

State of Hawai'i
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawai'i 96813

May 8, 2009

Chairperson and Members
Board of Land and Natural Resources
State of Hawai'i
Honolulu, Hawai'i

Land Board Members:

**SUBJECT: KAPUNAKEA PRESERVE CONTINUED ENROLLMENT IN
THE NATURAL AREA PARTNERSHIP PROGRAM AND
AUTHORIZATION OF FUNDING FOR FY10-15**

SUMMARY:

This submittal requests the Board to authorize matching funding for the management of Kapunakea Preserve as part of the Natural Area Partnership Program (NAPP). Although Natural Area Partnership agreements are made in perpetuity, funding is authorized on a six-year basis to allow for periodic State and public review. The current contract is scheduled to terminate at the end of this Fiscal Year, and The Nature Conservancy has prepared a new six-year management plan for Fiscal Years 2010-2015. The Division of Forestry and Wildlife recommends the authorization of matching funding, in the amount of \$781,880, to continue conservation management at Kapunakea Preserve for Fiscal Years 2010-2015.

BACKGROUND:

Chapter 195-6.5, HRS established the Natural Area Partnership Program in 1991 and authorized the Department of Land and Natural Resources to provide state funds on a two-for-one basis with private funds for the management of private lands that are dedicated to conservation. The program seeks to protect, restore, or enhance significant native resources of the state. Kapunakea Preserve is an example of a partnership involving the private, non-profit, community and public sectors to protect one of the highest quality native areas in the state.

Kapunakea Preserve is one of two state-funded Nature Conservancy of Hawaii (TNCH) preserves on Maui. Kapunakea was approved for NAPP funding in 1992, and soon thereafter TNCH implemented the management programs described in their initial plan, *Kapunakea Preserve FY1992 – FY1997 Long-Range Management Plan* (LRMP). In 1995, an environmental assessment was completed (*Final Environmental Assessment for Kapunakea Preserve Natural Area Partnership, 1995*). Subsequently, in 1997, NAPP funding for a new 6-year period was reauthorized following a renewal procedure which included the preparation of an updated plan (*Kapunakea Preserve FY1998 - FY2003 Long-Range Management Plan*) and another environmental assessment (*Final*

Environmental Assessment for Kapunakea Preserve Natural Area Partnership, 1997). This plan was followed by the *Kapunakea Preserve FY2004 –FY2009 Long Range Management Plan*.

The total budget for Fiscal Years 2010-2015 is \$1,172,820. Continuing as a Preserve under the NAPP, the State would provide 2:1 matching funding for the natural area protection efforts outlined in the FY10-15 LRMP. Total State funding requested for Fiscal Years 2010-2015 is \$781,880; The Nature Conservancy will provide the match of \$390,940.

This request is to continue funding the NAPP agreement. The renewal procedure included the preparation of a new 6-year long range management plan, and public review via the Environmental Assessment process. The Office of Conservation and Coastal Lands issued a Finding of No Significant Impact in the February 23, 2009 *Environmental Notice*. The Nature Conservancy has undergone a Conservation District Use Application process for their proposed activities, which has been submitted for approval in this meeting by the Office of Conservation and Coastal Lands.

Chapter 210 of Title 13, Hawaii Administrative Rules contain these provisions:
HAR §13-210-15 (a) (1):

The partnership agreement is subject to continued state funding of the State's two-thirds share of the approved management plan budget. If in any fiscal year, either the State does not appropriate or the board does not approve the expenditure of funds sufficient to meet the State's full two-thirds share of the approved partnership agreement, the applicant may:

- (A) Elect to terminate without any payback or penalty conditions at the end of the last fiscal year for which any funds have been appropriated and approved. In this event, the State shall not require that the conservation easement remain in effect under section 195-6.5, HRS; or
- (B) Elect to renew for less funding than originally approved. In this event, the State shall require that the conservation easement remain in full effect. In this event, the managing partner shall revise the management plan and budget in the managing partner's reasonable discretion to accomplish significant management goals which can reasonably be funded with the amount of state matching funds actually approved.

Kapunakea Preserve was established in 1992 when Pioneer Mill Company, Limited, granted The Nature Conservancy (TNC) a perpetual conservation easement over 1,264 acres on West Maui. The current landowner is Kaanapali Land Management Corp., successor in interest to Pioneer Mill Company, Limited. The conservation easement seeks to preserve and protect the natural, ecological and wildlife features of the property. The preserve's upper elevations are recognized as among the highest quality native areas in the state.

Kapunakea Preserve is adjacent to two other natural areas that are actively managed: Puu Kukui WMA (which is privately owned and part of the NAP Program) and the

Honokowai section of the State West Maui Natural Area Reserve (NAR). In addition, the West Maui Mountains Watershed Partnership (WMMWP) is mandated to conserve and protect important forest lands of West Maui, which include Kapunakea Preserve, Pua Kukui and the West Maui NAR. These managed native forests and natural areas comprise more than 50,000 acres of contiguous, managed watershed. Parcels in Kapunakea Preserve are listed below:

<i>Tax Map Key</i>	<i>Acreage</i>
4-4-07-01	1,014.6
4-4-07-03	74.0
4-4-07-07	175.0
4-4-07-08	0.21

Kapunakea contains 11 native-dominated natural communities, ranging from lowland shrublands to montane forests and bogs, including the rare Ohia Mixed Montane Bog (Attachment 1, Figure 1 and Appendix 1). Four of the communities are not found in the nearby West Maui NAR, most notably Koa/ohia (*Acacia koa/Metrosideros polymorpha*) Lowland Mesic Forest and Lama/ohia (*Diospyros sandwicensis/Metrosideros polymorpha*) Lowland Mesic Forest.

