Molokai Public Library
P. O. Box 395
Kaunakakai, HI 96748

Dear Librarian,


Enclosed please find one copy of the Final EA for the subject project. As will be noted in the October 8, 2000 issue of the Office of Environmental Quality Control’s Environmental Notice, our office has issued a Finding of No Significant Impact (FONSI) for the subject fence and landscaping project. Therefore, pursuant to Chapter 11-200, Hawaii Administrative Rules, the public challenge deadline for the subject FONSI is November 8, 2000.

Please make the Final EA available to those people who may wish to review it. Also, if possible, please retain the Final EA in your library’s collection.

Should you have any questions on this matter, please contact Eric Hill of our planning staff in Honolulu at (308) 587-0380.

Sincerely,

Dean Y. Uchida, Administrator
Land Division

Maui Board member
OEQC
Kamalo / Kapualei Watershed Management Project

Environmental Assessment

This document prepared by Molokai – Lanai Soil and Water Conservation District, pursuant to Chapter 343, HRS.

August 2000
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

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Appendix F  Moloka‘i Enterprise Community Strategic Plan / Community News
Appendix G  Proposed Fenceline Photo’s – Conservation District Subzones

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Molokai Advertiser News – East Moloka‘i Watershed Partners Sign Pact
Honolulu Advertiser – Public Key To Watershed Plan
HS&CPN – Notice of Public Hearing
Moloka‘i Advertiser News (The M.A.N.) – Public Comment Deadline
The Dispatch – Saving Moloka‘i’s Watershed

COMMENTS/RESPONSES

State of Hawaii, Office of Environmental Quality Control
Native Hawaiian Legal Corporation
Mr. Yama Kaholoaa Sr.
Ke Aupuni Lokahi, Stacy Crivello
University of Hawaii, Environmental Center
INTRODUCTORY INFORMATION

Applicant: Mr. Paul K. Elia, Chairman
Molokai – Lanai Soil and Water Conservation District
P.O. Box 336
Hoolehua, HI 96729

Landowners: James W. Austin, Owner and Kamehameha Schools Bishop Estate
Kapuaie Ranch
537 Ahina Street
Honolulu, HI 96816
(TMK: 5-5-06:1)

Kamehameha Schools Bishop Estate
567 South King Street, Suite 200
Honolulu, HI 96813
(TMK: 5-5-01:16)

Purpose Of This Document:

This Environmental Assessment ("EA") has been prepared for the Kamalo / Kapuaie Watershed Management Project to assess the installation of a wildlife/native forest protection fence line and implementation of strategies to restore health to the Kamalo and Kapuaie watershed areas which includes ungulate control, weed control, monitoring, research, revegetation, and partners. (Figure 1)

This project has been identified and developed through broad-based community planning. An East Molokai Watershed Partnership has been formulated which includes landowners, and various agencies. Compliance with Chapter 343 is required because project activities are located in the protective and resource Conservation District Subzones.

This EA has been prepared in compliance with the provisions of Hawai’i Revised Statutes Chapter 343 and Title 11, Department of Health, Chapter 200, EIS Rules.

Chapter 343 – ENVIRONMENTAL IMPACT STATEMENTS
§343-5 Applicability and requirements
(2) Propose any use within any land classified as conservation district by the state land use commission under Chapter 205.

Conservation District Sub Zones Affected:
Protective and Resource

Chapter §13-5-22, (Identified Land Uses in the Protective Subzone)
P-7 SANCTUARIES
(D-1) Plant and wildlife sanctuaries, natural area reserves (see chapter 195, HRS) and wilderness and scenic areas, including habitat improvements under an approved management plan.

Sub Chapter 3, Identified Land Uses and Required Permits

(4) Identified and uses beginning with letter (D) require a board permit, and where indicated, a management plan.
1.0 INTRODUCTION
1.0 INTRODUCTION

This section provides a project summary and background of the proposed project, including location, land ownership, property description and land uses of the surrounding properties.

