

DRAFT ENVIRONMENTAL ASSESSMENT

KĀNEPU‘U PRESERVE, LĀNA‘I
NATURAL AREA PARTNERSHIP PROGRAM

In accordance with Chapter 343, Hawai‘i Revised Statutes

Proposed by the
State of Hawaii
Department of Land & Natural Resources
The Nature Conservancy – Hawai‘i Operating Unit
November 2009

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I. Summary

Project Name:

Kānepu‘u Preserve Natural Area Partnership

Project Location:

Kānepu‘u Preserve, 590 acres on the Island of Lāna‘i, in the District of Lahaina, County of Maui, State of Hawai‘i

Tax Map Key

4-9-02: 01

Acreage

590.377

Zoning/Subzone

Conservation/Limited

Property Owner:

Castle & Cook Resorts, LLC

Applicant/Proposing Agency:

State of Hawai‘i
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street
Honolulu, Hawai‘i 96813

The Nature Conservancy, Hawai‘i Operating Unit
Maui Project Office
P.O. Box 1716
Makawao, Hawai‘i 96768

Approving Agency:

State of Hawai‘i Department of Land and Natural Resources

Anticipated Determination:

Finding of No Significant Impact (FONSI)

Individuals, Community Groups and Agencies Consulted:

Federal:

US Department of Agriculture/ Natural Resources Conservation Service
US Department of the Interior/ Fish & Wildlife Service – Environmental Services
US Department of the Interior/ US Geological Survey – District Chief
US Department of the Interior/ US Geological Survey – Biological Resource Division Maui

US Environmental Protection Agency

State:

Department of Accounting & General Services – Controller
Department of Agriculture
Department of Agriculture/ Resource Conservation Service – State Conservationist
Department of Environmental Services
Department of Hawaiian Home Lands – Chairman
Department of Health – Environmental Planning Office
Department of Land & Natural Resources – Shane DeMattos
DLNR/ Aquatic Resources Division—Maui District
DLNR/ Office of Conservation and Environmental Affairs
DLNR/ Division of Forestry & Wildlife—Maui District – John Cumming
DLNR/ Division of Forestry & Wildlife – Fern Duvall
DLNR/ Division of Land Management—Maui District
DLNR/ Division of Land Management – Lāna‘i Branch
DLNR/ Natural Area Reserves System – Randy Kennedy
DLNR/ Natural Area Reserves System Commission – Dale Bonar
DLNR/ Natural Area Reserves System – NARS Enhancement Coordinator, Emma Yuen
DLNR/ State Historic Preservation Division
Department of Transportation Services
EPA/PICO – Manager
NOAA – Pacific Islands Regional Office – Coral Reef Ecologist, Danielle Jayewardene
Office of Environmental Quality Control – Director, Katherine Kealoha
Office of Hawaiian Affairs – Chairperson, Haunani Apoliona
Office of Planning
Representative Mele Carroll
Senator J. Kalani English
University of Hawai‘i at Manoa (UHM), Environmental Center

County:

County Council – Councilman, Sol Kaho‘ohalahala
Department of Economic Development
Department of Planning – Conservation Chair
Department of Parks & Recreation
Department of Public Works
Department of Water Supply – Director, Jeffrey Eng
Fire Department – Fire Chief, Jeffrey Murray
Maui Economic Development Agency – Coordinator
NRCS – Maui County Resource Conservationist, James Inos
Office of the Mayor – Environmental Coordinator, Kuhea Paracuelles
Planning Department

Private:

Bob Hera
Bob Hobdy
Castle & Cooke Resorts, LLC – Brian Plunkett
Conservation Council for Hawai‘i

Cultural Resources Commission
Earth Justice Legal Defense Fund
Historic Hawai‘i Foundation
Hui Malama Pono O Lāna‘i
Kahului Regional Library
Lāna‘i Archaeological Committee Center
Lāna‘i Community Association
Lāna‘i Culture and Heritage Center – Kepā Maly
Lāna‘i Public Library
Maui Community College Library
Maui Invasive Species Committee – Teya Penniman
Maui Nui Botanical Gardens – Lisa Raymond
Native Hawaiian Plant Society
Plant Extinction Prevention Program – Hank Oppenheimer
Pono Pacific – John Leong
Solomon Kaopuiki
The Lāna‘i Times – Barry Osman
The Maui News – Editor
Tri-Isle RC&D, Inc. – Stuart Funke-d’Egnuff
West Maui Soil & Water Conservation District – Wesley Nohara

II. Project Description

Overview

The formation of Kānepu‘u Preserve was announced in January 1989; it was officially established in November 1991 when Dole Foods, Inc. finalized a perpetual conservation easement with The Nature Conservancy (TNC). The preserve was created to protect and enhance the olopuā/lama (*Nestegis/Diospyros*) dryland forest that once covered large portions of the lowlands on Maui, Moloka‘i, Kaho‘olawe, and Lāna‘i.

Major threats to the preserve’s native vegetation are introduced game animals (axis deer [*Axis axis*] and mouflon sheep [*Ovis musimon*]), rapid soil erosion, wildfire, and a number of invasive alien (non-native) plants. Much of this area was protected from 1911 until 1935 by fencing and other efforts carried out by George Munro, then the ranch manager for the area. These fences were removed by subsequent ranchers. In the 1970s, 1980s, and 1990s, dedicated volunteers and the group *Hui Malama Pono o Lāna‘i* built four small fenced exclosures that helped protect patches of native forest and associated rare plants. Without these efforts, the last remnants of this rare Hawaiian forest type would probably have been destroyed. In 1992, The Nature Conservancy completed construction of a 6’3” tall deer fence around each of the seven patches of forest to prevent further damage by grazing animals. From 1996 through 2001, various sections of fence were replaced due to severe corrosion from harsh environmental conditions. In 2002 and 2003, the fences around the two most biologically important units (Kahue and Kānepu‘u) were upgraded to stainless steel wire in an attempt to fend off corrosion problems.

Established in 1980, The Nature Conservancy of Hawai‘i (TNCH) is a local affiliate of The Nature Conservancy (TNC), a leading international, nonprofit organization that preserves the plants, animals

and natural communities representing the diversity of life on Earth by protecting the lands and waters they need to survive. TNCH has established a statewide system of preserves in Hawai'i totaling almost 32,000 acres. As a member of eight watershed partnerships, TNCH also works closely with public and private partners to help preserve nearly one and a half million acres statewide. TNCH has also extended its work from the forests to the reefs and is engaged in marine conservation in the nearshore waters of the main Hawaiian Islands.

The State of Hawai'i's Natural Area Partnership Program (NAPP) is an innovative program that aids private landowners, like the Conservancy, in the management of their native ecosystems. NAPP provides matching funds (\$2 state to \$1 private) for the management of qualified private lands that have been permanently dedicated to conservation. On Lāna'i, TNCH manages Kānepu'u Preserve, which was first approved for NAPP funding in 1992. The Kānepu'u Preserve NAPP contract is scheduled to be renewed in 2011. The renewal procedure includes the preparation of a new 6-year management plan, and public review via the Environmental Assessment process. Previous management work was conducted under a Conservation District Use Permit (LA-2535 and LA-2534) and Environmental Assessment (1997).

Presently, TNC is seeking reauthorization of NAPP funding for the programs described within the *Kānepu'u Preserve Long-Range Management Plan*. Our proposed actions in this Environmental Assessment will be ongoing and we will only seek additional approvals if there is significant management program or legal requirement changes. This plan continues the programs implemented under the previous plans and Environmental Assessment. State funds, distributed over 6 years, will be needed to implement the work outlined in this document.

We successfully implemented the resource management projects of the previous six-year long-range plan, as well as many others. See Table 1.

Table 1. Overview of Kānepu‘u Preserve Accomplishments by Programs, FY 2005 – FY 2009

Program	Accomplishments
Ungulate Control	<ul style="list-style-type: none"> • 173 hunts conducted • 194 axis deer removed • 2 mouflon sheep removed • Implemented “work to hunt” program for volunteers assisting in weed removal to be allowed hunting privileges • 5 miles of fences maintained routinely • All fences in Kānepu‘u inspected on a quarterly basis in FY05, semi-monthly in FY06, and monthly from FY07 forward • .55 mile (890m) of fence installed and replaced between Kānepu‘u entrance and Lapaiki fence line (Figure 3) • Erosion control mitigation conducted along fenceline as necessary
Invasive Plant Control	<ul style="list-style-type: none"> • Lapaiki and Kānepu‘u iki exclosures in Kānepu‘u unit and portions of Kahue unit treated routinely for priority weeds including Christmasberry, lantana, bull thistle, guinea grass, and koa haole • MISC swept areas outside the preserve for fountain grass and ivy gourd in FY07-FY09 with minimal finds
Fire Control	<ul style="list-style-type: none"> • A 10-foot wide corridor on both sides of the fence was improved as a fuel break in FY06 • Kānepu‘u and Kahue boundary fence mowed as needed • Fire hazard signage installed in FY07
Restoration, Research, and Monitoring	<ul style="list-style-type: none"> • 3 research projects supported, including one on <i>Hyposmocoma</i> moths, one on <i>Ptycta</i> bark lice, and one on ‘iliahi

TNCH recently aligned its conservation priorities with its resources by focusing on those areas in the state with the highest conservation value and feasibility of success. Budgetary constraints have required that we continue a scaled-back management effort at Kānepu‘u. Management programs have been contracted out since FY2005. We have been actively seeking other entities to assist us with management of the preserve. In the mean time, TNCH will continue to carryout ungulate, weed, and fire control programs by partnering with a local contractor or grantee, and working with local community members. TNC Maui staff oversees and occasionally supplement management activities carried out by the contractor or grantee and local community members.

Our management efforts will focus on the following activities:

- **Ungulate Control** – the primary management activity will continue to be the complete removal of all axis deer from the two best preserve units (Kahue and Kānepu‘u), along with the continued exclusion of mouflon sheep and cattle from all seven units. Due to the corrosive effect of sand, salt and prevailing winds on the island, a significant factor in the ongoing campaign to remove ungulates will be the need for fence maintenance and erosion control around the seven preserve units.
- **Weed Control** – Selective weed removal will occur primarily in areas within or surrounding high quality patches of native vegetation. Additionally, we will continue to assist MISC in its efforts to contain fountain grass and prevent its spread to other islands.

- **Fire Control** – Due to the relatively dry climate of the preserve, it is imperative for management to be especially vigilant in preventing wildfires from damaging the remaining natural resources. We will continue to maintain fuel breaks by mowing along the fence line.
- **Restoration, Monitoring, and Research** – When time allows, we plan to use contractors and volunteers to collect seeds of native species incidental to other preserve activities and work with cooperative nurseries to propagate off-site. Also, we plan to perform rare plant monitoring incidental to other preserve activities and provide limited assistance to researchers as staff time and budget permits.
- **Community Outreach** – We plan to use current TNCH staff to build the capacity of any interested group to assist with the management of the preserve, and we will look for outside funding to continue project stewardship.
- **Watershed Partnerships** – The Lāna‘i Forest Watershed Partnership (LFWP) was formed in 2001 to assist in protecting the island’s watersheds by leveraging efforts among conservation partners. As a member of this group, TNCH will continue to work with partners to promote stewardship activities in forest and watershed regions of Lāna‘i.

The State Department of Land and Natural Resources (DLNR), which administers the NAP program, is kept apprised of our progress in the preserve through written reports and an annual inspection. Operational plans are submitted annually (the Conservancy has adopted a July 1 – June 30 fiscal year). In addition, a semi-annual report is sent to DLNR each January. These documents are available upon request to others who are interested.

Summary Description of the Affected Environment

Location

The preserve, located northwest of Lāna‘i City, is comprised of seven disjunct sections ranging from 13 to 368 acres in size, and totals 590 acres (Figure 1). The elevation in this area is approximately 1,700 feet. The climate at Kānepu‘u is relatively dry: rainfall averages only 71 cm (28 in) per year, and falls primarily in the rainy season from November through March. Additional moisture comes in the form of fog that condenses on vegetation. Tradewinds are accelerated by the upwind islands of Moloka‘i and Maui. These strong and nearly constant winds increase evaporation of moisture, vegetation loss, and soil erosion in and around Kānepu‘u; in some places, up to 6 feet of soil has been lost. These degraded areas usually have little vegetation and are, therefore, even more susceptible to increased erosion. Many of the eroded areas are characterized by a hard pan substrate that appears unsuitable for plant establishment. Other eroded areas are comprised of dunes of wind-blown soil that may shift with the season.