Kapunakea protects at least 34 rare plants (Attachment 1, Appendix 2). At least eight of Kapunakea's rare plants have not been seen in the NAR. Four native forest birds are found in Kapunakea: apapane, iiwi, amakihi, and pueo. Uau have also been heard there. Populations of four species of rare Hawaiian tree snails have recently been documented at Kapunakea: *Partulina perdix*, *P. tappaiana*, *P. crocea*, and *Perdicella kuhnsi* (Attachment 1, Appendix 3). These snails probably were once widespread and abundant on Maui, but in many areas their numbers have declined precipitously in this century due to habitat destruction, collection, and the depredation by introduced animals. A number of other snails also occur at Kapunakea, including tornatellinines and species of *Auriculella*, *Succinea*, and *Philonesia*.

During the 18 years of management (FY 92-09) under the Natural Area Partnership Program, the primary strategy for protection of Kapunakea has been to prevent the further introduction and/or spread of destructive alien species. Kapunakea is remote and rugged. Given limited resources, the entire preserve cannot be managed equally. Management has been concentrated at the most urgent threats (e.g. halting pig ingress), and in areas that contain special plants, animals, and native natural communities (e.g. the rare montane bog community).

The Nature Conservancy of Hawaii works closely with both Maui Land and Pineapple Co., managers of Pua Kukui WMA, and with the State Division of Forestry and Wildlife, who are responsible for management of the NAR. Several agreements are used to coordinate management and sharing of staff, equipment, and expertise in order to maximize management efficiency.

SUMMARY OF COMMENTS

A Draft EA notice was published in *Environmental Notice* on December 23, 2008. The Office of Conservation and Coastal Lands issued a Finding of No Significant Impact in the February 23, 2009 *Environmental Notice*. The following agencies and organizations were specifically contacted for their review and comment during the preparation of the EA:

Federal

US Department of Interior/Haleakala National Park
US Department of the Interior/US Geological Survey

US Department of Agriculture/Soil Conservation Service-Maui District
US Department of Agriculture/Natural Resource Conservation Service-Maui
US Fish & Wildlife Service

State

Department of Hawaiian Homelands
Department of Health- Environment Planning Office
Directorate of Public Works- Environmental Division
DLNR/ Aquatic Resources Division- Maui District
DLNR/ Division of Forestry & Wildlife- Maui District
DLNR/ Division of Land Management- Maui District
DLNR/ Natural Areas Reserves Systems
DLNR/ Office of Conservation and Environmental Affairs
Kapunakea Final EA 2009
DLNR/ State Historic Preservation Division

Environmental Protection Agency
EPA -- PICO
Hawaii Department of Agriculture- Pesticide Branch
Hawaii Department of Business Economic Development & Tourism
Lahaina Public Library
Maui Island Burial Council
National Marine Fisheries Service
Office of Hawaiian Affairs – Land Management
Research Corporation of the University of Hawaii
State Council on Hawaiian Heritage
USDA Resources Conservation Service, State Conservationist

County

Maui County - Department of Water Supply
Maui County - Planning Department

Maui County - Department of Parks & Recreation
Maui County - Office of the Mayor

Private

Bob Hobdy
Central Maui Hawaiian Civic Club
Conservation Council for Hawaii
Cultural Resources Commission
Earth Justice Legal Defense Fund
Historic Hawaii Foundation

Kaanapali Farm Services, Inc.
Kaanapali Land Development Corp.
Kahu Charlie Maxwell
Lahaina Restoration Fund
Malama Honokowai
Maui Coffee Co.

Maui Invasive Species Committee
Maui Land and Pineapple Co.
Maui Nui Botanical Gardens
Native Hawaiian Plant Society
Natural Resources Conservation Service
Plant Extinction Prevention Program
(PEPP)
Queen Liliuokalani Children's Center

Royal Order of Kamehameha – Kahekili
Chapter
Sierra Club Legal Defense Fund
UHM Environmental Center
West Maui Mountains Watershed
Partnership
West Maui Soil & Water Conservation
District

Substantive comments from the reviewers as well as additional comments received during the 30-day review period are listed below. All received comments were considered, and if appropriate, were addressed in either the draft or final EA.

Comments received during pre-consultation

County of Maui Department of Planning

Requested TMKs to be included in the Draft EA. Concurs that use of Conservation District land triggers HRS Chapter 343. If action is planned in Agricultural District, a Special Use Permit or District Boundary Amendment or Zoning Change may be required.

Historic Hawaii Foundation

States that there does not seem to be any structures or cultural sites over fifty years old in the preserve.

Plant Extinction Prevention Program

Found the management plan to be a thorough and appropriate document to guide management of Kapunakea Preserve. Applauds successes achieved so far by TNC.