1.1 PROJECT SUMMARY

Project Name: Kamalo / Kapualei Watershed Management Project

Applicant: Molokai – Lanai Soil and Water Conservation District

Landowners: Kamehameha Schools Bishop Estate

AND

James "Kimo" Austin

Tax Map Key: 5-5-01:16 (Figure 2)

AND

5-6-06:1 (Figure 2)

Project Area: 25,621 Linear Fence Line Feet

Existing Use: TMK: 5-5-01:16 is an 1193 acre parcel owned by Kamehameha Schools Bishop Estate. Past land use of the lower elevations include cattle ranching. More recently the land is not in any agricultural use.

TMK: 5-6-01:1 is a 1678 acre parcel owned by James "Kimo" Austin. Land use at the lower elevations is cattle and horse grazing. Upper elevation is not in agricultural use and is in the State resource conservation district.

Proposed Use: Installation of a conventional fence, 26,621 linear feet in length, between the 3,000 feet and 3,500 feet elevation to protect native forest from further damage caused by feral animals. Management activities to include ungulate control, weed control, monitoring, research, revegetation, and partners (Figure 3).

Special Management Area: According to the County of Maui Department of Planning, the proposed fenceline is not located within the Special Management Area. (Figure 4 and 5)

Action Requested: Compliance with Chapter 343, Hawai’i Revised Statutes and Hawai’i Administrative Rules, Title 11, DOH, Chapter 200

Approving Agency: State of Hawaii, Department of Land and Natural Resources, Office of Conservation and Environmental Affairs
Aloha!

In compliance with the provisions of Chapter 205A, HRS relating to the Special Management Area requirements, a determination that the proposed fenceline project is outside the SMA area is requested for the Kamalo/Kapuaʻlei Watershed Management Project Conservation District Use Application (MO-2986).

The project area and proposed fenceline has been identified and attached for your review.

If you have any questions regarding this correspondence, please feel free to contact our office.

Mahalo,

[Signature]

The proposed fenceline location is not within the SMA. (See map.)

[Signature]

Planning Program Administrator

Figure 4
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

NOT IN SMA

Proposed Fenceline - intended to prevent unauthorized movement to forest edge.

TMK: S-5-01:16
KSBE

TMK: S-6-06:1
Austin, James W.

MAUI COUNTY
SPECIAL MANAGEMENT AREA

APPROVED:
12-28-79
MAYOR

PUBLIC HEARING 12-2

12-28-79
1.2 PROJECT BACKGROUND

In 1998, the community of Molokai began a grassroots planning effort to submit an application to the USDA Empowerment Zone Initiative. This process involved seven subcommittees and numerous community members throughout Molokai. This watershed project was derived from the Environmental Committee. Meetings were held several times weekly for a period of approximately four months. Molokai has since been designated an USDA Enterprise Community, or "EC". The EC Environmental Committee discussed the watershed project extensively and the fence was debated fully. The original plan was to construct a fence 15 miles in length. Through committee meetings, a compromise was reached and the fence was scaled down to the proposed 5.5 miles in length.

This project was presented at several community-wide meetings between August 1998 through January 2000. Community meetings were advertised in local newspapers, bulk mailings, and through posted bulletins throughout Molokai. This community process also involved prioritizing forty projects. Copies of the Molokai Enterprise Community News was distributed to box holders island-wide, along with 40 Projects in Molokai's 10-Year Strategic Plan that listed the Watershed Project and discussed fencing and open access for hunters. This project was voted as one of the top five projects by the Molokai Enterprise Committee Ke Aupuni Lokahi Board, and the Molokai Community. An informational meeting was also held in East Molokai to discuss this project.

The Kamalo/Kapualei Management Project reflects goals of the East Molokai Watershed Partnership. This project has been identified as the #1 environmental protection effort by the Molokai Enterprise Community's Strategic Plan, and developed through broad based community planning as a key component to the sustainability and health of Molokai's culture, traditions, and natural resources, and to the improvement of the island's economic stability.

1.3 LOCATION

The land area encompassed by this project is located at Kamalo and Kapualei on the island of Molokai, within the County of Maui. Kamalo is approximately nine miles east of Kualapuiki, the island's center of government and business that is located approximately eight miles southeast of Molokai Airport.

1.4 LAND OWNERSHIP

The parcel of land, TMK: 5-5-01:16, is owned by Kamehameha Schools Bishop Estate. The parcel of land, TMK: 5-6-06:1, is owned by James "Kimo" Austin.