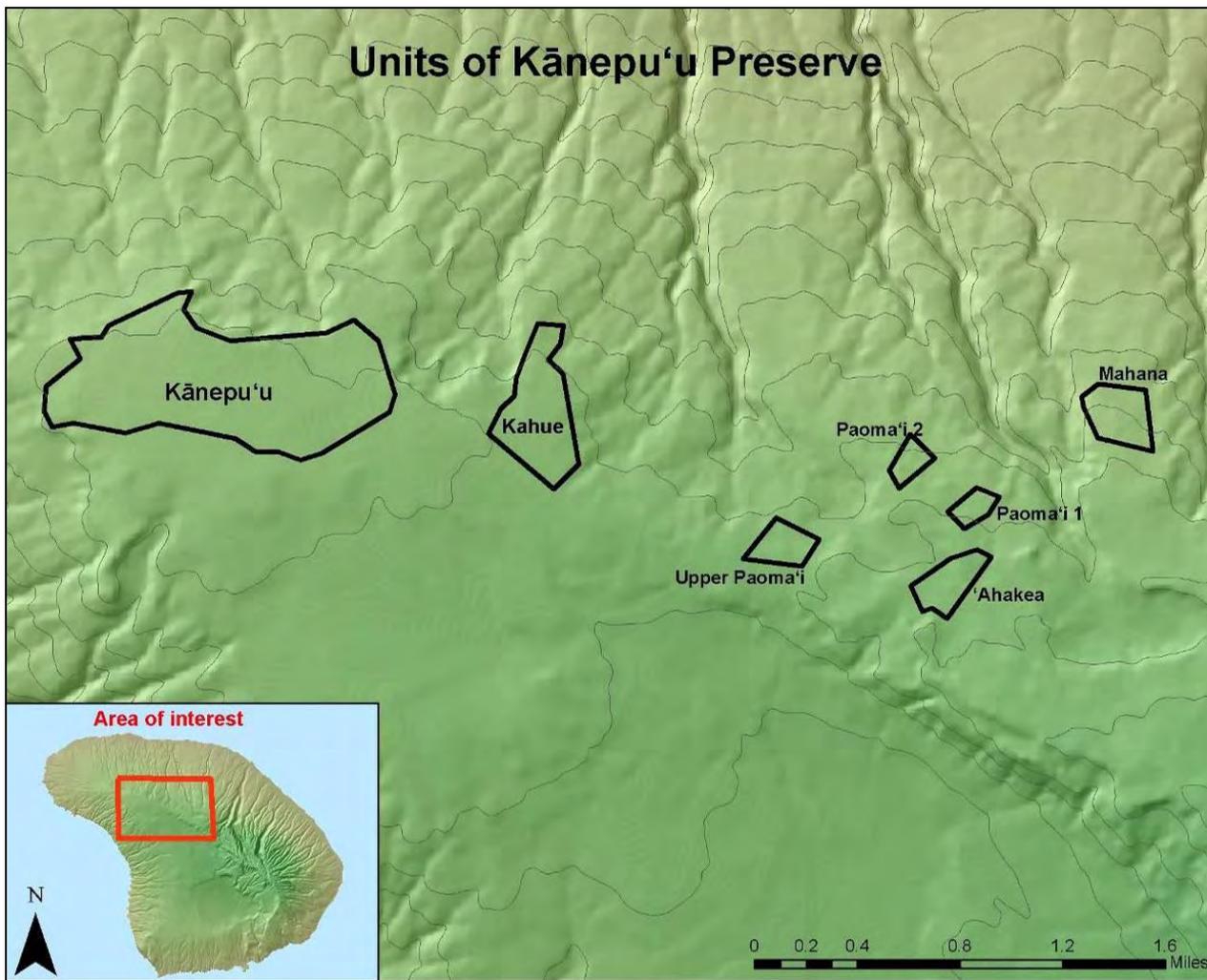


Figure 1. Kānepuʻu Preserve units

Natural Communities

Kānepuʻu is dominated by two plant communities: the native closed-canopy *olopua/lama* dryland forest, and an alien shrubland. Some sections of the preserve are bordered by a windbreak of non-native trees including swamp mahogany (*Eucalyptus robusta*), ironwood (*Casuarina* sp.), and Cook Island pine (*Araucaria* sp.). Areas of bare soil occur throughout the preserve.

The native forest canopy is dominated by lama (*Diospyros sandwicensis*) and olopua (*Nestegis sandwicensis*). The canopy also contains non-native Christmas berry (*Schinus terebinthifolius*) and up to 12 native species including ʻohe makai (*Reynoldsia sandwicensis*), ʻahakea (*Bobea sandwicensis*), ʻālaʻa (*Pouteria sandwicensis*), and ʻaiea (*Nothoestrum latifolium*). The understory has been severely damaged as a result of historical grazing and few native species remain. Common understory weeds include lantana (*Lantana camara*), scarlet sage (*Salvia coccinea*), corky passion vine (*Passiflora suberosa*), and several grasses including dallis grass (*Paspalum dilatatum*) and molasses grass (*Melinis minutiflora*). Figure 2 shows the current natural communities of the Kānepuʻu Preserve.

Kānepuʻu does not contain streams or other aquatic natural communities.

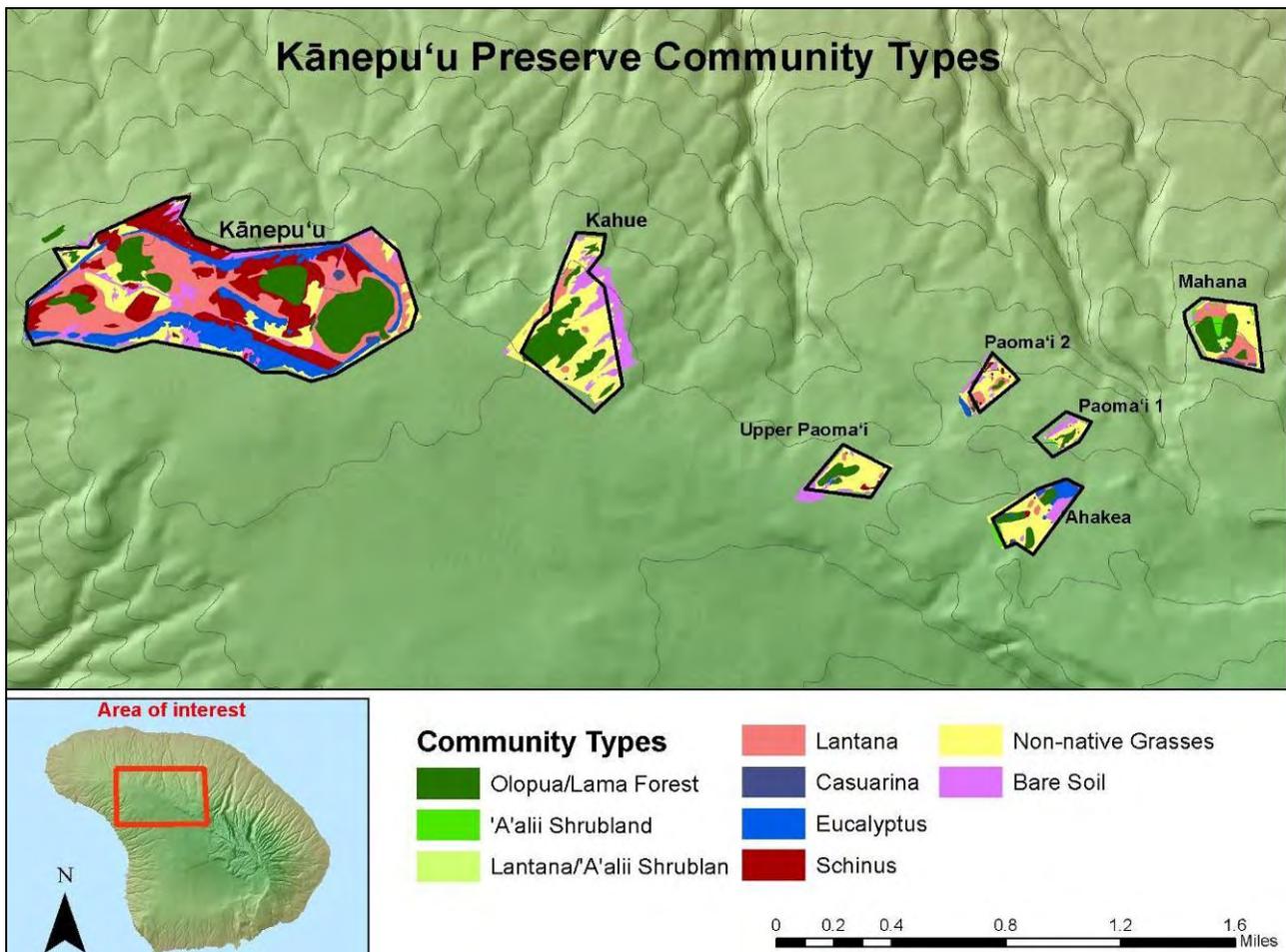


Figure 2. Kānepu‘u Preserve community types

Native Flora

Eleven rare plant taxa have been reported in Kānepu‘u Preserve; six of these are listed as federally endangered. However, two of these listed species, along with another with no federal status, are known only from historical records and have not been seen in Kānepu‘u Preserve since 1930 (Appendix 1). The four endangered plant species currently in the preserve are: the fragrantly flowered *Gardenia brighamii*, sandalwood or ‘iliahi (*Santalum freycinetianum* var. *Lāna‘iense*), *Bonamia menziesii*, and the ma‘o hau hele (*Hibiscus brackenridgei*). The Lāna‘i populations of *Gardenia brighamii* account for approximately 2/3 of all known *Gardenia brighamii* plants. It is believed that the ma‘o hau hele was planted in the preserve and may not have occurred there naturally.

Native Fauna

Vertebrates

Two native birds frequent Kānepu‘u Preserve: the pueo (short-eared owl, *Asio flammeus sandwichensis*) and the kōlea (Pacific golden-plover, *Pluvialis fulva*). Eleven non-native birds are also found in the preserve’s forest and open areas.

Invertebrates

At least ten different land snail taxa were identified in a subfossil sample found in the preserve. Currently, only the most common native snails still exist in Kānepu‘u Preserve.

Kānepu‘u Preserve’s arthropod fauna was sampled in 1992. According to collection records, 153 different insect species (some unidentified) were found. Nineteen spider taxa, two isopods, and one species of amphipod were also collected. Native taxa include a pyralid moth (genus *Scoparia*), mirids, drosophilids (fruit flies), yellow-faced bees (genus *Hylaeus*), and sphecid wasps. Two arthropod studies were conducted in Kānepu‘u Preserve in 2008 and 2009. Emilie Bess, a graduate student from the University of Illinois, conducted a study on bark lice (*Ptycta* spp.); results thus far indicate 11 different morphospecies. Further investigation will determine if the species are new or previously described, and their relationships with other Hawaiian *Ptycta*. Drs. Dan Rubinoff and Patrick Schmitz from the University of Hawaii conducted a study on the diversity of endemic flightless moths *Hyposmocoma* in the Hawaiian Islands. Determinations may reveal they found at least 5 new species in the Kānepu‘u area, all endemic to Lāna‘i. A remarkable part of their catch trap was the endemic Sphinx moth *Hyles* sp., unusual for the dry forest habitat of Kānepu‘u; frozen samples for molecular analysis will confirm the species identity, contributing to a better understanding of biodiversity. In addition, in December 2008, the endangered Blackburn’s Sphinx moth (*Manduca blackburni*) was discovered for the first time on Lāna‘i; it is currently unknown whether and to what extent it occurs in the Kānepu‘u area.

Historical/Archaeological and Cultural Sites

During a limited site visit in September 1996, Dr. Boyd Dixon of the State Historic Preservation Division (SHP) did not observe any surface evidence of cultural remains or historic sites in Kahue or Kānepu‘u units. According to SHP, the only known site in the vicinity of Kānepu‘u Preserve is the ‘ulu maika playing field described by Kenneth Emory in 1924. The site, located outside the preserve approximately 1 kilometer south of the current Kānepu‘u unit fenceline, was not relocated during a statewide inventory in 1974, and is presumed to have been destroyed. SHP has determined that, in general, the proposed activities will have no effect on significant historic sites.

See Appendix 3, Cultural Impact Assessment.

Adjacent Natural Resources

The areas immediately adjacent to Kānepu‘u Preserve are not particularly biologically significant. All seven management units are surrounded by sustained yield game management areas, or by cattle pasture. Grazing deer, sheep, and cattle have degraded most of the remaining native vegetation on these surrounding lands.

Sensitive Habitats

Much of Kānepu‘u Preserve is regarded as sensitive. The intent of all proposed management activities is to provide long-term protection of the rare forest. Potential negative effects of management activities such as introduction of new weeds are recognized, and special precautions will be taken to minimize the risks.