Comments received during consultation

Division of Forestry and Wildlife

Endorses this project.

Office of Hawaiian Affairs

Naturally supportive of this project. Noted that access rights for Native Hawaiians are recognized and proposed activities will not impeded access or cultural activities. Also notes that some of the project area is considered ceded lands. Appreciate TNC's public outreach in response to concerns from this proposal. Suggest that TNC contact local groups in the community as much as possible in accomplishing this project's objectives and goals.

Environmental Planning Office & Environmental Health Administration

No comments. Recommend reviewing Standard Comments on their website.

Dept of Land and Natural Resources – Engineering Division

Notes that the project site is located within the Flood Zone C according to the Flood Insurance Rate Map.

No substantive comments were received from the other contacted parties.

RECOMMENDATION That the Board:

1. continue approval of the activities identified in the Kapunakea Preserve FY 2010-2015 Long Range Management Plan;
2. authorize the continued funding for the Kapunakea Preserve as part of the Natural Area Partnership Program for Fiscal Years 2010-2015 in the amount requested (\$781,880);
3. authorize the Chairperson to negotiate and enter into a contract encumbering funds for a Pelekunu Natural Area Partnership Agreement with The Nature Conservancy for Fiscal Years 2010-2015 with the following conditions:
 - a. The long range management plan is accepted for a six-year period.
 - b. Funding is authorized for the full six-year period as described in the agreement, subject to annual availability of funding and annual budget execution procedures and approvals.

Respectfully submitted,



PAUL J. CONRY, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN, Chairperson

Attachments:

Attachment 1: Kapunakea Preserve Long Range Management Plan

Kapunakea Preserve West Maui, Hawai‘i

**DRAFT Long-Range Management Plan
Fiscal Years 2010–2015**



Submitted to the
Department of Land & Natural Resources
Natural Area Partnership Program

Submitted by
The Nature Conservancy – Hawai‘i Operating Unit
August 2008

EXECUTIVE SUMMARY

Established in 1980, The Nature Conservancy of Hawai'i is a local affiliate of The Nature Conservancy, 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. The Conservancy has established a statewide system of preserves in Hawai'i totaling almost 32,000 acres. As a member of eight watershed partnerships, the Conservancy also works closely with public and private partners to help preserve nearly one million acres statewide. The Conservancy 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's Natural Area Partnership Program (NAPP) is an innovative program that aids private landowners 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. Kapunakea Preserve is one of two state-funded Nature Conservancy of Hawai'i (TNCH) preserves on Maui. Kapunakea was approved for NAPP funding in 1992, and soon thereafter TNCH implemented the management programs described in our initial plan, *Kapunakea Preserve FY1992 – FY1997 Long-Range Management Plan (LRMP)*. In 1995, an environmental assessment was completed (*Final Environmental Assessment for Kapunakea Preserve Natural Area Partnership, 1995*). Subsequently, in 1997, NAPP funding for a new 6-year period was reauthorized following a renewal procedure which included the preparation of an updated plan (*Kapunakea Preserve FY1998 - FY2003 Long-Range Management Plan*) and another environmental assessment (*Final Environmental Assessment for Kapunakea Preserve Natural Area Partnership, 1997*). This plan was followed by the *Kapunakea Preserve FY2004 –FY2009 Long Range Management Plan*.

Presently, TNCH is seeking reauthorization of NAPP funding for the next 6-year period for the programs described within this *Kapunakea Preserve FY2010 – FY2015 Long-Range Management Plan*. This plan continues the programs implemented under the previous plans and environmental assessments. Herein, we request **\$781,880** in matched state funds for the 6 years spanning FY2010 – 2015. This plan was prepared in compliance with the NAPP agreement between the state, TNCH, and Hawai'i Administrative Rules Chapter 13-210.

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

Over the next six years TNCH will continue to seek outside assistance to carry out effective management at Kapunakea. During the past 2 years, the West Maui Mountains Watershed Partnership (WMMWP) helped to manage Kapunakea under contract to TNCH. WMMWP is mandated to conserve and protect 50,000 acres of important forest lands of West Maui, which include Kapunakea preserve. Under a sub-contract with WMMWP, we are able to deepen our effective removal of ungulates (our program's primary goal) through increased scouting and regular checks and maintenance of fences and snares. WMMWP considers continuation of Kapunakea's management programs (particularly ungulate removal) key to the viability of the West Maui Mountains. As such, TNC seeks to continue to subcontract with WMMWP to remove pigs and monitor for their presence, conduct an annual aerial weed survey, maintain infrastructure, and provide occasional access to researchers. In addition, TNCH, at its own expense, contracted a professional animal control company to conduct intensive ungulate removal in Kapunakea in FY 08. These contract hunters successfully removed 16 pigs at Kapunakea this past year and identified several potential ingress areas through the lower boundary fence. TNCH will continue to pursue opportunities for contract work as opportunities arise.

We plan to accomplish the following goals and objectives over the next six years:

Ungulate Control:

Goal: Remove all ungulates and prevent future invasion.

