listed endangered plants, however, eight individuals of the rare species Maiapilo (*Capparis sandwichiana*), better known from the Kona area, were located on the lava flows. The endangered ʻohai (*Sesbania tomentosa*) has also been historically reported at Kāwā but has not recently been observed.

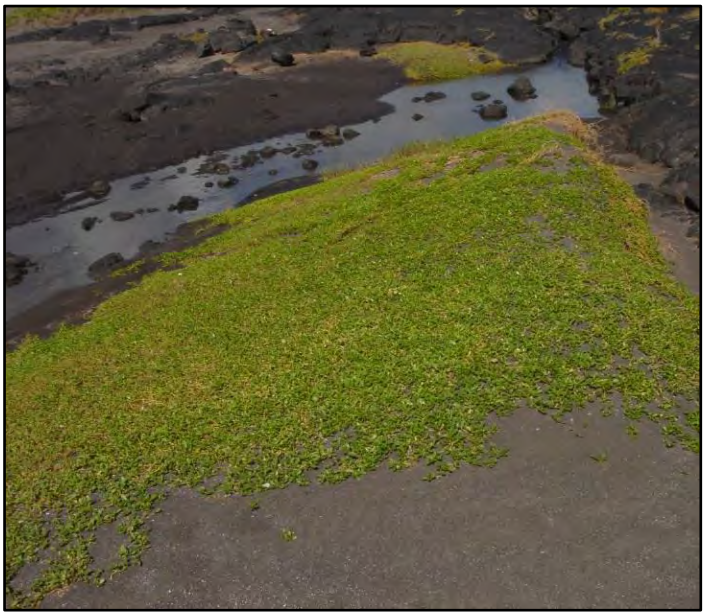
The area near Kāwā Springs has some relatively intact native coastal plant communities. The DAR study conducted in 2013 documented common plant species along the shoreline at Kāwā. Naupaka (*Scaevola taccada*), a widespread indigenous shoreline shrub, was found flourishing from the shoreline to inland reaches of Kāwā. ʻĀkulikuli (*Sesuvium portulacastrum*), an endemic succulent covered areas along the shoreline and on pāhoehoe lava near the ocean. ʻAki ʻaki (*Sporobolus virginicus*), an indigenous saltgrass, was growing plentiful along the shoreline. The banks of the spring-fed estuary contained indigenous plant species such as makaloa (*Cyperus laevigatus*) and ʻae ʻae (*Bacopa monnieri*). Along the banks of the spring-fed pond and in the pond itself was the indigenous reed ʻaka ʻakai (also referred to as nānaku, *Schoenoplectus californicus*). The indigenous seagrass *Ruppia maritima* was found near Kāwā spring. The seagrass is known to be beneficial to aquatic species by releasing high amounts of dissolved oxygen into the water (DAR, 2013).

One native plant species that is relatively common throughout the Property is ʻuhaloa (*Waltheria indica*). Other native plants found along the coast include: ʻilima (*Sida fallax*), pāʻū o hiʻiaka (*Jacquemontia ovalifolia*), pōhuehue (*Ipomoea pescaprae brasiliensis*), milo (*Thespesia populnea*), nanea (*Vigna marina*), and ʻohelo kai (*Lycium sandwicense*). Other common plants along the coast include the introduced tree heliotrope (*Tournefortia argentea*), various grasses, and a number of coconut palms (*Cocos nucifera*).


*COASTAL VEGETATION AT KĀWĀ. LEFT TO RIGHT: ʻILIMA; PĀʻŪ O HIʻIAKA; PŌHUEHUE*

*NAUPAKA, AN INDIGENOUS SHORELINE SHRUB, LOCATED ALONG THE COASTLINE AT KĀWĀ*

*MAIAPILO IN LAVA FIELDS AT KĀWĀ*



*ʻĀKULIKULI, AN ENDEMIC PLANT COVERS AREAS ALONG THE SHORELINE AND ON PĀHOEHOE LAVA NEAR THE OCEAN AT KĀWĀ*

## 2.3 HABITAT DESCRIPTIONS FOR SPECIES HIGHLIGHTED IN THE RLA AGREEMENT

While there is a wide array of native flora and fauna present at Kāwā (as described in Section 2.2), this section focuses on describing habitat and primary threats specifically for the four federally listed species that are distinguished in the *Kāwā Bay Acquisition and Habitat Restoration Project* (Hawai'i DLNR-DOFAW, 2007). The aforementioned document is referenced in the RLA Grant Agreement, which highlights the following four species:

- Hawksbill sea turtle
- Green sea turtle
- Hawaiian coot
- Orange-black Hawaiian damselfly

Although this section only focuses on the four federally listed species listed above, one important benefit is that management of habitat for these four species will also protect important habitat for many of the other common, native, rare, threatened, and endangered species that may be found at Kāwā.

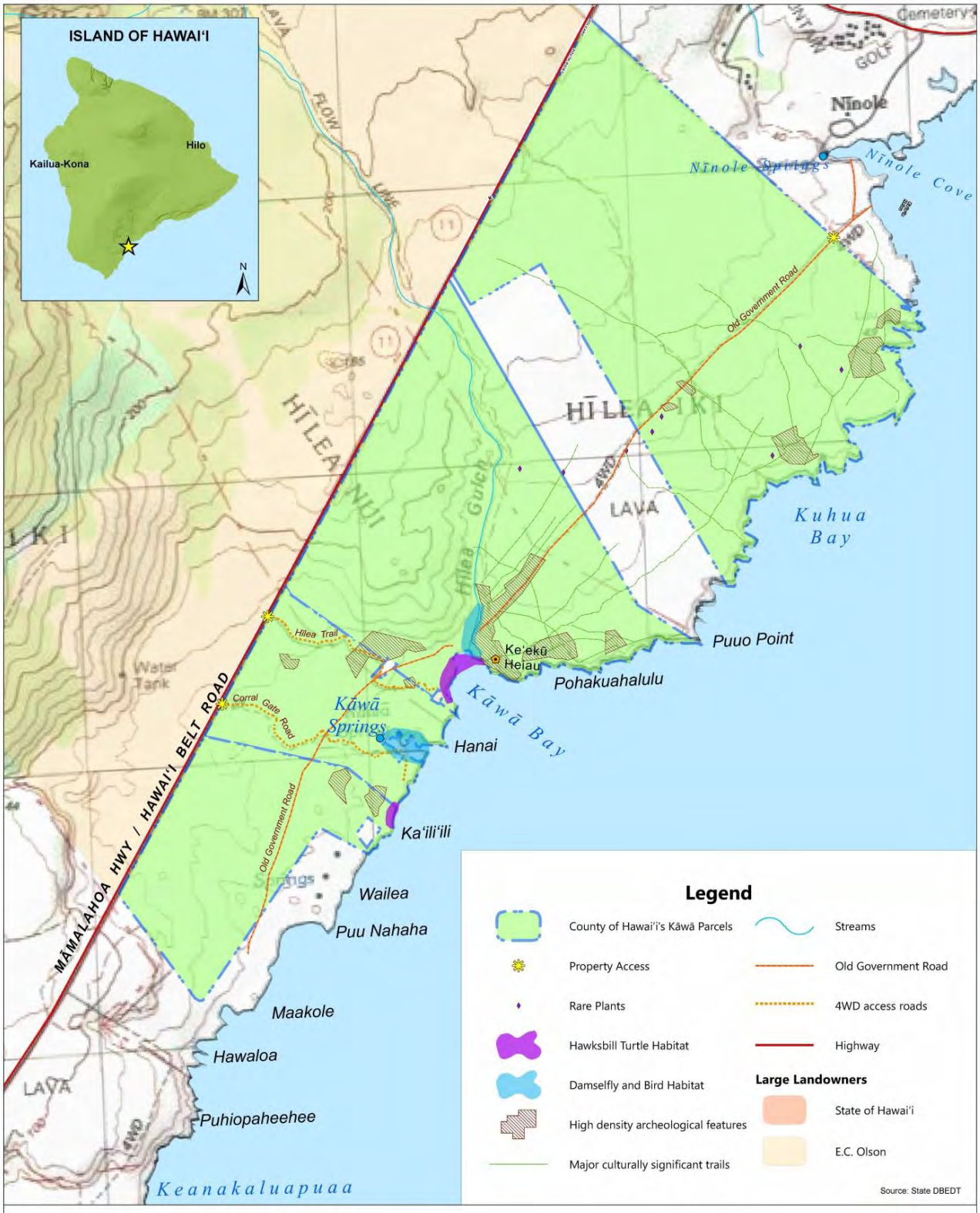
In general, most natural resources management activities tend to act synergistically to improve the overall health of an ecosystem, which in turn has direct and indirect benefits for all native species in the ecosystem. While there may not always be a clear distinction, direct benefits are related to intentionally protecting a species' important nesting or foraging habitat while indirect benefits are related to improving overall ecosystem health. Ultimately, management of habitat for the four species will also improve the overall health of the ecosystem.

Some of the species that may directly benefit from protecting suitable habitat for the four aforementioned threatened and endangered species are mentioned in the following sections, where relevant. Species that may indirectly benefit from protection of the suitable habitat include (but are not limited to): Hawaiian yellow-faced bees, Blackburn's sphinx moth, the Hawaiian hoary bat, the Hawaiian hawk, the Hawaiian short-eared owl, and the many species of seabirds that may fly over the Property.

### 2.3.1 Hawksbill Sea Turtle

Suitable habitat for Hawksbill turtles on the Property includes Kāwā Beach and Ka'ili'ili Beach, as well as the nearshore environment (Figure 8). Most of the information in this section is derived from data collected by the Hawai'i Island Hawksbill Turtle Recovery Project (HIHTRP; Seitz et al., 2012). HIHTRP has monitored and managed hawksbill nesting on Hawai'i Island since the early 1990s. However, access to Kāwā and Ka'ili'ili beaches has been limited in the past due to conflicts with beach inhabitants and legal landowners.

HIHTRP defines suitable nesting habitat in Hawai'i as "an area above the high tide line with substrate in which a nesting turtle is capable of digging an egg chamber." Nesting sites are typically found in small isolated pockets of sand with scattered cobblestones and/or coral, such as at Kāwā and Ka'ili'ili beaches. Beach vegetation on the Property varies by site, but typically includes naupaka, pōhuehue, and various non-native plants.




Kāwā Resources Management Plan

**Figure 8. Suitable Habitat Areas**

Kāwā Beach was reported to be a hawksbill nesting site dating back to the 1970s and is identified by the USFWS and National Marine Fisheries Service (NMFS) as a nesting area in the Recovery Plan for the U.S. Pacific populations of hawksbills. The beach consists of gray and black sand, and is bordered by scattered vegetation that includes naupaka, Christmasberry, and koa haole. The total area of the beach is about 21,780 square feet, with approximately 1,700 square feet of potential nesting site. In the past, vehicles were able to drive and park directly on the nesting site.

Nesting activity at Kaʻiliʻili Beach was first documented by HIHTRP in 1992. The beach is composed of cobblestones with a few scattered pockets of black sand and is bordered by naupaka. The total area of the beach is approximately a 5,060 square feet, with approximately 480 square feet of suitable nesting area. Similar to Kāwā Beach, vehicles were able to drive over the nesting area in the past. On two occasions, HIHTRP staff noted hawksbill tracks and signs of nesting, however, the egg chambers were never located due to sand compaction and numerous tire tracks. To prevent this from occurring, a small rock wall was built around the prime nesting site with an interpretive sign to discourage vehicular access. However, according to HIHTRP, these temporary measures were frequently removed by community members.

Data collected by HIHTRP between the early 1990s and 2009 indicate that hawksbill nesting on Hawaiʻi Island has a strong seasonal pattern, with nesting primarily occurring from May through December and peaking between July and September. Adult females may nest every two to eight years and return to the same geographic location where they hatched. Hawksbills can lay one to five nests per nesting season with an average of 20 days in between nesting events. Clutch sizes average 180 eggs per nest with an incubation period between 55 to 70 days. At Kaʻiliʻili Beach, the average incubation period was 65 days for thirteen nests monitored between 1992 and 2009 (eighteen nests in total were documented). An estimated 2,056 hatchlings reached the ocean from the thirteen nests.

*LEFT: KAʻILIʻILI BEACH, LOOKING SOUTH. RIGHT: A HAWKSBILL SEARCHING FOR SUITABLE NESTING SITE AT KAʻILIʻILI BEACH*

### 2.3.2 Green Sea Turtle

The 1998 USFWS and NMFS *Recovery Plan for U.S. Pacific Populations of Green Turtles* identifies the protection of foraging areas as a priority action. At Kāwā, green sea turtles are commonly seen in the nearshore coral reef environment where they feed on limu and algae as well as on the beaches where they haul out to presumably rest or bask in the sun.

Protection of green sea turtle habitat will also benefit the Hawaiian monk seal since the nearshore waters surrounding the Property are suitable habitat for the seal. Like green turtles, Hawaiian monk seals can occasionally be seen resting on the beach at Kāwā.

### 2.3.3 Hawaiian Coot

The USFWS *Recovery Plan for Hawaiian Waterbirds* identifies the protection of the endemic Hawaiian coot as a priority (Second Revision, 2011). The species has not been recently documented at Kāwā, however there is suitable habitat for the coot at Kāwā and it is known from nearby Punalu‘u, therefore, the bird may use habitat at Kāwā. Natural habitat for the Hawaiian coot consists of coastal wetlands with suitable emergent plant growth interspersed with open water. Hawaiian coots prefer freshwater wetlands, but will use brackish wetlands or estuaries, and rarely, saline habitats. Potential habitat for the Hawaiian coot at Kāwā includes the estuary formed at the mouth of Hīlea

*KĀWĀ POND, A TWO-ACRE SPRING-FED INTERTIDAL POND, PROVIDES IMPORTANT HABITAT FOR MANY NATIVE AND ENDANGERED SPECIES*

Stream, as well as the spring-fed, intertidal Kāwā Pond.

Protection of suitable habitat for the Hawaiian coot would also directly benefit a number of other bird species known or thought to be at Kāwā, including many species of shorebirds and waterbirds mentioned in Section 2.1.2.

### 2.3.4 Orange-Black Hawaiian Damselfly

The low, brackish estuary or pond that forms at the mouth of Hīlea Stream provides important habitat for the orange-black Hawaiian damselfly. The mouth of the stream sometimes becomes completely blocked by sediments and forms a brackish, spring-fed pond. This habitat supports some of the highest densities of this rare species known anywhere. The damselfly requires slow or standing waters associated with coastal wetlands or lower reaches of perennial streams for breeding. They lay their eggs in the tissues of aquatic plants associated with these habitats. Naiads (the immature aquatic stage) of this species are active swimmers and rest on exposed areas of the bottom on submerged vegetation.

*THE BRACKISH ESTUARY FORMED AT MOUTH OF HĪLEA STREAM PROVIDES HABITAT FOR THE ORANGE-BLACK HAWAIIAN DAMSELFLY AND POTENTIALLY FOR THE HAWAIIAN COOT*

## 2.4 PRIMARY THREATS TO OVERALL ECOSYSTEM, NATURAL RESOURCES, AND CULTURAL HERITAGE

This section describes general threats to the overall ecosystem, natural resources, and cultural heritage of Kāwā. Specific impacts to the four species highlighted in the RLA Grant Agreement and/or cultural sites are identified, where applicable.

Table 6 presents a summary of the primary threats facing populations of the Hawksbill sea turtle, the green sea turtle, the Hawaiian coot, and the orange-black Hawaiian damselfly at Kāwā. While there may be other threats facing populations elsewhere in Hawai'i (or globally), only the threats that may be relevant to the Property are presented.

**Table 6. Summary of Threats to Species Highlighted in the RLA Grant Agreement**

| | Hawksbill Turtle | Green Turtle | Hawaiian Coot | Orange-Black Hawaiian Damselfly |
|---|---|---|---|---|
| Climate Change | X | X | X | X |
| Human Recreation & Use | X | X | X | X |
| General Habitat Degradation/Loss | X | X | X | X |
| Predators | X | | X | X |
| Invasive Plants | X | | X | X |
| Entanglement in Marine Debris | X | X | | |
| Disease | X | X | X | |
| Other | X | | | |

### 2.4.1 Climate Change

Over time, changes in the climate are anticipated. According to the National Climate Assessment Report (2014), climate change will consist of rising carbon dioxide in the atmosphere, rising air and sea temperatures, rising sea levels and upper-ocean heat content, changing ocean chemistry and increasing ocean acidity, changing rainfall patterns, decreasing base flow in streams, changing wind and wave patterns, changing extremes, and changing habitats and species distribution. The average global sea level has risen about 8 inches since 1900. However, recent observations have indicated an increased rate of rise over the past two decades (1.3 inches per decade). Sea level rise will incrementally increase coastal flooding and erosion, thus posing major risks for coastal structures, infrastructures, and properties.

The effects of global climate change can be detected in Hawai'i's climate patterns. Air temperature has increased by 0.08°F per decade between 1919 and 2005 and a general downward trend in rainfall has been documented over the last century, especially during the past 20 years (a 15% decrease). However, the severity of storms has increased by a 12% increase in rain intensity. The severity and frequency of droughts, flooding, and wildfires have increased as well. During the past century, the ocean has become warmer at a rate of 0.22°F per decade and the sea level has risen at a rate of approximately 0.6 inches per decade. The ocean has also become more acidic as a result of an increase in carbon dioxide in the atmosphere that mixes with seawater (G70, 2016). Because these trends are likely to continue, the impacts of these changes on Hawai'i's watersheds,

coastal communities, and marine ecology are predicted to become more pronounced over time.

Increasing temperatures and decreasing rainfall will lead to an increased frequency of droughts and increased evaporation rates, which will reduce the amount of water going into streams and groundwater recharge. During droughts, soil moisture may be completely depleted in un-irrigated, fallow fields, causing dust storms and loss of top soils from wind erosion. The frequency of forest fires will also increase, further contributing to erosion and the degradation of native ecosystems. With declining forest health, erosion and runoff will increase, causing more sediments to be washed into streams and receiving water bodies. Climate change is also expected to cause more severe storm events, which will further contribute to erosion. Rising sea levels, higher sea-surface temperatures, increased coastal flooding, and increased sediment load deposition on coral reefs will have detrimental effects on aquatic and marine ecosystems.

Planning for sea level rise is challenging because there are changing and unknown factors.

*VEHICULAR TRAFFIC HAS DAMAGED HAWKSBILL NESTING HABITAT AT KĀWĀ IN THE PAST*

*Photo Credit: Julia Neal; kaunewsbriefs.blogspot.com*

### 2.4.2 General Habitat Degradation or Loss

Any kind of development that results in the loss or degradation of wetland, beach, or aquatic habitats negatively impacts the ecosystem. Beach armoring or other alterations of the beach can limit beach access for species, including sea turtles and monk seals.

Water management practices for agriculture, urban development, and ground water development may negatively impact the ability of many species to survive due to habitat loss and degradation. The loss of riparian vegetation and degradation of water quality resulting from grazing, disease, and possibly environmental contaminants threatens habitats for native species, including the Hawaiian coot and the orange-black Hawaiian damselfly.

### 2.4.3 Human Recreation & Use

**Public use is anticipated to increase in the future** posing threats to the overall ecosystem, natural resources, and cultural heritage if it is not managed properly. Large number of people using the area for surfing, swimming, fishing, camping, etc., often results in disturbed habitats, littered beaches, and contamination of the environment. Fishing gear such as nets and lines left along the shoreline can entangle species such as the hawksbill and green turtles, and monk seals. Burials and cultural sites located in frequent use areas (i.e., pedestrian and vehicular access ways of Corral Gate Road and the Hīlea Trail and near the coastal areas from Kāwā Pond to Kāwā Bay) are most susceptible to inadvertent disturbances. The area between Hīlea Stream to Nīnole is on occasion

accessed by fishermen and though not many vehicles currently access the Old Māmalahoa Trail from Nīnole, there is potential for increased vehicular access in the future.

**Unmanaged vehicular traffic** is a threat to the fragile and irreplaceable landscape, including burials and cultural sites that are present at Kāwā. Vehicular traffic negatively impacts the environment, and consequently, the ability of many species to survive in these disturbed habitats. Vehicular traffic can lead to compaction, rutting and displacement of sand. It also denudes coastal vegetation and create dirt roads that contribute to sand erosion. Sand compaction can particularly damage hawksbill nests and hatchlings since it makes nesting more difficult for females and emergence more difficult for hatchlings. The USFWS calls unmanaged vehicular traffic a "serious problem" for hawksbills.

**Artificial lights** from vehicular traffic, campers' flashlights, lanterns, and campfires disrupt the environment; in particular, impact habitat for hawksbill turtles. Sea turtles live in the ocean, but hatch at night on the beach. Hatchlings find the sea by detecting the bright horizon over the ocean, however, artificial lights disorient nesting females and hatchlings, increasing the risk of stranding, injury, and death.

**Wildfires** are common in Hawai'i particularly in the dry season and pose threats to the cultural and natural landscape at Kāwā. Of particular concern is the potential impact of firefighting activities on cultural sites. The use of bulldozing machines as a firefighting strategy may be an effective method to contain a wildfire by quickly clearing vegetation to create a fire break; however, bulldozing would damage cultural sites that are present in the area.

**Possible overfishing** is a concern expressed by some community members, although there is currently no immediate threat of overfishing at Kāwā. Consultations indicated that fishing is an important cultural practice that occurs at Kāwā and some community members were concerned over potential marine resource depletion in the future at Kāwā due to overfishing in other nearby fishing grounds.

**Marine debris, including discarded fishing gear,** can entangle hawksbill and green turtles at sea causing them to eventually drown. Incidental capture by commercial fishing operations can cause hawksbills to drown.

*A GREEN TURTLE ENTANGLED IN MONOFILAMENT FISHING LINE*

*Photo Credit: NOAA Fisheries Pacific Islands Regional Office*

### 2.4.4 Invasive Species

Invasive plants and animals have devastating effects on native ecosystems. Invasive plants often grow faster than native plants, can quickly dominate the habitat, and negatively affect cultural sites. Invasive mammals (i.e., feral cats, rats, and mongooses) are known to prey on many native species and generally degrade the habitat for many different native species at Kāwā.

*CALIFORNIA GRASS CAN ELIMINATE OPEN WATER HABITAT FOR NATIVE WATERBIRDS AND INSECTS, SUCH AS THE HAWAIIAN COOT AND THE ORANGE-BLACK HAWAIIAN DAMSELFLY*

*Photo Credit: www.botany.hawaii.edu*

**Invasive Plants**

Invasive plants can have many negative impacts on native ecosystems. They displace native flora by competition for resources (water, light, nutrients, and space). Invasive plants also displace native fauna by altering the structure and vegetation composition of habitat for native species. For example, invasive haole koa is known to take over extensive areas and choke out other plant species.

Invasive plants can reduce available nesting habitat for Hawksbill turtles. The roots of invasive plants can form dense matrices in the sand making it difficult for female Hawksbills to dig nests and can also trap hatchlings that become entangled during emergence.

Nonnative plant species, such as the highly invasive California grass, can form dense stands that can completely eliminate open water habitat for native waterbirds and insects, such as the Hawaiian coot and the orange-black Hawaiian damselfly. Moreover, these nonnative grasses provide fuel for wildfires.

Invasive plants negatively affect cultural sites directly through root systems growing on and breaking up structures such as house sites, walls, etc. For example, consultations indicated that non-native plants such as maunaloa (*Canavalia cathartica*) are prominent near many of the cultural sites. It chokes out many of the native species and finds its way into the cultural sites. Non-native plants also indirectly affect cultural sites as overgrown bushes inhibit proper archaeological surveys of the sites and provide habitat for feral ungulates that may potentially trample on and destroy sites.

**Invasive Animals**

In addition to impacts from invasive plants, many species at Kāwā are negatively impacted by invasive animals. For example, Hawksbill sea turtle nests are predated by cats, rats, and mongooses. Native birds, such as the Hawaiian coot, are also predated upon by the same small mammal species.

This sub-section describes the predators, or invasive animals, to the four federally listed species that are highlighted RLA Grant Agreement and in the *Kāwā Bay Acquisition and Habitat Restoration Project.*

*Mammalian Predators*

Feral cats, mongooses, and rats are widespread and common in most habitats on Hawai'i Island and are undoubtedly present at Kāwā, although the relative densities of these species is currently unknown. Predation by all three of the aforementioned predators is one of the greatest threats to the Hawaiian coot. The HIHTRP regularly traps these three species at several other Hawksbill nesting beaches in the Ka'ū District. Mongooses may be more commonly observed than cats and rats because they are diurnal and are often seen scavenging for food. Rats are nocturnal, small, and shy so their presence in a natural setting can go unnoticed. Feral cats are also mostly nocturnal in their habits and are the most cryptic of the three predators. Cats, mongooses, rats, and feral pigs also prey on Hawksbill hatchlings and eggs by digging up nests.

*A FERAL CAT ON O'AHU WITH A DEAD HAWAIIAN COOT*

*Photo Credit: Michael Walther; nene.net*

Domestic dogs are known to prey on birds, including the Hawaiian coot, and may pose risks to other species as well. The threat of predation by pigs or dogs is assumed to be low at Kāwā; however, they should not be disregarded, especially if Hawaiian coots are observed on the Property.

The abundance of human food and trash can increase the populations of all of these predators.

*Avian Predators*

Hawaiian coot eggs and chicks are vulnerable to predation by nonnative birds such as cattle egrets (*Bulbulcus ibis*) and barn owls (*Tyto alba*).

*INVASIVE AND PREDATORY MOSQUITO FISH (POECILIID) ARE COMMON IN HAWAI'I'S STREAMS*

*Photo Credit: Yamamoto and Tagawa; www.pbrc.hawaii.edu*

*Aquatic Predators*

Bullfrogs have been known to prey on Hawaiian coot eggs. They may also pose a risk to the orange-black Hawaiian damselfly. It is not known whether bullfrogs are present at Kāwā.

The orange-black Hawaiian damselfly is known to be depredated by nonnative

invertebrates, including backswimmers (aquatic true bugs; Heteroptera) and multiple species of odonates. Additionally, competition for space and resources with other nonnative insects, such as *Trichoptera* (caddisflies), is a potential threat to the damselfly. It is not known whether these species are present in Hīlea Stream.

Orange-black Hawaiian damselflies are vulnerable to predation by nonnative poeciliid fish (mosquito fish), introduced for mosquito control. It is not known whether poeciliid fish are present in Hīlea Stream.

### 2.4.5 Disease

A disease called fibropapillomatosis affects many green turtles in Hawai‘i. Hawaiian coots can be affected by diseases such as botulism. They can also be affected by contaminants in water, including lead and zinc.