General Description of the Action’s Technical, Economic, Social and Environmental Characteristics

Technical

This project is long term, consisting of several different phases. The primary goal is to maintain and enhance native ecosystems and protect the habitat of rare plants in the designated area. In addition to the NAPP contract currently in place, the Conservancy has entered into a number of agreements to facilitate management at Kānepu‘u Preserve:

- In 1991, Dole Foods, Inc. granted a perpetual conservation easement to The Nature Conservancy. This easement was later transferred to Castle & Cooke Resorts, LLC, the current landowner. The purpose of the easement is to preserve, protect, enhance, and restore the natural ecological, aesthetic, and scientific features of the preserve in perpetuity. The landowner retains the right to access the preserve, to inspect the area, and to use the area within regulations set by the Conservancy. Uses permitted in the easement include hunting, hiking, and using horses and vehicles on existing roadways. Commercial use of the preserve by the Conservancy is allowed with written permission of the landowner. The establishment of any industrial use of the preserve is forbidden, as are growing of crops, exploration for minerals, removing vegetation (except as required for management purposes), and grazing or driving of horses, cattle, or other livestock (except as required for management purposes).
- Kānepu‘u Preserve is covered under a state-wide Memorandum of Understanding between The Nature Conservancy and the state Department of Land and Natural Resources for wildfire suppression.
- Budgetary constraints have required that we continue a scaled-back management effort at Kānepu‘u. Since FY2005, management programs have been contracted or awarded out while we continue to actively seeking other entities to assist us with management of the preserve. In the meantime, TNCH will continue to carryout ungulate, weed, and fire control programs by partnering with a local contractor or grantee, and working with local community members.

MANAGEMENT

Management Considerations

1. The lands surrounding the preserve support sustained-yield sport hunting of axis deer and mouflon sheep, and cattle grazing. The preserve has been fenced to prevent these animals from further damaging native vegetation. Preserve activities must be coordinated with surrounding neighbors, not only for safety reasons, but also to ensure good working relationships.
2. All units of the preserve are accessible by good-quality dirt roads, although four-wheel drive vehicles are needed during wet weather. Unit boundaries, fence lines, and firebreaks are mostly accessible via tractors or other equipment. Access to the preserve is generally obtained through abandoned pineapple field roads, which may move over time. The preserve is easily accessible on foot. Mapped corridors that link the seven preserve units were established to satisfy county subdivision requirements and do not represent road access between units.

3. The Lāna‘i community and other members of the public were involved at Kānepu‘u before it was a TNC preserve. As such, interpretive opportunities for the community and the public will continue as feasible.
4. A central challenge of conservation in Hawai‘i is to integrate stewardship of native resources with community development, planning, corporate/landowner needs, and the priorities of the grass-roots community. Because of the history of community grass-roots involvement at Kānepu‘u, we initiated a capacity building effort in 1998 with the Hui Mālama Pono O Lāna‘i and other interested groups. The goal was to increase their organization effectiveness and develop a solid fundraising track record so that eventually they could become the managers of Kānepu‘u Preserve. To date, no community group has demonstrated the financial, administrative, and management capacity to manage Kānepu‘u Preserve. TNCH continues to believe that a community-based organization will provide the best solution for long-term management of the preserve.
5. Due to past deforestation and grazing by animals, massive wind and rain erosion remain a major threat to our fences. Erosion problems caused by heavy rains are often the focus of fence maintenance efforts.
6. We have learned that once the galvanizing on the 12.5 gauge fence wire becomes noticeably corroded, the wire fails quickly (within about 6 months). Salt spray, carried 3 miles inland and up to Kānepu‘u Preserve's 1,700-foot elevation, seems to be the largest corrosive factor, as well as the constant sandblasting from adjacent eroded mineral soils. Professional fence builders and natural area managers surmise that the dry environs of Kānepu‘u, exacerbated by drought, have allowed salt spray to stick to the wire rather than being washed clean by rains. Only where a tall shrub, tree, or fence post protects wire from the salt spray is corrosion minimal or non-existent. The corrosion appears accelerated where the fence is downwind from an unvegetated area; this is probably due to soil particles constantly battering the fence. While we considered re-vegetation as part of the fence protection program, it appears that only tall vegetation will protect the fence; however, this poses other problems to fence maintenance.
7. In 1992, TNC completed installation of a 6’3” tall deer fence around each of the seven patches of forest to prevent further damage by grazing animals. From 1996 through 2001, various sections of fence were replaced due to severe corrosion from harsh environmental conditions. In 2002 and 2003, the fences around the two most biologically important units (Kahue and Kānepu‘u) were upgraded to stainless steel wire in an attempt to fend off corrosion problems. TNCH may decide to replace the fencing for the other units at a later date.
8. Over the past ten years, we have noted the increasing presence of native tree seedlings of many species (previously deer had eaten seedlings). Moreover, mature trees, formerly stripped of leaves and branches to the height a deer can reach, are now re-sprouting from the base.
9. A short, 750-meter self-guided trail was established in the Kānepu‘u unit in 1997 to allow for unguided visitation along the main (unpaved) Polihua Road. This trail has since been determined inadequate in its initial goal of improving community understanding of the preserve’s resources, due to its location away from native-dominated ecosystems. A new interpretive trail will be developed in the future that will encourage local and visitor education on native plants and invasive weeds.

Management Areas/Units

The preserve is divided into seven units. Kahue unit has the highest diversity of rare plants and is important for both restoration and interpretation. Kānepu‘u unit has the largest patches of native forest; interpretation potential here is also great because of its location along a public road. ‘Ahakea unit has rare plants and patches of native forest. The three Paoma‘i units contain nice patches of forest, but these are quite small. The Mahana unit is the most distant unit and is also biologically the lowest priority for management and restoration. See Figure 1.

Management Programs

For each program listed in the following section, we identify a major goal, discuss the management methods and/or any management issues, and detail anticipated management activities.

Program 1: Non-native Species Control

Ungulate Control

Program Goal: Control axis deer in the Kahue and Kānepu‘u fenced units; continue to exclude mouflon sheep and cattle in all units.

In September of 1992, 9 miles of 6’3” tall deer fence was completed, encircling each of the seven preserve units. From 1996 through 2001, various sections of fence were replaced due to severe corrosion from harsh environmental conditions. In 2002 and 2003, the fences around the two most biologically important units (Kahue and Kānepu‘u) were upgraded to stainless steel wire in an attempt to fend off corrosion problems. The other five units are surrounded by aging galvanized and Bezinal fencing. Management activities continue to focus on the removal of axis deer from both the Kahue and Kānepu‘u units. Mouflon sheep have occasionally been found and removed in some units. There are no feral pigs or goats on the island of Lāna‘i.

In FY08, a short section (~ .5 mi) of 6’, Bezinal-coated deer-proof fence was installed from the main Kānepu‘u gate to the Lapaiki fence line in order to increase the effectiveness of ungulate removal (Figure 3). Monitoring will determine the need for additional fencing to facilitate deer removal. Additional fencing may be needed in order to break the largest unit (Kānepu‘u) into more manageable units. If deemed necessary and funding becomes available, additional 6’ deer-proof fencing may be installed in order to enclose native-dominated ecosystems and to facilitate deer removal adjacent to those areas (Figure 4).

Activities:

- Inspect and maintain fences at Kānepu‘u & Kahue units monthly. Inspect fencelines periodically for any weather-induced soil erosion which may require mitigation.
- Repair fences where damaged in other selected units as time permits.
- Conduct periodic hunts in Kānepu‘u & Kahue units, with the goal of complete removal of all animals from native-dominated areas.
- Install new fencing, as deemed necessary, to break up existing units into smaller units to facilitate deer removal from native-dominated ecosystems.

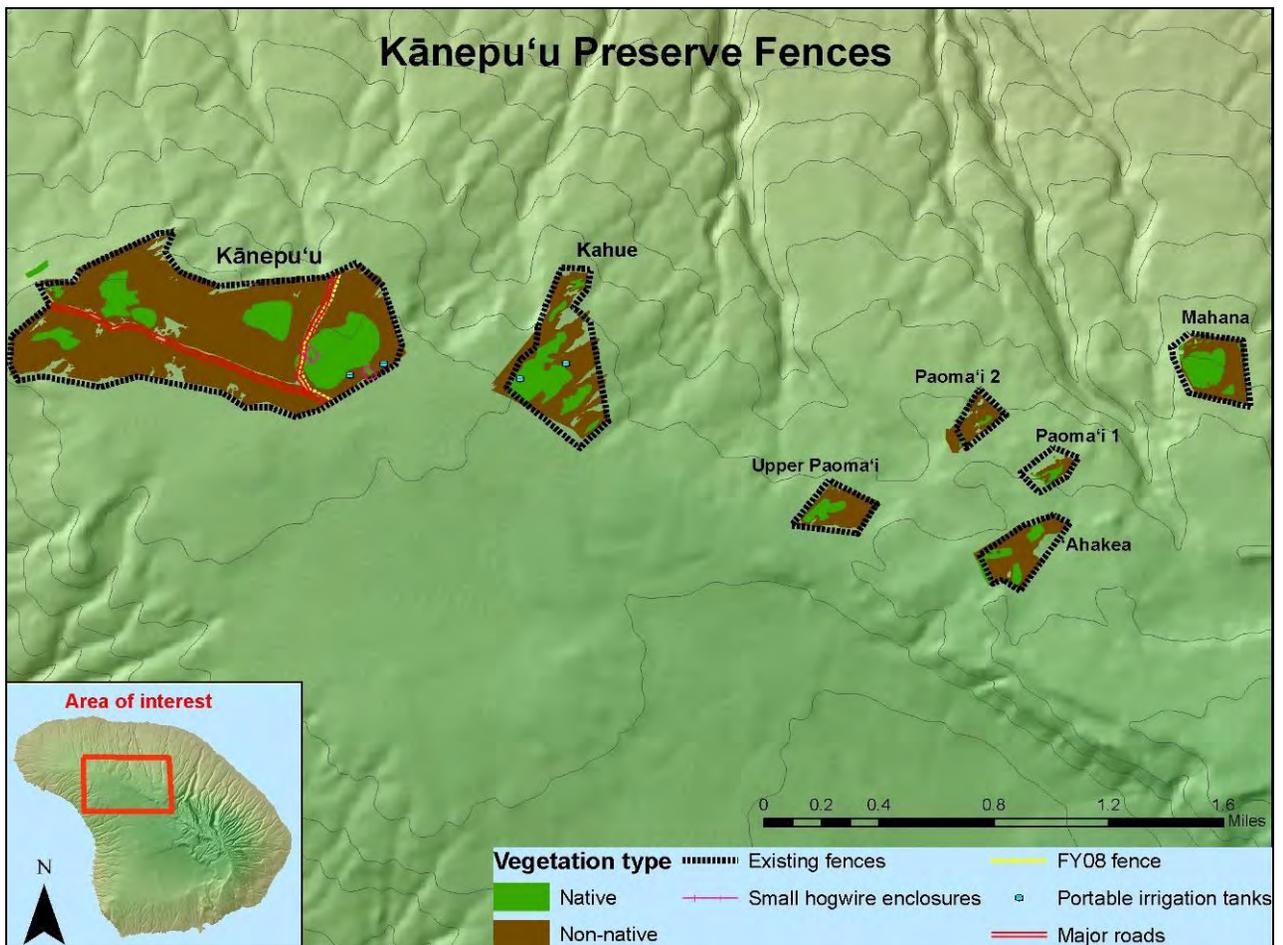


Figure 3. Fences of Kānepe'u Preserve.