Activities:

- Complete two check cycles of snares throughout the lower, mid and upper elevations of the preserve.
- Complete one aerial and one ground scout to determine whether pigs are present in areas of the preserve not currently targeted for active animal control; in particular to determine if there is ingress or egress of pigs across Kapunakea's steep, natural barriers.
- Conduct monthly inspections and repairs of Kapunakea's fences, making repairs as necessary.
- Map and document breaches and record time between observed breach and repair.
- Establish 2-4 traps adjacent to lower boundary fence to reduce ungulate pressure.

Invasive Plant Control:

Goal: Remove habitat-modifying weeds from high-quality native habitats; prevent introduction or spread of problem weeds.

Activities:

- Continue treatment of top two habitat-modifying weeds (*Tibouchina* and Strawberry guava).
- Monitor weeds as needed according to management priorities.
- Respond to new weed threats and map efforts.
- Update and maintain priority weed maps semi-annually.

Small Mammal Control

Goal: Increase our understanding of threats posed by small mammals; reduce their negative impact where possible.

Activities:

RESOURCES SUMMARY

General Setting

Kapunakea Preserve was established in 1992 when Pioneer Mill Company, Ltd., a subsidiary of Amfac/JMB-Hawai'i Inc., granted The Nature Conservancy a perpetual conservation easement over 1,264 acres on West Maui. The preserve's upper elevations are recognized as among the highest quality native areas in the state. Kapunakea Preserve is adjacent to two other natural areas that are actively managed: Pu'u Kukui WMA (which is privately owned and part of the NAP program) and the Honokōwai section of the state West Maui Natural Area Reserve (NAR). In addition, the WMMWP is mandated to conserve and protect important forest lands of West Maui, which include Kapunakea Preserve, Pu'u Kukui and the West Maui NARs. These managed native forests and natural areas comprise more than 50,000 acres of contiguous, managed watershed.

Flora and Fauna

Kapunakea contains 11 native-dominated natural communities, ranging from lowland shrublands to montane forests and bogs, including the rare 'Ohi'a Mixed Montane Bog (Figure 1, Appendix 1). Four of the communities are not found in the nearby West Maui NAR, most notably Koa/'ohi'a (*Acacia koa/Metrosideros polymorpha*) Lowland Mesic Forest and Lama/'ohi'a (*Diospyros sandwicensis/Metrosideros polymorpha*) Lowland Mesic Forest. Figure 1 depicts the vegetation communities present in Kapunakea Preserve, established through GAP analysis.

Kapunakea protects at least 34 rare plants (Appendix 2). At least eight of Kapunakea's rare plants have not been seen in the NAR. Four native forest birds are found in Kapunakea: 'apapane, 'i'iwi, 'amakihi, and pueo. 'Ua'u have also been heard there. Populations of four species of rare Hawaiian tree snails have recently been documented at Kapunakea: *Partulina perdis*, *P. tappaniana*, *P. crocea*, and *Perdicella kuhnsi* (Appendix 3). These snails probably were once widespread and abundant on Maui, but in many areas their numbers have declined precipitously in this century due to habitat destruction, collection, and the depredation by introduced animals. A number of other snails also occur at Kapunakea, including tornatellinines and species of *Auriculella*, *Succinea*, and *Philonesia*.

MANAGEMENT

Management Considerations

1. The primary strategy for protection of Kapunakea is to prevent the further introduction and/or spread of destructive alien species. Special care must be taken to avoid negative side effects of management activities. For example, trails and management activities are designed to prevent further weed and ungulate invasion. This strategy requires helicopter access to most parts of the preserve. Interpretive and educational uses are limited in scope. Guidelines are followed to minimize impacts such as trampling and weed dispersal.
2. The preserve is bounded on the west (lowland) side by private agricultural lands. Activities related to agricultural production (large, heavily-loaded trucks, agricultural burning, etc.) pose a risk to preserve users. As a result, public access is limited, and we carefully coordinate our management and interpretive activities with work in adjacent agricultural areas.
3. Kapunakea is remote and rugged. Given limited resources, the entire preserve cannot be managed equally. Management is concentrated at the most urgent threats (e.g. halting pig ingress), and in areas that contain special plants, animals, and native natural communities (e.g. the rare montane bog community).
4. Kapunakea Preserve is adjacent to two areas that are also managed to protect natural resources: Pu'u Kukui WMA (privately owned) and the Honokōwai section of the state West Maui NAR. TNCH works closely with both Maui Land and Pineapple Co., managers of Pu'u Kukui WMA, and with the State Division of Forestry and Wildlife, who are responsible for management of the NAR. Several agreements are used to coordinate management and sharing of staff, equipment, and expertise in order to maximize management efficiency.

Management Units

Kapunakea is managed as five units (Figure 2) defined by topographic boundaries, similarity of natural community types, and threats.

1. Unit 1 consists of the lowland (up to 3,000 feet elevation) portion of the preserve that is closest to Kapāloa Stream. It is primarily comprised of 'Ohi'a Lowland Wet Forest and Uluhe (*Dicranopteris linearis*) Lowland Wet Shrubland. Prior to our management efforts, this unit showed high levels of pig activity. Activity has been significantly reduced by control measures that must be maintained to keep activity low.
2. Unit 2 encompasses the remainder of the preserve's lowland elevations. It contains five native communities, and non-native vegetation in the gulch bottoms. Because *Tibouchina* and strawberry guava are prevalent throughout the unit, we aim to prevent their spread into other units, rather than eliminate them from Unit 2. Pig activity, although high during the initial phases of ungulate control, has been reduced substantially.