### 2.4.6 Other

The rocky substrate at Kāwā and Ka‘ili‘ili beaches can make it difficult for hawksbills to dig a nest. Hatchlings can also be trapped under rocks when emerging from nests or can become stranded amongst cobblestones on the beach. In the past, the HIHTRP assisted the majority of hatchlings to the ocean due to these obstacles.

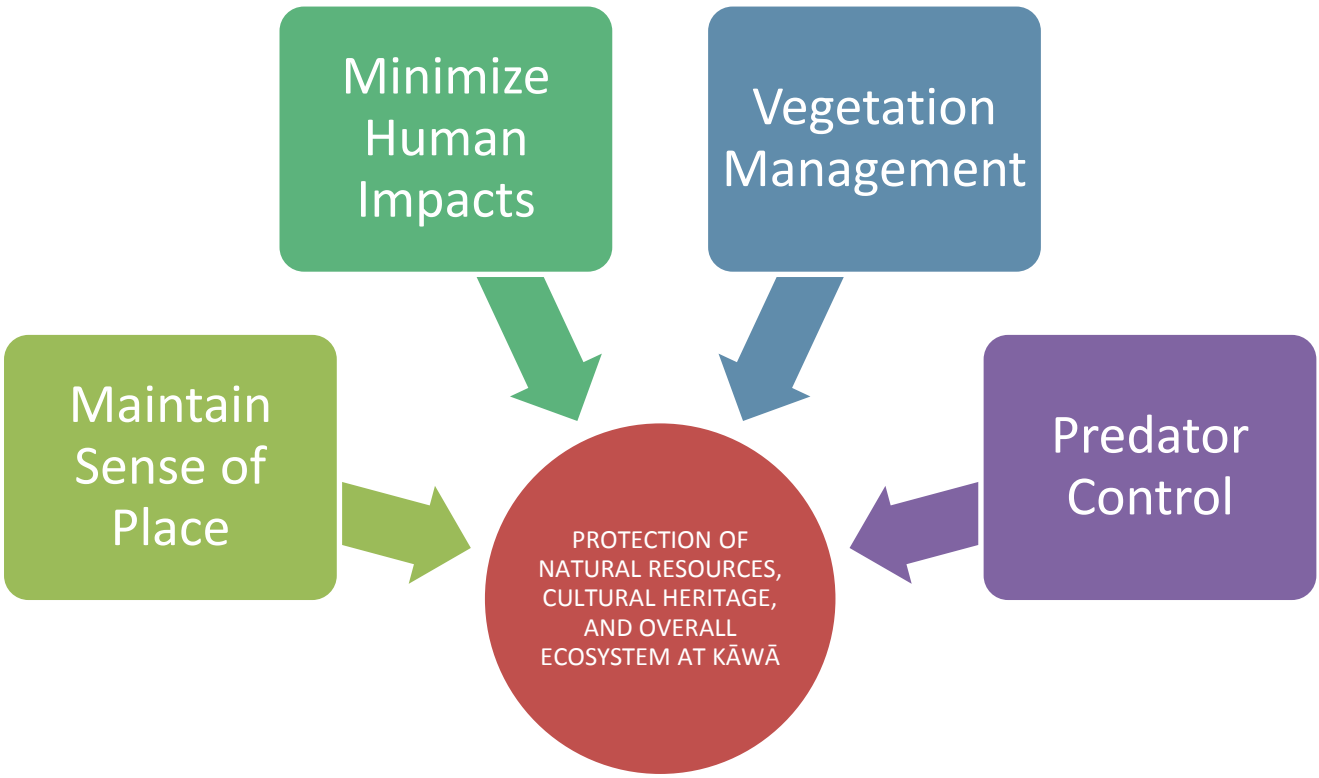
# 3 STEWARDSHIP OF RESOURCES AT KĀWĀ

Management strategies for the protection of the natural resources, cultural heritage and overall ecosystem at Kāwā are presented in this chapter, and graphically presented in Figure 10. These strategies are grouped into the following management areas:

- Maintain Sense of Place
- Minimize Human Impacts
- Vegetation Management
- Predator Control

The final section, titled "Application of Management Strategies for the Priority Species," explains how the various management actions described in the following sections can be applied for the management of each of the four species highlighted in the RLA Grant Agreement. Note that management activities that directly impact federally listed threatened and endangered species will require a permit from USFWS before management actions may be implemented.

**Figure 9. Management Areas**




Kāwā Resources Management Plan
**Figure 10. Site Plan**

The strategies relating to cultural sites described in this section are consistent with recommendations provided in the *Archaeological Reconnaissance Survey of the County of Hawai'i Kāwā Property* prepared by Rechtman Consulting, LLC, 2013. Also, it is understood that Kāwā is unique and that conditions may change over time; therefore, an adaptive management approach is key to successful management and protection of cultural sites. Strategies for cultural sites should be periodically reassessed and modified as needed.

## 3.1 MAINTAIN SENSE OF PLACE

Place is intertwined with identity and self-determination of today's Native Hawaiians in complex and intimate ways[10]. It is through place that many Hawaiians share their spiritual way-finding to a Hawaiian identity that is essential to their existence as a people and culture, both past and present. This connection to place and significance of place to identity was evident at Kāwā, as lineal and cultural descendants shared that Kāwā is part of their identity as Native Hawaiians and as Ka'ū people. However, separation from the land and the loss of land from development sever these connections and challenge identity by alienating people from their relationships to places. Therefore, maintaining the integrity and sense of place of unique places like Kāwā is important for communal well-being and cultural survival.

Consultations indicated unanimous agreement that Kāwā should not be developed and should remain the way that it is. Consistent with community desires to protect and preserve the natural, undeveloped character of this place, this management plan assumes that there will be no man-made structures to be developed in the future except for the possibility of building a Hawaiian-style hale as a gathering place. It is also recognized that improved access would increase human activity and ultimately impact the resources and feel of the place and many references were made to nearby South Point as an example of what Kāwā should never become. To prevent this problem from occurring in the future, maintaining on-site control is crucial. As stated in the Judgement dated October 14, 1980 (Civil No. 4590, Third Judicial Circuit), vehicular access must be provided to the general public via the Corral Gate Road. However, vehicular access should not be permitted beyond the existing easement.

To maintain the sense of place that is uniquely Kāwā, the following recommendations are proposed:

- Keep Kāwā unaltered and undeveloped to remain as it is;
- Manage human activity by limiting vehicular access within the Property beyond the existing easement; and
- Increase awareness through signage about wahi pana and mo'olelo and education programs that connect people to place.

[10] Kana'iaupuni and Malone 2006. This Land Is My Land: The Role of Place in Native Hawaiian Identity.

## 3.2 MINIMIZE HUMAN IMPACTS

Many people use this area for swimming, picnicking, fishing, surfing, and passive recreational activities. However, unmanaged human activities are a significant threat to both the natural resources and cultural sites. Visitor demand at Kāwā is currently significantly lower compared to other places in Ka'ū such as South Point; but, public use of Kāwā is anticipated to increase in the future as the place becomes more popular and as more stringent rules are enforced at other recreational places.

Human activities often result in disturbed habitats, littered beaches, and contamination of the environment. This section describes management actions that are generally applicable to manage and protect resources at Kāwā. Additional actions for protecting species highlighted in the RLA Grant Agreement from human activities are described in their respective subsections in Section 3.5.

Management actions to minimize adverse impacts from human activities at Kāwā are recommended in this section.

### 3.2.1 Manage vehicular access, activities and uses

Vehicular access to the Property is provided by Corral Gate Road to the south side of Kāwā Pond. Civil No. 4590 Judgement dated October 14, 1980 states that the "general public are entitled to reasonable access to Kāwā Bay and the adjacent shoreline" via a 10-foot wide vehicular, equestrian and pedestrian easement[11] along the Corral Gate Road.

*KĀWĀ SPRINGS*

Given the existing easement on the Property, strict rules (i.e., no driving across the pond and beaches) must be established and enforced to avoid any vehicular use beyond the easement, particularly on or near the coastal areas. Vehicular access should only be permitted along the aforementioned easement to prevent inadvertently driving over cultural sites, degradation of habitat for native species, and damage to the overall ecosystem. (see Section 3.1.4 for direct impacts to habitat for hawksbill sea turtles).

Threats to resources can be limited through the management of permitted activities and uses. Signage to inform the public regarding vehicular access and permitted activities and uses is needed. At present, temporary rock barriers have been constructed by local community members to prevent vehicular access onto the beaches It is important that these rock barriers remain and/or more permanent barriers, without compromising the natural character of the landscape, be

[11] Refer to Appendix B for pedestrian and vehicular easements for the Property.

constructed. Care must be taken to avoid impacting cultural sites when gathering rocks to create vehicle barriers.

In addition, successful stewardship of Kāwā will require the presence of personnel—whether County or a third-party such as a community organization—to deter actions that may damage resources, report illegal activities, and serve in an educational capacity. On-site presence and enforcement of rules are critical elements of future management—for the protection of resources and visitor safety.

### 3.2.2 Consider providing toilets near the coast

Two portable toilets are located near Māmalahoa Highway on the Hīlea Trail, but there are no sanitary facilities closer to the coastline at Kāwā. Adequate sanitary facilities are crucial to maintaining a safe and clean environment, especially if public use is anticipated to increase in the future. Certain areas have been reported to be littered with toilet paper and used as a bathroom because existing portable toilets are located too far away. It is recommended that the County considers placing toilets closer to Kāwā Beach in an area that does not contain significant cultural sites and would not impact habitat for threatened and endangered species. However, note that increasing amenities may attract more visitors to Kāwā and will require on-going maintenance. Accessibility by maintenance trucks must also be taken into consideration.

*VEHICLES PARKED NEAR KĀWĀ POND*

Another option for providing sanitary facilities closer to the coast is the use of composting toilets. It should also be noted that a facilities manager for Kamehameha Schools has shared that the composting toilets at a number of their sites have not worked because: (1) any level of heavy use results in problems with disposing of the filled-up containers of "organic" material; and (2) there are no Hawai'i-based companies that know how to repair the fans/circulation systems in composting toilets.

### 3.2.3 Reduce trash and maintain trash receptacles throughout the Property

Trash is present throughout the site, and marine debris is especially prevalent at Ka'ili'ili Beach and Kāwā Beach. There are several waste receptacles currently located on-site near the Hīlea Trail gate by the highway and near Kāwā Beach; however, they are frequently overflowing with trash. Trash and food scraps can attract non-native predators to an area, such as mongooses, rats, feral cats, and pigs. The waste receptacles need to be secured, covered, and maintained regularly so they do not attract these non-native predators that may pose harm to native species. The need for additional waste receptacles

should be assessed periodically if public use is anticipated to increase in the future.

Beach clean-ups should also be conducted when necessary. Trash and marine debris removal will improve nesting suitability and lessen the risk of entanglement for sea turtles, and also improve the overall health of the Property.

### 3.2.4 Educate and engage the public

Educate the public about the cultural sites and natural resources present at Kāwā, through on-site and off-site materials and programs. The County should collaborate with local experts, teachers, and organizations to develop and implement an education and outreach program that highlights the important aspects of Kāwā. The community should be actively engaged in restoration and preservation efforts in order to promote a greater sense of respect for the place. Educational outreach could include: installing interpretive educational signs to raise public awareness about the cultural sites and natural resources at Kāwā; conducting a series of talk story events/community awareness days in the community (e.g., discussion on specific resources at Kāwā; kūpuna share their experiences and knowledge of Kāwā); partnering with local schools; and/or providing volunteer opportunities at Kāwā to restore and maintain the place.

Working in partnership with the NPS Ala Kahakai NHT to provide proper management and care to protect the integrity of the trails at Kāwā is recommended. Signs should be posted in areas to inform the public about the cultural significance of the area, caution the public about disturbing cultural sites and important habitat areas for native species, and cite penalties for violations of laws, where applicable. The community, particularly cultural and lineal descendants, should be encouraged to participate in creating and posting signs to promote local ownership

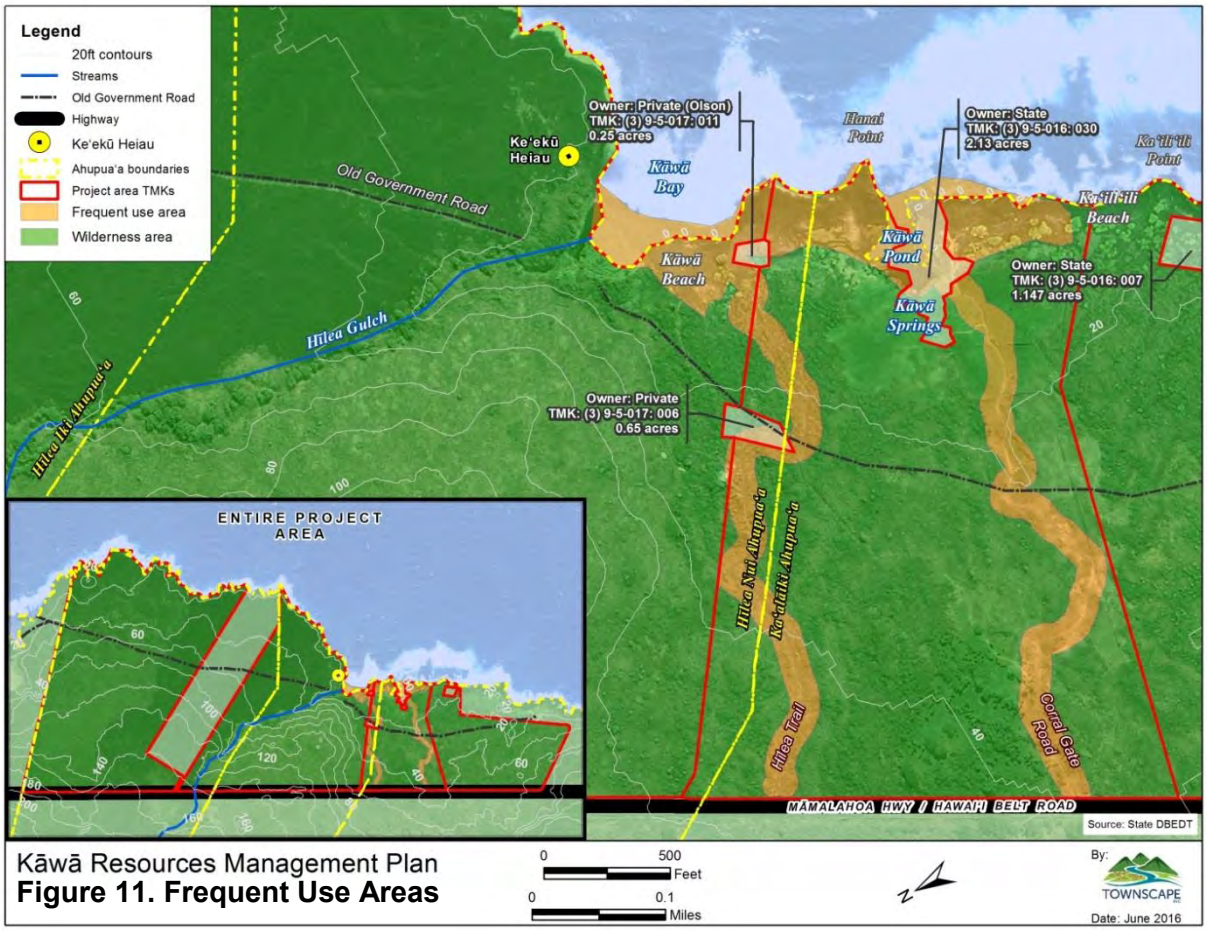
*STUDENTS FROM A LOCAL SCHOOL HELP TO COLLECT TRASH AND MARINE DEBRIS AT KA'ILI'ILI BEACH*

over stewardship of cultural sites. Signs relating to protection of habitat for native species should be developed in consultation with their respective agencies and organizations.

### 3.2.5 Conduct a phased Archaeological Inventory Survey

Numerous archaeological studies conducted for this property previously indicate the presence of a rich cultural landscape at Kāwā with a vast array of archaeological features, including burials. At present, no AIS has been conducted for the Property. The *Archaeological Reconnaissance Survey of the County of Hawai'i Kāwā Property* prepared by Rechtman Consulting, LLC, 2013 provides the most current archaeological information of sites at Kāwā and should be used to develop an AIS in compliance with HAR Chapter 13-275. The AIS would serve as a regulatory guidance document upon approval from the DLNR-State Historic Preservation Division (SHPD). Considering the large area of the Property, a phased approach to the AIS is recommended. Areas most susceptible to human impact should be identified as "Frequent Use" areas where an AIS should be conducted as a priority. Figure 11 identifies suggested areas (highlighted in orange) that should be designated as frequent use. The AIS would provide significant evaluations and treatment recommendations for all sites within the area.

Typically, AIS projects are conducted by private consulting firms which can be



expensive especially if the project area is significant. However, it is recommended that the processes of collecting and synthesizing archaeological data for an AIS at Kāwā be conducted by local communities and/or through education programs.

This approach is unique and provides opportunities to build the capacity of local communities by teaching them archaeology and mapping techniques, while creating a cumulative record of data gathered over time that can be used towards the development of the AIS. This approach has been adopted by education centers, such as Kamehameha Schools' Maluaka site in Keauhou, Kona, and is consistent with the use of Kāwā as a place for education. Data collected may be presented as Geographic Information System (GIS) maps that represent a baseline of archaeological sites that can be updated regularly.

### 3.2.6 Nominate Kāwā as a Historic District to the State and National Historic Places

Formalizing nominations to the Hawai'i and/or the National Register of Historic Places[12] may provide an additional layer of protection for cultural sites. These registers are the official lists of properties worthy of preservation within the state and nationally and are administered by the SHPD. Rechtman Consulting, LLC (2013) described Ke'ekū Heiau as one of the most significant sites at Kāwā and while some of its architectural elements have been altered in modern times, the bulk of the site is intact and in excellent condition. The study recommended that Ke'ekū Heiau be nominated to both the Hawai'i and National Register of Historic Places for additional enforceable protection. However, considering Kāwā's rich cultural landscape, it is recommended that Kāwā be nominated as a historic district that would include Ke'ekū Heiau. Consultations with lineal and cultural descendants should be conducted to determine if this option is appropriate. The register status might also provide opportunities for funds for the treatment and perpetuation of such resources.

### 3.2.7 Consider designation of a Community-based Subsistence Fishing Area

Hoa'āina or ahupua'a tenants in Hawai'i have constitutional rights to access both government and privately-owned land for traditional and customary Native Hawaiian subsistence, cultural, and religious purposes (McGregor 1996). These rights extend to lineal and cultural descendants of Kāwā, whose rights must be protected. However, the availability of natural resources is necessary to sustain these customary practices. Therefore, the management of natural and cultural resources at Kāwā is essential not only for the perpetuation of culture, but for maintaining the integrity of ecosystems.

Rules for fishing in the State of Hawai'i are set forth by the DLNR and summarized in a booklet titled, "Hawai'i Fishing Regulations, August 2011." However, lack of enforcement of rules is common especially in remote areas like Kāwā. Consultations indicated a desire to designate Kāwā as a

[1212] Hawaii Register of Historic Places is established by HRS Chapter 6: Historic Preservation. It is administered by the State SHPD.

Community-based Subsistence Fishing Area (CBSFA). A CBSFA represents a state recognized avenue for local community groups to steward resources, by proposing regulatory recommendations and management activities to sustain the health and abundance of marine resources important to native Hawaiian subsistence and cultural practices. This designation is consistent with the historical use of Kāwā as a place for subsistence for lineal and cultural descendants of Kāwā and for residents of nearby towns. Under HRS Chapter 188-22.6, the DLNR can designate CBSFAs and carry out fishery management strategies for such areas by adopting rules in accordance with HRS Chapter 91.

The process of CBSFA designation is lengthy and takes years to complete. General steps for CBSFA designation are provided in Appendix C. To date, only the two communities of Hāʻena on Kauaʻi and Moʻomomi on Molokai have participated in this process in Hawaiʻi with the former taking eight years to complete and the latter, almost 20 years. On Hawaiʻi Island, the community of Kaʻūpulehu responded to the impacts of marine resource depletion by adopting a 10-year kapu on fishing in a designated area through their Try Wait initiative. Therefore, there are examples for communities in Kaʻū to learn from in developing a CBSFA. Considering the previous use of Kāwā as a place of subsistence, the presence of various endangered aquatic species, and the presence of existing community groups who are keen to steward Kāwā, a CBSFA designation should be considered.

### 3.2.8 Develop and adopt a fire management protocol for Kāwā

Consultations indicated that the Hawaiʻi County Fire Department (HCFD) has discretion over the firefighting methods employed to combat a fire and often use bulldozing methods to contain fires particularly in areas with human settlement. However, the lack of residential areas within and around Kāwā would allow the HCFD to take their time in extinguishing fires at Kāwā and adhere to a fire management protocol that prioritizes the protection of cultural sites. The County, HCFD, and community members with knowledge of the cultural sites should work together to develop an appropriate fire management plan for Kāwā. At minimum, the Nāʻālehu and Pahala fire stations should be alerted about the presence of sensitive cultural sites at Kāwā so that extra care be taken should fire response be needed.

The use of bulldozing should be avoided at Kāwā. Instead, emphasis should be placed on using fire lines, also referred to as a firebreak, to control fires. A fire line is a gap in vegetation or “fuel” to stop the spread of a fire. Existing natural features of the place, such as the access roads, trails, and lava flows, could serve as firebreaks.

Kāwā is unique in that Māmalahoa Highway (State Route 11) serves as a mauka fire break and the ocean as the makai fire break, therefore, fire lines can be established along exposed lava flows on the southwest and northeast sides of the property running perpendicular to the highway to contain fires.

Currently, the two access roads into Kāwā, as well as Hīlea Steam, also serve as fire lines. Fire lines should also be placed strategically near areas with aggregates of cultural sites. Since most cultural sites in the ahupua‘a of Hīlea Iki and Hīlea Nui are located in lava rock with little vegetation, fires in this region of the Property will not be an issue. The majority of cultural sites are located in the coastal areas of Ka‘alāiki ahupua‘a and seaward of the Old Māmalahoa Highway. Therefore, identifying the Old Māmalahoa Highway from Hīlea Stream to south of the Property not only highlights the historical significance of this trail but also serves as an additional fire line around a major aggregation of sites. Fire lines will need to be maintained regularly and should be incorporated into service learning projects for Kāwā or become part of Kāwā’s regular maintenance protocol. Ancient mauka-makai trails, particularly between Hīlea Stream and Nīnole that emergency personnel could use to access the coast line should also be identified.

To protect cultural resources from damage resulting from fires, it is recommended that a fire management protocol be developed and adopted for Kāwā whereby:

- Fires be allowed to burn without creating bulldozed firebreaks;
- Fire lines running perpendicular to Māmalahoa Highway are created to form a contained firebreak around Kāwā; and
- Old Māmalahoa Highway that extends laterally and south from Hīlea Stream is identified as a fire line in Ka‘alāiki Ahupua‘a.

*INVASIVE VEGETATION REMOVED NEAR A HOUSE SITE*

## 3.3 VEGETATION MANAGEMENT

Management actions to restore the native ecosystem at Kāwā are recommended this section.

### 3.3.1 Focus efforts in areas where special protection, restoration, and monitoring are needed

Since vegetation management is extremely labor intensive, it is recommended that initial efforts be focused on areas where the most intact native plant communities are concentrated, and areas surrounding cultural sites and habitat for threatened and endangered species. Below are examples of specific areas where special protection, restoration, and monitoring should occur.

*Wetlands*

The highly invasive seashore paspalum grows within and along the banks of the pond. It has an extensive root system that grows deep and holds the sand and soil together. California grass, another invasive grass, covers a significant section of Kāwā Pond and the surrounding area. Consultations with Hawai‘i Wildlife Fund have indicated that restoration work should include removal of these invasive plant species which will then allow the native reeds and other native coastal vegetation (such as ‘akulikuli, ‘ae‘ae and naupaka) to re-populate the pond and wetlands. Hawai‘i Wildlife Fund has also indicated that removal of the invasive plant species will improve estuarine fish habitat connectivity by reducing non-native obstructions to tidal flow and increase the dissolved oxygen levels in the estuary; thus, improving the marine ecosystem.

The Kāwā estuarine marshes can provide suitable habitat for native bird species, such as the federally listed endangered and endemic Hawaiian coot. Restoring the wetlands will enhance the natural habitat for these waterbirds; therefore, if and when Hawaiian coots return to Kāwā estuaries, improvements during the restoration phase will need to make sure that efforts do not disturb or negatively impact the birds. If Hawaiian coots are observed or should coot nesting occur during restoration work, it is recommended that a buffer be created around Hawaiian coots and/or nests where restoration work will be avoided, and the DLNR Division of Forestry and Wildlife should be contacted immediately.

For the area around Hīlea Stream, vegetation management should be conducted with moderation and caution since the federally-listed endangered orange-black Hawaiian damselfly lays eggs on both native and nonnative plants.

*INVASIVE SEASHORE PASPALUM WITH AN EXTENSIVE ROOT SYSTEM*

*INVASIVE CALIFORNIA GRASS COVERS A SIGNIFICANT SECTION OF KĀWĀ POND*

*Kāwā Beach and Kaʻiliʻili Beach*

Kāwā Beach consists of gray and black sand, pebbles, and cobblestones. It is bordered by scattered vegetation that includes naupaka, Christmas berry, and haole koa. Kaʻiliʻili Beach is mostly composed of cobblestones with a few scattered pockets of black sand and is bordered by naupaka. Both these beaches provide suitable Hawksbill sea turtle nesting habitat; therefore, it is critical that restoration of native vegetation near these beaches does not include outplanting plants or trees with extensive root systems, as it could make nesting difficult for Hawksbill sea turtles.

### 3.3.2 Develop a Native Plant Restoration Plan

Development of a *Native Plant Restoration Plan* could provide a guide for future restoration efforts. Consultations indicated that Christmas berry and haole koa are the two species of greatest threat to cultural sites that dominate the forested regions of the Property, therefore methods for the eradication of these target species should be incorporated into the *Native Plant Restoration Plan.*

The plan could outline appropriate methods and guidelines to follow for Kāwā. For example, invasive plants should be removed through the use of hand tools if possible; however, the use of herbicide for the forested regions of the Property could be considered, as removal of invasive species will require continuous physical labor and maintenance. Herbicide can be a valuable tool for weed control; however, extreme care should be taken when using herbicides near waterbodies. Herbicide should always be applied according to the label; while some herbicides are especially formulated to be used near waterbodies, most are not. For the sake of protecting aquatic and marine resources, the use of herbicides near waterbodies is not recommended.

Extreme care should be taken near culturally sensitive areas when removing invasive plants to avoid disturbance. Native plants should be outplanted concurrently with invasive plant removal; however, outplanting should be not conducted in areas where sensitive cultural sites and/or burials are located.