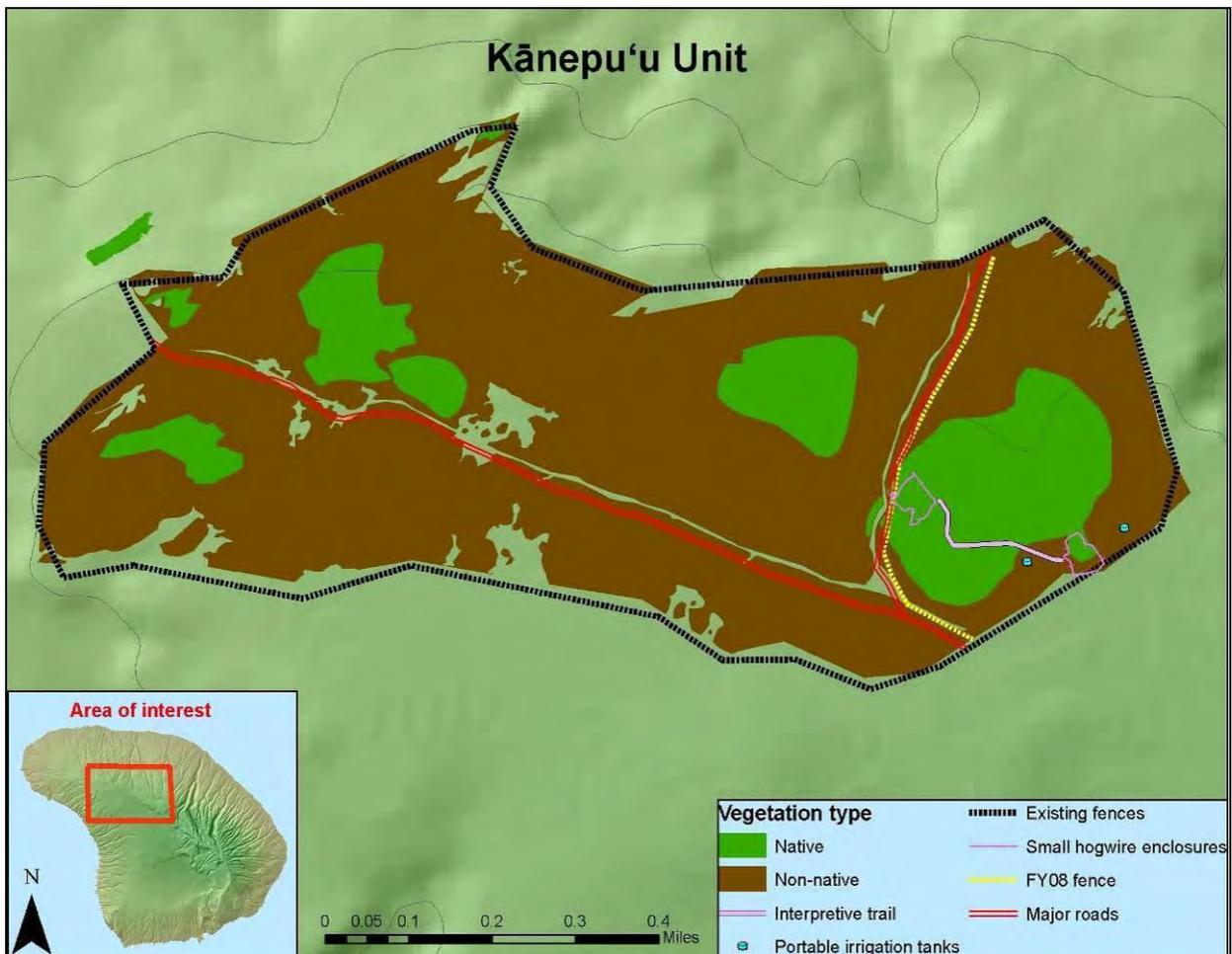


Figure 4. Location of native versus non-native ecosystems with Kānepu‘u Unit. Location of new interpretive trail and irrigation tanks are also depicted.

Weed Control

Program Goal: Assist other groups (e.g., Invasive Species Committees) with regional initiatives for incipient weed control; encourage volunteer groups to remove weeds within or surrounding high quality patches of native vegetation.

A number of non-native plants are well established in the preserve. We have narrowed our focus to controlling habitat-modifying weeds (see Table 1). Our strategy has been, and continues to be, removal of canopy-dominant species in the most intact native forest areas, removal of incipient weeds preserve-wide, and lastly, removal of additional habitat-modifying weeds from wider areas in the preserve. Weed control is accomplished manually, with limited use of herbicides; heavy equipment is not used (see following page). Since 2000, gaps created in the native forest as a result of weed removal have been filled through planting of native species.

Since 1994, we’ve concentrated on the removal of canopy-dominating weeds, primarily *Schinus terebinthifolius* (Christmasberry), from the most intact forest patches. Monitoring and re-treating regrowth remains a growing part of the weed control effort. *Passiflora suberosa* (huehue haole, or corky passion vine) was not documented in the preserve until FY1995; however, we know it is not a new pest because not only it is widespread, but some of the resprouting vines are quite large. It was likely

suppressed by deer. This vine is a major concern because it has become a major pest in other dry forests in Hawai‘i.

We will continue to encourage volunteer groups (e.g., high-school groups, trail and mountain clubs, hunters) to hand-pull and mechanically control weeds in high quality patches of native vegetation. We will also continue to assist MISC in its efforts to control fountain grass (*Pennisetum setaceum*) and prevent its spread to other islands.

A short, 750-meter self-guided trail was established in the Kānepu‘u unit in 1997 to allow for unguided visitation along the main (unpaved) Polihua Road. This trail has since been determined inadequate in its initial goal of improving community understanding of the preserve’s resources, due to its location away from native-dominated ecosystems. A new interpretive trail will be developed in the near future that will encourage local and visitor education on native plants and invasive weeds.

Activities:

- Conduct priority weed control in high quality patches of native vegetation on a monthly basis.
- Support MISC with removal of potentially harmful incipient weeds currently found outside the preserve that could potentially impact Kānepu‘u.
- Work with Invasive Species Committees to develop regional initiatives for incipient weeds.
- Develop a replacement short, interpretive trail to help educate volunteers on weed and native plant identification.

Table 2. Habitat-modifying weed species in Kānepu‘u Preserve

Scientific Name	Common Name
<i>Acacia confusa</i>	Formosan koa
<i>Casuarina</i> sp.	Ironwood
<i>Grevillea robusta</i>	Silk oak
<i>Lantana camara</i>	Lantana
<i>Leucaena leucocephala</i>	Koa haole
<i>Melinis minutiflora</i>	Molasses grass
<i>Panicum maximum</i>	Guinea grass
<i>Passiflora suberosa</i>	Huehue haole
<i>Psidium cattleianum</i>	Strawberry guava
<i>Psidium guajava</i>	Guava
<i>Schinus terebinthifolius</i>	Christmas berry

Small Mammal Control

This program has been suspended due to the elimination of on-island preserve staff and our subsequent inability to check bait stations as frequently as needed to run an effective control program. However, the Maui County coordinator for the Plant Extinction Prevention Program (PEPP), maintains small exclosures with conventional spring-snap rat traps around some *Gardenia* seedlings and notes a significant positive impact of doing so.

Rats and mice are known to damage native ecosystems by consuming or damaging flowers, fruits, and new growth of plants, and by reducing native invertebrate populations. TNCH may decide to resume small mammal control in the near future. This program would focus on reducing the impact of rats and mice on native plant regeneration. Rats and mice would be controlled with snap traps and anti-coagulant bait blocks in bait boxes. Diphacinone is registered for use in natural areas in Hawaii under a Section

24c registration (also known as a special local use registration). All diphacinone use at Kānepe‘u is in accordance with the special local use registration. Bait is deployed in Protecta brand tamper-proof boxes. The state Department of Agriculture is tracking diphacinone use in Hawai‘i, and requires annual notification of use. Bait is limited to 16 ounces per station at any one time. All areas baited are posted in accordance with requirements. If approved for use in Hawaiian natural areas, we may also deploy other types of rodenticides that are shown to be safe and effective.

An assessment of the rat population of Kānepe‘u was conducted in January 1995. The results of this assessment included a recommendation to use bait stations in 50-meter grids around rare plant populations. U.S. Fish and Wildlife recovery plans for both *Gardenia brighamii* and *Santalum freycinetianum* var. *Lāna‘iense* state that rodent control efforts should be implemented for these species at Kānepe‘u. Both of these species usually have fruit on them year-round. Other rare plant taxa, such as *Bonamia menziesii* and *Reynoldsia sandwicensis*, would probably also benefit from rodent control during fruiting stages.

Activities:

- Set rat traps around key rare species as time allows.

Program 2: Fire Control

Program Goal: Attempt to mitigate fires in the preserve.

Wildfire is a major threat and has diminished the extent of native vegetation in the preserve in the past. Vehicle traffic along roads passing through or near the preserve is the primary source of ignition. Nevertheless, the Conservancy is required to accommodate public access through the preserve along these or suitable alternate roads. A 15-20 foot wide swath of cleared vegetation along the fence line of each preserve unit will be maintained as a fuel break for fire prevention where feasible.

TNCH staff work with the Division of Forestry and Wildlife (DOFAW) under a Memorandum of Understanding for fire suppression at Kānepe‘u Preserve, and meet with DOFAW and county fire personnel on Lāna‘i periodically to discuss our fire management plan and address fire-related issues.

Activities:

- Maintain fuel breaks along fence line, as needed, to accommodate mower.

Program 3: Restoration, Research and Monitoring

Restoration

Restoration activities will focus on the Lapaiki area in Kānepe‘u unit. We plan to use contractors and volunteers to collect seeds incidental to other preserve activities and work with cooperative nurseries to propagate off-site. Once seeds are propagated they will be outplanted in Lapaiki and other units. The irrigation system will be restored via installation of two water tanks at Kahue and two water tanks to feed Kānepe‘u iki in Kānepe‘u if permission can be gained to use an existing water line. Tanks have been donated and range in size from 400 to 1,000 gallons. No construction or physical improvements will be necessary.

Activities:

- Improve irrigation system to supply water for restoration activities.

Research and Resource Monitoring

No major activities or expenditures are proposed. We plan to use Maui staff to perform rare plant monitoring incidental to other preserve activities and provide logistical assistance to researchers as staff time and budget permits. In addition, PEPP maintains small exclosures around *Gardenia* seedlings, conducting small-scale rat and weed control. We will continue to support PEPP in such efforts.

Program 4: Community Outreach

No major activities or expenditures are proposed. As time allows we will continue to build the capacity of qualified and interested groups to assist with the management of the preserve.

Program 5: Watershed Partnerships

On October 11, 2001 a Memorandum of Agreement was signed, bringing together the following entities into a Lānaʻi Forest and Watershed Partnership: Castle & Cooke Resorts, LLC (formerly known as Lānaʻi Company Inc.), Hui Mālama Pono O Lānaʻi, Maui County Board of Water Supply, State of Hawaiʻi Department of Land and Natural Resources Division of Forestry and Wildlife, U.S. Fish and Wildlife Service, The Nature Conservancy, the United States Department of Agriculture Natural Resources Conservation Service, Molokaʻi-Lānaʻi Soil and Water Conservation District, Lānaʻi Water Advisory Committee, State of Hawaiʻi Commission on Water Resource Management, and Maui County. TNC will participate in partnership meetings and assist when feasible.

Socioeconomic

Public education and the creation of conservation opportunities on Lānaʻi are the primary socioeconomic benefits expected to result from the proposed project. No negative socioeconomic effects are anticipated.

The Nature Conservancy, in partnership with the state, is committed to fostering community awareness of Hawaiʻi's natural resource and restoration issues, and to using volunteers to help attain management goals. As was previously mentioned, an interpretive program has been developed with guidance from members of *Malama Pono O Lānaʻi* and staff of Castle & Cook Resorts, LLC. A self-guided interpretive trail in Kānepuʻu unit was established in 1997; however we have since discovered a better site for interpretive opportunities in the same unit, closer to large native vegetation patches. Layout of this trail is nearly complete.

Environmental

This project has benefited, and will continue to benefit, the environment by maintaining and enhancing a rare native ecosystem, and preserving rare and endangered Hawaiian plants. Seven rare plant taxa currently known from Kānepuʻu Preserve are better protected as a result of this project.

III. Summary of Major Impacts

Major Positive Impacts

- Maintenance of seven fenced units with the two most biologically important units to become ungulate free.
- Reduction of ungulate activity to a level that will promote and sustain measurable recovery of native vegetation in native-dominated portions of management units.
- Reduction of the range of habitat-modifying weeds, and prevention of introduction of new problem weeds.
- Tracking biological resources in the preserve, and evaluation of changes in these resources over time to identify new threats.
- Logistical support to approved research projects will improve management understanding and protection of the preserve's resources as well as other natural areas in the state.
- Prevention of the extinction of rare species in their preserve.

Major Negative Impacts

One potential impact is the accidental introduction or spread of new weed species by managers or visitors on equipment, supplies, or transport vehicles. Also, because herbicides are sometimes used to control habitat-modifying weeds (though we follow strict procedures in accordance with the Hawaii Dept. of Agriculture and official herbicide labels) in the preserve, there is a remote possibility of localized soil contamination. If we opt to use rodenticides, there will be a very small chance that non-target animals may be harmed. It is also possible that there will be some visitor impacts along the interpretive trail in Kānepu'u unit, though visitors will always be accompanied by a docent. However, with care, no major negative impacts are expected to result from the proposed activities.

IV. Proposed Mitigation Measures

To prevent the accidental introduction or spread of weed or other pest species, staff, contractors, volunteers, and hike participants entering sensitive portions of the preserve will be required to clean their clothing, boots, equipment, and camping gear of soil and plant material. We also monitor the areas along roads and trails to detect new alien species introductions.