Management Programs

Although the following management programs are described separately, they form an integrated management approach. For each program listed in the following section, we have indicated a major goal and described the management methods chosen. Also included are highlights of past and current achievements, along with key management issues. Finally, objectives and costs for FY2010–FY2015 are listed. Staff time and effort, along with equipment expenses, are included separately within the ‘Personnel, Equipment, and Facilities’ program section.

Program 1: Non-native Species Control

A. Ungulate Control

Program Goal

Remove all ungulates and prevent future invasion.

Program Description

The elimination of ungulates in Kapunakea Preserve and on adjacent partnership lands continues to be our highest priority. Ungulate damage has been substantially reduced since 1995, especially in upper elevation areas. However, it is known that pigs continue to find their way into the preserve from adjacent lands. During 2008, 16 remaining animals were removed from Kapunakea by contract hunters at TNCH’s expense. However, if ungulates reappear in the preserve (and this is very likely based on past history and reliance on strategic fencing), their control will again become our highest priority. We will continue scouting and removal efforts as needed. Some resources may be shifted to weed control should we deem ungulate levels low enough to justify this shift.

The ungulate control program utilizes a combination of fencing, hunting (primarily contract hunting), and snaring to bring pig populations down to zero as rapidly as possible and prevent them from re-establishing. The fence along the lower boundary of the preserve was replaced in several phases between FY1993 and FY1995. This lower boundary fence replaced an aging Forest Reserve boundary fence in existence for many decades. This fence is key to preventing ungulate ingress into the Preserve; as such it is likely that ongoing maintenance and possible additions to this lower boundary fence will be necessary during the next six years. A short strategic fence initially constructed in FY1993 at 4,200 feet was replaced in 2003 to prevent pigs from moving into the bog areas. The WMMWP fencing crew recently completed a boundary fence on adjacent lands. We expect this approximately half-mile fence at Hähäkea to further prevent pig ingress into Kapunakea from neighboring lands. In the coming years we may need to continue constructing short strategic fences at possible points of pig ingress. In the near future, we may need to add fencing along the boundary separating Unit 3 above from Units 1 and 2 below. If ungulates continue to persist in lower elevation areas, this fence would be instrumental in keeping ungulates out of more pristine, higher elevation areas. Figure 3 depicts current and proposed fences in Kapunakea Preserve and on adjacent lands. We propose to make this decision in 2010 or 2011 after we have evaluated the effectiveness of recent improvements to the lower boundary fence.

Snaring is still the most effective and feasible technique for controlling pigs in areas too remote, rugged, and/or fragile for frequent hunting, and where hunting cannot remove low-density pig populations from sensitive sites. Until an effective alternative can be found, snares will continue to be

Kapunakea Preserve & Adjacent Fence Locations

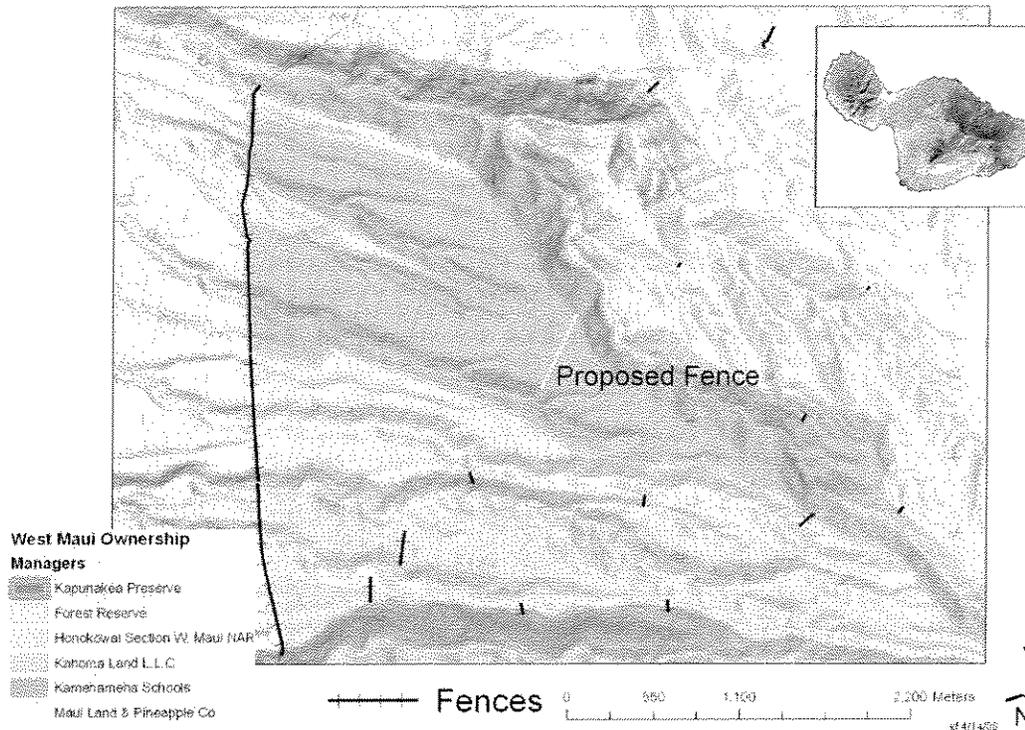


Figure 3. Existing and proposed fences at Kapunakea Preserve and surrounding lands.