### 3.3.3 Monitoring program for existing native plant species

Monitor areas where there are intact native plant communities. For example, the eight individuals of the rare species Maiapilo located on the lava flows north of Hīlea Stream should be regularly monitored for disturbance from human activities or invasive plants. Appropriate action (i.e., on-site presence, signage, or management of invasive plants) should be taken of disturbance to the native plant species are observed.

### 3.3.4 Increase native plant density through an outplanting program

Outplanting program should focus on areas where native plants are most intact and the boundary should be incrementally expanded for these plants. Rare and threatened native plant species should only be introduced once more hardy vegetation has been re-established in the area. Vegetation outplanted should be aligned with vegetation suitable for threatened and endangered species (for example, plants with extensive root systems such as coconut and morning glory should not be introduced near critical hawksbill sea turtle nesting beaches).

### 3.3.5 Community Involvement and Education

Vegetation restoration should be done in consultation with local community groups, cultural practitioners, local community organizations, and other stakeholders to ensure that proposed plant removal and outplanting do not negatively affect the integrity of the overall ecosystem, cultural sites and/or habitat for threatened and endangered species.

The community should be actively engaged in restoration efforts in order to promote a greater sense of respect for the place. For example, partnering with local school groups to engage students in restoration work would provide an educational opportunity to students while encouraging a greater sense of respect and appreciation for the place. A hui dedicated to overseeing the overall efforts of native plant restoration and invasive plant removal could be formed. Members of the hui may include cultural and lineal descendants who have genealogical ties to the land and sites at Kāwā and/or community members interested in stewarding Kāwā. The County could consider allowing members of the hui to camp during an annual or bi-annual work weekend to carry out plant removal and restoration work, which may nurture and develop stewardship ownership among members in caring for Kāwā. An annual or bi-annual community workday could also be organized to involve the larger community in restoration efforts.

## 3.4 PREDATOR CONTROL

The focus of predator control is on controlling small mammal populations and managing threats from pigs and dogs. Threats from small mammalian predators such as non-native mongoose, rats, and feral cats are a concern at Kāwā, posing a threat to natural resources and cultural sites.

Mongooses may be more commonly observed than cats and rats because they are diurnal and are often seen scavenging for food. Rats are nocturnal, small, and shy so their presence in a natural setting can go unnoticed. Feral cats are also mostly nocturnal in their habits. These animals are often concentrated where human food and trash are found. Pigs and dogs pose threats to native species either directly (i.e. through predation) or indirectly (i.e. through habitat disturbance). Pigs have been occasionally observed at Kāwā and in surrounding areas, however, the size of pig population in the area is not known. Dogs at Kāwā are typically pets of community members and visitors. Threats from avian and aquatic predators are not well understood at the present time at Kāwā, but should be evaluated.

Any fencing and/or trapping that may be implemented should take into account the presence of cultural sites. Care should be taken to avoid impact to cultural resources, particularly placing traps on or too close to burial features.

### 3.4.1 Small Mammals

Full scale control of small mammals typically requires continual and intensive trapping (using live traps or lethal traps) to reduce populations to a level that decreases the risk of predation. Three methods of predator control are presented in this section: live traps, lethal traps, and fencing.

Rodenticides can also be used to control rodent populations in the area; however, a permit for use in natural areas is typically required and permit requirements can be difficult to comply with.

Care should be taken that the use of a single type of trap does not encourage an increase in population of another predator (i.e., increase in feral cat population due to rats killed from lethal traps). Thus, multiple trap types could/should be used to ensure that all small mammalian predators are controlled.

The risk of catching non-target species in traps (e.g. birds) is important to consider when implementing a predator control program. Care should be taken to avoid placing traps in areas where non-target animals would be likely to encounter the trap. Traps should be monitored for non-target catches and mitigation efforts should be pursued if non-target species are caught. For example, snap traps can be placed under a protective cover that could limit the chances of a non-target species accidentally encountering the trap.

*Predator Control with Live Traps*

One of the methods for conducting predator control is through the use of live traps, such as the one pictured to the right. These traps can be used to catch rats, mongooses, and cats. Place the traps in shaded areas throughout the habitat, as well as around the periphery of the habitat. For targeting smaller mammals (such as rats), the traps should be spaced close together to increase the chances of interception (e.g., traps may be spaced 25 yards apart or closer). For larger animals (such as cats), the traps could be spaced farther apart. It is recommended to use bait that is attractive to all target predators, such as sardines. The bait should be replaced every time the trap is checked (unless it appears to still be fresh). The traps should ideally be checked on a daily basis to remove and dispatch any caught animal for humane reasons.

*EXAMPLE OF A LIVE TRAP (TOP) AND A SNAP TRAP (BOTTOM) FOR PREDATOR CONTROL OF SMALL MAMMALS.*

*Predator Control with Lethal Traps*

There are many different types of lethal traps (also referred to as kill traps) that can be used to control small mammals. The most relevant and practical types of traps are discussed below. Note that none of the lethal trapping methods described below target cats; if cat control is required, live traps should be used or more research into kill traps for cats should be conducted.

Snap Traps

The most commonly used type of kill trap targets rats. These traps, commonly called "snap traps," are inexpensive and easy to use. They can be tethered and set on the ground or secured onto the branches of shrubs/trees. The more snap traps that are deployed in an area, the better the predator control will be. A grid of snap traps should be spaced no more than 25 yards apart throughout the habitat and around the periphery. A variety of baits can be used on snap traps, however, peanut butter has been found to be very attractive to rats by a number of conservation organizations in Hawai'i. The traps should be checked and baited as often as possible, since the more frequently the traps are baited and re-set, the more successful the predator control effort will be. Ants and slugs are an issue in some areas as they can rapidly remove the bait from the trap. In the beginning of the trapping effort, it may be beneficial to reset

the traps more frequently (e.g. daily or every other day) for a couple of weeks to significantly reduce the population of rats in the trapping area to make the long-term trapping effort more successful. Victor® brand snap traps (shown in the picture above) work well for targeting rats (and are relatively low in cost). Note that snap traps should be carefully used around native bird habitat (such as the Hawaiian coot) to reduce the risk of accidental take (e.g. traps could be secured above the ground or placed in a tunnel/box).

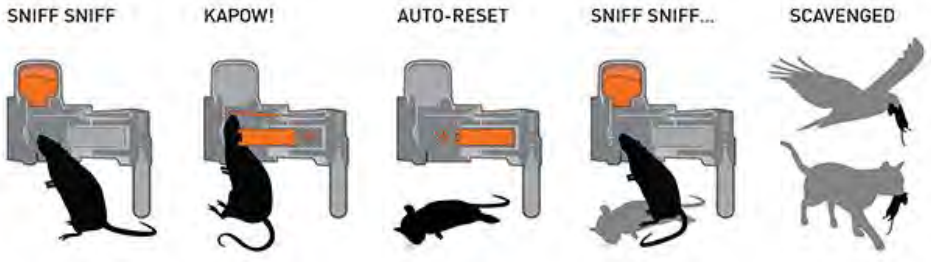

*GOODNATURE® A24 AUTOMATIC MULTI-KILL*

Automatic Multi-Kill Trap

The Goodnature® A24 automatic multi-kill trap is a new type of rat trap available from a New Zealand-based company called Goodnature®. The trap is powered by a small carbon dioxide ($CO_2$) canister and is designed to humanely kill rats (see image below). A24s have also been shown to effectively kill mongooses. The traps can be fired up to 24 times before the $CO_2$ canister needs to be replaced. It is very common that the carcasses beneath the trap are scavenged by other animals.

The primary benefit of using an automatic multi-kill trap is that it reduces the amount of labor that is required for other trapping methods since the automatic traps remain set and baited for a longer period. Automatic multi-kill traps should be mounted on trees or stakes approximately seven inches (i.e. roughly the height of a 'shaka') from the ground or above a branch jutting out horizontally from a tree. If there are ground nesting birds or other species of concern in the area, the traps should be mounted higher off the ground, perhaps above a horizontal branch. In fact, it has been documented that black rats in Hawai'i spend a significant amount of time in trees so installing some traps higher up on trees may be beneficial. Consider making signs to display in the area that warn of the dangers of tampering with the traps.

Automatic traps can be spaced farther apart




*AUTOMATIC MULTI-KILL TRAP*

from *http://www.goodnature.co.nz/products/rat-stoat/)*

from each other in a grid than one would place snap traps since they are multi-kill devices (e.g. as in a large area, A24s could be spaced 50 yards apart). However, as with most predator control devices, the more traps that are placed in an area, the more likely it is that a predator will encounter a trap. Bait is placed in a jar compartment inside the trap. To maximize the utility of an automatic trap, it is important to use bait that is both long-lasting and attractive to rats/mongooses. Goodnature® has a number of bait products, including ones with preservatives, available for purchase. Alternatively, different formulations, such as adding preservatives to peanut butter, may be experimented with.

Goodnature® A24 traps have been shown to be effective in some areas at reducing predator populations and protecting resources. They have been tested in Hawai'i and are being used for conservation purposes on other islands worldwide. Goodnature® A24 traps are significantly more expensive than other types of traps, costing approximately $123 (USD) for one A24 trap and starter kit. However, this relatively higher upfront investment will save money in the long-term with reduced labor costs required for predator control.

*Fencing*

Predator-Proof Fences

A predator-proof fence is specifically designed to exclude all mammalian predators, including mice, rats, mongooses, cats, dogs, and pigs. Various features are incorporated into the fence design to prevent these predators from accessing the enclosed habitat. For example, Xcluder, a brand from New Zealand, is designed to prevent rats and other animals from climbing over the top of the fence with the use of a curved hood at the top of the fence (see image above). After construction of a predator-proof fence, an intensive trapping effort needs to occur to remove all predators from within the fenced area. Even when eradication is achieved, on-going monitoring and occasional trapping is necessary to maintain a predator-free habitat. Constructing a predator-proof fence is a costly yet effective option that works to exclude all predators, including small mammals as well as pigs and dogs, from the fenced area. Predator-proof fencing has many ecological benefits, however it is very expensive to construct and maintain and it may also alter the undeveloped, natural character of the landscape at Kāwā. Recent cost estimate for predator proof fence is approximately $300 per meter, according to a locally-based conservation organization.

*PREDATOR FENCE AT KA'ENA POINT, O'AHU*

from *http://roweenvironment.weebly.com/hawaii.html*

### 3.4.2 Pigs and Dogs

Hogwire or Hog Panel Fences

Providing the best protection for vulnerable native species from the risk of predation by pigs and dogs would typically require fencing. As with trapping methods, there are a number of different types of fences that can be constructed to exclude predators. Generally, hogwire or hog panel fences are used to exclude large animals (e.g. pigs and dogs). Note that hogwire or hog panel fences do not exclude small mammalian predators (e.g. mice, rats, mongooses, and cats).

The most common type of fence used to exclude pigs and dogs is made out of four-foot-tall "hogwire." These fences are relatively inexpensive to construct; the cost per foot of hogwire is approximately $1.27 for materials (Sailer, 2006). Another option for fences to exclude pigs and dogs is semi-rigid hog panels (36 inches or 52 inches high) with graduated mesh. This type of fence is becoming more commonly used for conservation purposes because it is more flexible, stronger, and simpler to construct. However, panel fences are more expensive to construct than hogwire fences. A 16-foot long, 52-inch-high panel costs approximately $40 or $2.50/foot (Sailer, 2006).

Fenced areas can be very small with the intent to provide protection to a specific habitat (e.g. around a hawksbill nesting beach or around the Kāwā Pond), or fenced areas can be large to provide protection to a larger ecosystem. Once a fence is constructed, all pigs and dogs should be removed from the area and care should be taken to prevent reinvasion. Fences would need to be checked, maintained, and repaired regularly.

Domestic dogs should be kept on a leash at all times and should not be allowed to roam freely on-site during the hawksbill nesting season and/or if coots are observed at Kāwā.

*EXAMPLE OF HOGWIRE PANEL FENCE IN MĀKAHA VALLEY, O'AHU.*

Table 7 summarizes the advantages and disadvantages of the various predator control methods described in this plan.

**Table 7. Summary of Predator Control Methods**

| ADVANTAGES | DISADVANTAGES |
|---|---|
| **Live Traps** | |
| • Easy to use and check<br>• Catches all small target mammal species (rats, mongooses, cats)<br>• Can see the number of animals trapped | • Labor intensive; must be checked frequently (for humane reasons)<br>• Animals must be "dispatched" (killed on-site or removed from site)<br>• Potentially unpopular in visible public areas |
| **Snap Traps** | |
| • Cheap – can use more<br>• Easy to use<br>• Don't have to check as often as live traps<br>• Effectively used as sole rat control device for other Hawaiian species (e.g. by the Army to protect the O'ahu Elepaio) | • Only targets rats (does not kill mongooses or cats)<br>• Scavenging of carcasses may make it difficult to determine catches<br>• Can be accidently triggered (e.g. by a branch), rendering the trap useless<br>• Bait is often removed by slugs/insects between checks<br>• Potential to catch non-target species (e.g. birds)<br>• Potentially unpopular in visible public areas |
| **Automatic Multi-Kill Trap** | |
| • Requires less maintenance (and staff time) than other trapping methods<br>• Shown to be effective for rat control in some areas (in Hawai'i and elsewhere) | • Up-front purchase cost<br>• Does not control cats (only rats and mongooses)<br>• Scavenging of carcasses may make it difficult to determine catches (Note: Counting devices are available for purchase)<br>• Finding a long-lasting bait that is attractive to both rats and mongooses (Note: Goodnature® has a number of bait products available for purchase) |
| **Predator-Proof Fences** | |
| • Provides total protection from all mammalian predators | • Very large up-front investment – most expensive option (construction and predator eradication)<br>• Likely some community opposition (e.g. perceived as an "eye sore," unnecessary, or preventing access)<br>• A gate system would be required to allow pedestrian access |
| **Hogwire or Hog Panel Fences** | |
| • Protects resources from pigs and dogs | • Large up-front investment (compared to not having a fence) and potentially high maintenance costs (with rust near the ocean)<br>• May be some community opposition (e.g. perceived as an "eye sore," unnecessary, or preventing access)<br>• A gate system may be required to allow pedestrian access |

## 3.5 APPLICATION OF MANAGEMENT STRATEGIES FOR THE SPECIES HIGHLIGHTED IN THE RLA GRANT AGREEMENT

This section explains how the general management strategies described in the previous sections can be specifically applied to manage habitat and protect the four species highlighted in the RLA Grant Agreement at Kāwā: the hawksbill sea turtle, the green sea turtle, the Hawaiian coot, and the orange-black Hawaiian damselfly. For more information about these four species and how they utilize habitat at Kāwā, refer to Chapter 2.

In consideration of current resources (labor/staffing), three tiers of proposed predator control measures are presented, where appropriate. Tier 1 represents actions that should be conducted at minimum, followed by Tiers 2 and 3 with higher levels of protection for resources. Note that any management activities that directly impact federally listed threatened and endangered species will require a permit from USFWS before implementing management actions.

### 3.5.1 Hawksbill Sea Turtle Management

Hawksbill sea turtles have been confirmed to occasionally nest at Kāwā, and hawksbill nests and hatchlings are very vulnerable to predation. If signs of hawksbill sea turtle nesting are observed, the Hawai'i Island Hawksbill Turtle Recovery Project (HIHTRP) should be contacted immediately.

*Small Mammal Predator Control*

Mongoose, rats, and feral cats can destroy hawksbill sea turtle eggs and prey on hatchlings, if not controlled.

The following recommendations (Table 8) are proposed to protect hawksbill sea turtles from small mammals during the nesting season (generally from May to December):

- **Patrol beaches** for signs of nesting. Kāwā and Ka'ili'ili beaches should be monitored for signs of nesting activity at a minimum of once daily in the morning (or as frequently as possible). If possible, personnel should camp overnight at Kāwā to conduct nightly watches to detect any signs of nesting turtles or emerging hatchlings.
- **Install predator traps** in the vicinity of the nesting area, creating at least a 25-yard buffer around the nest (Tier 1). Traps should be installed in the vegetation along the periphery of the


*STAFF FROM THE HAWAII ISLAND HAWKSBILL TURTLE RECOVERY PROJECT CONSTRUCTS A TEMPORARY NEST ENCLOSURE AROUND NESTS TO PROVIDE PROTECTION FROM PREDATORS, VEHICLES, AND PEOPLE*

nesting beach creating a buffer of protection. If live traps are used, they should ideally be maintained twice daily (to bait the traps and check for animals). If kill traps are used, they can be baited and checked less often, however, the more frequently the traps are baited and re-set the more effective the predator control will be. Snap traps would need to be secured to a root or branch. Refer to Section 3.4 for more detailed information on traps for predator control. Tier 2 recommends conducting on-going small mammal predator control year-round to overlap with Hawaiian coot habitat and to provide ecosystem-wide benefits. Tier 3 recommends constructing a fence around nesting habitat to exclude all mammalian predators. However, fencing could alter the scenic views of the landscape and could also be perceived as posing limitations to community access.

*Managing Threats from Pigs & Dogs*

Feral ungulates, such as pigs and uncontrolled dogs have been known to prey on hawksbill sea turtle hatchlings and eggs by digging up nests. At the present time, pigs and dogs do not seem to be a significant threat to hawksbill sea turtles at Kāwā. Three tiers for managing threats from pigs and dogs are provided. Tier 1 recommends that a hui assist in monitoring the impacts of pigs and dogs, especially if animals are seen on-site. Members of the members of the hui would assist in hunting and trapping feral pigs, and monitor for stray dogs. Domestic dogs should be kept on a leash at all times and should not be allowed to roam freely on-site. Should pigs and dogs pose a significant threat at Kāwā, then Tier 2 should be considered. Tier 2 recommends fencing for Kāwā and Ka‘ili‘ili beaches. During and/or after fence construction, all pigs and dogs would be removed from the area enclosed by the fence using hunting, trapping, or snaring methods. However, a challenge with fencing of the beaches is that the fence ends will need to remain open to provide hawksbill sea turtles with access to and from the ocean. Predators would then be able to access the fenced-area during low tide. Therefore, effectiveness of fencing for the beaches will need to be further examined should pigs and dogs pose a significant threat for Kāwā. Refer to Sections 3.4 for more information on fences for predator control.

*HAWKSBILL HATCHLINGS HEAD FOR THE OCEAN*

Tier 3 recommends a predator-proof fence to exclude all mammalian predators, including mice, rats, mongooses, cats, dogs, and pigs. Fences with a gate for human access would require people to be accountable for closing the gate and not

letting pigs and/or dogs in the enclosed areas.

*Vegetation Management*

Habitat for hawksbill sea turtles is threatened by: non-native plants such as invasive koa haole and Christmas berry that can reduce the available hawksbill sea turtle nesting habitat; and plants and trees with extensive root systems such as coconut tree and morning glory (*Ipoemea indica*) that can form dense matrices in the sand making it difficult for female hawksbills to dig nests, and can entangle eggs and hatchlings. Thus, outplanting near critical nesting beaches should not use plants and trees with extensive root systems. Habitat restoration improvements should be done in consultation with organizations such as HIHTRP and HWF. Restoration work near critical nesting beaches should be accomplished using only manual labor and hand tools.

The use of heavy equipment can crush turtle eggs and hatchlings and can remove sand vital to eggs incubating below. In addition to removing invasive vegetation, beach clean-ups should be conducted at nesting beaches.

*Protection from Human Activities*

Artificial lighting near the coast directly impacts hawksbill sea turtles. The female hawksbill sea turtles come to shore for the sole purpose of digging nests in the sand to lay their eggs, which is typically done at night. Hawksbill hatchlings typically emerge from the nest at night as well. Female hawksbills and hatchlings are guided to the sea by the light of the moon; therefore, any artificial light from vehicular traffic, campers' flashlights, lanterns, and campfires may disorient them, increasing the risk of stranding, injury, and death.

Vehicles can cause severe damage to habitat for hawksbill sea turtles by compacting the sand and accelerating erosion. Driving on nesting beaches may crush incubating eggs, crush hatchlings in the nest, and trap hatchlings after they emerge from the nest cavity and begin their trek to the sea.

The following strategies are recommended to minimize adverse impacts specifically for hawksbill sea turtles:

- Prohibit use of artificial lights near coastal areas during nesting and hatching seasons;
- Prohibit use of campfires near nesting beaches;
- Work with neighboring landowners to use proper lighting methods, such as retrofitting artificial lights with downward directing shields;
- Encourage other best practices such as covering flashlights with red cellophane; and
- Prohibit driving on or near beaches.

| Table 8. Recommended Hawksbill Sea Turtle Management | |
|---|---|
| Strategy | **Actions** |
| **Monitor beaches for signs of nesting activity** | Monitor beaches once daily in the morning, or as frequently as possible. If possible, camp overnight to conduct nightly watches during the nesting season. |
| **Place temporary enclosures over identified nests** | Place temporary enclosures over the nest when signs of nesting activity are observed |
| **Conduct predator control for small mammals** | **Tier 1:** Install traps for small mammals in the vicinity of the nesting area when signs of nesting activity are observed, creating at least a 25-yard buffer around the nest<br>**Tier 2:** Conduct on-going small mammal predator control year-round to overlap with Hawaiian coot habitat and to provide ecosystem-wide benefits.<br>**Tier 3:** Fence nesting habitat to exclude all mammalian predators. |
| **Manage threats from pigs and dogs** | **Tier 1:** Monitor area for pigs. Hunt and trap pigs if sighted on the Property. Set regulation where domestic dogs must be kept on a leash at all times<br>**Tier 2:** Fence habitat with hogwire or hog panels to exclude large animals should pigs and dogs pose a significant threat on the Property.<br>**Tier 3:** Fence nesting habitat to exclude all mammalian predators. |
| **Manage habitat near nesting areas** | • Conduct beach clean-ups to remove debris<br>• Remove non-native plants and plants and trees with extensive root vegetation near nesting beaches; restore with native vegetation |
| **Reduce impacts from human activities** | • Prohibit use of nighttime artificial lights during nesting and hatching seasons<br>• Set regulation to prohibit driving on and/or near nesting beaches<br>• Work with neighboring landowners to use proper lighting methods<br>• Install signage to inform visitors of the important habitat for hawksbill sea turtles<br>• Construct barriers around nesting beaches to prevent damage from human activities, particularly from vehicular access |

### 3.5.2 Green Sea Turtle Management

Predation by small mammals, pigs and dogs is not a significant threat for green sea turtles at Kāwā; however, pigs and dogs can contribute to general loss or degradation of habitat. Therefore, any measures taken to control pigs and dogs at Kāwā will ultimately contribute to protection of habitat for green sea turtles and other native species. Vegetation management actions, as described for the hawksbill sea turtles, will also help to protect habitat for the green sea turtle. These actions should include removing non-native plants at Kāwā and Ka‘ili‘ili beaches and restoring the habitat with native vegetation. Beach clean-ups should be conducted regularly. Management actions, also as described for the hawksbill sea turtles, to reduce impacts from human activities should be implemented. These actions should include prohibiting driving on beaches, installing educational signage, and constructing barriers to prevent vehicular access.

*BEACHES ARE AN IMPORTANT PART OF GREEN SEA TURTLE HABITAT; PHOTO TAKEN AT NEARBY PUNALU‘U BEACH*

**Table 9. Recommended Green Sea Turtle Management**

| Strategy | Actions |
|---|---|
| **Manage habitat** | • Conduct beach clean-ups to remove debris<br>• Remove non-native plants and plants and trees with extensive root vegetation near nesting beaches<br>• Restore with native vegetation |
| **Manage threats from pigs and dogs** | See management actions for Hawksbill Sea Turtles. |
| **Reduce impacts from human activities** | • Set regulation to prohibit driving on beaches<br>• Install signage to inform visitors of the important habitat for green sea turtles<br>• Construct barriers around beaches to prevent damage from human activities, particularly from vehicular access |

### 3.5.3 Hawaiian Coot Management

At the present time, Hawaiian coot nesting is not known at Kāwā nor is there a confirmed presence of a Hawaiian coot population at Kāwā, although it is known to be present at nearby Punalu'u. On-going trapping and fencing, in addition to intensive restoration and continuous vegetation management, are essential if the goal is to establish a consistent and growing population of coots. Hawaiian coots will not be successful at nesting without managing predation (a coot biologist shared that a single cat can wipe out an entire flock in a short amount of time).

If Hawaiian coots are observed or should nesting occur at Kāwā, the DLNR Division of Forestry and Wildlife (DOFAW) should be contacted immediately.

*Small Mammal Predator Control*

Predation by mongoose and feral cats has been documented on adult and young Hawaiian coots, and predation by rats has been documented on eggs and chicks. As stated earlier, Hawaiian coot nesting is not known at Kāwā nor have they been recently documented at Kāwā, although it is known to be present at nearby Punalu'u. However, if coots are found or should nesting occur at Kāwā, it is crucial that predator control occurs in order to avoid becoming a "sink" for populations of coots. It is possible that coots could visit Kāwā or spend some time foraging in the wetlands and never nest there.

Three tiers of small mammal predator control is recommended for Hawaiian coot management. Tier 1 recommends monitoring the wetlands for signs of coot presence and installing predator traps around the perimeter of the wetlands (with at least a 25-yard buffer around the wetlands) should Hawaiian coots be observed or should nesting occur at Kāwā. Cat (and other small mammal predators) control is extremely important and must be implemented if coots begin to nest at Kāwā or if coots are found at Kāwā. Tier 2 recommends conducting on-going small mammal predator control to overlap with hawksbill sea turtle habitat and to provide ecosystem-wide benefits. Tier 3 recommends fencing the wetlands to exclude all mammalian predators.

*Managing Threats from Pigs & Dogs*

Pigs in other areas in Hawai'i are known to damage Hawaiian coot habitat. Dogs have also been documented as predators of both young and adult Hawaiian coots in other areas. Similar to management measures recommended for the hawksbill sea turtles, three tiers for managing threats from pigs and dogs are proposed. Tier 1 recommends a hui to assist with monitoring, trapping, and hunting pigs, and to assist with monitoring for stray dogs. Domestic dogs should be kept on a leash at all times and should not be allowed to roam freely on-site. However, if there is a confirmed presence of a Hawaiian coot population at Kāwā or if nesting does occur at Kāwā, Tier 2 or 3 are recommended. Tier 2 recommends fencing habitat with hogwire and/or hog panels to protect the nesting birds and their habitat . The exact location of the fence will need to be determined based upon site conditions and practicability. Tier 3 recommends installing a predator-proof fence around the wetlands to exclude all mammalian predators.

*Vegetation Management*

Vegetation management for the wetlands should consist of removing invasive vegetation and planting of native vegetation. Note that a significant section of the wetlands may be located within the State-owned parcel, TMK 9-5-016: 030, and not within the County's Kāwā property. Options for land acquisition of this parcel are discussed in Chapter 4.