To prevent contamination of soil with herbicides, all field staff have been trained in the safe application of approved herbicides. Weed control staff are licensed by the state Department of Agriculture's pesticide branch. Similarly, any diphacinone use at Kānepu'u will be in accordance with the special local use registration, or with a state Department of Agriculture experimental use permit. One of the requirements of the special local use registration is to notify the Department of Agriculture before planned use of the pesticide. Staff supervising work conducted under an experimental use permit will have the required state Department of Agriculture Category 10 certification. We will utilize tamper-

proof or tamper-resistant bait boxes designed to minimize the chances of non-target animal poisoning. The Nature Conservancy will continue to work with the informal Toxicant Registration Working Group to employ the safest, most effective rodent control techniques.

With regard to visitor impacts, we will monitor the area along the interpretive trail, and discontinue public use of the trail if we detect significant impacts.

V. Alternatives Considered

Although The Nature Conservancy considered a variety of alternatives involving lower levels of management, we decided that the actions outlined in this assessment are all necessary for the immediate protection and eventual restoration of Kānepu‘u’s rare dryland ecosystem. Slowing the pace of management could jeopardize progress made in controlling deer and habitat-modifying weeds.

Similarly, a no-action alternative would promote the loss of both native species and one of Hawai‘i’s few remaining native dryland forest communities.

VI. Determination

No significant negative impacts to the environment are expected to result from the implementation of the proposed activities. The anticipated determination for the Kānepu‘u Preserve Management Project and Long-range Management Plan is a Finding of No Significant Impact (FONSI).

VII. Findings and Reasons Supporting Determination

In summary, all activities are expected to be beneficial, or to have no long-term negative effect. The proposed activities are expected to benefit native species (including rare and endangered plants) and a rare native ecosystem. Specific benefits include: protection from deer and other harmful alien animals, control of invasive alien plants (which could displace native species), ecosystem restoration, and propagation and outplanting of rare plants. Public education is one significant socioeconomic benefit.

This conclusion and determination was based on analysis of the following significance criteria regarding impact on the environment established in the EA preparation guidelines:

(1) *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The proposed activities are expected to benefit native species (including rare plants and animals) and native natural communities in the project area, and enhance watershed on adjacent lands. For example, ungulate control will protect rare plants and rare natural communities from browsing and other types of ungulate damage (including the spread of certain weeds). Active weed control in the project area will also help protect rare plants and natural communities, and will indirectly help rare and other native animals. Active management of Kānepu‘u Preserve will also promote a more stable water regime both in and below the project area by reducing the potential for rapid runoff from disturbed or degraded areas.

Through a rigorous cleaning and monitoring program, the introduction or spread of new weed species by humans is expected to be minimal. Management-related impacts on historical resources in the area will be avoided. Furthermore, the risk of herbicide contamination is low because: 1) only small volumes of approved herbicides are used, 2) staff are well-trained in herbicidal application, and 3) all chemical use is in compliance with the state Department of Agriculture's pesticide branch.

This project and proposed land use will not harm or impact cultural resources. This project in essence protects the native plants, animals and natural environment that are critical to Hawaiian culture. Given the sparse historical/traditional use of the lands comprising the Kānepu'u Preserve, reflected by a lack of archeological sites, the key mitigation for cultural impacts lie in providing for protection of irreplaceable native species and ecosystems forming the living foundation of Hawaiian culture, and ensuring appropriate and sustainable access to these resources for traditional use.

(2) Curtails the range of beneficial uses of the environment.

Our proposed natural resource management actions aim to conserve and enhance overall current uses of the environment by protecting native habitats and species for education, culture, recreation, economic uses, climate change, soil and natural flood mitigation. There will be no significant alterations to the existing terrain. All management activities are expected to enhance the physical condition of the surrounding area. Ungulate control activities are appropriate as this is not a designated hunting area. If new fences were determined necessary, they would only require a minimum of clearing and vegetation disturbance. Other activities like monitoring, education, and research only occur occasionally and do not involve any structures or visual impacts that would affect the surrounding area.

Maintaining the natural, physical, and environmental aspects of the land through abatement of the key threats will help preserve the beauty and open space characteristic. Over time these aspects will improve by halting degradation caused by feral animals, the worst invasive weeds, and other threats. As there is a clear policy and established procedure for traditional Hawaiian access (TNCH 1996), this project helps to ensure cultural resources.

(3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions or executive orders.

The proposed actions are consistent with the environmental policies established in Chapter 344, Hawai'i Revised Statutes (HRS) and conserve threatened and endangered species, as covered by Chapter 195D, HRS. Management actions also support the purpose of the State land use designation of Conservation District under Chapter 13-5 by "conserving, protecting, and preserving the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare." The actions are consistent with goals and objectives of the Lāna'i Forest Watershed Partnership and with the policies outlined in the Memorandum of Understanding of the Hawai'i Association of Watershed Partnerships. The actions are also consistent with various federal and state rare species recovery plans.

(4) Substantially affects the economic or social welfare of the community or state.

The effects on the economic and social welfare of the community and state are substantially positive. The project provides great social welfare value by conserving native habitats and species, culture, recreation, economic livelihoods, and education.

(5) Substantially affects public health.

Public health will continue to benefit from Kānepu‘u Preserve management by maintaining the climate and air-filtering benefits of a healthy dryland forest. This project will reduce public health risks by controlling non-native animal species. Axis deer are disease vectors and raise public health concerns. *Leptospira* and other pathogens are transmitted by the feces, urine, and carcasses of animals. *Cryptosporidium*, a disinfection-resistant protozoan, is transmitted by rodents, deer, goats, cattle, and cats. Programs already in place are aggressively addressing the problem of deer. Should cattle or mouflon sheep ever become a problem, they would be addressed as well.

Public health should not be affected by the use of herbicides and/or rodenticides in this project. Appropriate permits and mitigation measures described in Section IV will ensure localized and safe use of herbicides and rodenticides with minimal potential to impact non-target species.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities.

There are no population changes or effects on public facilities anticipated. There are no full-time residents in the Kānepu‘u Preserve Management Area or existing extensive public facilities. The few guided or limited hiking opportunities will not have an effect on public facilities.

(7) Involves a substantial degradation of environmental quality.

The goal of the management actions is to keep intact and enhance the native habitats and species in and surrounding the project area, its hydrological elements and features, and the existing watershed. Therefore, proposed actions will not substantially degrade environmental quality, but rather will conserve and enhance the existing high level of environmental quality found in the area for the long-term.

(8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.

Management actions have been described and identified in a comprehensive manner across natural resource management disciplines for the entire Kānepu‘u Preserve. Since proposed management actions are to conserve and enhance existing conditions and prevent further degradation to the Kānepu‘u Preserve and the Lāna‘i watershed, negative cumulative effects are not anticipated.

(9) Substantially affects a rare, threatened, or endangered species, or its habitat.

Proposed management actions will combat existing threats to rare, threatened, or endangered species and habitats. Fencing, animal removal, surveying and monitoring, and invasive weed and non-native animal management are aimed at protecting and enhancing these species and habitats. Several of the

management actions also support existing plans (e.g., State Comprehensive Wildlife Conservation Strategy, U.S. Fish and Wildlife Service Recovery plans) that are geared for the protection and perpetuation of rare, threatened, or endangered species and their habitats. Therefore, anticipated affects are positive and no substantial negative effects are anticipated.

(10) *Detrimentially affects air or water quality or ambient noise levels.*

The protection of the native forest and watershed for their air and water quality services are one of the main goals of the proposed management actions. Healthy forests absorb carbon dioxide and provide oxygen as well as filter water and mitigate sedimentation in streams. Therefore, impacts to air and water quality will be positive, not detrimental. Temporary disturbance of ambient noise levels may occur during transportation of materials or staff access via vehicle. However, given that proposed areas for such activity are far from communities, actions will occur during daylight hours, actions are for short durations, and no residents live in these areas, impacts are not anticipated to be detrimental.

(11) *Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.*

The purpose of several of the proposed management actions is to protect sensitive areas through fencing, non-native animal removal, and invasive weed control, as well as mitigate potential impacts to coastal waters. As such, management actions are geared toward conserving such sensitive areas and actions are not anticipated to create any damaging effects to areas.

(12) *Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.*

Management actions are geared toward conserving the socioeconomic value of Kānepu‘u Preserve by keeping intact scenic vistas and viewplanes. No buildings or large structures are being proposed. The upper most range of existing fencing height is less than 7 feet and its location in remote areas mean that residents should not be able to see it. If additional fencing is needed in the future, the maximum fence height would be no higher than 8 feet.

(13) *Requires substantial energy consumption.*

Energy consumption of the management actions will be derived mainly from vehicle use for management and any hand power tools for fence construction and invasive weed management and other management activities. However, such energy consumption is linked with individual projects that are short-term or temporary in nature. No infrastructure or similar elements that require ongoing energy consumption is being proposed. As such, management actions are not anticipated to require substantial energy consumption.

VIII. LIST OF PERMITS REQUIRED FOR PROJECT

All of the Kānepu‘u Preserve project area is zoned by the State as Conservation District, in the Limited Subzone. A Conservation District Use Permit (LA-2535) for ongoing management actions in Kānepu‘u Preserve was received in 1992; this permit covers ongoing management activities including protecting fencing, ungulate control, weed control, habitat restoration, and firebreak maintenance. For specific

management actions that are not covered under CDUP LA-2535, a Site Plan Approval (SPA) process will be undertaken in advance of management actions. The Office of Conservation and Coastal Lands will provide the Site Plan Approval pursuant to HAR 13-5-23. The project area is not in a Special Management Area; therefore county permits are not needed at this time. Specific work related to threatened and/or endangered species will require appropriate permits from the State and Federal agencies. Additional necessary permits, such as those from the Board of Land and Natural Resources, will be sought once the Environmental Assessment determination is provided.

IX. EA Preparation Information

This document is an updated version of the Final Environmental Assessment for Kānepu‘u Preserve Natural Area Partnership, prepared in 1997.

This Environmental Assessment analyzes our ongoing conservation management actions into the indefinite future. It is being prepared to support the NAPP contract renewal process. The primary EA preparer is:

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X. Appendices

Appendix 1 Rare Plants Of Kānepu‘u Preserve

SCIENTIFIC NAME	COMMON NAME	HERITAGE RANK (a)	FEDERAL STATUS (b)
<i>Bidens micrantha</i> ssp. <i>kalealaha</i> *	Ko‘oko‘olau	G3T1	LE
<i>Bobea sandwicensis</i>	‘Ahakea	G1	SOC
<i>Bonamia menziesii</i>		G1	LE
<i>Gardenia brighamii</i>	Nā‘ū	G1	LE
<i>Haplostachys munroi</i> *		GH	SOC
<i>Hibiscus brackenridgei</i> ssp. <i>brackenridgei</i> ¹	Ma‘o hau hele	G1T1	LE
<i>Nesoluma polynesianum</i>	Keahi	G2	SOC
<i>Nothocestrum latifolium</i>	‘Aiea	G1	C
<i>Reynoldsia sandwicensis</i>	‘Ohe	G2	SOC
<i>Santalum freycinetianum</i> var. <i>Lāna‘iense</i>	‘Iliahi	G3T1	LE
<i>Vigna owahuensis</i> *		G1	LE

* Plants known historically from preserve

¹ Planted in the preserve; not historically known from area

(a) NatureServe Rank:

G1=Species critically imperiled globally (typically 1–5 current occurrences)

G2=Species imperiled globally (typically 6–20 current occurrences)

G3=Species vulnerable globally (typically 21–100 current occurrences)

GH=Species possible extinct

T1=Subspecies or variety critically imperiled globally

T2=Subspecies or variety imperiled globally (typically 6–20 current occurrences)

(b) Federal Status:

LE=Listed endangered

SOC=Species of concern

C=Candidate

Appendix 2 References and Related Documents

Management Plans

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Appendix 3
Cultural Impact Assessment
for
KĀNEPU‘U PRESERVE

**An Assessment of Impacts on Cultural Sites and Practices
at Kānepu‘u Preserve, Lāna‘i**

In accordance with Chapter 343, HRS, The Nature Conservancy of Hawai‘i (TNCH) is submitting this information to help identify and address the effects of its ongoing land management actions on native Hawaiian cultural sites and practices at its Kānepu‘u Preserve. All actions being proposed for reauthorization in this *Environmental Assessment* are substantially similar to, and relevant to, the actions previously considered in the *Final Environmental Assessment for Kānepu‘u* for which the Conservancy received a "Finding of No Significant Impact" in 1997 (TNC 1997).