This program represents an estimated 70% of the overall effort and budget in this long range management plan.

B. Invasive Plant Control

Program Goal

Remove habitat-modifying weeds from high-quality native habitats; prevent introduction or spread of problem weeds.

Program Description

The most important aspects of our weed control program are to control established weeds in intact native communities, and to prevent the introduction of new species of alien plants. (Elimination of ungulates is believed to be one of the most effective means of controlling the introduction and spread of habitat-modifying weeds.) In some cases, when weeds are considered a direct threat to rare plant populations occurring in alien-dominant habitat, localized control actions may be taken.

We will continue to enforce strict procedures to remove weed seeds from equipment and clothing before people enter the preserve. Helicopter flights will originate from areas free of aggressive weeds, and all equipment and clothing will be inspected and cleaned. Of the alien plants already established in

medium fuel during drought periods. Mechanical and chemical control efforts have worked to limit the dominance of this weed along trails, camps, and especially landing zones.

We have had success at containing and shrinking populations of Hilo grass (*Paspalum conjugatum*) along strategic trails; future efforts will focus on maintaining that status for this shade-tolerant grass.

We routinely control specific priority weeds along trails, campsites, and landing zones above 3,200 feet elevation, limiting current infestations in otherwise intact forest or shrubland. This also serves to minimize spread of priority weeds to new places during other preserve activities.

As part of our routine management program, we will continue to: 1) monitor for and control new weeds at landing zones, campsites, and upper trails; 2) train staff in the proper handling and application of herbicides; 3) participate as a member of the Maui Invasive Species Committee; 4) update aerial survey and range maps for *Tibouchina* and guava; and 5) cooperate with DOCARE in marijuana control as needed. In the future, it is likely that we will be employing new passive technologies like remote sensing or high resolution aerial photography for weed mapping.

Table 2. Priority Weed Species for Management in Kapunakea Preserve

Rank	Scientific Name	Common Name
1	<i>Tibouchina herbacea</i>	Tibouchina
2	<i>Rubus argutus</i>	Blackberry
3	<i>Psidium cattleianum</i>	Strawberry guava (waiawi)
4	<i>Paspalum conjugatum</i>	Hilo grass
5	<i>Rubus rosifolius</i>	Thimbleberry
6	<i>Andropogon virginicus</i>	Broomsedge
7	<i>Passiflora suberosa</i>	Passiflora
8	<i>Melinis minutiflora</i>	Molasses grass
Other Important Pest Species:		
-	<i>Ficus</i> spp.	Banyan
-	<i>Buddleia asiatica</i>	Butterfly bush
-	<i>Juniperus bermudiana</i>	Juniper
-	<i>Grevillea robusta</i>	Silk oak
-	<i>Setaria gracilis</i>	Yellow foxtail
-	<i>Holcus lanatus</i>	Velvet grass
-	<i>Axonopus fissifolius</i>	Carpet grass
-	<i>Juncus planifolius</i>	Bog rush
-	<i>Psidium guajava</i>	Guava
-	<i>Hedychium coronarium</i>	White ginger

Activities

Years 1-6 (FY2010-15)

Program Description

Resource monitoring differs from threat monitoring in that its purpose is to document and quantify natural resources (vegetation, birds, and invertebrates) and track them over time, identifying trends. Accurately quantifying changes in natural resources provides land managers with the information needed to determine the efficacy of past management programs and to plan future research and management actions in Kapunakea. We have established a network of monitoring plots to quantify and better understand Kapunakea's baseline vegetation.

We completed a monitoring report for Kapunakea, *Long-Term Biological Threat and Resource Monitoring, Kapunakea Preserve, West Maui*, in 1995. It consists of four parts: vegetation monitoring, rare plant monitoring, pest plant monitoring and feral ungulate monitoring. Our monitoring transects include: 1) 10,000 meters of permanent belt transects for monitoring the distribution, frequency, and relative abundance of feral ungulates and alien plant species, and 2) 41 permanent, 250 square meter plots for obtaining in-depth quantitative data on forest vegetation. In FY2010, we plan to contract with a qualified botanist to complete one vegetation reassessment and survey and compare results with those completed in 1995. The need for additional resource monitoring will be decided once we have the results of this contract.

Bird surveys were conducted during various years along the same transects by observers trained in the U.S. Fish and Wildlife Service's Hawai'i Forest Bird Survey methodology. The purpose of these surveys is to document the relative abundance of all bird species in the forest. In the future, we will conduct bird surveys only during the state's routine bird surveys (every 5 years).

Activities

Year 1 (FY2010)

- Monitor and maintain threat monitoring transects once per year.
- Provide logistical support to researchers.
- Complete one vegetation reassessment and survey and compare results with those completed in 1995.

Year 2-6 (FY2011-15)

- Monitor and maintain threat monitoring transects once per year.
- Provide logistical support to researchers.