If Hawaiian coots are observed or should coot nesting occur during restoration work for the wetlands, a buffer should be created around the coots and/or nests where restoration work will be avoided and the DLNR DOFAW should be contacted immediately.

Invasive Vegetation

Some species of non-native invasive plants that reduce value of wetland habitat for Hawaiian coots include California grass, water hyacinth (*Eichornia crassipes*), red mangrove (*Rhizophora mangle*), and Indian fleabane (*Pluchea indica*). The highly invasive California grass (also commonly known at buffalo grass) is present at Kāwā and can form dense stands that can completely eliminate open water habitat for the Hawaiian coot. Additionally, the California grass can impede the flow of water in the pond ecosystem. Removal of this non-native vegetation would not only protect and improve coot habitat, but would also improve the estuarine fish habitat. Removing invasive plants and grasses such as seashore paspalum and California grass from the estuary is recommended for coot habitat protection.

Native Vegetation

Certain types of vegetation provide better feeding and nesting conditions for Hawaiian coots, which also enhances the wetlands. Desirable native plant species are listed in Table 10. ʻAeʻae (*Bacopa monnieri*), which is found at Kāwā, is an indigenous plant that is important for coot habitat because it provides vegetative cover on which to build nests and harbors lots of invertebrates for coots to eat. Outplanting of native species should be conducted at the same time as invasive plant removal.

*Protection from Human Activities*

The springs/pond is a popular swimming and fishing spot for residents. It is the area with the largest potential conflict between human use and endangered waterbirds. The springs/pond area has a high potential to attract endangered waterbirds such as Hawaiian coots. It is recommended that the County:

- Prohibit vehicular access across the pond;
- Provide secured waste receptacles that are covered with a lid and maintained regularly to minimize attracting predators; and
- Provide educational signage near coot habitat to inform the public of the important habitat

Signage should include information about resources in the area, important habitat, and language such as "Please Do Not Feed Wildlife," and reasons why coots should not be fed.

**Table 10. Desirable Native Plant Species for Coot Habitat**

| SCIENTIFIC NAME | COMMON NAME | HAWAIIAN NAME |
|---|---|---|
| *Bolboschoenus maritimus* | Bulrush, Makai sedge, Saltmarsh bulrush | Kaluhā, Makai |
| *Cyperus javanicus* | Marsh cyperus, Java sedge, Javanese flatsedge | ʻAhuʻawa |
| *Cyperus laevigatus* | Smooth flatsedge | Makaloa |
| *Cyperus polystachyos* | Manyspike flatsedge | |
| *Cyperus trachysanthos* | Sticky flatsedge, Sticky galingale | Kaʻa, Puʻukaʻa |
| *Eleocharis obtusa* | Spikerush | Kohekohe, Pīpīwai |
| *Ludwigia octovalvis* | Primrose willow | |
| *Ruppia maritima* | Ditchgrass, Widgeongrass, Tassel pondweed | |
| *Schoenoplectus juncoides and S. lacustris, S. tabernaemontani* | Giant bulrush | ʻAkaʻakai, Nānaku |
| *Bacopa monnieri* | Water hyssop, Baby tears | ʻAeʻae |

**Table 11. Recommended Hawaiian Coot Management**

| Strategy | Actions |
|---|---|
| **Monitor Property for signs of Hawaiian coots** | Monitor for presence of Hawaiian coots. |
| **Conduct predator control for small mammals** | **Tier 1:** Install traps for small mammals around the perimeter of the wetlands, creating at least a 25-yard buffer around the wetlands, should Hawaiian coots be sighted or should nesting occur at Kāwā.<br>**Tier 2:** Conduct on-going small mammal predator control year-round to overlap with hawksbill sea turtle habitat and to provide ecosystem-wide benefits.<br>**Tier 3:** Fence nesting habitat to exclude all mammalian predators. |
| **Manage threats from pigs and dogs** | **Tier 1:** Monitor area for pigs. Hunt and trap pigs if sighted on the Property. Set regulation where domestic dogs must be kept of a leash at all times.<br>**Tier 2:** Fence habitat with hogwire or hog panels to exclude large animals should pigs and dogs pose a significant threat on the Property.<br>**Tier 3:** Fence habitat to exclude all mammalian predators. |
| **Restore wetlands** | • Remove non-native invasive plants such as California grass and seashore paspalum<br>• Outplanting of native species |
| **Reduce impacts on habitat from human activities** | • Prohibit driving across the wetlands<br>• Provide secured and covered waste receptacles; maintain waste receptacles regularly.<br>• Install educational signage to inform the public about the resources and important habitat at Kāwā, to not feed wildlife, and reasons why wildlife should not be fed. |

### 3.5.4 Orange-Black Hawaiian Damselfly Management

The low, brackish estuary or pond that forms at the mouth of Hīlea Stream provides suitable habitat for the orange-black Hawaiian damselfly. While small mammals are not a significant threat for the orange-black Hawaiian damselfly, the damselfly is vulnerable to nonnative invertebrates including backswimmers (aquatic true bugs; *Heteroptera*) and non-native poeciliid fish (mosquito fish introduced for mosquito control). An aquatic biological survey of the lower reaches of Hīlea Stream should be conducted to better understand possible threats from predation by nonnative fish and aquatic invertebrates on the orange-black Hawaiian damselfly at Kāwā. Mitigative measures should be taken to control or eliminate nonnative predators if any are identified.

*Managing Threats from Pigs & Dogs*

Predation by pigs and dogs is not a direct threat for orange-black Hawaiian damselflies, but pigs and dogs can contribute to natural habitat loss. Pigs spend much of their time rooting or digging with their noses in search of food items, which increases the rate of erosion and results in poor water quality. Pig droppings may also affect water quality. Likewise, dogs may contribute to poor water quality. Thus, monitoring for pigs and dogs near Hīlea Stream is recommended. A hui (as described for hawksbill sea turtle management) should assist with monitoring, hunting and trapping pigs at Kāwā. Fencing to exclude pigs and dogs may be considered in the future if pigs and/or dogs pose a serious problem at Kāwā. Domestic dogs should not be allowed to roam freely on the Property.

*Vegetation Management*

The damselfly requires slow or standing waters associated with coastal wetlands or lower reaches of perennial streams for breeding. They lay their eggs in the tissues of native and non-native aquatic plants associated with these habitats. Monitoring for signs of habitat degradation at the mouth of Hīlea Stream is recommended. Vegetation management may be necessary if the estuary becomes overgrown with invasive plants that impede streamflow and threaten the integrity of the habitat. However, extreme care should be taken when conducting any kind of vegetation management in damselfly habitat to not degrade water quality in the estuary by wading in the water excessively. Additionally, since damselflies lay eggs on most types of plants (native and nonnative), removal of vegetation may result in “take” of the damselflies. Therefore, vegetation management should only be conducted if the perceived benefits outweigh the potential risks to the damselflies.

*Protection from Human Activities*

The lower reaches of Hīlea Stream should be protected from heavy use or any activities that may degrade the water quality in the estuary. Educational signage should be considered near the lower reaches of Hīlea Stream and possibly in other areas to inform the public about the important habitat and explain why non-native plants and animals should not be intentionally introduced to the area.

| Table 12. Recommended Orange-Black Hawaiian Damselfly Management |
|---|
| Conduct an aquatic biological survey of the lower reaches of Hīlea Stream to better understand possible threats from predation by nonnative fish and aquatic invertebrates on the Orange-black Hawaiian damselfly at Kāwā. |
| Limit activity near the lower reaches of Hīlea Stream to prevent degradation of habitat from human disturbance. |
| Monitor for signs of habitat degradation near the lower reaches of Hīlea Stream; apply appropriate measures such as vegetation management with care, moderation, and only when the benefits outweigh the risks to damselflies. |
| Install education signage to inform the public about the important habitat and why people should not introduce new plants and animals to the area. |


*SIGNAGE TO INFORM VISTORS ABOUT HABITAT; PHOTO TAKEN NEAR TRIPLER MEDICAL HOSPITAL, O'AHU*


*EXAMPLE OF SIGNAGE FOR THE ORANGE-BLACK HAWAIIAN DAMSEFLY; PHOTO TAKEN NEAR TRIPLER MEDICAL HOSPITAL, O'AHU*

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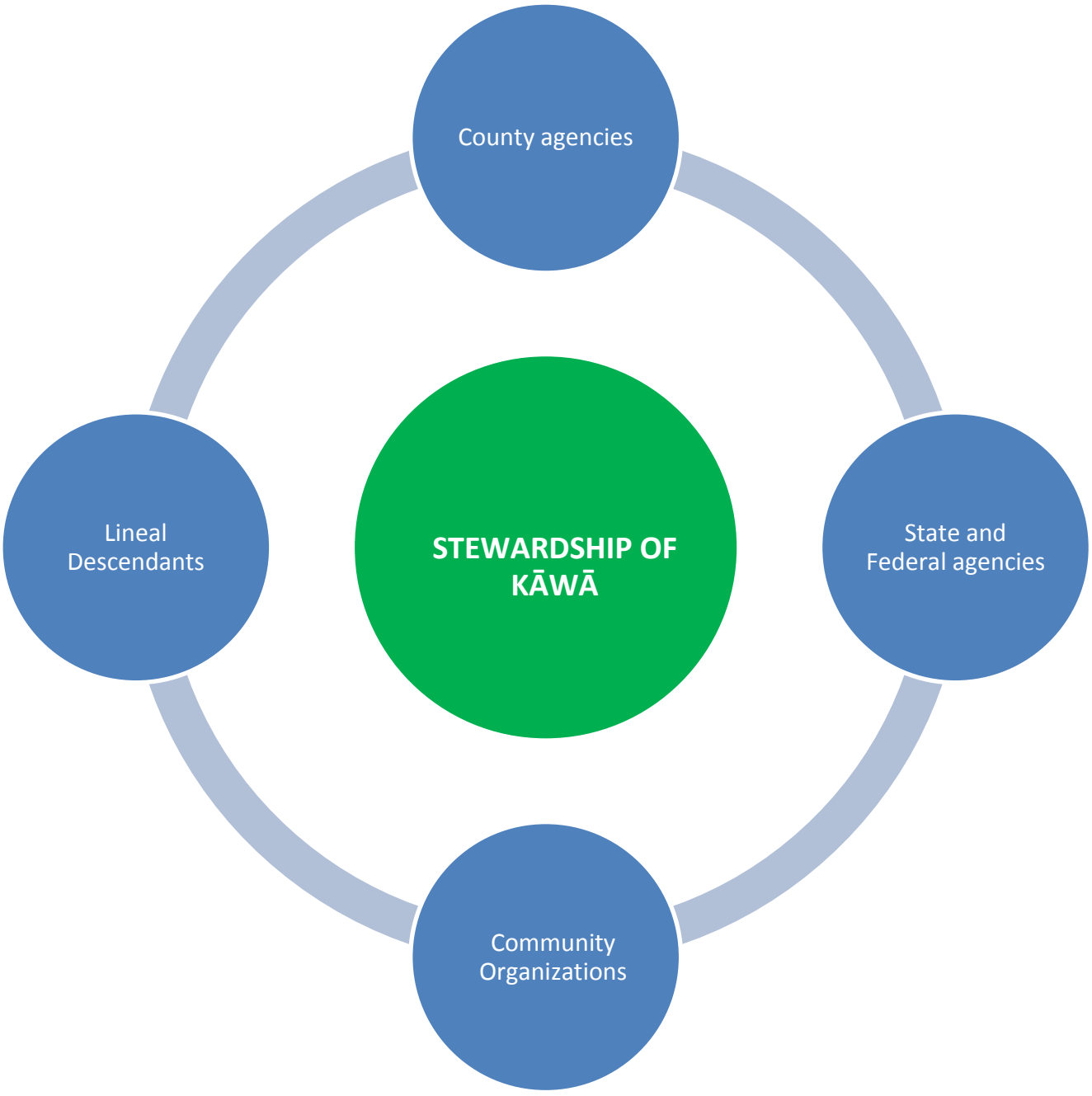
# 4 MANAGEMENT APPROACH AND IMPLEMENTATION

Implementation of management strategies identified in Chapter 3 will require partnership amongst state and county agencies, community organizations, cultural practitioners, researchers, educators, and lineal descendants to carry out many of the actions outlined. A collaborative effort is critical to successfully execute the actions described in this plan, as it is a task beyond the capacity of just one organization or government agency. Working with lineal descendants and Kaʻū community members to steward the place is critical to future management. Partnerships with agencies and organizations with expertise in managing and protecting habitat for the species highlighted in the RLA Grant Agreement are important. The County must set and actively enforce rules to maintain site control and to ensure that Kāwā is not exploited and degraded the way other open space lands in remote areas have been. On-site management presence is critical to minimizing potential impacts to the overall ecosystem from human activities, and to maintain the sense of place that is uniquely Kāwā.

Thus, a co-management approach for Kāwā is recommended since it is understood that the County currently does not have the capacity to adequately manage and maintain the 700+ acres of land at Kāwā without assistance from the community.

**Figure 12. Stewardship of Kāwā**

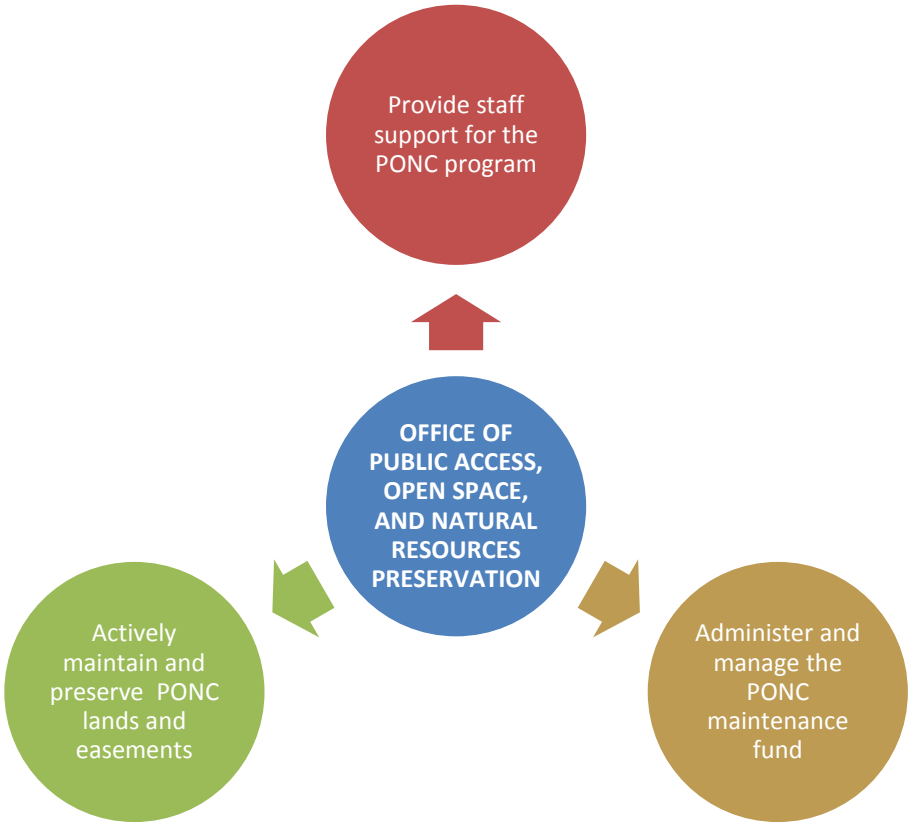


## 4.1 CREATION OF DEDICATED BRANCH FOR PONC RELATED ACTIVITIES

A dedicated branch (i.e., "Office of Public Access, Open Space, and Natural Resources Preservation") within the County's Finance Department would be created to oversee on-going management of all properties acquired using PONC funds, including Kāwā. This new branch would provide staff support for the PONC program, administer and manage the maintenance fund, and actively maintain and preserve lands and easements acquired by the PONC fund (Figure 13). Responsibilities relating to lands and easements acquired by the PONC fund are currently dispersed between the County's Department of Parks and Recreation (DPR) and Department of Finance; however, a single managing entity would improve efficiency and management of these lands.

Future management and maintenance of Kāwā, and other PONC lands, will require dedicated staff to maintain the natural resources and cultural sites of these lands. Personnel for the proposed "Office of Public Access, Open Space, and Natural Resources Preservation" will be required to provide a higher level of maintenance than needed for typical neighborhood parks, beach parks, playgrounds, or other recreational facilities. Staff personnel should have some knowledge about natural and/or cultural resources management.

**Figure 13. Management of PONC Lands**



At minimum, the following staff personnel are recommended for the proposed "Office of Public Access, Open Space, and Natural Resources Preservation":

- Administration/Stewardship Program Coordinator
- Natural Resources Professional
- Caretaker/Maintenance Worker

The administration/stewardship program coordinator would provide administrative support to the PONC program and coordinate activities with organizations providing stewardship to PONC lands. The natural resources professional would be responsible for overseeing management actions related to protection of habitat for native species, particularly for threatened and endangered species highlighted in RLA Agreement for PONC properties. The caretaker/maintenance worker would provide on-site presence regularly and work with various community groups to maintain the place. Duties specifically for Kāwā may include maintaining waste receptacles; maintaining vegetation along Hīlea Trail for pedestrian access; maintaining portable/composting toilets; maintaining and keeping the beaches clear of trash and/or marine debris; monitoring human activities on-site; and providing information to visitors if needed. More staff may be needed in the future for the proposed "Office of Public Access, Open Space, and Natural Resources Preservation" as more lands are acquired under the PONC program.

## 4.2 CO-MANAGEMENT APPROACH AND NEXT STEPS

In addition to dedicating County staff to manage and maintain the PONC lands, a co-management approach between the County and community stakeholders is recommended for Kāwā. Emphasis should be placed on partnering with organizations, cultural and lineal descendants and individuals from Kaʻū to steward the place. For example, the County could partner with HIHTRP and HWF to assist with monitoring during the hawksbill sea turtle nesting season. The County could also partner with organizations and programs (i.e., Three Mountain Alliance's Imi Pono no ka ʻĀina, local Kaʻū schools, and Youth Challenge) that facilitate connecting people, particularly youth, to the natural and cultural environment. Kāwā offers many educational opportunities for ʻāina-based, or place-based, learning about the natural environment and about Hawaiian cultural practices, knowledge, and resources. These programs could be coordinated with the County staff person overseeing the stewardship program, as mentioned earlier.

Successful co-management of Kāwā requires a commitment from community groups and individuals to collaborate with the County and with one another to mālama the place. For Kāwā, numerous groups consisting of lineal and cultural descendants and community organizations care deeply about Kāwā and have expressed interest in long-term stewardship of the place. These groups share common goals of restoring, caring for and protecting the natural resources and cultural sites; however, community consultations have revealed that

one of the main challenges is getting various groups and individuals to effectively work together to care for this place. Long-standing issues amongst various groups and individuals need to be resolved before these interested parties can effectively collaborate on the stewardship of Kāwā. For example, some issues result from differing opinions and interests on how the place should be managed. Despite the differences, all entities that have expressed interest in stewarding Kāwā share a common vision for managing and protecting a valuable heritage of Ka‘ū for future generations.

Thus, a facilitation process by a neutral third-party involving various groups, individuals, and the County is recommended in order to work towards successful co-management of Kāwā. These facilitated meetings should identify existing conflicts, potential strategies to resolve the conflicts, various groups' perspective on management actions, and their potential roles in caring for Kāwā. It is assumed that these facilitated meetings will allow groups to build good working relationship and to establish a structure for successful co-management of Kāwā. Outcomes from these meetings should include identifying the organizational structure for co-management of Kāwā lands and resources, roles and responsibilities, rules/protocol of conduct/operation at Kāwā, and a plan for conflict resolution. Note that some issues may take longer to resolve, thus, regular, on-going meetings in the future may be needed in order to continue discussions amongst community groups. The County may consider holding regular meetings consisting of representatives from parties involved with stewardship of Kāwā to promote collaboration and effective co-management of the place.

Once a co-management structure for Kāwā has been developed, the County should then enter into a Memorandum of Understanding (MOU) with non-profit organization(s). Various groups and individuals that have expressed interest in caring for this place are generally interested in different aspects of restoration work for Kāwā. For example, restoration efforts for some of the lineal and cultural descendants are focused on maintaining the house sites, while restoration work by Na Mamo o Kāwā, a local community group, consists of activities such as re-establishing native plants. Taking this into consideration, there are opportunities for various parties to steward different aspects of Kāwā while coordinating and partnering with other groups who share similar goals of restoring and maintaining the place.

Unlike nearby Honu‘apo lands where the County has executed an MOU with one local non-profit organization, it is recommended that the County consider entering into more than one MOU with different organizations for various areas within Kāwā. Stewardship of the entire 700+ acre property is beyond the capacity of any one organization, especially if the majority of labor from community organizations is assumed to continue on a volunteer basis.

## 4.3 AMEND COUNTY CHARTER

To ensure consistency and long-term availability of community stewardship for this treasured place, the County should consider amending the County Charter to allow the use of the PONC maintenance fund: to provide for the funding of educational programs that help to care for resources at Kāwā and other PONC lands; and to provide for the payment of labor of community organizations that assist as "caretakers" of the lands and easements acquired by the PONC fund.

At present, a challenge faced by many community organizations is the inability to use stewardship grants from the maintenance fund to pay for the cost of labor (as it currently only provides for the cost of supplies and equipment). See Appendix D for the County Charter. For most people, time spent volunteering at Kāwā means time spent away from a job that provides money to support and feed their families. Therefore, amending the County Charter to allow stewardship grants from the maintenance fund to pay for the cost of labor would alleviate issues faced by many community organizations. Note that there are alternative ways for community organizations to seek other funding sources to pay for labor (e.g., working with their Councilmember to get "discretionary funds," similar to the Waipio Ranger Program); however, use of the maintenance fund monies would be a more reliable source in the long-term.

## 4.4 LAND ACQUISITION

In order to implement actions relating to Kāwā Pond and surrounding wetlands, approval from the State is required since the parcel (TMK 9-5-016: 030) is under the jurisdiction of the State of Hawai'i. The County could request to lease the parcel from the State which would give the County control of the land and full management abilities. A smaller 1.147-acre parcel (TMK 9-5-016: 007) located near the coast by Ka'ili'ili Beach is also owned by the State. Both of these State-owned parcels could be set aside to the County under an Executive Order from the Governor (Section 171-11, HRS, as amended). With full management abilities of the pond and wetlands, the County can better coordinate restoration work to make the highest and best use of the land, and better manage the entire coastline as a whole.

## 4.5 SUMMARY OF MANAGEMENT MEASURES AND ESTIMATED COSTS

A summary of estimated costs for management measures discussed in this plan is provided in Table 13. Note that this plan recommends using an adaptive management approach for certain aspects of Kāwā. Therefore, cost estimates may be better determined after implementation of some measures. For example, conducting some predator control will provide the County with a better idea of the level of predator control needed.

**Table 13. Summary of Management Measures and Estimated Costs**

| | | |
|---|---|---|
| **CAPITAL COSTS (ONE-TIME COSTS)** | | |
| ***General Land Management/Education*** | | |
| | Signage | $2,000 - $4,000 |
| | Waste receptacles | $1,000 - $3,000 |
| ***Vegetation Management*** | | |
| | Equipment and Supplies (chainsaws, weedeaters, etc.) | $10,000 - $20,000 |
| ***Cultural Resources Management*** | | |
| | Phased Archaeological Inventory Survey | $50,000 - $100,000+[19] |
| | Equipment (GPS) | $6,000 |
| ***Predator Control Management*** | | |
| | Tier 1: Temporary Enclosures, Live and Lethal Traps | $9,000 - $35,700[20] |
| | Tier 2: Live and Lethal Traps, and Hog Wire/Hog Panel Fencing | $66,000 - $107,000[21] |
| | Tier 3: Predator-proof fence and trapping | $400,000[22] |
| **ANNUAL OPERATING COSTS** | | |
| | Staff personnel for the proposed "Office of Public Access, Open Space, and Natural Resources Preservation" | $150,000 - $170,000[23] |
| | Portable Toilets (rental and maintenance) | $4,800 - $9,600[24] |
| | Equipment fuel | $2,000 - $4,000 |
| ***Predator Control Management*** | | |
| | Replacement of snap traps | $7,200[25] |
| | Bait for predator control | $600 - $1,200[26] |
| | Fence maintenance | $500 - $1,000 |
| ***Vegetation Management*** | | |
| | Vegetation outplanting | $8,000 - $10,000[27] |

[19] AIS projects are typically conducted by private consulting firms which can be expensive especially if the project area is significant. However, it is recommended that the processes of collecting and synthesizing archaeological data for an AIS at Kāwā be conducted by local communities and/or through education programs. Actual costs could be reduced if such an approach is taken.

[20] Assumes buffer of 75 feet around suitable habitat areas with kill traps spaced 10 feet apart, live traps spaced 75 feet apart, and/or automatic multi-kill traps spaced 25 feet apart. Cost will vary depending on type of lethal traps (snap trap or automatic multi-kill trap) used. Note that automatic kill-traps can be spaced further apart with consistent rat control spanning several acres (e.g. traps can be spaced up to 150 feet apart).

[21] Assumes buffer of 75 feet around suitable habitat areas with kill traps and live traps spaced 10 feet apart and/or automatic multi-kill traps spaced 25 feet apart. Cost will vary depending on type of lethal traps (snap trap or automatic multi-kill trap) and fence used. Costs include labor cost associated with fence construction for 3,570 linear feet of fencing.

[22] Costs include labor cost associated with fence construction for 3,570 linear feet of fencing. Trapping will occur within the enclosure to remove predators.

[23] Assumes three full-time staff persons salaries and benefits only.

[24] Assumes two to four portable toilets.

[25] Assumes replacement of snap traps every 6 months.

[26] Assumes new bait will be applied twice a week. Actual cost will depend on the total number of traps used and how frequent the bait is replaced.

[27] May vary depending on cost of plants and the need to outplant. Assumes mostly volunteer labor.

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# Kāwā Resources Management Plan

## Appendix A:
## Summary of Community Consultations

**Value of Kāwā**

Consultations for this project revealed that Kāwā is a special place for the people of Kaʻū but also for residents from other regions of Hawaiʻi Island. For many, Kāwā connects the past to the present and evokes memories of Old Hawaiʻi and what it means to be Hawaiian. In the past, it was one of the places people would access for fishing in Kaʻū so it was important not only for survival but the practice often involved camping at the beach for several days which facilitated families spending time together. During this time, core Hawaiian values, such as mālama, kōkua, and aloha were learned and lived out through taking care of resources and of each other. "My grandparents used to take us down to Kāwā for gathering and fishing — our food," said a kupuna from Pahala. Another kupuna from Nāʻālehu shared similar memories:

> Kāwā was a place where you can feed your family so we took care of it… the ones who'd go down there, we'd share whatever we do down there. People would share—kōkua. No such word today. You know, a person who does that, is humble… It was mostly a place to fish for subsistence. We wouldn't take much. We'd only take a pot of rice down to the beach. We'd [also] bring sugar, coffee, and tea…… From Friday to Sunday we'd be there, dry our fish down there. My job was to pick up wood, find wood that would float.