In ascertaining the potential impacts of its land management activities on cultural sites and practices, the Conservancy consults regularly with appropriate authorities, reviews published and unpublished literature, and takes advantage of the cultural expertise of current and former staff: Iokepa Naeole (former TNCH Maui Outreach Coordinator and a founding member of Na Kūkulu, Hawaiian cultural practitioners) and Dr. Sam Gon III (current TNCH Senior Scientist and Cultural Advisor). The Conservancy is concerned about the protection of cultural sites and practices within its preserves and strives to conduct all land management activities in a sensitive manner.

A. Summary Description of the Affected Environment

Location

The 590-acre Kānepu‘u Preserve consists of 7 disjunct units and encompasses portions of traditional Hawaiian ahupua‘a (land divisions): Ka‘a, Paoma‘i, and Mahana (Ziegler 1986). The western unit of the Preserve, the Kānepu‘u unit, is in the ahupua‘a of Ka‘a. The central units, named Paoma‘i 1, Paoma‘i 2, Upper Paoma‘i and ‘Ahakea, are within the ahupua‘a of Paoma‘i. The eastern unit of the Preserve, Mahana, is within the ahupua‘a of Mahana.

All seven units are surrounded by sustained yield game management areas or by cattle/horse pasture. Grazing deer, sheep, and cattle have degraded most of the remaining native vegetation on these surrounding lands. Hence, the areas immediately adjacent to Kānepu‘u Preserve are not particularly biologically significant.

Historical/Archaeological and Cultural Sites

Ungulates, particularly pigs, deer, goats, cattle, and sheep, are known to disturb archaeological sites because they knock over stone walls, turn over soil, initiate accelerated erosion and landslides, and spread noxious weeds, which in turn can destroy the integrity of archaeological sites by growing through

and around them. On Lāna‘i, axis deer and mouflon sheep run wild, and invasive weeds abound. One of our long-term goals at the Preserve is to keep ungulates out of the fenced units and to control invasive weeds.

To assess the potential effect of our management actions on archaeological sites and cultural practices, we conducted individual and group interviews with kūpuna on Lāna‘i. Additional information was obtained from *The Island of Lāna‘i: A Survey of Native Culture* (Emory 1924), *The Story of Lāna‘i* (Munro, no date), and *Cultural and Natural History of Kānepe‘u, Lāna‘i and Its Potential for a Natural Area Preserve* (Ziegler 1986). In preparing the latter, the author, Marjorie Ziegler, reviewed the literature on Kānepe‘u and Lāna‘i, including general publications, biological reports and assessments, and unpublished manuscripts and documents. To supplement her literature search, Ziegler obtained additional information from conversations and correspondence with a number of individuals (Ziegler 1986).

Information gathered from these interviews and obtained from the documents mentioned above suggests that no cultural sites are known from within the Preserve. For example, Emory (1924) did not find any indications of traditional Hawaiian structures on the flats around Kānepe‘u during his survey of the island. (However, he did find house sites well represented along the coast to the north and west of Kānepe‘u and elsewhere on the central plateau. This suggests temporary occupation of Kānepe‘u by Hawaiians who may have stayed in the forest for days at a time gathering plants, feathers, and wood, but perhaps preferring to live in more hospitable locations on the plateau and closer to the sea [Ziegler 1986, 1989].) Sol Kaho‘ohalahala, a cultural expert associated with Hui Mālama Pono O Lāna‘i (a cultural preservation society on Lāna‘i), was not aware of any archeological sites in Kānepe‘u Preserve itself. Additionally, Sol Kaopuiki, a respected cultural expert and Lāna‘i kūpuna, was also not aware of archeological sites in the Preserve. He informed us that there are cultural sites outside the Preserve, near Keahikawelo, that may not contain physical archeological remains, but nevertheless may be considered traditional cultural property because of their importance in story (legend).

In the recent past, we had obtained information on the cultural value of Kānepe‘u Preserve and surrounding environs from a field inspection by Dr. Boyd Dixon (Director of the Department of Hawaiian Homelands Archaeological Crew on Maui) and a review conducted by the State Historic Preservation Division (SHPD) (Hibbard 1996). The review was based on historic reports, maps, and aerial photographs maintained at the SHPD. In 1996, Dr. Dixon did not observe any surface evidence of cultural remains or historic sites within the two preserve units he visited (the Kānepe‘u and Kahue units). According to SHPD, the only known site nearest to the Preserve is an *‘ulu maika* playing field that lies about 1 kilometer south of the Kānepe‘u Preserve fenceline. However, this site was not relocated during a statewide inventory in 1974, and is presumed destroyed.

Cultural Practices

At Kānepe‘u Preserve, we focus on protecting native forest cover by constructing fences and removing non-native animals and weeds. Neither of these activities impedes human access or cultural practices. Any person physically capable of hiking or driving to any of the fenced units should have no problem crossing through the gates. The contractor hired by TNCH monitors admission of visitors to the Preserve. Visitors need to contact TNCH to ensure that there is no hunting conducted during their time of visit. Guided hikes can be arranged for both small and large groups. The former community outreach program included a self-guided interpretive trail in the Kānepe‘u unit. This trail has been removed, as it

did not best reflect the Preserve's native natural resources. A new interpretive trail is currently being established adjacent to two native-dominated exclosures within the Kānepu'u unit. This will offer a unique opportunity to see the work ongoing at the Preserve and view rare plants that once existed throughout the native dryland forest. The brief trail signs were designed to match the existing interpretive signs on Lāna'i at the request of Castle & Cooke Resorts, LLC (formerly the Lāna'i Company) and Hui Mālama Pono O Lāna'i to ensure a feeling of continuity with other important island sites.

According to the cultural experts we interviewed, the Kānepu'u area has not been used by hula practitioners or other native peoples for cultural practices or gathering. Thus, no problems were reported regarding access for traditional gathering practices. If a request for traditional gathering practices were received there would be no problems regarding access as long as TNC staff are contacted (for safety reasons regarding potential scheduling conflicts with hunters).

In the 1970s, 1980s, and 1990s, dedicated volunteers and the group Hui Mālama Pono O Lāna'i built four small fenced exclosures that helped protect patches of native forest and associated rare plants. Without these efforts, the last remnants of this rare Hawaiian forest type would probably have been destroyed.

The land management efforts occurring in Kānepu'u Preserve today help protect and maintain populations of native plants important to native Hawaiian cultural practices. Examples of native Hawaiian plants that occur in the project site include: laka (*Diospyros sandwicensis*), one of the plants of Laka (goddess of hula), whose wood was used to construct sacred houses and heiau; 'āla'a (*Pouteria sandwicensis*), whose milky sap was used as birdlime to catch small birds and as a hardwood for house construction and tools; olopua (*Nestegis sandwicensis*), a preferred firewood since it burned with a hot flame even when green; 'ahakea (*Bobea sandwicensis*), once used as gunwales of outrigger canoes because of its yellow color and durability; and 'iliahi or the endangered sandalwood tree (*Santalum freycinetianum* var. *ense*), once used to give a pleasant scent to tapa cloth. By protecting ethnobotanical plants, we are enhancing the renaissance of Hawaiian culture.

B. General Description of the Action's Effect on Cultural Sites and Practices

The Conservancy is committed to reversing the current degradation of natural resources caused by the damaging effects of non-native plants and animals across the landscape. Reduced populations of ungulates and aggressive weeds will also help to protect the integrity of the cultural sites. None of the fences established in the Preserve to keep out ungulates impede legitimate public access on established trails. As corroded fence wire needs replacement, field workers will be instructed to halt work and report to proper authorities should they encounter evidence of an archaeological site.

With regard to Kānepu'u Preserve proper, the State Historic Preservation Division (SHPD) determined that, in general, our land management activities will have no effect on significant historic sites. Should the Conservancy's land management programs be expanded in the future, "especially so as to include interpretation of cultural resources, rehabilitation of historic sites within a Preserve, and improvements to historic trails", SHPD recommends that additional work be done prior to implementing any such elements (Hibbard 1996).

The Nature Conservancy has not received confidential material or conflicting information in regard to identified cultural resources, practices, and beliefs.

C. Literature Cited

- Emory, K.P. 1924. The Island of Lāna‘i: A survey of Native Culture. *B.P. Bishop Mus. Bull. 12*. Bishop Mus. Press, Honolulu, HI.
- Hibbard, D. 1996. Memorandum (dated November 14, 1996) from the State Historic Preservation Division to Michael Buck, Administrator, Division of Forestry and Wildlife. Reprinted in: The Nature Conservancy of Hawai‘i. 1997. *Final Environmental Assessment for Kānepu‘u Preserve Natural Area Partnership*.
- Munro, G.C. (no date). *The Story of Lāna‘i*. Unpubl. typescript. 139 pp. (Located at the B.P. Bishop Museum Library, Honolulu.)
- The Nature Conservancy of Hawai‘i. 1997. *Final Environmental Assessment for Kānepu‘u Preserve Natural Area Partnership*.
- The Nature Conservancy of Hawai‘i. 2003. *Kānepu‘u Preserve, Lāna‘i, Hawai‘i: Long- Range Management Plan, Fiscal Years 2004 – 2009*. Unpublished document prepared for the Department of Land and Natural Resources Natural Area Partnership Program.
- Ziegler, Marjorie F. Y. 1986. *The Cultural and Natural History of Kānepu‘u, Lāna‘i and its Potential for a Natural Area Preserve*. University of Hawai‘i Manoa, Senior Honors Thesis.
- Ziegler, Marjorie F. Y. 1989. Kānepu‘u: A remnant dry forest on Lāna‘i, Hawai‘i. *‘Elepaio* 49(4): 17–24.

Appendix 4
LRMP Preconsultation Letters, Comments, and Responses

From: Danielle Jayewardene [Danielle.Jayewardene@noaa.gov]
Sent: Tuesday, June 30, 2009 10:45 AM
To: Alison C. Cohan
Cc: Lance Smith; Lisa Van Atta; Alan Everson
Subject: Re: Kane Pu'u Preserve LRMP

Dear Ms Cohan,

In response to the message below: PIRO's Habitat Conservation Division does not consider that there will be adverse impacts to marine benthic resources, e.g. coral reefs, from the proposed actions described in the LRMP for Kanepu'u preserve on Lanai.

On the contrary, the proposed ungulate-, invasive plant-, and fire control in the Preserve, will potentially benefit the marine environment and NOAA trust resources by reducing soil erosion and thus sediment input to any streams in the area and thus nearshore marine environment.

Feel free to contact me with any questions you may have.

Aloha!

Danielle

Lance Smith wrote:

> Ms. Cohan, thank you for your June 22 letter to the Pacific Island
> Regional Office (PIRO) of NOAA Fisheries inviting us to comment on the
> environmental assessment (EA) for your new long range management plan
> (LRMP) for Kanepu'u preserve on Lanai. PIRO's Protected Resources
> Division is responsible for implementation of the Marine Mammals
> Protection Act and the Endangered Species Act (marine species), so we
> are involved primarily in the conservation of marine mammals and
> turtles. As the Kanepu'u Preserve is entirely upland and has little
> effect on these species, we have no comments on the LRMP.

>

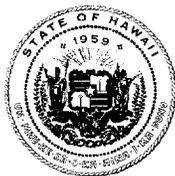
> PIRO's Habitat Conservation Division is responsible for implementation
> of a variety of marine habitat protection mandates, so I have copied
> them on this message in case they wish to comment (letter is
> attached). Thanks you for contacting NOAA Fisheries, Lance

>

--

Danielle Jayewardene Ph.D.
Coral Reef Ecologist
NOAA, Pacific Islands Regional Office
1601 Kapiolani Blvd, Suite 1110
Honolulu, HI 96814
Phone # (808) 944 2162
Fax # (808) 973 2941

LINDA LINGLE
GOVERNOR



RUSS K. SAITO
COMPTROLLER

BARBARA A. ANNIS
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810

(P)1193.9

JUL - 7 2009

Ms. Alison Cohan, Field Representative
The Nature Conservatory Maui
81 Makawao Avenue, Suite 203A
Makawao, Hawaii 96793

Dear Ms. Cohan:

Subject: Early Consultation for Draft Environmental Assessment (EA) on the Kanepuu Preserve
Long Range Management Plan for Years 2011 through 2016

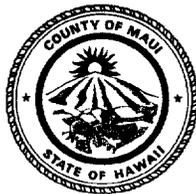
Thank you for the opportunity to provide early consultation comments on the Kanepuu Preserve Long Range Management Plan for Years 2011 through 2016. The management plan does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer. Accordingly, we do not wish to receive a copy of the Draft EA.

If you have any questions, please call me at 586-0400 or have your staff call Mr. Clarence Kubo of the Public Works Division at 586-0488.