This program represents an estimated 3% of the overall effort and budget in this long range management plan.

Program 3: Rare Species Protection and Research

Program Goal

Prevent the extinction of rare species in the preserve.

- Maintain current maps of rare species populations.

This program represents an estimated 1% of the overall effort and budget in this long range management plan.

Program 4: Community Outreach

Program Goal

To educate, empower, and engage the community in the preservation of their natural and cultural heritage from summit to sea.

Program Description

Sustaining biologically significant native ecosystems throughout the state requires an educated, empowered and mobilized public and private constituency. Our main goal is to increase conservation and advocacy for these areas through an understanding of the importance of, threats to, and protection efforts towards watersheds on Maui.

Currently, there is limited on-site public outreach at Kapunakea Preserve. TNC no longer provides scheduled monthly access to Kapunakea Preserve and other interpretive hikes. However, individuals may accompany staff and assist on field projects if they have experience in remote forestry work that requires camping. Also, the WMMWP provides the public information about forest protection efforts on West Maui and will provide the outreach infrastructure to safely lead selected groups into the preserve.

Activities

Years 1-6 (FY2010-15)

- Present slide shows and talks as requested by community and school groups.
- Lead special hikes for targeted community members.

This program represents an estimated 1% of the overall effort and budget in this long range management plan.

Program 5: Watershed Partnerships

Program Goal

Assist the long-term effective management of the native ecosystems of West Maui by the West Maui Mountains Watershed Partnership.

Program Description

The WMMWP provides protection for about 50,000 acres on West Maui administered by a coordinator and field crew (first hired in 2000). Activities include fencing, ungulate removal, and resource monitoring programs for all of West Maui's native forests. TNC's Maui Field Office has actively participated in partnership activities from the beginning in 1998. As a partner, we helped set

with the United States Agency for International Development, our guiding federal agency, is currently 38.5%.

In terms of contractual and TNC time and effort, roughly 70% of personnel time budgeted for Kapunakea is spent on ungulate control; 15% is spent on weed control activities. The remainder of the personnel budget is divided among the following activities: monitoring (3%); rare species protection (1%); small mammal control (1%); community outreach (1%); watershed partnerships (5%), and planning and administration (5%).

The Nature Conservancy's Honolulu office provides administrative, technical and annual planning support. In particular, the Director of Conservation, the Science team, and other resource staff will help prepare annual plans and reports and develop and implement monitoring and research programs.

All full-time field staff are provided training in first aid, CPR, and fire suppression. Field staff participate in a variety of emergency and safety training programs offered by cooperating state and federal agencies (fire training, helicopter safety, hunter safety, rappelling, etc.). Other training needs, such as computer, communication, and other skill-building courses, are provided to staff on an individual, as needed basis.

Travel costs consist of airfare, ground transportation, board and lodging for TNCH staff traveling off-island, along with supervisory staff attending regular meetings at the Honolulu office. Because the NAP program requires an annual inspection, we have budgeted airfare for DOFAW staff to help cover expenses for this visit. Facilities costs include 10% of office and baseyard facilities incurred to support the Kapunakea Preserve program. Supplies include the cost of fuel, insurance, and maintenance for the vehicles, along with the cost of general supplies needed to perform overall management activities. Contractual fees consist of technical assistance provided by Hawai'i Biodiversity and Mapping Program (HBMP) and National Tropical Botanical Garden's botanists, ecologists, and science staff, who assist with resource monitoring and research, and data compilation.

This program represents an estimated 5% of the overall effort and budget in this long range management plan.

Stewardship Subcontract to WMMWP + Helicopter Travel - \$125,664
 FY14

Stewardship Subcontract to WMMWP + Helicopter Travel - \$129,434
 FY15

Stewardship Subcontract to WMMWP + Helicopter Travel - \$133,317

Baseyard:

\$3,000 has been budgeted in the first year and a 5% inflation increase each year thereafter to cover a portion of the baseyard, security, insurance and other miscellaneous project related expenses.

Overhead:

The allowable overhead rate of 10% on NAPP projects has been included on all costs.

BUDGET TABLE

Kapunakea NAPP							
	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	TOTAL
Labor and Fringe	42,090	43,563	45,087	46,666	48,299	49,989	275,694
Supplies/Equipment	2,000	2,000	2,000	2,000	2,000	2,000	12,000
Travel	2,200	2,266	2,334	2,404	2,476	2,550	14,230
Subcontracts	115,000	118,450	122,004	125,664	129,434	133,317	743,869
Baseyard	3,000	3,150	3,308	3,473	3,647	3,829	20,407
<i>Subtotal</i>	<i>164,290</i>	<i>169,429</i>	<i>174,733</i>	<i>180,207</i>	<i>185,856</i>	<i>191,685</i>	<i>1,066,200</i>
Overhead @ 10%	16,429	16,943	17,473	18,021	18,586	19,169	106,620
TOTAL	180,719	186,372	192,207	198,227	204,441	210,854	1,172,820
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Kapunakea Budget	180,719	186,372	192,207	198,227	204,441	210,854	1,172,820
Match (1/3 of total)	60,240	62,124	64,069	66,076	68,147	70,285	390,940
TOTAL NAPP REQUEST (2/3)	120,479	124,248	128,138	132,151	136,294	140,569	781,880

ENVIRONMENTAL REVIEW COMPLIANCE

Although all actions being proposed for reauthorization in this Long-Range Management Plan are substantially similar to, and relevant to, the actions previously considered in the *Final Environmental Assessment of Kapunakea* for which we received a "Finding of No Significant Impact" in 1997, we will be completing a new Environmental Assessment in order to comply with Conservation District Use Application requirements.