She explained that as young children, they were able to gather food and contribute to the livelihood of their family. "Nowadays, kids don't know how 'cause get at the store," she said. "We'd plant too," she remembered. She explained that while they were down at the ocean, they would also exchange potato and bananas with fishermen for fish. She also added:

> Kaʻū people, real rebellious people…[but] the Hawaiians, helped each other and we'd respect. After we leave [Kāwā], we'd clean up. That's how it was and when you'd visit people, you'd take food. Everybody liked the dried fish. Those days, had chicken too.

For lineal descendants, Kāwā connects them to their families through their iwi kūpuna who are buried at Kāwā and the house sites they have left behind as memories of people who once lived at and called Kāwā their home. The granddaughter of one of the original inhabitants of Kāwā whose house site still remains, feels deeply about Kāwā as a place that is part of her identity. "They [her grandparents] were there. If it weren't for them, I wouldn't be here,"

she said with tears in her eyes. “To feel it, and to inhale it, all I could see is love… I love it. It is part of who I am.” She spoke of Kāwā as being part of her DNA and recalled times when they would be at Kāwā and her mother would often say, “Papa, are you here with us today?” Since 2005, her family has gone down to Kāwā every month to restore her papa’s hale. She shared her sentiments and feelings evoked while at Kāwā:

> I don’t wear shoes. I’m on the ground cleaning. I love to feel the ‘āina… You literally feel the mana. You walk around, everything you look at, is the past and the present. History speaks in whispers, you can hear your ancestors’ voices in the wind.

Another lineal descendent of Kāwā who currently lives in Hilo, explained that he used to spend his summers in Kāwā. “I enjoyed growing up there. There, you had no worries,” he said. He fondly recalled childhood memories of fishing and hunting in Ka‘ū. “It was horrible but now I appreciate it,” he said laughingly. He was proud of his ability to carry out many Hawaiian cultural practices like fishing, hunting, and preparing food. He explained that his upbringing in Ka‘ū was an education for him which he believes grounded him culturally so he is not worried if the barge stopped coming. He believed that the things he learned from Kāwā in his youth made him the person he is today, pointing out the value of Kāwā for Hawaiian children. “It’s not just about Ka‘ū people but for all Hawaiian kids,” he said who understands the struggles of contemporary adolescents that he works with as a counselor and football coach.

The value of Kāwā as a place for education was reiterated by a kupuna who stated:

> You can go to school and get educated but when you’re THERE [at Kāwā], and you feel it, and touch it, you learn more. I learn more about being there than going to school. You just gotta hold it and that’s what I feel when I’m there. I feel at home. I do. I feel at home. I feel it’s one of the homes. It’s part of our lives. It’s part of us.

Her two nephews who are in their early twenties and who consistently participate in restoring their great-grandfather’s hale at Kāwā every month, shared how their relationship to Kāwā influenced their lives and the direction of their areas of focus as students at the University of Hawai’i (UH). One nephew is graduating in anthropology but started restoration work in Kāwā with his family when he just started college. “I was getting into college and I realized that we needed some kind of direction because going down and cleaning is

awesome but we didn't know what would happen after that, like the continued protection of it and to learn what would benefit us in the long run—taking care of the area or trying to help take care of Papa's hale," he said. He also explained how his education allowed him to understand the structures at Kāwā better and how that knowledge influenced his life:

> As I went through school I learned that these hale were a part of Post-Contact but in that transitional point from traditional hale to wooden structures but they didn't do it just as tradition. They incorporated a lot of what they learned from Western influence and incorporated that into this hale which to me is awesome because it shows that gap between tradition and western and it shows that transitioning point. So, that's why I wanted to go into anthropology.

Kāwā also impacted his cousin's life in a similar way. He had spent high school in Alaska but returned to Hawai'i and is currently pursuing a degree in environmental science at the University of Hawai'i at Hilo. While in Alaska, he worked for the Fish and Wildlife Service with Alaskan native communities to preserve native sites similar to Kāwā. He explained the significance of Kāwā to his learning:

> I started thinking about how we can implement that— the same thing down here and bring that education. So that's kind of why I started going into environmental science to preserve natural resources and at the same time minoring in Hawaiian studies to learn all the [cultural] aspects a little bit more. I guess in a way it's shaping my college career, and it's pushing me to learn more and more because every time you go down there, something new comes up. Whether we learn about the spring and the fishes and how everything interacts and the individual plants and what they offer the area as well as the invasive [plants], how they can acidify certain spots and take over and choke out the native plants.

He wanted to share that experience with other people and their children because of its impact on his own life. "I want them to have the same experience that I had and that I'm still having," he said. Both cousins often use Kāwā in their presentations at school and share their experiences about the place. "Some of them know about it and most of them want to see it and wanna know more about it," said one nephew. He explained that one of the main reasons students seek out counsellors at the university is associated with the lack of

cultural identity. He felt that Kāwā would be a good venue to help Native Hawaiians feel more connected to their culture.

He also explained that many individuals and groups are interested in visiting and learning about Kāwā. Two professors from the departments of Anthropology and Hawaiian Studies at University of Hawai‘i at Hilo were mentioned who were interested in taking students to Kāwā. The professor of Hawaiian Studies is also a family member of one of the hale at Kāwā. “She takes the Hawaiian students down to Ka‘ū,” he said. “Not quite Kāwā but a little bit past it and she’s wanting to start doing that over at Kāwā.”

Currently, Kāwā is accessed by various organizations who take students to Kāwā, such as the Hawai‘i Wildlife Fund (HWF), Three Mountain Alliance (TMA), and the University of Hawai‘i at Hilo. “Kāwā is a place that allows students to connect to the ‘āina,” relayed a guide for the TMA, who believes the experience is important for teaching youth a sense of identity. In 2015, she took 18 students (6$^{th}$ to 12$^{th}$ graders) twice to Kāwā for service projects through TMA’s Imi Pono no ka ‘Āina program which exposes students, teachers, and community members to a variety of natural environments, their cultural significance, and the threats to native ecosystems. The excursion was in collaboration with the HWF where students assisted in the organization’s restoration work at Kāwā.

The HWF is a non-profit that began restoration work around Kāwā Pond in October 2014 and received a grant to conduct 24 work days at Kāwā over a span of two years. The organization is dedicated to the conservation of Hawai‘i’s wildlife through research, education and advocacy and often provides opportunities for other education programs to become involved in their work, such as the TMA, Youth Challenge, Hawai‘i Pacific Academy, and students from local Ka‘ū Schools particularly students from Ka‘ū Middle School from high risk substance abuse

*Restoration work by Hawai‘i Wildlife Foundation and students from local Ka‘ū schools*

families. “The HWF has done a really good job of bringing in the students,” said a lineal descendent of Kāwā. “Sometimes it’s just a few and sometimes it’s bigger groups. Each time they [students] come, it’s a good chance to talk with them and find out what they’re passionate about. It’s nice that HWF does that and we continue to do that,” he shared. In addition, students from UH Hilo have participated in the marine debris clean-ups led by HWF at Kāwā. Thus, Kāwā is a space and place that facilitates students learning about the natural environment and about Hawaiian cultural practices, knowledge, and resources.

**Wahi Pana, Moʻolelo, and Sense of Place**

The value of Kāwā is also reflected through the moʻolelo that kamaʻāina and lineal descendants shared about Kāwā. These stories represent and highlight the resources and practices that characterize the people and land of Kāwā and Kaʻū that were not only important to its people but reflect the environmental conditions that create the sense of place that is unique to Kāwā and Kaʻū. Participants recounted moʻolelo telling of the rebellious nature of the Kaʻū people who often usurped chiefs who did not treat the people well. “Kaʻū people, real rebellious people…[but] the Hawaiians, helped each other and we’d respect,” an 82-year-old kūpuna explained. Consultations for this project reflect the continuity of people who care deeply about place, understand the importance of maintaining the sense of place of their wahi pana, and are fiercely protective of special places like Kāwā, that perpetuate the Kaʻū way of life and the Native Hawaiian lifestyle.

Other important moʻolelo shared, included the surfing chief of Kaʻū who used to surf at Kāwā and defeated a Kohala chief. This moʻolelo highlights the prominence of Kāwā as a place for surfing historically which continues to be one of the most accessed places for surfing in the Kaʻū District today. Though historically Kāwā was a place for fishing, a kupuna explained that today, “only surfers go there [Kāwā]. They go there for a reason,” she said. Consultations indicated that Kāwā is used most by surfers.

Several moʻolelo, such as Kū Mauna and Puʻu ʻEnuhe or Caterpillar Hill, were shared that are connected to Kāwā and highlight the significance of fresh water at Kāwā. In relating the story of Puʻu ʻEnuhe, one kupuna stated that, “caterpillars used to be plentiful at Kāwā particularly during the months of July to September when they would come down from the mountains to the ocean and eat everything.” She explained that during this time, there would be a shortage of water in the mountains so

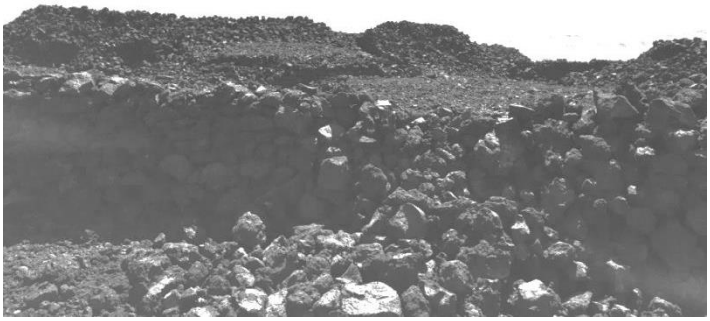
they were attracted to the coast because of the freshwater from the coastal springs. She recalled the roads being covered in caterpillars and they would be able to hear the loud sounds made when the cars would run over them. She also made references to the railroads being slippery from the trains riding over caterpillars on the tracks. Despite being once plentiful, she explained that they don't see many caterpillars like how it used to be.

Another kūpuna identified the caterpillars as those of monarch butterflies. "Once in a couple years, it rained monarch caterpillars," she said. She remembered how her whole school would be covered in caterpillars. She related that she has not seen the caterpillars anymore like it used to be previously. Perhaps the changes observed among informants about the reduced prevalence of monarch caterpillars reflect environmental changes in Kaʻū in the last century.

Hīlea Stream, a prominent wahi pana of Kāwā, also connects Kāwā to the mountain ranges of Kaʻū which carries water down to Kāwā from Puʻu ʻEnuhe and Makanau. These moʻolelo and wahi pana reiterate the mauka-makai connections within the ahupuaʻa of Hīlea Iki and Hīlea Nui and the important role that Hīlea Stream plays in the estuary habitat and ecosystem surrounding Kāwā Beach.

**Vision**

Consultations indicated a general consensus that Kāwā is a special place that should be protected and not be changed or developed in any way for future generations and that it should be used as a place for learning and education. "We need to preserve it for the future, for future generations," explained a kupuna from Nāʻālehu. A lineal descendent pointed to the rail being built on Oʻahu and lamented on its impact on iwi. "They're taking history away from us," she said fearing that the same might happen at Kāwā. South Point was also brought up by several Kaʻū residents as an example of what they don't want Kāwā to become. "They destroyed South Point," said a lineal descendent of Kāwā. "We don't want that to happen to Kāwā." She felt that it was important for the County to support the protection of Kāwā to preserve it for the future and for successive generations. She also explained that Kāwā belongs to everyone so the place



*Keʻekū heiau*

should be shared, therefore, she wanted to see it conserved, clean, and kept the way it was before. It was also important to her that people know and understand the resources present on the land. Another resident of Kaʻū wanted the fishing village at Kāwā restored.

A group of young residents of Kaʻū, who are eager to steward Kāwā, shared their 20-year vision of the place. They imagined that in 20 years, they could drive up to the front entrance and there would be trails where visitors could walk on that would lead them to different parts of Kāwā. The trails would be lined with native plants and also culturally-relevant plants like ʻulu, papaya, and niu—possibly a botanical garden with interpretive signs. There would be no running water, no indoor plumbing, and no vehicular access down at the beach. They envisioned a traditional Hawaiian hale structure with a caretaker to steward the place who would be paid to be there eight hours a day. They also imagined a restored Hawaiian fishpond that could generate revenues from the sale of moi and ʻāholehole but sold cheaply to local people. They wanted an area with picnic tables, a composting toilet, an ʻimu, and two nurseries on-site—dryland and coastal. They felt that it was important to have a nursery to create an internal seedbank within Kāwā to reduce the spread of fire ants.

**Cultural Resources**

Consultations indicated that Kāwā is rich in cultural resources including graves, heiau, house sites, and other archaeological features. Several participants described gravesites as being "plentiful" at Kāwā; that the access road known as the Napoleon Road, on the south side of the property, has "too much iwi;" that burials are located beside the coconut trees next to the freshwater spring where a garden was built by an individual claiming ownership of the land and living there; and that petroglyphs and kōnane boards have been found at Kāwā. A resident of Pahala pointed out there is not much soil at Kāwā cracks in the lava were filled up with sand and used as burials. "There were a lot of cultural things on the land," she said. "Certain places, we couldn't go to, get heiau, get grave. We had to respect the land."

A young man described Keʻekū Heiau as the piko of Kāwā while another felt that it was the area between Kāwā Beach to Kāwā Pond as this is where people gather. A kupuna shared that the most important resource at Kāwā for her was Keʻekū Heiau which she felt is an important part of the history of Kaʻū, therefore, wanted to see the heiau restored and preserved. Another kupuna explained that not many people, including the people of Kaʻū, know about the history of Kāwā, such as the 300 iwi on the Kaʻalāiki side of Kāwā, Kūʻula, the heiau, kōnane, and the petroglyphs.

She referred to the work of Violet Hanson and several archaeological studies previously conducted at Kāwā.

Other significant cultural sites identified by informants included eight ancestral house sites that still remain at Kāwā today. A kupuna explained that Kāwā was settled by fourteen people of the same family and formed the fishing village that Kāwā became known for, therefore, the descendants of the families of each house site, are related. Consultations indicated that Basil ʻĀpiki had a kuleana parcel within the project area whose house site still stands at Kāwā. Since 2005, lineal descendants visit Kāwā regularly on a monthly basis to clean and restore the ʻĀpiki house site. Currently, it is the only house site out of the eight at Kāwā that is currently cleared and restored. The family shared that they are trying to figure out how they can be involved in taking care of Kāwā. "For us, it's kind of like putting together our grandparents' life," a family member shared. "So, to understand it better instead of just being confined to certain areas, we would understand it a lot better if we were part of the whole so that we would know why certain things were done in this area as opposed to this area."

**Cultural Practices**

Consultations indicated that Kāwā was and continues to be accessed by Native Hawaiians for various traditional cultural practices. These include fishing, surfing, salt gathering, and religious practices. A kupuna explained:

> Families would "go down" to Kāwā for kids to surf and some would go fishing and gathering. Plantation workers who used to work further mauka, would also go down there.

Of these practices, consultations revealed that salt gathering is no longer practiced though salt was once gathered at Kāwā. A kūpuna who frequented Kāwā recalled gathering salt from Punaluʻu all the way down to South Point. "We'd scoop salt with the large ʻopihi shells and just go along the coast and scoop," she reminisced as she identified salt pans along the pāhoehoe rocks of Kāwā that she gathered salt from as a child.

***Fishing:*** Historically, fishing was an important activity at Kāwā and was accessed by residents of nearby towns and plantation villages for fish. "We Hawaiians, we went there to get food. We went there for a purpose," a kupuna said who explained that the primary purpose of families going to Kāwā was for fish. Fishing involved families camping at the beach for several days where fish would be processed and

dried. She shared the following memories of fishing at Kāwā:

> Kāwā was a small beach. Mostly, the Kaʻalāiki people [would] get good stuff from down there: the limu, pipipi, everything you can think of. Used to have ʻōhua, wana, hāʻukeʻuke…The land was not like now. Was all rocks. Kāwā never had sand. The bay was all rocks all the way up and in the 1930s, the place had boulders.

Another kupuna recalled fishing from Kāwā Pond using cast nets drawn from one side of the pond to the other. A salt water pond was also identified more towards the South Point side of the property where she remembered fishing for ʻopihi, wana, crabs, and "all kinds of fish." She also explained that eating turtle was normal back then but her grandfather stopped them from catching turtles. She fondly reminisced about those days they spent at the beach as a child and how her grandfather taught her and her siblings how to fish. "Gampa would say, "don't be greedy. Just take what you need."

Though fishing is not as prominent for survival today as in the past, people still access Kāwā for fish, particularly for net fishing. A lineal descendent of Kāwā remembered that the old Filipino men, who used to work in the sugar plantations nearby, were good fishermen who mostly threw net at Kāwā. "These guys were really good. They knew where to go get fish," he said. He added that fishermen from Kaʻū preferred going to South Point where ocean conditions are more favorable particularly for line fishing. Nevertheless, he himself explained that he also learned to fish at Kāwā where he spent his summers away from his home in Hilo. Another participant explained that every one of her uncles was a fisherman who used to throw-net in Kāwā.

***Surfing:*** Today, Kāwā was reported to be accessed most frequently by surfers as it has one of the few surfing breaks in the Kaʻū District which is generally referred to as Kāwā. "Only surfers go there [now], explained a kupuna. "They go there for a reason." Several informants in their mid to late twenties who frequently surf at Kāwā explained that a second surf break called Windmills, breaks off of Kāwā Pond during large surf events. A young surfer shared that his wife and kids would swim at the springs while he surfs.

***Religious Practices:*** Consultations did not collect much information pertaining to religious practices at Kāwā except to suggest that Native Hawaiian families still practice protocol of paying respects to their ancestors, as well as the significance of Keʻekū Heiau.

**Natural Resources**

***Freshwater Resources***: Consultations indicated that freshwater resources are available at Kāwā that come from Hīlea Stream and freshwater springs around the area surrounding Kāwā Pond. Informants noted that there are many underwater freshwater springs all along the coastline of Kaʻū that includes Kāwā. Staff of the Division of Aquatic Resources (DAR) of the Department of Land and Natural Resources (DLNR) referred to the aquatic areas surrounding the mouth of Hīlea Stream and including the coastline of Kāwā Bay, as well as the areas surrounding Kāwā Pond, as estuarine environments because of the presence of freshwater. They indicated that estuaries provide important habitats for certain fauna and flora and they also serve as important breeding grounds for juvenile fish. The DAR initially considered Kāwā for an island-wide estuarine study for juvenile sport fish but excluded the site because Kāwā Bay and Kāwā Pond were too small for a cast-net methodology necessary for the study.

***Hīlea Stream***: A frequent surfer explained that Hīlea Gulch originates in the mountain regions at Puʻu One and carries water down into the ocean at Kāwā, therefore, Hīlea Stream changes depending on the rain and also on ocean swells. Consultations also indicated that Kāwā Bay is in a flood inundation zone and that Kāwā now floods but never used to in the past. It was observed that the water during flooding events at Kāwā, originate in Kaʻalāiki mauka. ʻOʻopu, shrimp, and various species of fish, particularly juvenile fish, were reported to be found at and around the mouth of Hīlea Stream. A kupuna remembered that there used to be tilapia at Hīlea Gulch. Though studies have shown that the endangered orange-black damselfly have been found at Hīlea Stream, none of the informants for this project had ever noticed their existence at Kāwā.

***Kawa Pond***: Consultations indicated that Kāwā Pond is one of the most prominent and significant features at Kāwā. Historically, the freshwater springs surrounding the pond was a source of freshwater for nearby residents and visitors to Kāwā. A kupuna explained that when they would visit Kāwā, they only brought poi and chili pepper water with them to the beach. “We never had to bring our own water,” she said. “My grandparents taught us how to gather.” He also taught them how to gather freshwater for drinking from the brackish water ponds. She explained that in those days, there were many brackish water ponds so Kāwā was a beautiful place to be. She recalled that the existing pond was larger and it used to have islets where they could swim to from the banks as children. She also remembered a pond adjacent to the Kāwā Pond that had a coconut tree growing in it and it was

their "drinking" pond where her uncles would dive down to get freshwater.

As children, she and her siblings were not allowed to go in that pond. When they would visit Kāwā, their grandfather would always go in the water first. "He'd go down and get plenty fish," she remembered. However, she pointed out that some people were permanently camping at Kāwā and "destroyed stuff" and dug out the pond. She also made references to a tidal wave in the 1970's that covered up a freshwater pond they had used.

She explained that the native reeds that grow by the stream now used to grow further inland. ʻOʻopu is prevalent in Hīlea stream and also in the pond. The Kaʻū ʻoʻopu is said to be different from other ʻoʻopu in that regular ʻoʻopu swim upstream but the Kaʻū one swims through to the aquifer.

**Threatened and Endangered Species**

Consultations indicated that of the threatened and endangered species known to inhabit Kāwā, only sea turtles were reported to be seen regularly at Kāwā. Monk seals were also reported to visit Kāwā Beach every year. One participant reported seeing turtles in Kāwā Pond but the general consensus was that turtles are seen mostly around Kaʻiliʻili Beach. No one had ever seen the pinaoʻula (damselfly) or the Hawaiian coot though some felt that if Kāwā Pond is restored, the native birds will come to Kāwā.

**Plants**

Consultations indicated that most of the vegetation at Kāwā is non-native with koa haole and Christmas berry dominating the kula regions of the property. Some native ʻaʻaliʻi are present and ʻuhaloa and ʻilima were reported to be dispersed throughout the property. Two kūpuna from Nāʻālehu explained that people don't access Kāwā to gather native plants for lāʻau lapaʻau though patches of maiapilo grow along the rocky coastal area of Hīlea Iki. However, more native vegetation was reported along the coastline as dune plants near Kāwā Pond including ʻākulikuli and naupaka.

A kupuna remembered that people planted watercress at the Kāwā Pond and her grandmother would make ʻopihi with watercress. Nānaku grass, a native reed, also grows around Kāwā Pond which pigs were reported to like eating. The nānaku also provide an ideal habitat for juvenile fish and oxygenate the water. Two main invasive grasses, seashore paspalum (golf course grass) and California grass (*Brachiaria mutica*) dominate Kāwā Pond and inhibit the flow of water to and from the ocean by holding sand and sediments.

**Areas of Concern**

Consultations identified various concerns not only to environmental and cultural resources at Kāwā, but also to the proper function of programs at Kāwā and the safety of visitors. These included the following:

**Individual claiming ownership:** Majority of consultations raised the presence of an individual claiming ownership at Kāwā as a threat to the environmental integrity of Kāwā and to visitors, both residents of Kaʻū and non-residents. Several informants referred to this individual as not taking care of Kāwā through their own actions, such as destroying house sites, building a garden over burial grounds, and through bringing others to Kāwā who did not act responsibly. Various accounts of negative interactions with this individual were shared.

**Sand Erosion:** Several informants identified sand erosion as a problem in two main areas: 1) surrounding Kāwā Pond; and 2) Kāwā Beach. Informants have observed that there is less sand near the Hīlea river mouth than before. They believed that sand erosion has been attributed to high spring tide and surf events which have caused the waves to push sand from Kāwā Beach across the pāhoehoe, to fill in Kāwā Pond and fresh water springs and the sand is not cycling back into the ocean. They believed that vegetation in the area between the beach and the pond used to stop the flow of the sand. However, they believe that the vegetation loss, and vehicular access in this area, has carved out a dirt road through the vegetation that has contributed to the erosion.

Recommendations suggested by some community members to mitigate sand erosion included: 1) revegetating the area between the beach and the pond with native plants, such as naupaka, ʻakiʻaki, and ʻākulikuli; 2) prohibiting vehicular access; 3) building a wall around the fresh water springs along the edges of the pāhoehoe; 4) removing the grasses that hold the soil at Kāwā Pond; 5) conducting student volunteer programs to assist and participate in restoration activities; and 6) conducting a baseline hydrology study at Kāwā.

**Invasive plants:** Consultations identified various invasive plant species at Kāwā. Two invasive grasses specifically surrounding Kāwā Pond included California grass and seashore paspalum or golf-course grass. These grasses hold sand and inhibit the flow of water into and out of the estuary. One informant predicted that removing invasive plants from the pond and replacing with native species would create a more ideal habitat for native birds. Vegetation with thick root systems, such as coconut trees, along the shoreline also prevent hawksbill turtles from being able to dig through the sand for their egg chambers. Christmas berry and koa haole are two other common invasive plants prevalent

throughout the project area. One informant complained that the Christmas berry make restoration work of cultural sites difficult because they grow on house sites and their root systems destroy the walls and are difficult to remove. Another plant commonly known as maunaloa (*Canavalia cathartica*) was also reported to work its way into many of the cultural sites.

Community members suggested: 1) prioritizing grass removal around estuary, and encouraging native reed as fish and bird habitat; 2) prioritizing California grass removal further mauka of estuary; 3) offering opportunities for visitors to Kāwā to plant a native plant there; 4) planting native plants along the shoreline such as naupaka rather than niu (coconut); and removing invasive plants like Christmas berry.

**Pests:** Though fire ants are absent at Kāwā despite an island-wide infestation, several pests were identified to be present in the project area. These included mongoose, pigs, feral cats, and a higher prevalence of centipedes compared to before. Mongoose and feral cats, encouraged by growth of California grasses around the estuary, are threats to turtles because they eat the eggs and small hatchlings. Pigs were identified as a pest that dig around and destroy the integrity of areas surrounding fresh water springs. One informant reported that mosquitoes and cockroaches are not problems at Kāwā.

Recommendations for addressing pests at Kāwā included: 1) using kill traps (with sardines) for mongoose, feral cats, and rats; 2) working with local community group to monitor beach during hawksbill turtle nesting season; 3) removing invasive plants like California grass that encourage pest habitat; and 4) establishing an in-house seed/plant nurseries to prevent fire ant infestation.

**Turtles:** Kāwā provides habitat for green and hawksbill turtles though HIHTRP explained that Kāwā is not particularly favorable habitat for hawksbill because of the abundance of cobblestones and little sand. However, turtles return to the same beach they were hatched to nest and some are known to also visit nearby beaches, therefore, beaches along entire coastlines like those of Kaʻū, including Kāwā, are important to be protected for this reason. Informants reported seeing turtles at Kāwā Pond but mostly at Kaʻiliʻili Beach where turtles are known to nest at and egg shells were apparent. However, most community participants did not differentiate between green and hawksbill turtles. Informants shared that in the past, eating turtle was normal but is no longer practiced. The HIHTRP identified several threats to turtles and their management at Kāwā:

- **Pests/Predation:** The main terrestrial pests/predators to turtles at Kāwā include mongoose, feral cats, and rats.