Sincerely,

Handwritten signature of Russ K. Saito in cursive script.
RUSS K. SAITO
State Comptroller

CHARMAINE TAVARES
Mayor



TAMARA HORCAJO
Director

ZACHARY Z. HELM
Deputy Director

(808) 270-7230
FAX (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

July 7, 2009

Ms. Alison Cohan
The Nature Conservancy
Maui Program
P.O. Box 1716
Makawao, Hawaii 96768

SUBJECT: Kanepu`u Preserve

Dear Ms. Cohan:

We have reviewed the Kanepu`u Long-Range Management Plan and have no comments or objections to submit at this time.

Thank you for the opportunity to review and comment on this matter. Please feel free to contact me or Mr. Patrick Matsui, Chief of Parks Planning and Development at 270-7387 should you have any other questions.

Sincerely,

TAMARA HORCAJO
Director of Parks & Recreation

c: Patrick T. Matsui, Chief of Parks Planning and Development

TH:PTM:do

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 523-4730 • Internet: www.honolulu.gov

MUFI HANNEMANN
MAYOR



WAYNE Y. YOSHIOKA
DIRECTOR

SHARON ANN THOM
DEPUTY DIRECTOR

TP6/09-320506R

July 8, 2009

Ms. Alison Cohan
Field Representative
The Nature Conservancy Maui
81 Makawao Avenue, Suite 203A
Makawao, Hawaii 96793

Dear Ms. Cohan:

Subject: Pre-Consultation - Draft Environmental Assessment (DEA) for
Kanepuu Preserve, Lanai

This is in response to your letter requesting our review and comments on the pre-consultation for a Draft Environmental Assessment (DEA) for the subject project.

We have no comments to offer at this time. Also, we do not need a copy of the DEA when it is published.

Should you have any questions on the matter, please contact Mr. Brian Suzuki at 768-8349.

Very truly yours,

A handwritten signature in black ink, appearing to read "Wayne Y. Yoshioka", is written over the typed name.

WAYNE Y. YOSHIOKA
Director

From: Fern.P.Duvall@hawaii.gov
Sent: Tuesday, July 14, 2009 2:23 PM
To: Alison C. Cohan
Cc: Pat Bily; Randall.W.Kennedy@hawaii.gov
Subject: Comments to Kanepu'u Preserve, Lanai HI Draft LR Management Plan FY 2011-2016

Alison:

I provide a few comments to the draft. Overall very solid plans. Can your plans be better integrated to the LHWP area through contact to Lanaihale Project staff DOFAW-PCSU has in place, and Kepa Maly? We do quite a bit of outreach for the higher forests.

General:

I fully agree that fencing and then removal and permanent exclusion of ungulates should be the primary management goal for Kanepu'u Preserve (KP). It makes little sense to do vegetation restoration work, especially for rarer elements, if ungulates are still present inside the fences. Fire breaks are needed - excellent that you stress need for them.

Specific:

At the end of December 2008 the endangered Blackburn's Sphinx moth (*Manduca blackburni*- or Mabl) were discovered in good numbers on Lanai for the first records ever - they were found on Indian Tree Tobacco (*Nicotiana glauca*). 'Aiea (*Nothocestrum latifolium*) is in distinct decline on Lanai and no one actually was able to determine if the moth larvae were on any of the remaining trees or in KP. It may be worth planning for Mabl at KP. Hobdy reports the tallest trees on Lanai were always the 'aiea. When ungulates are removed it may be that funding to help with the management could be derived through 'aiea outplanting, and Mabl recovery efforts at KP.

Page 6. Birds. 'Amakihi have not been seen since the early 1980's on Lanai. We have searched since 2006 on Lanaihale with no record.

'Elepaio to my knowledge was not ever recorded, even from pre-contact or subfossil finds, from any Maui County islands.

Page 8.

Fencing is again best management to pursue. Use of stainless steel should be installed at all units of KP. Maintaining fences is a priority action for all units for the entire 2011-2016 period.

Page 9. Cameras could detect if deer do enter KP from Polihua Road before fencing is proposed. If detected then fencing should occur along Polihua to prevent ingress.

If you have questions please let me know, contact info is below. Thanks for the opportunity to give my few comments.

Aloha!
Fern

Dr. Fern P. Duvall II - Wildlife Biologist
Department of Land and Natural Resources
Division of Forestry & Wildlife
54 South High Street, Room 101

Wailuku, Hawaii 96793
Phone: (808) 873-3502, Fax: (808) 873-3505
Web Page: <http://hawaii.gov/dlnr/dofaw>
E-mail: fern.p.duvall@hawaii.gov

[This communication may contain confidential information. Please do not cite or disclose without express permission of the author.](#)

CHARMAINE TAVARES
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955



RALPH NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793

July 14, 2009

Ms. Alison Cohan, Field Representative
THE NATURE CONSERVANCY MAUI
81 Makawao Avenue, Suite 203A
Makawao, Maui, Hawaii 96768

Dear Ms. Cohan:

**SUBJECT: ENVIRONMENTAL ASSESSMENT PREPARATION BY
THE NATURE CONSERVANCY FOR KANEPUU PRESERVE ON
LANAI**

We reviewed the subject application and have the following comments:

1. We believe that the Kanepuu Preserve is bisected by Keomuku Highway, a County-owned and maintained road. However, we are not sure of this as the maps provided in the Kanepuu Long Range Management Plan are not very clear on this. We request clarification of this.
2. If Keomuku Highway does bisect the Kanepuu Preserve and is a County roadway, we would like to request what type(s) of restrictions of maintenance of Keomuku Highway would be sought by the Nature Conservancy in the management of the Preserve.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,



MILTON M. ARAKAWA, A.I.C.P.
Director of Public Works

MMA:MMM:ls

xc: Highways Division
Engineering Division

kanepuu_Preserve_Lanai_ea_ls.wpd



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR
ABBEY SETH MAYER
DIRECTOR
OFFICE OF PLANNING

OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-12661

July 20, 2009

Ms. Alison Cohan
Field Representative
The Nature Conservancy Maui
81 Makawao Avenue, Suite 203A
Makawao, Hawaii 96793

Dear Ms. Cohan:

Subject: Draft Long-Range Management Plan for
Kanepuu Preserve
Lanai, Hawaii

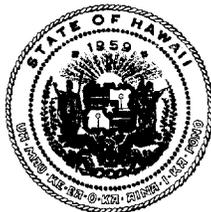
Thank you for the opportunity to review and comment upon the Draft Long-Range Management Plan for Kanepuu Preserve on Lanai. The Office of Planning has no comments at this time. In so stating, the Office offers no judgment of either the adequacy of the document itself or the merits of the proposed project.

If you have any questions, please contact Scott Derrickson of our Land Use Division at 587-2805.

Sincerely,

Abbey Seth Mayer
Director

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Ref: OCCL:MC

Corr LA-09-273

Alison Cohan
The Nature Conservancy of Hawai'i
81 Makawao Ave., Suite 203A
Makawao, HI 96793

JUL 22 2009

Dear Ms. Cohan,

SUBJECT: KĀNEPU`U PRESERVE LONG RANGE MANAGEMENT PLAN (2011-2016)
Kānepu`u, Lāna`i, Lahaina District, Maui County
TMK: (2) 4-9-2:1

The Department of Land and Natural Resources (DLNR) Office of Conservation and Coastal Lands (OCCL) has reviewed the Kānepu`u Preserve draft Long Range Management Plan (2011-2016) that The Nature Conservancy has posted online. The Preserve is in the Limited Subzone of the State Land Use Conservation District.

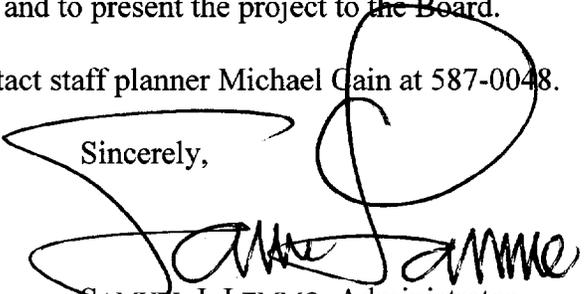
In 1987 the Board of Land and Natural Resources approved Conservation District Use Permit (CDUP) SH-2028 for the management of a statewide Natural Preserve System. In 1991 the approved CDUP LA-2535 for the installation of protective fencing around the Preserve.

In 1997 the Board approved the Kānepu`u Preserve Long Range Management Plan (1998-2003). The Division of Forestry and Wildlife (DOFAW) was the accepting authority for the application and Environmental Assessment (EA), and there is no corresponding CDUP number.

The Draft Long Range Management Plan did not mention who the accepting authority would be for the upcoming Environmental Assessment. Either OCCL or DOFAW would be the appropriate choices to process the EA. and to present the project to the Board.

If you have any questions you can contact staff planner Michael Cain at 587-0048.

Sincerely,


SAMUEL J. LEMMO, Administrator
Office of Conservation and Coastal Resources

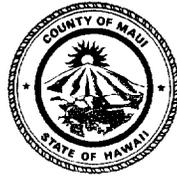
cc: Chair; DOFAW

Kānepu`u Draft EA

CHARMAINE TAVARES
Mayor

JEFFREY S. HUNT
Director

KATHLEEN ROSS AOKI
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING

August 3, 2009

Mrs. Alison Cohan, Field Representative
The Nature Conservancy, Maui
81 Makawao Avenue, Suite 203A
Makawao, Hawaii 96768

Dear Mrs. Cohan:

SUBJECT: PRE-CONSULTATION COMMENTS IN PREPARATION OF A DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR CONTINUED ONGOING MANAGEMENT OF THE KANEPU'U PRESERVE, LOCATED ON THE ISLAND OF LANAI, STATE OF HAWAII, (EAC 2009/0027)

The Department of Planning (Department) is in receipt of the above-referenced request for early consultation comments, for the Kanepu'u Preserve Long Range Management Plan Draft EA. The Department understands the proposed action includes the following:

1. Kanepu'u Preserve has been managed by The Nature Conservancy since its establishment in 1991;
2. Because of budgetary constraints, an unnamed local contractor will provide the management activities; and
3. The Long Range Management Plan is for fiscal years 2011-2016.

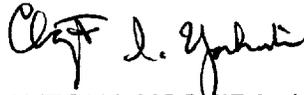
Based on the foregoing, the Department provides the following comments in preparation of the Draft EA:

1. The Land Use designations for the project area are as follows:
 - a. Cannot be determined without a Tax Map Key (TMK) or multiple TMK numbers; please provide the TMK number(s) in the Draft EA, as well as the State and Community Plan designations and the County zoning.
2. If the Preserve occurs on State Agricultural land, a Land Use Commission Special Use Permit or a District Boundary Amendment/Zoning Change may be required.

Mrs. Alison Cohan, Field Representative
August 3, 2009
Page 2

Thank you for the opportunity to comment. Should you require further clarification, please contact Staff Planner Joseph Prutch at joseph.prutch@mauicounty.gov or at 270-7512.

Sincerely,



CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for JEFFREY S. HUNT, AICP
Planning Director

xc: Joseph M. Prutch, Staff Planner
2009 EAC File
General File

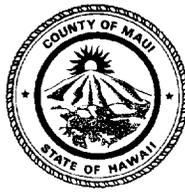
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CHARMAINE TAVARES
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director



RALPH M. NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT SERVICES ADMINISTRATION
250 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

August 19, 2009

Ms. Alison Cohan, Field Representative
THE NATURE CONSERVANCY
81 Makawao Avenue, Suite 203A
Makawao, Maui, Hawaii 96768

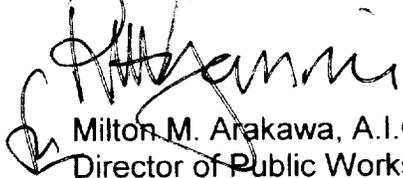
Subject: **ENVIRONMENTAL ASSESSMENT PREPARATION BY
THE NATURE CONSERVANCY FOR KANEPUU PRESERVE ON
LANAI**

Dear Ms. Cohan:

We reviewed your responses to the comment letter dated July 14, 2009 and have no further comments at this time.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,



Milton M. Arakawa, A.I.C.P.
Director of Public Works

Is
xc: Highways Division
Engineering Division
S:\LUCA\CZM\Kanepuu_Preserve_lanai_ea_resp_ls.wpd

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISI AND RESERVE COMMISSION
LAND
STATE PARKS

August 31, 2009

Ms. Alison Cohan
Field Representative
The Nature Conservancy, Maui Program
81 Makawao Avenue, Suite 203A
Makawao, Hawai'i 96768
acohan@tnc.org

LOG NO: 2009.2063
DOC NO: 0908PC85
Archaeology

**SUBJECT: Chapter 6E-8 Historic Preservation Review – Request for Comments Regarding the Preparation of a Draft Environmental Assessment for the Kanepu'u Preserve Ka'a Ahupua'a, Lahaina (Lana'i) District, Island of Lana'i
TMK: (2) 4-9-002:001 por.**

Thank you for the opportunity to comment on the abovementioned project, correspondence for which we received on June 24, 2009. Please accept our apologies for the delay in responding.