**APPENDIX 2
RARE NATIVE PLANTS OF KAPUNAKEA PRESERVE**

SCIENTIFIC NAME	COMMON NAME	HERITAGE RANK (a)	FEDERAL STATUS (b)
<i>Acacia koaia</i> †	koai‘a, koai‘e, koa‘oha	G2	SC
<i>Alectryon macrococcus</i> var. <i>macrococcus</i> ^	‘ala‘alahua, mahoe	G1T1	LE
<i>Alphitonia ponderosa</i> ²	kauila, kauwila, oa	G2	
<i>Argyroxiphium caliginis</i>	‘eke silversword	G1	
<i>Bobea sandwicensis</i> ^†	‘ahakea	G1	
<i>Bonamia menziesii</i> ^†	-	G1	LE
<i>Calamagrostis expansa</i>	-	G1	C
<i>Chamaesyce arnottiana</i> var. <i>integrifolia</i> ²		G1	
<i>Chamaesyce olowaluana</i> ²	akoko	G2	SC
<i>Clermontia oblongifolia</i> sbsp. <i>Mauiensis</i> ²	‘oha	G3T1	LE
<i>Colubrina oppositifolia</i> ^†	kauila	G1	LE
<i>Ctenitis squamigera</i>	pauoa	G1	LE
<i>Cyanea glabra</i> ²		G1	LE
<i>Cyanea lobata</i> subsp. <i>lobata</i> ¹		G1	LE
<i>Cyrtandra filipes</i> ¹		G1	C
<i>Cyrtandra munroi</i> ¹		G1	LE
<i>Eurya sandwicensis</i>	anini, wanini	G2	SC
<i>Exocarpos gaudichaudii</i> †	Heau	G1	SC
<i>Geranium hillebrandii</i> (formerly <i>humile</i>)	Nohoanu, hinahina	G1	C
<i>Hibiscus kokio</i> ssp. <i>kokio</i> †	koki‘o ‘ula‘ula	G2T1	SC
<i>Kadua</i> (formerly <i>Hedyotis</i>) <i>formosa</i> ^	-	G1	SC
<i>Keysseria</i> (formerly <i>Lagenifera</i>) <i>maviensis</i>	howaiaulu	G2	
<i>Liparis hawaiiensis</i> ²	Jewel orchid	G3	
<i>Melicope orbicularis</i> *	alani	G3	
<i>Myrsine vaccinioides</i>	kolea	G1	C
<i>Neraudia melastomifolia</i> ^†	ma‘aloa, ma‘aloa, ‘oloa	G2	SC
<i>Nothoestrum latifolium</i> ^*†	‘aiea	G1	C
<i>Phyllostegia bracteata</i> *	-	G1	
<i>Phyllostegia stachyoides</i> *†	-	G1	C
<i>Platanthera holochila</i>	-	G1	LE
<i>Ranunculus mauiensis</i> ^†	makou	G2	C

**APPENDIX 3
RARE NATIVE LAND SNAILS OF KAPUNAKEA PRESERVE**

SCIENTIFIC NAME	HERITAGE RANK (a)
<i>Partulina crocea</i> †	GNR
<i>Partulina perdix</i>	G1
<i>Partulina tappaniana</i>	G1
<i>Perdicella kuhnsi</i>	G1

† = Not known from Pu‘u Kukui WMA

(a) Heritage Rank:

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

GNR = Insufficient data available to assign definite rank

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STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD09/4126B

March 18, 2009

Paul Conry
Administrator, Division of Forestry and Wildlife
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

RE: Request for approval and authorization to continue a natural area partnership management agreement with The Nature Conservancy of Hawai'i for the Kapunakea Preserve, Maui.

Aloha e Paul Conry,

The Office of Hawaiian Affairs (OHA) received the above-mentioned letter on March 13, 2009. The Division of Forestry and Wildlife, Forest Reserves System is requesting OHA's acceptance and approval of their continued partnership with The Nature Conservancy (TNC) of Hawai'i for the Kapunakea Preserve. The Kapunakea Preserve encompasses approximately 1,264 acres of conservation land in the West Maui Mountains, and contains at least 34 rare plants. Since 1992, Kapunakea Preserve has received 2:1 matching funding every six years as a part of the Natural Area Partnership Program. The division is requesting \$781,880 in state funds for the fiscal years 2010-2015, while TNC provides a match of \$390,940 and is held responsible for implementing the management plan. Thank you for the opportunity to comment, however we have no comments at this time. If you have further questions, please contact Heidi Guth by phone at (808) 594-1962 or e-mail her at heidig@oha.org.

'O wau iho nō me ka 'oia'i'o,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o".
Clyde W. Nāmu'o
Administrator