- **Marine Debris:** Currents bring marine debris to Kāwā. Debris along the shoreline may prevent turtles from accessing sanding areas of the beach to nest, prevent new hatchlings from finding the ocean, and turtles may become tangled in nets.
- **Artificial Lighting:** Artificial light from nearby residence, vehicles, and camp fires may interrupt nesting patterns of hawksbill turtles. Nesting females and hatchlings find the sea by detecting the bright horizon over the ocean; however, artificial lights disorient them, increasing the risk of stranding, injury and death.
- **Negative Public Interactions:** A turtle monitoring program at Kāwā ceased due to negative public interactions.
- **Vehicles:** Vehicles are a threat to turtles because the vibrations from tires moving along the sand cause turtle eggs to hatch prematurely. Vehicles also compact the sand making it difficult for turtles to dig their nests. Vehicles might also denude shoreline vegetation, such as naupaka that play a critical role in the nesting habits of turtles. In addition, noise from vehicles at night may prevent turtles from coming onshore to nest and artificial lighting from headlights may also interfere with nesting habits.

**Vehicular Access:** Vehicular access to the Property is provided by Corral Gate Road, which extends from the main highway (Highway 11) to the south side of Kāwā Pond. A gate is located near the highway but remains open since an existing easement requires the property owner to provide the general public with vehicular and pedestrian access along this road. Another vehicular access road (Hīlea Trail) is located to the north of Corral Gate Road. This access road extends from Highway 11 to the north of Kāwā Pond; however, the road is not open for public vehicular access. A gate is located near Highway 11 at the entrance of Hīlea Trail. Both the Corral Gate Road and Hīlea Trail are narrow, rugged, dirt roads. Hīlea Trail has a thin layer of gravel in various sections of the road.

As mentioned previously, the HIHTRP indicated that vibrations from tires on the sand cause turtle eggs to hatch prematurely and artificial light from vehicles interfere with turtles coming onto shore and returning to the ocean as they are guided by the brightest light. A participant also pointed out that tires denude coastal vegetation and create dirt roads that add to sand erosion. Though one participant recommended paving the County road to provide better access for emergency services, several participants felt that the road should remain undeveloped and unchanged to

maintain the sense of place of Kāwā. Several feared that paving the road would attract more people to Kāwā which would impact the natural and cultural resources of the place.

Several informants also pointed out that the parking situation along the main highway is dangerous and unsafe. Others reported that cars often get broken into.

Some community members suggested prohibiting driving on the beach and across the pond. Some informants suggested moving the north gate (for Hīlea Trail) more seaward of the highway with a small area designated for parking.

**Maintaining Sense of Place of Kāwā:** The majority of people consulted for this project explained that Kāwā is currently undeveloped and felt that it should remain that way to maintain the sense of place of Kāwā. However, one kupuna felt that many changes have occurred at Kāwā, attributing to the influences of an individual claiming ownership of the place. "I don't have that happy feeling anymore like how it used to be," she said. "The changes down there wasn't a good feeling. Different. When grandpa died, I was in eighth grade then (11 years old) and we stopped going…I see Kāwā as, I don't want anything changed. South Point, gone already," she said. Another kupuna also expressed that she did not want Kāwā to be like South Point or Oʻahu.

Kāwā conjured up fond memories among most participants. Some shared memories of their childhood of camping at the beach, learning how to fish, surf, and spending time with their families. Some felt that the time they spent in Kāwā helped ground them culturally as Hawaiians and they appreciated the opportunity to have grown up that way. Lineal descendants, also saw Kāwā as part of their identity and where their iwi kupuna are buried. Therefore, it was important that the resources at Kāwā are protected. A participant feared that a change in leadership for Hawaiʻi Island may potentially have a negative impact for Kāwā, especially if the leadership's values are not aligned with the community's vision for the place. He was also apprehensive of not being able to access Kāwā as a lineal descendent like he always has should the County develop Kāwā. Most consulted recommended that Kāwā remain undeveloped to maintain its sense of place and to preserve Kāwā for future generations.

**Protection of Cultural Sites:** Currently, no signs exist to delineate boundaries around burial sites. A kupuna was worried about visitors' lack of knowledge of iwi on the property. Since Native Hawaiians still visit Kāwā and ask for permission of ancestors to enter the place, she felt that iwi should be marked for educational purposes. Others reported that an individual destroyed part of the ʻĀpiki house site and built a

garden over graveyards near the freshwater pond.

Lineal descendants of existing house sites expressed the need for more time for restoration work but the hours set forth by the County is limiting. "I had to sign one paper from the County about the key… it says on the paper that if I'm not out by 6 p.m. I'll be arrested," said a family member who was frustrated about the process.

> All these years we've been doing exactly what the County has been asking us to do. We've been doing it [but] inside that PASH it says we have the right of way and yet…but it [the paper] says we cannot stay overnight because of the archaeological that's there. But we're working on it [to restore it]. We're not doing anything to destroy it. I don't understand it," she exclaimed.

She believed that being able to camp at Kāwā, for example, over a weekend, would give them more time at Kāwā to accomplish more restoration work:

> For my family. Let me tell you, we could do so much if we had the time. But we don't have the time. We have to be out of there. After a hard day's work, all of us, myself, my entire family, would love to sit and enjoy all of Kāwā.

She also explained that Kāwā is hot and having to rush to do their work during the day is difficult for kupuna like her mother who is in her 80s and herself in her 60s. She explained that having more time would allow them to be able to sit down and really enjoy being at Kawa. She continued:

> It's hard because we're so limited. We only got this hour to go to this time. And by the time we're through cleaning we gotta pack up and go home.

The family also explained that acquiring the key from the police station for the gate at Kāwā was problematic for them because they would have to wait for a long time. "Sometimes it would take 3 to 4 hours," said a family member. Sometimes they'd never have the key but I guess they lost it. We'd call the County because we're coming all the way from this [Hilo] side and to go down there and not be able to do anything is a big waste," he said.

Other threats to the integrity of cultural resources at Kāwā included people who have taken cultural features from the place, and visitors to Kāwā who do not look after the place, such as those brought into Kāwā by an individual previously claiming ownership and living there. Invasive plants, such as Christmas berry, were also identified as threats to the existing house sites which grow and break up the walls of the house sites.

Suggestions from consultations to protect the cultural resources at Kāwā

included: 1) conducting a cultural and archaeological study at Kāwā preferably locally; 2) requiring the presence of an archaeological monitor for all future work or development at Kāwā; 3) iwi found in Kāwā should be buried in place and never removed from Kāwā; 4) identifying and fencing iwi so that people know where they are to prevent trampling; 5) forming a restoration hui of the lineal descendants connected to the house sites at Kāwā to encourage their participation in the restoration of house sites and stewardship of Kāwā; and 6) holding a lūʻau to bring together families and stakeholders interested in the stewardship of Kāwā. One kupuna offered to teach people and share her knowledge about Kāwā.

**Traditional Practices:** Consultations indicated that the rough waters and bathymetry of the shoreline makes Kāwā unfavorable for line fishing so most fishermen would go to South Point. Therefore, participants were generally not worried about overfishing at Kāwā. However, several pointed out that while overfishing may not be an issue currently, it could be in the future. A kupuna recommended setting a limit on the number of fishing poles each fisherman could have, for example, two poles rather than five in order to prevent issues with overfishing. Three informants recommended creating a community-based subsistence fishing area to follow the model used by communities in Hāʻena, Kauaʻi and Moʻomomi in Molokai.

Surfers generally park along the highway and walk down to Kāwā Beach along the Hīlea Trail road. Though surfers are likely the most experienced and comfortable in the water conditions of Kāwā, some participants expressed concern about the response time of emergency services, such as police, ambulance, and fire engines should accidents happen at the beach. The isolation and the difficulty of driving on the access roads were identified as the threats to public safety at Kāwā, discussed in more detail below. However, others felt that people who visit and surf Kāwā are liable for themselves and should enter at their own risk.

**Sanitary Conditions:** Several entities consulted were concerned about the sanitary conditions at Kāwā. Participants explained that two portable toilets are located by the gate near the highway which is a 10 to 15 minute walk from the beach. Several felt that the distance to walk to the toilets is inconvenient so people end up using the bushes by the beach and the back of the Napoleon shack.

Several recommended relocating the toilets closer to the coast. Others felt that more portable toilets would also be needed for hosting student programs at Kāwā and recommended that PONC funds could be accessed for a composting toilet. Currently, the HWF

brings a "toilet kit (wet bag)" with them during workdays for participants who do not want to walk to the porta-potties. One family also mentioned that they have their own personal porta-potty and could bring them during restoration work days.

The lack of trash bins at Kāwā was also raised. Existing trash bins were reported to be frequently overflowing with trash. Members of Na Mamo o Kāwā have voluntarily assisted in emptying the trash. A kupuna stressed the importance of people taking responsibility and taking back any ʻōpala they bring with them to Kāwā. A full-time caretaker on the property who would be responsible for maintaining the site was suggested during consultations.

**Drugs:** In the past, heroin use was reported to have been a problem at Kāwā. Though the problem no longer exists, one kupuna recommended that no drugs and alcohol should be allowed at Kāwā.

**Ocean Safety and Emergency Services:** Several informants raised safety concerns relating to ocean use at Kāwā. These include strong currents that pose threats to children and those who are not familiar with the area. Two kūpuna explained that the Halaʻea current is a strong current that travels south past Kāwā towards South Point. Several informants also mentioned that the presence of sharks off the coast of Kāwā and highlighted a recent shark bite incident.

Consultations highlighted the isolation of Kāwā and the distance from emergency services. The Kaʻū Police Station is approximately five miles away, and nearest fire station is in Nāʻālehu which also operates an ambulance. One informant felt that the County access road into Kāwā was inadequate and needed to be paved to allow for easier access of emergency services to the coast. However, most participants who were consulted felt that part of being in Kāwā and maintaining the sense of place of Kāwā is being isolated.

A lineal descendant of Kāwā recommended a volunteer lifeguard program and/or a lifeguard stand to store equipment at Kāwā. He discussed the idea of training the regular surfers and/or users at Kāwā so that they could serve as volunteer lifeguards for that area since it is located in such a remote area. "Right now, it's a liability. If anything happens, the County will shut down the place," he said. He also shared that he thinks the program would serve as a way to inspire and provide another career path for the youth.

# Kāwā Resources Management Plan

## Appendix B:
## Relevant Court Cases

THIRD CIRCUIT
STATE OF HAWAII
FILED

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Y. NIIAMURA
CLERK

LEGAL AID SOCIETY OF HAWAII
305 Wailuku Drive
Hilo, HI 96720
Telephone No.: 961-2851

BEN H. GADDIS (1023)
TIM LUI-KWAN (2271)
Attorneys for Plaintiffs

IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAII

| | |
|---|---|
| HENRY BARBA, BALBINO SALMASAN, ERNEST BUYUAN, RALPH DEDMAN, PELE HANOA, and THE SPORTSMAN'S CLUB OF KAU, on behalf of themselves and all others similarly situated,<br><br>Plaintiffs,<br><br>vs.<br><br>MATSUHEI OKUNA, also known as THOMAS OKUNA, and the STATE OF HAWAII,<br><br>Defendants. | CIVIL NO. 4590<br><br>JUDGMENT |

JUDGMENT

Pursuant to the Findings of Fact, Conclusions of Law, and Order filed herewith in this cause,

IT IS HEREBY ORDERED, ADJUDGED AND DECREED that:

1) Pursuant to Rule 23(b)(2) of the Hawaii Rules of Civil Procedure, a class is certified and the class is defined as follows:

> All residents of the State of Hawaii, who in the past have used and enjoyed reasonably, or who have been prevented or deterred by Defendants' actions and conduct from using and enjoying reasonably the trails and paths claimed in the Complaint filed in this cause to reach Kawa Bay and the adjacent tidelands, beaches and oceans.

2) The individual Plaintiffs, members of the

EXHIBIT B1

EXHIBIT AA-8

Sportsmans Club of Kau, persons similarly situated, and the general public are entitled to reasonable access to Kawa Bay and the adjacent shoreline in the following manner along the following rights-of-way more specifically described in the Findings of Fact and Conclusions of Law entered herewith:

a) A 3 foot wide pedestrian easement along the Ancient Walking Trail.

b) A 15 foot wide pedestrian, equestrian, and wagon easement along the portion of the Government Road which extends from the Honuapo boundary of the subject property to Hilea Stream.

c) A 15 foot wide pedestrian, equestrian and vehicular easement along that portion of the Government Road which extends from Hilea Stream to the Punalu'u boundary of the subject property.

d) A 3 foot wide pedestrian easement from the upper reach of the waves at the mouth of Hilea Stream to the intersection of Hilea Stream with the Government Road.

e) A 10 foot wide vehicular, equestrian and pedestrian easement along the Corral Gate Road as located in Plaintiffs' Exhibit 13(a).

f) A 3 foot wide pedestrian easement along the Hilea Trail as located in Plaintiffs' Exhibit 13(a).

3) Defendant MATSUHEI OKUNA and his agents, servants, employees, and all persons acting in active concert or participation with him who receive actual notice of this order are permanently enjoined from barring or preventing the Plaintiffs, members of the Sportsmans Club of Kau, persons similarly situated, and members of the public from using any

EXHIBIT B2

of the trails, roads and rights-of-way in the manner above-described to reach the shoreline of the subject property.

DATED: Hilo, Hawaii, OCT 14 1980.

JUDGE OF THE ABOVE-ENTITLED COURT

EXHIBIT B3

EXHIBIT AA-10

LEGAL AID SOCIETY OF HAWAII
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IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAII

| | |
|---|---|
| HENRY BARBA, et al., Plaintiffs, vs. MATSUHEI OKUNA, et al., Defendants. | CIVIL NO. 4590<br>FINDINGS OF FACT AND CONCLUSIONS OF LAW; ORDER |

## FINDINGS OF FACT AND CONCLUSIONS OF LAW

This cause came on for hearing on May 14, 1980, before the Honorable Ernest Kubota, Judge of the above-entitled Court, sitting without a jury, and the Court having reviewed and examined the testimony, exhibits, and written arguments presented by BEN H. GADDIS and TIM LUI-KWAN, of the Legal Aid Society of Hawaii, attorneys for Plaintiffs, STUART ODA, attorney for Defendant MATSUHEI OKUNA, and Deputy Attorney General JACKIE MAHI ERICKSON, attorney for the State of Hawaii, and being fully advised, the Court makes the following Findings of Fact and Conclusions of Law.

### I. FINDINGS OF FACT

#### A. The Parties

1. Plaintiffs HENRY BARBA, BALBINO SALMASAN, ERNEST BUYUAN, PELE HANOA, and RALPH DEDMAN are all

EXHIBIT 04
EXHIBIT AA-11

residents of the District of Kau, County and State of Hawaii.

2. Plaintiffs SPORTSMANS CLUB OF KAU is an unincorporated association composed of residents of the District of Kau. The club was organized for the purpose of securing public access for recreational purposes to the shoreline in the Kau District, including the shoreline adjacent to Kawa Bay.

3. Defendant MATSUHEI OKUNA, also known as THOMAS OKUNA, is a resident of Waiohinu, County and State of Hawaii, and owns land adjacent to Kawa Bay, which is the subject of this action, designated by State of Hawaii Tax Map Key Numbers 9-5-17-07, 9-5-16-25, and 9-5-16-06.

4. Defendant STATE OF HAWAII owns a parcel which is the subject of this action described by State of Hawaii Tax Map Key Number 9-5-16-30.

B. The Shoreline And Its Use

5. Kawa Bay is situated on the shoreline on the Island of Hawaii between Honuapo Bay and Punaluu in the District of Kau.

6. An intermittent stream known as Hilea empties into Kawa Bay and forms a black sand beach at its mouth.

7. On the Honuapo side of Hilea Stream, the land surface is composed of smooth pahoehoe lava. This shoreline area has no sea cliffs and is relatively flat.

8. On the Punalu'u side of Hilea Stream, the terrain is composed of rough a'a lava with sea cliffs which preclude land travel along the shoreline within the upper reach of the waves.

9. A large fishpond or tidal inlet is located on

EXHIBIT B5

the Honuapo side of Kawa Bay. This pond is known as Kawa Springs, Hilea or Kaalaiki fishpond and is fed by a large fresh water spring.

10. The heaiu of Keeku is located on a cliff overlooking Kawa Bay.

11. Keeku heiau was constructed between the thirteenth and fifteenth centuries as a Luakini heiau dedicated to the god Ku.

12. The heiau was of great significance in the district in ancient times and was maintained by priests who performed human sacrifices and other ceremonies which drew persons to Kawa Bay from the entire District of Kau.

13. Physical features such as the large fishpond, the fresh water spring, ancient habitation sites, and the heiau as well as the opinions of expert witnesses William Bonk and Marion Kelly all establish that several hundred Hawaiians lived in this shoreline area in ancient times.

14. The diary of Reverand William Ellis, recorded in 1823, contains an account of a village consisting of at least two hundred persons at this location.

15. Keeku heiau and its associated features continue to be important sites for study by students of Hawaiian culture.

16. Anthropologists, archeologists, and historians presently conduct studies and research in this area. College classes on Hawaiian culture have visited the area, and local residents continue to guide interested persons to these ancient and historic sites.



EXHIBIT 86

EXHIBIT AA-13

17. The entrance to Kawa Bay has been a famous surfing site since ancient times and continues to receive heavy use because it is one of the few good surfing areas within the Kau District.

18. Fishing is and always has been excellent from the shoreline in this area.

19. Numerous persons use this area for swimming, picnicing, camping and other recreational purposes.

20. The features and attractions described above draw large numbers of persons to the shoreline of the subject property from both within and without the district.

21. This shoreline area received heavy use by persons throughout this part of the Island in both ancient and historic times.

22. Traditional informants or "kamaaina witnesses" such as ninety-two year old William Meinecke, were born and raised in the District of Kau and were taught about the customs and history of use of this shoreline area by older residents and relatives.

23. Testimony from such elderly residents demonstrates that a large and undefinable group of persons, hereafter termed "the public", from both within and without the district, have used accessways in the manner hereinafter described to reach the shoreline of the subject property for the purposes described above for as long as anyone can remember.

24. All segments of the community and all races have freely and continuously used the accessways hereinafter



EXHIBIT A7

EXHIBIT AA-14

described to reach this shoreline until the mid 1970's.

25. The public used these rights-of-ways believing that they had a right to use these trails and roads to reach the shore.

26. The vast majority of the public using these rights-of-way did not ask, nor did they receive permission for such use from Defendant OKUNA and/or his predecessors in interest.

27. Until trespassing arrests began in the mid 1970's, there is no evidence that the public attempted to conceal its use of these rights-of-way.

28. Use of these rights-of-way by the public was open and obvious and was of such a nature that Defendant OKUNA and/or his predecessors and agents must have been aware of the public use and the hostile and adverse nature of the use.

C. The Ancient Walking Trail

29. A trail or right-of-way for pedestrian travel, hereinafter "Ancient Walking Trail", has existed parallel to this shoreline continuously since ancient times.

30. This Ancient Walking Trail is part of the system of shoreline trails which extends around the Island of Hawaii.

31. This shoreline trail system was customarily used by native Hawaiians in prehistoric times to move from place to place along the shoreline.

32. The Ancient Walking Trail extends from Hilea Stream towards Punaluu and is well marked by the placement of large smooth round stones, two to three feet

EXHIBIT BB

apart, on the rough a'a lava.

33. The physical location of this portion of the Ancient Walking Trail is established by the aerial photograph and the map admitted into evidence as Plaintiffs' Exhibit 12 and 13(a), respectively.

34. The Ancient Walking Trail continues on to Honuapo from Hilea Stream over the relatively smooth pahoehoe lava immediately adjacent to the shoreline.

35. The Ancient Walking Trail is three feet in width. (See photographs admitted as Plaintiffs' Exhibit 17(x)-17(r).)

36. The Ancient Walking Trail has been continuously used as a right-of-way by the public for travel since ancient times.

37. The Reverend William Ellis used this trail on his tour around the Island of Hawaii one hundred and fifty seven years ago.

38. The Ancient Walking Trail was in existence and was used for travel by the public both before and after the Great Mahele of 1848.

39. Members of the public have walked up and down this pedestrian right-of-way for as long as anyone can remember in order to fish from the shoreline.

40. Public rights-of-way such as the Ancient Shoreline Trail were not normally reserved expressly in conveyances of land from the sovereign during this period.

41. Where the terrain was smooth, persons using



EXHIBIT 89

EXHIBIT AA-16

the Ancient Walking Trail walked adjacent to the shore, probably within the shoreline setback. On a'a lava, they used the stepping stones located on the map admitted into evidence as Plaintiffs' Exhibit 13(a) to reach fishing areas along the seacliffs.

42. Fishermen who have used other trails or roads to reach this shoreline used the ancient trail to range up and down the shoreline while fishing.

43. There is no credible evidence that the use of the Ancient Walking Trail has ever been interrupted but for a time of national emergency when temporary wartime restrictions on access to the coastline were imposed by military authorities during World War II.

44. No owner or occupier of these lands has ever attempted to bar or restrict the use of this right-of-way.

45. The use of this Ancient Walking Trail by members of the public has been peaceable, reasonable, and free from dispute from time immemorial until this action was initiated.

46. The Ancient Walking Trail is still regularly used for fishing, shoreline travel and for other recreational purposes.

47. There is no credible evidence that anyone ever asked or required permission for a member of the public to travel across this property along the Ancient Walking Trail.

48. Public use of the Ancient Walking Trail has



EXHIBIT R/O

been open, adverse, continuous, notorious, under a claim of right and uninterrupted for over a century.

49. Predecessors in interest of Defendant OKUNA were aware of the use of the Ancient Walking Trail by the public for fishing.

50. The use of the Ancient Walking Trail by fishermen and others was of such frequency and was of such a nature that Defendant OKUNA and his predecessors must have known that the public used the Ancient Walking Trail hostilely, as a matter of right, and not in reliance upon toleration or permission of the landowner.

51. Defendant OKUNA, and his predecessors in interest, by their silence and inaction have acquiesced in the use of this Ancient Walking Trail by fishermen and other members of the public for as long as anyone can remember.

52. But for the Ancient Walking Trail, no other reasonable means exists for the public to travel parallel to the shoreline of this property for fishing.

D. The Government Road

53. A second roadway, hereinafter the "Government Road", extends across this property parallel to the shoreline mauka of the Ancient Walking Trail.

54. The Government Road was constructed in the mid 1800's when horses came into regular use on this portion of the Island of Hawaii.

55. The road was constructed as a public project in order to provide access for missionary and public activities that were beginning in the district.

56. Thereafter the Government Road received .

EXHIBIT B//

regular and extensive use by pedestrian, horse, bullock and cart traffic.

57. The Government Road is shown as a trail, which was identified by the designation of "aupuni" or Government Road on a map of Kau compiled by S.S. Lyman dated August, 1879. (Plaintiffs' Exhibit 1)

58. Numerous later maps (such as Plaintiffs' Exhibits 2, 3, and 4) identify this right-of-way as a Government Road.

59. The Government Road is still designated as "Government Beach Trail" on current tax maps which describe this property (Plaintiffs' Exhibits 5 and 6).

60. The Government Road is clearly visible on the aerial photograph admitted as Plaintiffs' Exhibit 12, and its location is shown on the map admitted as Plaintiffs' Exhibit 13(a).

61. The Government Road passes over a'a lava on the Punalu'u side of Hilea Stream and is presently a very rough road which requires a four-wheel drive for vehicular travel.

62. The Government Road is well marked by stones on both sides on the Honuapo side of Hilea Stream.

63. On the Honuapo side of Hilea Stream, the Government Road no longer receives vehicular use but continues to receive pedestrian use.

64. The map of a portion of Grant 2370, admitted as Plaintiffs' Exhibit 7, shows the location of the Government Road across TMK No. 9-5-16-25 and demonstrates that the Government Road is fifteen feet in width.

EXHIBIT AA-19

65. Defendant OKUNA has conceded that a public right of pedestrian and equestrian access exists upon the Government Road from the Honuapo boundary of the property at issue to Hilea Stream, and that a public right of pedestrian, equestrian and vehicular access exists from Hilea Stream to the Punalu'u side of the property in question along the Government Road.

66. The Ancient Walking Trail and the Government Road intersect at the mouth of Hilea Stream several hundred feet mauka of the upper reach of the waves at Kawa Bay.

67. Members of the public used the Government Road continuously as a right-of-way for travel by foot, horse and cart to Kawa Bay from the mid 1800's until the late 1930's.

68. Such use was continuous and was of sufficient frequency that predecessors in interest of Defendant OKUNA must have known that persons were using the road as a matter of right and not in reliance upon toleration or permission.

69. In the late 1930's or early 1940's, public use of that portion of the Government Road between Hilea Stream and the Honuapo boundary of the property at issue, became less frequent.

70. However, there was no evidence of any intention on the part of the public or public authorities to abandon this portion of the Government Road.

71. The general public used the Government Road for pedestrian, equestrian, and wagon travel openly, adversely,



EXHIBIT BB

EXHIBIT AA-20

continuously, notoriously, under a claim of right, and without interruption for a period of at least 80 years.

72. In the mid 1940's, the military converted the portion of the Government Road from the Punalu'u boundary of the subject property to Hilea Stream and Kawa Bay into a jeep trail.

73. Since 1946, the portion of the Government Road described in paragraph 73 has received regular use as a right-of-way by the public for four-wheel drive vehicles.

74. Beginning in 1946, the general public has used the portion of the Government Road described in paragraph 73 for pedestrian and vehicular travel, openly, adversely, continuously, notoriously, under a claim of right, and without interruption for a period of at least 30 years.

75. At present, however, use of this portion of the Government Road as a vehicular right-of-way is extremely difficult even for four-wheel drive vehicles, inasmuch as the road is very rough.

76. No owner or occupier of these lands ever attempted to bar or restrict the use of the Government Road until the 1970's.

77. In the 1970's, Defendant OKUNA placed large rocks and poles across the Government Road for the purpose of containing his cattle.

78. These rocks and barriers were quickly removed by members of the public utilizing the Government Road and did not interrupt its use.



EXHIBIT B14

EXHIBIT AA-21

79. Even during World War II when wartime restrictions on coastline access were imposed, some members of the public still used this road to reach Kawa Bay.

80. There is no evidence that any member of the public ever asked permission nor did any landowner require permission for a member of the public to travel across this property along the Government Road to the beach at Kawa Bay.