Please do forward a copy of the Draft Environmental Assessment to this office when complete.

Based on the information included with the current request for comment, it is not clear if any of the proposed management activities will be occurring within or near known or unknown historic properties which may be located within the preserve. Without more specific information, we are unable to offer any substantive comments at this time.

If you have any questions or comments regarding this letter, please contact the SHPD's Lead Maui Archaeologist, Ms. Patty Conte (Patty.J.Conte@hawaii.gov).

Aloha,

A handwritten signature in cursive script that reads "Nancy A. McMahon".

Nancy McMahon, Deputy SHPO/State Archaeologist
State Historic Preservation Division



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July 20, 2009

Danielle Jayewardene Ph.D.
Coral Reef Ecologist
NOAA, Pacific Islands Regional Office
1601 Kapiolani Blvd, Suite 1110
Honolulu, HI 96814

Re: Long Range Management Plan (LRMP) for Kānepu‘u Preserve on Lāna‘i

Aloha Ms. Jayewardene,

Thank you for your response letter on June 30, 2009 regarding the Kānepu‘u Preserve Long Range Management Plan.

We appreciate your comments regarding how the proposed management activities will potentially benefit the marine environment and NOAA trust resources by reducing soil erosion and thus sediment input to any streams in the area and thus the nearshore marine environment.

We value and appreciate any further comments or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepu‘u Preserve.

Sincerely,

Alison Cohan, M.A.S.
Field Representative
The Nature Conservancy
acohan@tnc.org
Phone: (808) 856-7658

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July 22, 2009

Dr. Fern Duvall
DLNR – DoFAW
54 South High Street
Wailuku, HI 96793

Re: Long Range Management Plan (LRMP) for Kānepu‘u Preserve on Lāna‘i

Aloha Fern,

Thank you for your response email on July 14, 2009 regarding the Kānepu‘u Preserve Long Range Management Plan. We really appreciate the thought and effort that went into your response.

We will certainly take all of your comments into consideration in the revised, Final Long Range Management Plan. We completely agree that maintaining fences is a priority action for the entire FY2011-16 period. We appreciate the information you provided on the moth and `aiea; thanks for the suggestion to incorporate that into our planning. Your suggestion on installing deer cameras to detect ingress along Polihua road is a good one. Also, we plan to revise the language on bird sightings to include only those scientifically corroborated.

Thanks again for your comments and please don't hesitate to call or email with any further thoughts or suggestions.

Sincerely,

Alison Cohan, M.A.S.
Field Representative
The Nature Conservancy
acohan@tnc.org
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August 3, 2009

Russ Saito, State Comptroller
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, HI 96810

Re: Long Range Management Plan (LRMP) for Kānepuʻu Preserve on Lānaʻi

Aloha Mr. Saito,

Thank you for your response letter on July 7, 2009 regarding the Kānepuʻu Preserve Long Range Management Plan.

Although you have no specific comments regarding our management plan at the current time, please don't hesitate to contact us in the future should questions arise.

We value and appreciate any ideas or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepuʻu Preserve.

Sincerely,

Alison Cohan, M.A.S.
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Kānepuʻu Draft EA



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August 3, 2009

Tamara Horcajo, Director
Department of Parks and Recreation
County of Maui
700 Halia Nakoa Street, Unit 2
Wailuku, HI 96793

Re: Long Range Management Plan (LRMP) for Kānepu‘u Preserve on Lāna‘i

Aloha Ms. Horcajo,

Thank you for your response letter on July 7, 2009 regarding the Kānepu‘u Preserve Long Range Management Plan.

Although you have no specific comments regarding our management plan at the current time, please don't hesitate to contact us in the future should questions arise.

We value and appreciate any ideas or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepu‘u Preserve.

Sincerely,

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August 3, 2009

Wayne Yoshioka
Department of Transportation Services
City and County of Honolulu
650 S. King Street, 3rd floor
Honolulu, HI 96813

Re: Long Range Management Plan (LRMP) for Kānepuʻu Preserve on Lānaʻi

Aloha Mr. Yoshioka,

Thank you for your response letter on July 8, 2009 regarding the Kānepuʻu Preserve Long Range Management Plan.

Although you have no specific comments regarding our management plan at the current time, please don't hesitate to contact us in the future should questions arise.

We value and appreciate any ideas or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepuʻu Preserve.

Sincerely,

Alison Cohan, M.A.S.
Field Representative
The Nature Conservancy
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Kānepuʻu Draft EA



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August 3, 2009

Milton M. Arakawa, Director
Department of Public Works
County of Maui
250 S. High Street
Wailuku, HI 96793

Re: Long Range Management Plan (LRMP) for Kānepu‘u Preserve on Lāna‘i

Aloha Mr. Arakawa,

Thank you for your response letter on July 14, 2009 regarding the Kānepu‘u Preserve Long Range Management Plan.

We appreciate your taking the time to read the plan and provide comments. You voiced concern over the possibility of Kānepu‘u Preserve being bisected by County-owned Keomuku highway. I can confidently assure you that our Preserve is not bisected by Keomuku highway; instead it is bisected by Polihua road. Keomuku highway is significantly southeast of our Preserve. I have attached an image from Google Earth depicting this.

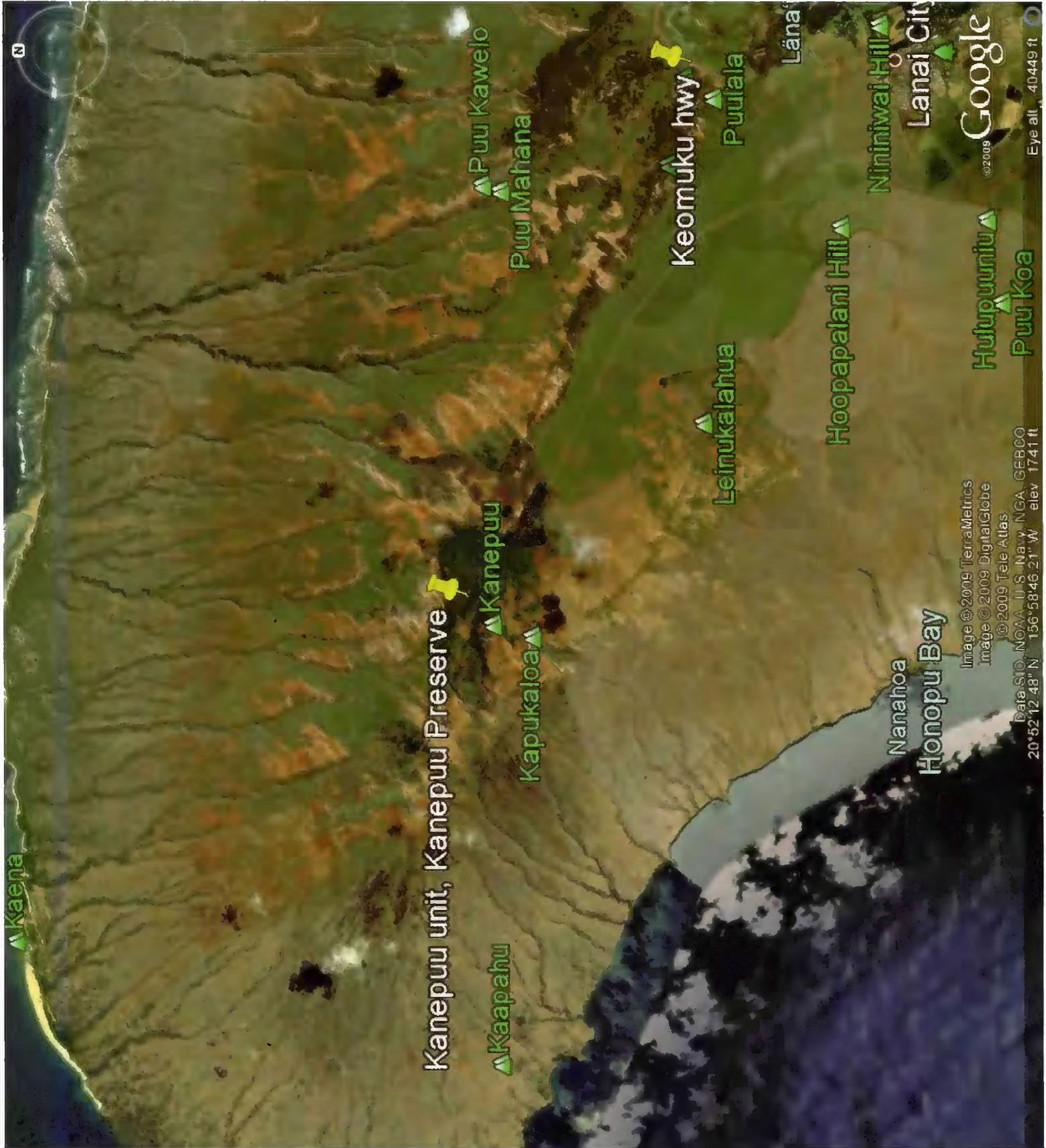
We value and appreciate any further comments or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepu‘u Preserve.

Sincerely,

Alison Cohan, M.A.S.
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The Nature Conservancy
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August 3, 2009

Abbey Seth Mayer
Department of Business, Economic Development and Tourism
Office of Planning
P.O. Box 2359
Honolulu, HI 96804

Re: Long Range Management Plan (LRMP) for Kānepu‘u Preserve on Lāna‘i

Aloha Ms. Mayer,

Thank you for your response letter on July 20, 2009 regarding the Kānepu‘u Preserve Long Range Management Plan.

Although you have no specific comments regarding our management plan at the current time, please don't hesitate to contact us in the future should questions arise.

We value and appreciate any ideas or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepu‘u Preserve.

Sincerely,

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August 3, 2009

Sam Lemmo, Administrator
State of Hawaii
Department of Land and Natural Resources
Office of Conservation and Coastal Lands
P.O. Box 621
Honolulu, HI 96809

Re: Long Range Management Plan (LRMP) for Kānepu‘u Preserve on Lāna‘i

Aloha Mr. Lemmo,

Thank you for your response letter on July 22, 2009 regarding the Kānepu‘u Preserve Long Range Management Plan.

We appreciate the information you provided on the history of Conservation District Use Permits and Environmental Assessments for Kānepu‘u Preserve. You noted that the management plan we provided did not mention the accepting authority for our upcoming Environmental Assessment. I spoke with Emma Yuen, and DOFAW will be the accepting authority. We will ensure that this is clear in the EA.

We value and appreciate any further comments or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepu‘u Preserve.

Sincerely,

Alison Cohan, M.A.S.
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August 6, 2009

Jeffrey S. Hunt, Planning Director
County of Maui
Department of Planning
250 S. High St.
Wailuku, HI 96793

Re: Long Range Management Plan (LRMP) for Kānepuʻu Preserve on Lānaʻi

Aloha Mr. Hunt,

Thank you for your response letter on August 3, 2009 regarding the Kānepuʻu Preserve Long Range Management Plan.

We appreciate your taking the time to read and provide comments on the management plan. Your understanding of the proposed actions is correct. We will be sure to include information on land use designation in the Draft EA, including TMK numbers, community plan designation and county zoning. In addition, Kānepuʻu Preserve does not occur on state agricultural land; the land is zoned for conservation use. These details will be highlighted in the Draft EA, and we will send you a copy so that you can provide further comments if necessary.

We value and appreciate any further comments or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepuʻu Preserve.

Sincerely,

Alison Cohan, M.A.S.
Field Representative
The Nature Conservancy
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Phone: (808) 856-7658

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October 7, 2009

Nancy McMahon, Deputy SHPO/State Archaeologist
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, HI 96707

Re: Long Range Management Plan (LRMP) for Kānepuʻu Preserve on Lānaʻi

Aloha Ms. McMahon,

Thank you for your response letter on August 31, 2009 regarding the Kānepuʻu Preserve Long Range Management Plan.

We appreciate your taking the time to read and provide comments on the management plan. You inquired about whether proposed management activities will be occurring within or near known historic properties. Kānepuʻu Preserve is not known to contain any historic sites or cultural remains within or adjacent to the Preserve. These details will be highlighted in the Draft EA, and we will send you a copy so that you can provide further comments if necessary.

We value and appreciate any further comments or suggestions that would help us improve management and ultimate preservation of the remarkable native forest at Kānepuʻu Preserve.

Sincerely,

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Field Representative
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