81. Members of the public still regularly use the Government Road to reach the shoreline at Kawa Bay from both the Honuapo and Punalu'u sides of the property, although travel is very difficult.

E. The Corral Gate Road

82. Mauka-makai trails have existed within the ahupuaas of Kaalaiki and Hilea since ancient times.

83. Ancient Hawaiians from other ahupuaas were able to and did travel freely to Kawa Bay along mauka-makai trails.

84. One mauka-makai trail (hereinafter "Corral Gate Road") extends from the freshwater springs at Kaalaiki fishpond mauka to Highway 11 and further mauka to the old Volcano Highway and beyond.

85. The Corral Gate Road is a distinct and visible one lane roadway, at least ten feet wide, which can be seen in the aerial photograph admitted into evidence as Plaintiffs' Exhibit 12. The road is identified on the map admitted into evidence as Plaintiffs' Exhibit 13(a).

86. The Corral Gate Road intersects further mauka with lateral trails such as the Kaalaiki Camp Trail, which extends all the way from Naalehu. (See U.S. Geologic Survey

EXHIBIT B15

Map of Naalehu Quadrangle dated 1921, admitted into evidence as Plaintiffs' Exhibit 4.)

87. The public has continuously and customarily used mauka-makai trails such as Corral Gate Road to reach the shoreline at Kawa since ancient times.

88. The public has used the Corral Gate Road as a distinct and visible path for foot, horse and mule traffic for as long as local residents can remember.

89. Persons from within and without the District of Kau have used the Corral Gate Road to go to the shoreline at Kawa to picnic and fish since time immemorial.

90. For as long as anyone can remember, the public has also travelled along the Government Road from Ninoole to Kaalaiki fishpond and from there mauka into the ahupuaa of Kaalaiki along the Corral Gate Road.

91. The Corral Gate Road was customarily used for public pedestrian and equestrian travel to Kawa Bay from mauka areas of Kau before the 1890's.

92. The Corral Gate Road has been continuously used as a right-of-way by the public for pedestrian and equestrian travel since before the 1890's.

93. In 1939, the Hawaii Belt Highway 11 was constructed through this area and unlocked gates were installed where the highway intersected with the Corral Gate Road.

94. After 1939, persons continued to travel from Punaluu and Ninoole to Kawa and mauka to Kaalaiki along the Corral Gate Road by horseback or mule.

95. Other members of the public began to use the

EXHIBIT B16

entrance of the Corral Gate Road from the Hawaii Belt Highway to reach Kawa.

96. Beginning in 1939, members of the public began to drive automobiles down the Corral Gate Road to the fishpond at Kaalaiki in order to reach Kawa.

97. In order to reach the shoreline, persons would unlatch the gate next to the corral on Hawaii Belt Highway 11 and would drive down and park their automobiles next to the fishpond.

98. Members of the public would also park their cars next to the Hawaii Belt Highway and would walk along the Corral Gate Road to the fishpond and the shoreline.

99. For as long as anyone can remember, Defendant OKUMA and his predecessors in interest, by their silence and inaction, have acquiesced in the public use of the Corral Gate Road.

100. Defendant OKUMA posted a "no trespassing" sign on the highway entrance to the corral gate in 1955 and again in the 1960's.

101. These "no trespassing" signs disappeared soon after they were posted and did not affect public use of the Corral Gate Road.

102. In the early 1960's, Defendant OKUMA chained and locked the highway gate on the Corral Gate Road in order to protect his livestock.

103. Thereafter, members of the public continued to use the Corral Gate Road by climbing over the gate and walking down the road to the fishpond.

104. In the mid 1970's, Defendant OKUMA halted most of the public use of the Corral Gate Road by painting

"no trespassing" signs on the gate, placing barbed wire on top of the gate and by filing trespassing complaints with the Police Department of the County of Hawaii.

105. No other owner, occupier of these lands, or predecessor in interest of Defendant OKUNA has ever attempted to bar or restrict the public use of the Corral Gate Road.

106. Use of the Corral Gate Road by members of the public was peaceable, reasonable and free from dispute until Defendant OKUNA began to actively prevent members of the public from using this road in the mid 1970's.

107. Even after the mid 1970's, members of the public continued to use the road, however, many of these persons were arrested for trespassing.

108. The public has reasonably used the Corral Gate Road for pedestrian, horse, and automobile travel in order to reach the shoreline at Kawa for recreational purposes including fishing and surfing.

109. The public has used the Corral Gate Road for pedestrian travel to Kaalaiki fishpond and the surrounding shoreline openly, adversely, continuously, notoriously, under a claim of right and without interruption for at least 100 years.

110. The public has used the Corral Gate Road for equestrian travel to Kaalaiki fishpond and the surrounding shoreline openly, adversely, continuously, notoriously, under a claim of right, and without interruption for at least 50 years.

111. Beginning in 1946, the public has used the Corral Gate Road for vehicular travel to Kaalaiki fishpond and the surrounding shoreline openly, adversely, continuously,

EXHIBIT ..

notoriously, under a claim of right, and without interruption for at least 13 years.

112. The vast majority of the members of the public using the Corral Gate Road did not seek permission to use this accessway to reach Kawa from Defendant OKUNA and/or his predecessors in interest.

113. Predecessors in interest and/or occupants of the property, such as Mitsuhei Okuna, Thomas Masaru Okuna, Lydia Papalimu, and Katherine Hamilton and her family were aware of the use of the Corral Gate Road by the public.

114. The use of the Corral Gate Road by persons seeking to reach Kawa was of such frequency that Defendant OKUNA and his predecessors must have known that persons using the road did so as a matter of right and not in reliance on toleration or permission.

F. The Hilea Trail

115. Another mauka-makai trail extends from the old Volcano Highway close to the Village of Hilea down to the shoreline at Kawa.

116. This trail crosses the Hawaii Belt Highway at the location of Gate #2 identified on Plaintiffs' Exhibit 13(a).

117. From the Hawaii Belt Highway, the trail extends to the shoreline in the vicinity of Kawa Bay.

118. By the 1850's, large numbers of Hawaiians lived in mauka areas around the Village of Hilea.

119. Hilea Village is located and identified by an orange circle on the map by M.D. Monsarat dated 1887 and admitted into evidence as Plaintiffs' Exhibit 2.

EXHIBIT 819

120. Hawaiians living around the Village of Hilea have customarily used a mauka-makai trail to reach Kawa at least since the 1850's.

121. A right-of-way in substantially the same location as the Hilea Trail was customarily used for public pedestrian travel to mauka areas around the Village of Hilea well before the 1890's.

122. A right-of-way in substantially the same location as the Hilea Trail has been continuously used as a right-of-way by the public for pedestrian travel since before the 1890's.

123. The Hilea Trail has been customarily and continuously used for pedestrian travel by people living in the Village of Hilea and other persons from the district for as long as anyone can remember.

124. Based on the type of usage which this trail received, the Hilea Trail is determined to be a minimum of three feet wide.

125. The Hilea Trail was regularly used by members of the public and such use was continued without interruption until Defendant OKUNA actively began to restrict mauka-makai access to the area in the mid 1970's.

126. After the Hawaii Belt Highway was constructed, in 1939, use of the Hilea Trail intensified because persons would park their cars along the highway and would walk to Kawa Bay.

127. The Hilea Trail has been particularly popular with surfers who carry their surfboards to Kawa Bay by this most direct route.

128. Defendant OKUNA posted "no trespassing" signs on the gate at the highway entrance of the Hilea Trail adjacent to the Hawaii Belt Highway around 1955 and again in the 1960's, however, these signs disappeared shortly after they were erected.

129. These "no trespassing" signs did not effectively interrupt public use of the Hilea Trail.

130. Defendant OKUNA made no further attempt to halt use of the Hilea Trail until the mid 1970's.

131. No other owner, or occupier of these lands, or predecessor in interest of Defendant OKUNA, has ever attempted to bar or restrict public use of the Hilea Trail.

132. Use of the Hilea Trail by members of the public was peaceable, reasonable, and free from dispute until Defendant OKUNA began to actively prevent members of the public from using these trails in the mid 1970's.

133. Even after the mid 1970's, some members of the public continued to use the trails; however, many were arrested for trespassing.

134. The public has used a trail in substantially the same location as the Hilea Trail for pedestrian travel to the shoreline of the subject property openly, adversely, continuously, notoriously, under a claim of right, and without interruption for over a century.

135. The public has used the Hilea Trail from Gate Number 2 for pedestrian travel to the shoreline of the subject property openly, adversely, continuously, notoriously, under a claim of right, and without interruption, for over 35 years.

EXHIBIT 121

136. The vast majority of the members of the public using the Hilea Trail never asked permission from Defendant OKUNA and/or his predecessors in interest to use this means to reach Kawa.

137. Some of Defendant OKUNA's predecessors in interest as well as occupants of this property were aware of the public nature of the use of the Hilea Trail.

138. The use of the Hilea Trail by the public was of such frequency that Defendant OKUNA and his predecessors must have known that persons using the trial did so as a matter of right and not in reliance upon toleration or permission of the landowners.

139. Until 1975, Defendant OKUNA and his predecessors in interest, by their silence and inaction, acquiesced in the use of the Hilea Trail by members of the public for as long as anyone can remember.

G. Other Findings

140. All of the lands at issue were originally owned by the sovereign and were conveyed by Government to separate individual owners.

141. Since the mid 1970's, public use of the shoreline at Kawa has been sharply reduced inasmuch as persons wishing to use the area must have access to four-wheel drive vehicles or walk much further along the Government Road or Ancient Walking Trail in order to reach the shoreline at Kawa.

142. Defendant OKUNA has since 1975 barred the individual Plaintiffs, members of the Sportsmans Club of Kau, and other members of the public, from using the

EXHIBIT A22

EXHIBIT AA-29

mauka-makai trails described above and has denied them reasonable access to and from Kawa Bay and the adjacent ocean, tidelands and beaches.

143. Defendant OKUNA has never acted to make his lands or the accessways above-described available to the public for recreational purposes.

144. The individual Plaintiffs and members of the Sportsmans Club of Kau, who have used and enjoyed this shoreline for many years, have been injured by these restrictions on access in a manner which differs in degree and kind from that suffered by the community at large.

145. The individual Plaintiffs and members of the Sportsmans Club of Kau have traditionally used and enjoyed this shoreline for recreational purposes, and have been specially, personally and adversely affected by the actions of Defendant OKUNA in barring the general public from reaching the shoreline along the accessways above described.

146. Public interests and claims in the subject property were not adjudicated in Ulrich v. Okuna, Civil No. 1240, inasmuch as the State of Hawaii was dismissed as a party before a judgment was rendered on the merits.

147. Plaintiffs are proper representatives of a class so numerous that the joinder of all members is impracticable.

148. There are questions of fact common to Plaintiffs and class members.

149. The representative parties will fairly and adequately protect the interests of the class.

150. Defendant OKUNA has acted on grounds generally applicable to the class.

II. CONCLUSIONS OF LAW

Upon the Findings of Fact aforesaid, the Court concludes as follows:

1. There are questions of law common to Plaintiffs and class members.

2. The claims of the representative parties are typical of the claims or defenses of the class.

3. The representative parties will fairly and adequately protect the interests of the class.

4. Final injunctive relief and corresponding declaratory relief is appropriate for the class as a whole.

5. The Court finds the following individuals to be members of the class:

> All residents of the State of Hawaii, who in the past have used and enjoyed reasonably, or who have been prevented or deterred by Defendants' actions and conduct from using and enjoying reasonably the trails and paths claimed in the Complaint filed in this cause to reach Kawa Bay and the adjacent tidelands, beaches and ocean.

6. The decision in Ulrich v. Okuna, Civil No. 1240, filed on July 13, 1966, does not bar Plaintiffs' claims.

7. Res judicata and/or collateral estoppel do not bar these claims inasmuch as public interests in the lands at issue were not adjudicated in Ulrich v. Okuna.

8. Section 520-7, H.R.S., does not preclude the acquisition of public prescriptive rights over the rights-of-way in question, inasmuch as applicable prescriptive periods were satisfied and prescriptive rights vested in the public long before the enactment of this statute.

9. Section 520-7, H.R.S., does not bar acquisition of prescriptive easements to this property by the public because Defendant OKUNA has not acted to make his lands available to the public for recreational purposes and thus

EXHIBIT B24

cannot claim the protection and benefits of Chapter 520.

10. Kaalaiki fishpond designated and described by Hawaii Tax Map Key No. 9-5-16-30 was expressly reserved by the sovereign in Grant 1530 to Kimokeo and remains public land owned by the State of Hawaii.

11. Section 657-31, H.R.S., does not bar this action inasmuch as Plaintiffs have acted promptly to assert their claims and have met all applicable statutory limitation periods.

12. Any interruption of use of these rights-of-way by the military during World War II would not affect prescriptive or customary access claims inasmuch as these restrictions were imposed by public authorities in a time of national emergency and bear no relation to the rights or state of mind of the landowners or trail users.

13. The public has without interruption, openly, adversely, continuously, and notoriously, used under a claim of right, the rights-of-way described below for the following periods:

(a) Ancient Walking trail for pedestrian travel for at least 20 years and probably for over 100 years.

(b) Government Road for pedestrian, equestrian and wagon travel for at least 20 years and probably for over 80 years.

(c) Government Road from Hilea Stream to the Punaluu boundary of the property for vehicular travel for at least 20 years and probably for over 30 years.

(d) Corral Gate Road for pedestrian travel for at least 20 years and probably for over 100 years.

(e) Corral Gate Road for pedestrian travel for

at least 20 years and probably for over 100 years.

(f) Beginning in 1946, Corral Gate Road for vehicular travel for over 13 years.

(g) A trail in substantially the same location as the Hilea Trail for pedestrian travel at least 20 years and probably for over 100 years.

(h) The Hilea Trail from Gate Number 2 on the Hawaii Belt Highway for pedestrian travel for at least 20 years and probably for over 35 years.

14. The acts of Defendant OKUNA which prevent or hinder Plaintiffs and other members of the public from using these trail are in violation of their right to access through an easement by prescription.

15. It is well established that all land in Hawaii originates with a common grantor.

> It was long ago acknowledged that the people of Hawaii are the original owners of all Hawaiian land. The Constitution of 1840, promulgated by King Kamehameha III, states:
>
> Kamehameha I, was the founder of the kingdom and to him belonged all the land from one end of the Islands to the other, though it was not his own private property. It belonged to the chiefs and the people in common, of whom Kamehameha I was the head, and had the management of the landed property. Fundamental Law of Hawaii (1904) at 3. State v. Zimring, 58 Haw. 106, 111 (1977).

16. Plaintiffs as members of the general public are entitled to access through the subject property along the Ancient Walking Trail, the Government Road and the Corral Gate Road above-described because easements in favor of Plaintiffs and the general public were reserved by implication in all conveyances of this property.

EXHIBIT 826

17. The acts of Defendant OKUNA which prevent or hinder access to the Ancient Walking Trail, the Government Road and the Corral Gate Road by the Plaintiffs and other members of the general public are in violation of an implied reservation of easement.

18. Prior to the overthrow of the Hawaiian Monarchy and the adoption of the common law of England as the common law of Hawaii, in 1892, the public enjoyed a customary right of access across the subject property along the rights-of-way and for the purpose hereafter described:

(a) Ancient Walking Trail for pedestrian travel.

(b) Corral Gate Trail for pedestrian and equestrian travel.

(c) A trail in substantially the same location as the Hilea Trail for pedestrian travel.

19. Defendant OKUNA now refuses to recognize or acknowledge the customary rights of access above-described and has violated the rights of Plaintiffs and the general public to utilize the Ancient Walking Trail, the Corral Gate Road, and the Hilea Trail based on Hawaiian usage and custom.

20. Before the beginning of the written history of the state and prior to the institution of a system of private land tenure, and thereafter, Plaintiffs and their predecessors, as a custom, have utilized the Ancient Walking Trail, the Corral Gate Trail and a trail in substantially the same location as the Hilea Trail to travel across the subject property.

21. A customary public right of access along the trails and roads above-described is not repugnant to other

customs or laws of the State or County of Hawaii.

22. The acts of Defendant OKUNA which have denied or discouraged public access across this property have violated the rights of Plaintiffs and the general public to customary access along the rights-of-way above-described.

23. By reason of necessity, the State of Hawaii is entitled to access through and across the subject property through the use of a mauka-makai trail from the Hawaii Belt Hawaii to Kaalaiki fishpond.

24. Plaintiffs and the general public are entitled to access across the subject property along the Ancient Walking Trail by virtue of the doctrine of necessity inasmuch as no other means exists whereby persons such as Plaintiffs may traverse the shoreline to fish and enjoy the beaches and tidelands as they have done in the past.

25. Plaintiffs and the general public are entitled to access through and across the subject property through the use of a mauka-makai trail inasmuch as no other reasonable means exists by which members of the public may travel from the Hawaii Belt Highway to reach the shoreline at Kawa.

26. Any actions of Defendant OKUNA which would prevent access along the Ancient Walking Trail and/or access along a mauka-makai trail from Highway 11 would violate the public's right to an easement to this shoreline pursuant to the doctrine of necessity.

27. Any alienation or abandonment of an established public right-of-way by the Defendant STATE OF HAWAII which leaves the public without reasonable access to Kawa Bay and the adjacent shoreline would constitute a breach of public trust; however, there has been no evidence showing

that such an alienation or abandonment occurred.

28. Defendant OKUNA's past actions such as posting "no trespassing" signs, locking gates, blocking rights-of-way with stones and poles and commissioning trespassing arrests, have interfered with the possession, use, and enjoyment of these rights-of-way by the public and warrant the imposition of injunctive relief.

III. ORDER

Based on the foregoing, IT IS HEREBY ORDERED, ADJUDGED AND DECREED that:

1) Pursuant to Rule 23(b)(2) of the Hawaii Rules of Civil Procedure, a class is certified and the class is defined as follows:

> All residents of the State of Hawaii, who in the past have used and enjoyed reasonably, or who have been prevented or deterred by Defendants' actions and conduct from using and enjoying reasonably the trails and paths claimed in the Complaint filed in this cause to reach Kawa Bay and the adjacent tidelands, beaches and ocean.

2) The individual Plaintiffs, members of the Sportsmans Club of Kau, persons similarly situated, and the general public are entitled to reasonable access to Kawa Bay and the shoreline of the subject property in the following manner along the following rights-of-way.

a) A 3 foot wide pedestrian easement along the Ancient Walking Trail.

b) A 15 foot wide pedestrian, equestrian, and wagon easement along that portion of the Government Road which extends from the Honuapo boundary of the subject property to Hilea Stream.

c) A 15 foot wide pedestrian, equestrian and vehicular easement along that portion of the Government

Road which extends from Hilea Stream to the Punalu'u boundary of the subject property.

d) A 3 foot wide pedestrian easement from the upper reach of the waves at the mouth of Hilea Stream to the intersection of Hilea Stream with the Government Road.

e) A 10 foot wide vehicular, equestrian and pedestrian easement along the Corral Gate Road, as located in Plaintiffs' Exhibit 13(a).

f) A 3 foot wide pedestrian easement along the Hilea Trail as located in Plaintiffs' Exhibit 13(a).

3) Defendant MATSUHEI OKUNA and his agents, servants, employees, and all persons acting in active concert or participation with him who receive actual notice of this order are permanently enjoined from barring or preventing the Plaintiffs, members of the Sportsmans Club of Kau, persons similarly situated, and members of the public from using any of the trails, roads and rights-of-way in the manner above-described to reach the shoreline of the subject property.

DATED: Hilo, Hawaii, OCT 14 1980.

JUDGE OF THE ABOVE-ENTITLED COURT

EXHIBIT R30

EXHIBIT AA-37

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAI`I

| | | |
|---|---|---|
| In the Matter of the Petition of | ) | DOCKET NO. A93-701 |
| | ) | |
| KAUPULEHU DEVELOPMENTS | ) | FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER |
| | ) | |
| To Amend the Conservation Land Use District Boundary into the Urban Land Use District for Approximately 1,009.086 Acres of Land at Ka`upulehu, North Kona, Island, County, and State of Hawai`i, TMK 7-2-03: por. 1 | ) | |

This is to certify that this is a true and correct copy of the Decision and Order on file in the office of the State Land Use Commission, Honolulu, Hawaii.

OCT 18 2001 by _____
Date Executive Officer

LAND USE COMMISSION
STATE OF HAWAII
2001 OCT 18 P 12:51

FINDINGS OF FACT,
CONCLUSIONS OF LAW, AND DECISION AND ORDER

**EXHIBIT BB-1**

RECEIVED OCT 22 2001

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L. CHINEN, CLERK
THIRD CIRCUIT COURT
STATE OF HAWAII

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Attorneys for Plaintiffs and Defendants, Cross-Claimants and Third-Party Plaintiffs Mary Ann Omerod and John Omerod

IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAI'I

| | |
|---|---|
| CLARA APIKI OMEROD, et al.,<br><br>Plaintiffs,<br><br>vs.<br><br>C. BREWER AND COMPANY, LTD; et al.,<br><br>Defendants. | CIVIL NO. 03-1-0226<br>(Hilo)<br>(Other Civil Action)<br><br>PARTIAL STIPULATED FINAL JUDGMENT, DECREE AND ORDER OF CONVEYANCE IN TRUST BETWEEN THIRD-PARTY PLAINTIFFS MARY ANN OMEROD AND JOHN OMEROD ON BEHALF OF THE BASIL 'ĀPIKI PASH RIGHTS DESCENDANTS AND THIRD-PARTY DEFENDANT COUNTY OF HAWAII |
| MARYANN OMEROD, JOHN OMEROD, DESMOND ANTONE HAUMEA, GENESIS LEE LOY, DARLYNE P. VIERRA,<br><br>Defendants, Cross-claimants, and Third-Party Plaintiffs,<br><br>vs.<br><br>MARSHA JOHNSON, WAIOHINU DREAMS, L.L.C, DOE PERSONS 6-10; DOE PARTNERSHIPS 1-10; DOE CORPORATIONS 1-10; ROE "NON-PROFIT" CORPORATIONS 1-10, ROE ENTITIES 1-10, INCLUSIVE, | |



I hereby certify that this is a full, true and correct copy of the original on file in this office.

Clerk, Third Circuit Court, State of Hawaii

kl

Third-Party Defendants. )

PARTIAL STIPULATED FINAL JUDGMENT, DECREE AND ORDER OF CONVEYANCE IN TRUST BETWEEN THIRD-PARTY PLAINTIFFS MARY ANN OMEROD AND JOHN OMEROD ON BEHALF OF THE BASIL ʻĀPIKI PASH RIGHTS DESCENDANTS AND THIRD-PARTY DEFENDANT COUNTY OF HAWAII

PARTIAL STIPULATED FINAL JUDGMENT AND DECREE

Come now Third-Party Plaintiffs Mary Ann Omerod and John Omerod, by and through their attorney, Stanley H. Roehrig, on behalf of the Basil ʻĀpiki PASH Rights descendants, and Third-Party Defendant County of Hawaiʻi and hereby enter into a Partial Stipulated Final Judgment and Decree as provided herein.

WHEREAS, archaeological digs during the 1950s and 1960s at ancient Hawaiʻian house sites in Kaʻū by Dr. Mills of the Bishop Museum revealed that

> Occupants of house sites at Kawaʻa Bay were all from Hilea-iki. They were . . . Basil Apiki[.]
>
> Basil Apiki's house (Feature #5 of Dr. Mills' survey) is nearest the sea between Manaopae and Paliiki.

And WHEREAS, a published history of the Kawaʻa Bay area from the Bishop Museum further reflects that an ancient grass hut at Kawaʻa Bay owned by the Basil ʻĀpiki PASH rights descendants was still there in 1900 and was replaced by a lumber house built about 1910. That history also reflects that fresh water resources from Kawaʻa Springs were utilized by these PASH rights holders.

And WHEREAS, the Decree Quieting Title in Third Circuit Civil 9073, Okuna, et al v. Francis Apiki, et al, filed July 8, 1988 provides in part at Paragraph 3(e) of the Decree for the:

> Reservation of the rights of native tenants contained in . . . LCA 9971, Apana 11.

This includes the above house site at Kawa'a Bay that is located within LCA 9971, Apana 11. That same judgment at Paragraph 3(d) also preserves the rights of way for access to the premises described in the Findings of Fact, Conclusions of Law and Order dated October 14, 1980, in Barba v. Okuna, Third Circuit Civil 4590. The Government Access Road is identified at Paragraphs D53 *et seq.* The Corral Gate Road to the premises is described at Paragraphs E82, *et seq.* The Hilea Access Trail to the premises is described at Paragraphs F115 *et seq.*

And WHEREAS, seven years after the Judgment was entered in Okuna v. Apiki, the Supreme Court of the State of Hawai'i decided PASH v. County of Hawai'i Planning Commission, 79 Hawai'i 425 (1995). That case established that the rights of the natives preserved in the Judgment of Civil 9073 are henceforth categorized as Hawai'ian PASH rights. The nature of these rights are described in part at Findings [21] [22] [of the PASH decision] at pages 447, 448, where the Supreme Court of the State of Hawai'i held in part:

> The issuance of a Hawai'ian land patent [such as LCA 9971:11] confirmed a limited property interest as compared with typical land patents governed by western concepts of property. *C.f.* United States v. Wynans, 198 U.S. 371. . . (1905) (observing that the United States Congress was competent to secure to the Indians such a remnant of the great rights they possessed).

The PASH court went on to hold as follows at 443, 447, 450:

> Traditional and customary [Hawai 'ian PASH] rights are properly examined against the law of property as it has developed in this state.
>
> . . .
>
> A community development proposing to integrate [Hawai'ian] cultur[e] . . . with tourism and community living represents a promising opportunity to demonstrate the continued viability of Hawai'ian land tenure . . . in the modern world.
>
> . . .
>
> [t]he State is obligated to protect the reasonable exercise of customarily and traditionally exercised rights of Hawai'ians to the extent feasible.

And WHEREAS, the County of Hawai'i is the successor in interest in this case to that portion of LCA 9971:11 which includes the above Basil 'Āpiki PASH rights resources at Kawa'a Bay;

And WHEREAS, Third-Party Defendant County of Hawai'i acknowledges that the Basil 'Āpiki descendants are owners of the above PASH rights;

And WHEREAS, Third-Party Plaintiffs John Omerod and Mary Ann Omerod on behalf of the Basil 'Āpiki descendants and Third-Party Defendants County of Hawai'i agree that for the efficient management of these PASH rights and the facilitation of joint management of the Kawa'a area, a PASH rights trust order will assist the parties and the judicial system in the above management and facilitation;

NOW, THEREFORE, be it resolved that Third-Party Plaintiffs Mary Ann Omerod and John Omerod on behalf of the Basil 'Āpiki PASH rights descendants and Third-Party Defendant County of Hawai'i agree to the following Partial Stipulated Judgment, Decree and Order of Conveyance in Trust, which is approved and so ordered by the court:

(a) The Basil 'Āpiki descendants' PASH rights in Kawa'a Bay are recognized by Third-Party Defendant County of Hawai'i. They are hereby ordered by the court to be conveyed in trust in perpetuity by this Stipulated Judgment, Decree and Order of Conveyance of Trust pursuant to Rule 70 HRCP, to be recorded at the Bureau of Conveyances. The initial trustee of the Basil 'Āpiki PASH Rights Trust is John P. Omerod, 2226 Tantalus Drive, Honolulu, Hawai'i 96813. The descendants of Basil 'Āpiki who are beneficial interest holders in the trust are as follows:

| | |
|---|---|
| Clara 'Āpiki Omerod<br>147 Desha Street<br>Hilo, Hawai'i 96720 | 25% |
| Marvaleen Adams<br>89-312 Mokiawe Street<br>Waianae, Hawai'i 96792 | 12.5% |
| Basil Apiki<br>89-247 Kauwahi Avenue<br>Waianae, Hawai'i 96792 | 12.5% |

Rowena Kaleimomi Kaulia
1240 Ala Kapuna Street, #303
Honolulu, Hawai'i 96819 25%

Mary Lei Paris
1031 Ho'okanahe Street
Mililani, Hawai'i 96789 12.5%

Bernadette Shipley
2055 Sierra Road, #48
Concord, California 94518 12.5%

(b) The PASH rights ordered conveyed by the court in trust include a right of entry, possession, repair, and reconstruction of the houses and other appurtenant sites according to traditional Hawai'ian culture, in perpetuity, according to law.

(c) The Basil 'Āpiki PASH Rights trustee and beneficial interest holders have rights of reasonable ingress and egress to the premises and appropriate rights to the spring water at Kawa'a Springs for traditional and customary use as described in the Barba and Okuna judgments and as protected by the PASH decision, supra.

(d) A metes and bounds of the Basil 'Āpiki PASH rights resources, including the house site, burial and other appurtenant sites, will be prepared by the above trustee within a reasonable time for inclusion as an amendment to the Order of Conveyance in Trust to be filed with the court and also recorded at the Bureau of Conveyances.

(e) The Basil 'Āpiki PASH Rights trustee and beneficial interest holders will be responsible for reasonable maintenance and sanitation of the above PASH rights resources.

(f) The Basil 'Āpiki PASH Rights trustee and beneficial interest holders shall be responsible from time to time to update the identity of beneficial interest holders.

(g) The Basil 'Āpiki PASH Rights trustee shall work with the State of Hawai'i and the County of Hawai'i to reasonably address plans and policies relating to the future utilization of the area as required by law.

(h) Any dispute between the trustee and/or the beneficial interest holders and/or Third-Party Defendant County of Hawai'i shall be resolved by mediation (ho'oponopono) and, failing that, by arbitration.

ORDER OF CONVEYANCE OF BASIL 'ĀPIKI PASH RIGHTS IN TRUST

NOW, THEREFORE, pursuant to the authority as provided to the Court pursuant to §668-1 HRS, §668-7 (5) HRS, Rule 70 HRCP, and Campbell v. DePonte, 57 Haw. 510, 514-515 (1977), the Court does hereby order and set apart in trust the Basil 'Āpiki PASH rights at Kawa'a Bay to John P. Omerod, 2226 Tantalus Drive, Honolulu, Hawai'i 96813, Trustee of the Basil 'Āpiki descendants' PASH Rights in Trust.

1. The descendants of Basil 'Āpiki 'ohana are beneficial interest holders in the Trust. The names of the beneficial interest holders and their percentage beneficial interest in the Basil 'Āpiki Descendants' PASH Rights Trust are as follows:

| | |
|---|---|
| Clara 'Āpiki Omerod<br>147 Desha Street<br>Hilo, Hawai'i 96720 | 25% |
| Marvaleen Adams<br>89-312 Mokiawe Street<br>Waianae, Hawai'i 96792 | 12.5% |
| Basil Apiki<br>89-247 Kauwahi Avenue<br>Waianae, Hawai'i | 12.5% |
| Rowena Kaleimomi Kaulia<br>1240 Ala Kapuna Street, #303<br>Honolulu, Hawai'i 96819 | 25% |
| Mary Lei Paris<br>1031 Ho'okanahe Street<br>Mililani, Hawai'i 96789 | 12.5% |
| Bernadette Shipley<br>2055 Sierra Road, #48<br>Concord, California 94518 | 12.5% |

2. The PASH rights hereby ordered conveyed by the court in trust include a right of entry, possession, repair, and reconstruction of the houses and other appurtenant sites according to traditional Hawai'ian culture, in perpetuity, according to law.

3. The Basil ʻĀpiki PASH Rights trustee and beneficial interest holders have rights of reasonable ingress and egress to the premises and appropriate rights to the spring water at Kawaʻa Springs for traditional and customary use as described in the Barba and Okuna judgments and as protected by the PASH decision, supra, according to law.

4. A metes and bounds of the Basil ʻĀpiki PASH rights resources, including the house site, burial and other appurtenant sites, will be prepared by the above trustee within a reasonable time for inclusion in an amendment to the Trust Order to be filed with the court and also recorded at the Bureau of Conveyances.

5. The Basil ʻĀpiki PASH Rights trustee and beneficial interest holders shall be responsible for reasonable maintenance and sanitation of the above PASH rights resources.

6. The Basil ʻĀpiki PASH Rights trustee and beneficial interest holders shall be responsible from time to time to update the identity of beneficial interest holders from generation to generation and to notify the County of the same.

7. The Basil ʻĀpiki PASH Rights trustee shall work with the State and County of Hawaiʻi to reasonably address state and county plans and policies relating to the future utilization and management of the surrounding area according to law.

8. Any dispute between the State and/or County of Hawaiʻi and the trustee and/or beneficial interest holders shall be resolved by mediation (hoʻoponopono) and, failing that, by arbitration.

9. If at any time during the existence of this Trust the trustee shall resign or shall for other reasons cease or become unable to act as trustee, the person nominated by the trustee herein shall become the successor trustee. If the original trustee shall fail to nominate a

successor trustee, the person who is selected by a majority interest of the beneficial interest holders under the Basil 'Āpiki Descendants' PASH Rights Trust shall become the successor trustee.

10. The trustee of this Trust shall be entitled to receive reasonable compensation and reimbursement for reasonable and necessary expenses to preserve the PASH rights resources as the beneficial interest holders shall determine from time to time.

11. The trustee may appoint one or more advisory committees to assist in the management of the PASH rights resources.

This PARTIAL STIPULATED FINAL JUDGMENT, DECREE and ORDER OF CONVEYANCE OF BASIL 'ĀPIKI PASH RIGHTS IN TRUST (hereafter "ORDER OF CONVEYANCE IN TRUST") finally adjudicates all claims rights, liabilities and defenses in this case by John Omerod and Mary Ann Omerod on behalf of the Basil 'Āpiki PASH Rights descendants in the Kawa'a Bay area and by this PARTIAL STIPULATED FINAL JUDGMENT, DECREE and ORDER OF CONVEYANCE IN TRUST, all claims, rights, liabilities and defenses not adjudicated are hereby dismissed with prejudice and none are remaining as to John Omerod and Mary Ann Omerod on behalf of the Basil 'Āpiki PASH Rights descendants in this area. This PARTIAL STIPULATED FINAL JUDGMENT, DECREE, and ORDER OF CONVEYANCE IN TRUST is entered pursuant to HRCP Rule 58 and Rule 70, Jenkins v. Cades Schutte Fleming & Wright, 76 Haw. 115, 119, 869 P.2d 1334, 1338 (1994), and Campbell v. DePonte, 57 Haw. 510, 514-515 (1977). This PARTIAL STIPULATED FINAL JUDGMENT, DECREE and ORDER OF CONVEYANCE IN TRUST specifically identifies the claims for which it is entered, and this PARTIAL STIPULATED FINAL JUDGMENT, DECREE and ORDER OF CONVEYANCE IN TRUST dismisses with prejudice any other claims of John Omerod and Mary Ann Omerod on behalf of the Basil 'Āpiki PASH Rights descendants not specifically identified. This PARTIAL STIPULATED FINAL JUDGMENT, DECREE and ORDER OF CONVEYANCE IN TRUST

resolves all PASH rights claims against said Third-Party Defendant County of Hawai'i and does not reserve any PASH rights claim in the Kawa'a Bay area for later action by this Court.

DATED: Hilo, Hawai'i AUG - 7 2008

Judge, Third Circuit Court
GREG K. NAKAMURA

THIRD CIRCUIT COURT SEAL STATE OF HAWAII

IT IS SO STIPULATED:

STANLEY H. ROEHRIG
Attorneys for Third-Party Plaintiffs Mary Ann Omerod and John Omerod on behalf of the Basil 'Āpiki PASH Rights Descendants

GERALD TAKASE
Attorney for Third-Party Defendant County of Hawai'i

# Kāwā Resources Management Plan

## Appendix C:
## Community-based Subsistence Fishing Area Designation Process

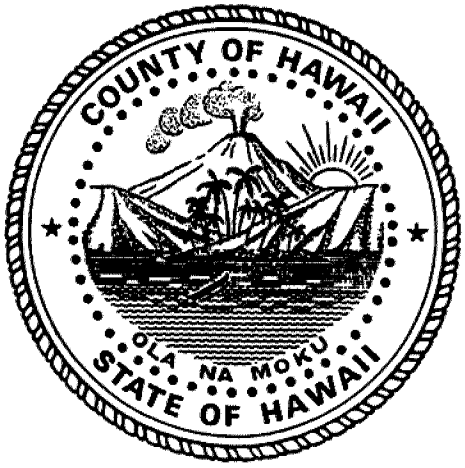
The process of CBSFA designation is lengthy and takes years to complete but the following general steps are recommended:

1. **Community Self-Evaluation**: As the initial step in the process, this stage assesses whether a CBSFA is appropriate for Kāwā. This involves identifying marine resource concerns and building support for management amongst traditional subsistence fishing practitioners. A letter of inquiry is sent to DLNR's Department of Aquatic Resources (DAR) outlining the group's interest in CBSFA designation. In turn, DLNR provides information to assist communities in evaluating the appropriateness of a CBSFA and responds to the group's letter of inquiry. The timeframe of this step is dependent on the community.
2. **Pre-Proposal**: Communities can begin collecting information to support a CBSFA proposal and prepare a pre-proposal outlining their justification for CBSFA designation. Once submitted, a site visit is held with the DLNR. DAR reviews the pre-proposal to determine the appropriateness of a CBSFA designation and whether to support CBSFA management planning. The timeframe of this step is community dependent but allows for a 3-month review period of the pre-proposal by DAR.
3. **Management Planning**: At this stage, a stakeholder analysis is conducted and a community engagement plan is discussed with DAR. This involves consulting with community stakeholders, building support for regulatory recommendations as needed, and documenting engagement efforts. The community group continues to collect information to support the CBSFA proposal and develops a management plan in consultation with DLNR that is submitted to DAR. Stakeholder analysis and review of community engagement plans is facilitated by DAR who coordinates the DLNR's input on the community engagement plan and regulatory recommendations. DAR monitors the group's community engagement efforts and participates in meetings with stakeholders. The timeframe for this step is also community dependent but requires about 6 months of DLNR input.
4. **Proposal Review and Rule Package Development**: At this stage, the group continues community consultations to build support for rules and to attend information meetings held by DAR. The group's full proposal is reviewed by DAR who decides how to adapt community regulatory recommendations into a Ramseyer format rule package. DAR hosts informational workshops at the community location. DAR may revise rules as necessary and will coordinate review of final rule package by Division Administrators, the DLNR Chair, and the Attorney General. This process takes approximately 6 months.
5. **Administrative Rule Making (Chapter 91)**: As the final step in the designation process, the DAR prepares a small business impact statement and facilitates rule package progress through the Chapter 91 administrative rule making process. The group provides input on the small business impact statement as needed and testimony at public hearings. This step may take approximately 1 to 1.5 years.

# Kāwā Resources Management Plan

## Appendix D:
## Hawai‘i County Charter

# COUNTY CHARTER




COUNTY OF HAWAIʻI
2016

**Section 10-14. Centralized Purchasing.**

(a) The department of finance shall be responsible for the procurement of all materials, supplies, equipment and services required by any agency of the county, except as otherwise provided by this charter or any law.

(b) There shall be a standardization committee composed of five members. The mayor shall appoint four members without necessity of council confirmation, each of whom shall be from a separate department. The fifth member shall be a representative of the department of finance who shall serve as chairperson of the committee. The committee shall classify all materials, supplies and equipment commonly used by the various agencies of the county and shall prepare and adopt standards and specifications for such material, supplies and equipment.

(c) All purchases and contracts for materials, supplies, equipment and services shall be made in accordance with Hawai'i Revised Statutes and rules and regulations established by the state procurement policy office thereto. Any such rule or regulation may be modified by the director of finance, in accordance with Chapter 91, Hawai'i Revised Statutes, provided that such modifications shall be consistent with the requirements of state law.

(d) The director of finance shall, from time to time, secure from all agencies estimates of their needs for articles of common use and shall, when practicable, consolidate requisitions in order to secure the benefits of quantity purchases, and may enter into cooperative buying arrangements with other public agencies.

(e) The director of finance may by rules and regulations, not inconsistent with state law, provide for:
   (1) Emergency purchases which might be required.
   (2) Petty cash funds or blanket purchase orders or both.
   (3) Non-competitive purchases and contracts.
   (4) Approval and signing procedures related to the issuance of purchase orders.
   (5) Negotiated sales of county property found unusable for public purposes and valued below $250.00 without public auction.

(f) All county storerooms (other than departmental) shall be supervised and operated by the director of finance.

(g) The director of finance shall require such guarantees of performance by vendors as in the director of finance's opinion may be necessary or may be prescribed by ordinance.

(1979, Prop. 8; 1990, Prop. 14, sec. 1 and Prop. 16, sec. 3; 1994, Ord. No. 94-50, sec. 2; 2010, Prop. 7, sec. 43.)

**Section 10-15. Public Access, Open Space, and Natural Resources Preservation Fund.**

(a) In adopting each fiscal year's operating budget, the council shall appropriate a minimum of two percent of the certified real property tax revenues, including penalty and interest, to a fund known as the public access, open space, and natural resources preservation fund. Deposits to the fund shall occur at a minimum, on a quarterly basis.

(b) Funding shall consist of a minimum of two percent of actual revenue received in the fiscal year. Additional revenue may consist of grants and private contributions intended for the purpose of this section, voluntary contributions of any amount as specified on the real property tax bill, proceeds from the sale of general obligation bonds authorized and issued for the purpose of this section, council appropriations for the purpose of this section, and any other source of revenue.

(c) Monies in this fund shall be used solely to:
  (1) Purchase or otherwise acquire lands and easements in the County of Hawai'i for public outdoor recreation and education, including:
    (A) Access to beaches and mountains;
    (B) Preservation of historic or culturally important land areas and sites;
    (C) Protection of natural resources, significant habitat or eco-systems, including buffer zones;
    (D) Preservation of forests, beaches, coastal areas, natural beauty and agricultural lands; and
    (E) Protection of watershed lands to preserve water quality and water supply.
  (2) Pay the principal, interest and premium, if any, due with respect to bonds issued in whole for the purpose of this fund.

(d) Any balance remaining in the fund at the end of any fiscal year shall not lapse, but shall remain in the fund accumulating interest from year to year. The moneys in this fund shall not be used for any purpose except those listed in this section.

(e) The council shall by ordinance establish procedures for the administration and expenditure of moneys in this fund.

(f) This fund shall be used for acquisition of land and easements and shall not be used for development, maintenance or for any purpose other than as provided in this section.

(g) The highest and best use of this fund is to leverage the money in the fund by attracting matching funds, although, matching funds are not required in every purchase.

(h) Any land acquired with this fund shall contain the following restrictive covenant in its recorded deed of conveyance: "This land was acquired with moneys from the Public Access, Open Space, and Natural Resources Preservation Fund. It shall be held in perpetuity for the use and enjoyment of the people of Hawai'i County and may not be sold, mortgaged, traded or transferred in any way."

(i) Any easement acquired with this fund shall contain the following restrictive covenant in its recorded deed of conveyance: "This easement was acquired with moneys from the Public Access, Open Space, and Natural Resources Preservation Fund. It shall be held in perpetuity for the use and enjoyment of the people of Hawai'i County and may not be sold, mortgaged, traded or transferred in any way."

(2010, Prop. 1, sec. 1; 2012, Ord. No. 11-94, sec. 1.)

**Section 10-16. Public Access, Open Space, and Natural Resources Preservation Maintenance Fund.**

(a) The purpose of the public access, open space, and natural resources preservation maintenance fund is to accrue and use moneys for maintenance of lands and easements acquired by the public access, open space, and natural resources preservation fund. The maintenance fund will ensure that money is dedicated to preserve the land, promote public safety, and maintain a healthy stewardship.

(b) Definitions. For the purpose of this section, the following definitions apply:

"Maintenance" means to preserve and conserve lands and easements acquired by the public access, open space, and natural resources preservation fund and keep them in good repair for public safety.

"Maintenance fund" means a separate fund that holds moneys directed from: 1) the general fund and property tax revenues; or 2) designated grants, private contributions, proceeds from the sale of general obligation bonds, council appropriations, and any other source of revenue.

(c) There is established a public access, open space, and natural resources preservation maintenance fund (hereinafter "maintenance fund"). The maintenance fund shall be administered and managed by the department of parks and recreation. The financial aspects of the maintenance fund shall be handled by the department of finance.

(d) Deposits due to the maintenance fund.

(1) In adopting each fiscal year's operating budget, the council shall appropriate one-quarter of one per cent of all real property tax revenue (including interest and penalties) to the maintenance fund. Deposits to the maintenance fund shall occur on a quarterly basis at a minimum.

(2) Additional revenue deposited in the maintenance fund may consist of grants and private contributions intended for the purpose of this section, proceeds from the sale of general obligation bonds authorized and issued for the purpose of this section, council appropriations for the purpose of this section, and any other source of revenue.

(e) Accounting for the maintenance fund; interest bearing accounts; reporting by the department of finance.

(1) All moneys in the maintenance fund shall be deposited in interest bearing accounts until needed. Any interest shall accrue to the maintenance fund.

(2) Moneys in the maintenance fund shall be identified separately for:

(A) Funding received from the real property tax revenue including interest and penalties; and

(B) Funding received from grants and private contributions, and any other source of revenue, and its interest earned, which:

i. Shall be itemized and earmarked for specific projects for the lands or easements.

ii. Shall not be subjected to the maximum accrual of funds limit provided in subsection (f).

(3) Financial statements shall be posted each month on the public access, open space, and natural resources preservation fund web site.

(f) Maximum accrual limit in maintenance fund; exemption to funding.

(1) Only moneys derived from real property tax revenue, its interest, and its penalties shall be included in the computation of the maximum accrual limit for the maintenance fund. All other moneys specifically directed to the maintenance fund shall be held separately from those moneys in the maintenance fund that originated from real property tax revenues (including interest and penalties), and shall not be subjected to the maximum accrual limit.

(2) The maximum accrual limit shall not exceed $3,000,000.

(3) At the end of any fiscal year in which the maintenance fund holds unencumbered funds derived from real property tax revenue (including interest and penalties) of at least $3,000,000, any unencumbered amount in excess of that $3,000,000 shall be permanently transferred to the general fund balance.

(4) Exemption to funding. If the maintenance fund holds $3,000,000 in unencumbered funds derived from real property tax revenue (including interest and penalties), then the council and the executive branch do not need to add more money to the maintenance fund until the next budget cycle. This exemption shall not release the administration from its mandatory duty to maintain and preserve lands and easements acquired by the public access, open space, and natural resources preservation fund in good repair for public safety each fiscal year.

(g) The maintenance fund shall be used solely for public safety maintenance and preservation of those lands and easements acquired by the public access, open space, and natural resources preservation fund, and may be used only for expenditures directly related to its purpose. Expenditures by the administration or stewardship grants presumed to be directly related are as follows:

(1) Reparation (fixing, mending, repair work, and servicing);
(2) Preservation (damage control, salvaging, safekeeping, and safeguarding);
(3) Conservation of soil, forests, shorelines, native wildlife, streams, wetlands, watershed, and floodways;
(4) Restoration (replacement, reclamation, reconditioning, and remediation);
(5) Wildfire and fire prevention;
(6) Repair of existing buildings to meet the current code requirements, if the building is deemed reasonable to save;
(7) Replacing signs to meet the current code requirements;
(8) Installation, repair, or replacement fencing and gate or access mechanisms;
(9) Installation or repair of cattle guards;
(10) Mitigation of flooding problems including repair or restoration of existing culverts, drainage features, or other similar flood control mitigation;
(11) Archeological survey and buffering of Native Hawaiian historical or cultural sites after appropriate consultation with Native Hawaiian descendants and cultural practitioners;
(12) Biological studies for the protection of Native Hawaiian species of plants and animals; or
(13) Mitigation of Americans with Disabilities Act compliance issues that may arise during the course of public safety maintenance and preservation.

Moneys in the maintenance fund shall not be used for planning, design, development, or construction of new buildings, facilities, or infrastructure including roads, paths, bridges, culverts, ramps, or drainage features. Money in the maintenance fund shall also not be used for mitigation of Americans with Disabilities Act compliance issues for any new buildings, facilities, or infrastructure. Payment to resolve these aforementioned issues shall be from the capital improvement projects budget or allotments derived from the general fund.

(h) Stewardship Grants. Moneys may also be used to provide grants-in-aid for projects, which uses are reflected in subsection (g).

(1) An award of a stewardship grant shall be by council resolution. Stewardship grants may be awarded only until moneys in the maintenance fund are extinguished. Grants shall be awarded on the basis of ability of the stewardship organization to complete the project on time and within cost estimates.

(2) Only 501(c)3 nonprofits or an organization that operates under the umbrella of a 501(c)3 nonprofit, and that can complete a project for the good of the community, shall be considered for a stewardship grant.

(3) Public notice by the department of finance of the availability of the stewardship grants shall be placed in two newspapers of general circulation, as well as electronic media accessible by internet, by August 1 of each fiscal year provided money is available. These advertisements shall be paid for from the maintenance fund.

(4) To apply for a stewardship grant, a stewardship organization shall provide to the department of parks and recreation the following:

(A) An application form obtained from department of parks and recreation which is completed for each specific purpose or project;

(B) A detailed business plan for the project that includes the name of the 501(c)3 nonprofit organization, the organization that operates under the umbrella of a 501(c)3 nonprofit organization, if any, a copy of its letter of determination from the Internal Revenue Service, a copy of its bylaws and mission statement, a description of the specific project, time frames for project goals, costs, and activities to accomplish the stated purpose, and any other information requested by the department of parks and recreation; and

(C) A signed agreement to file a written report one year or less after receipt of funds that includes details as to what has been accomplished on the project, costs, and how the money was spent.

(5) No officer, board member, or employee of the 501(c)3 nonprofit organization or the organization that operates under the umbrella of a 501(c)3 nonprofit organization shall receive a salary or payment for labor or receive any reimbursement for the stewardship work on the project. The 501(c)3 nonprofit shall sign an agreement so stating these conditions and submit it with the application.

(6) Mismanagement of moneys awarded for a stewardship grant shall bar the 501(c)3 nonprofit organization and the organization that operates under the umbrella of a 501(c)3 nonprofit organization from receiving future grants from the maintenance fund.

(7) The director of the department of parks and recreation shall provide a short written evaluation of the proposed project to the council and include a recommendation about the applicant's ability to complete the project according to the project plan.

(2012, Ord. No. 12-16, sec. 1.)

# KĀWĀ RESOURCES MANAGEMENT PLAN

## Appendix E:
## Standard Operating Procedures for Wetland Habitat Restroation from DOFAW

**Division of Forestry and Wildlife**
**Standard Operating Procedures for Wetland Habitat Restoration on O'ahu**[1]

**Waterbird Surveying:**

1. Waterbird surveys shall commence 6 months before any site work is to begin. Surveys shall be conducted by a qualified biologist and shall:
    a. Inventory shall include waterbirds, shorebirds, and other notable wetland species on site. The surveys should occur two times per month
    b. When coot, moorhen and stilt nesting/mating activities begin, surveys shall be done once per week. Observes should note and inventory territories, observed nests, chicks, and predators present. Observers should keep track of all observed chick and not whether they fledge or not.
    c. Habitat (veg cover, type, water level, etc.) type should be noted in conjunction with nesting areas
    d. Observers should not approach nests or broods.
2. All observations should be kept to ensure a record of:
    a. Overall birds observed
    b. Territories established per species
    c. Habitat usage
    d. Nesting season
    e. Observed nesting success
    f. Weather Conditions/Rainfall
3. Site work should be noted when started. All site work should avoid sensitive habitat and nesting areas.
4. A licensed vet shall be kept on retainer, should an injured native bird be observed. In the event a coot, moorhen, or stilt is observed injured, the observer shall notify the vet, DOFAW and USFWS local representatives.
5. If any listed species is observed dead, a qualified individual shall collect it immediately. DOFAW and USFWS representatives shall be contacted immediately to make the determination on what to do with the carcass.

**Habitat/Site Restoration:**

1. Vegetation removal and control should be limited to non-native species which:
    a. Directly impact nesting waterbirds by reducing habitat
    b. Obstruct water ways
    c. Provide cover and ambush points for predators, etc.
2. No activity is to take place during the nesting season. Nesting seasons shall be established during pre-sitework observation.
3. Woody vegetation should be removed from wetland or nesting areas
4. Waterbird surveys should also indicate what non-native plants are used for foraging, nesting and cover. Those identified species shall be controlled, not eradicated.
5. IF possible, tilling should be included in operations to:
    a. Condition soil and create aerated pond bottoms
    b. Reduce or eliminate algal buildup
    c. Expose seed bank to provide long term weed control
    d. Minimize the use of herbicides

[1] All activities described must accompany proper permits and authorizations before initiating work

6. Use of herbicides, pesticides must be in compliance with labels.
7. No soils are to be removed, excavated, or stockpiled on site
8. Predator control should occur, minimally during nesting season. Year-round if possible. See attached predator control guidelines for DOFAW-Oahu operations.
9. A 48 hour trap check policy must be in place if there are endangered species present.
10. IF an endangered species is captured, DOFAW and USFWS local representatives shall be informed immediately
11. Tracking tunnels should be deployed in a grid formation to inventory predators present.

**General:**

1. Signs should be placed on site informing visitors about the resources in the areas'
2. Fences should be erected to identify sensitive areas.
3. All personnel shall be trained to identify protected and endangered spp.
4. Before any site work is done, the qualified observer shall be consulted