1.5 DESCRIPTION OF THE PROPERTY

Kamehameha Schools Bishop Estate, TMK: 5-5-01:16 is a 1,193 acre parcel. Past landuse of the lower elevations include cattle ranching. More recently the land is not in any agricultural use. Feral goat herders have severely impacted the upper dry land forest and are working their way up to the rainforest and nature preserves. Several endangered species occur in this area and the State DoFaW maintains several protected exclusions. Rainfall ranges from 30 inches to 150 inches per year at upper elevations. Soils are mostly rough broken land and severely eroded soils.

Kapualei Ranch, TMK: 5-6-06:1 is a 1,678 acre parcel owned by James "Kimo" Austin. Land use at the lower elevations is cattle and horse grazing. Upper elevation is not in agricultural use and is in the State resource conservation district. Feral goat herders have severely impacted upper dryland forest and are working their way up to the rainforest and nature preserves. Several endangered species occur in this area and the State DoFaW maintains several protective exclusions. Rainfall ranges from 30 inches to 150 inches per year at upper elevations. Soils are mostly rough broken land and severely eroded soils.
1.6 SURROUNDING LAND USES

Vacant lands are located to the west of Kamalo. There are house lots, vacant lands, and Kalaalao Harbor, located to the east of Kapualei.

This project site is located on the island of Molokai and is approximately nine miles east of Kaunakakai town.

1.7 AGENCIES CONSULTED IN PREPARING THE ENVIRONMENTAL ASSESSMENT

The following agencies and organizations have been consulted during the planning process and for the preparation of the Draft and Final Environmental Assessment:

County of Maui
Department of Planning
Maui Board of Water Supply

State of Hawaii
Department of Health – Office of Environmental Quality Control
Department of Land and Natural Resources – Historic Preservation Division
Department of Land and Natural Resources – Forestry and Wildlife Division
Office of Hawaiian Affairs

University of Hawaii
Environmental Center
College of Tropical Agriculture & Human Resources (CTAHR)

Federal Agencies
Kalaupapa National Historical Park
USDA Natural Resources Conservation Service
US Department of the Interior – Fish and Wildlife Service
US Environmental Protection Agency
US Geological Survey – Water Resources Division

Other Agencies
The Nature Conservancy Hawaii, Molokai

Community Individuals and Organizations
(The Molokai community has been involved in this project since its inception and continues to be involved through the planning phase.)

Stacy Crivello
Yama Kaholoa’a
Edwin Misaki
Molokai Enterprise Community Governance Board, Ke Aupuni Lokahi
2.0 PROJECT DESCRIPTION
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

2.0 PROJECT DESCRIPTION

The proposed Kamalo/Kapuaelei Watershed Management Project, fence details, and a timetable and approximated costs are described in this section.

2.1 GENERAL DESCRIPTION

The Kamalo/Kapuaelei Management Project reflects goals of the East Molokai Watershed Partnership. This project has been identified as the #1 environmental protection effort by the Molokai Enterprise Community’s Strategic Plan, and developed through broad based community planning as a key component to the sustainability and health of Molokai’s culture, traditions, and natural resources, and to the improvement of the island’s economic stability.

Originally named Kamalo'o, “the dry place,” Kamalo is dominated by a steep canyon, 1,500 feet deep and over half a mile wide at its head. The canyon is the most striking feature of East Molokai’s ruggedly beautiful southern slopes. The topography of the canyon and the stream-cut upper slopes that feed into it limits human access to the region. Due to this very limited access, very few people have explored the lands above Kamalo’s famous waterfalls, Hina, Haha and Mo‘o‘ola.

Kapuaelei is comprised of a series of steep gulches/ridges east of Kamalo Canyon. The steep ridges culminate at Kamakou, the highest peak on Molokai at 4,974 feet. Like Kamalo, the upper reaches of Kapuaelei have remained relatively unexplored.

Together, these two ahupua’a (land division) encompass approximately 5,000 acres. Three thousand acres are within the State Forest Reserve Conservation Zone. The “upper zone,” above 3,500 feet elevation, contain the heart of some of the best remaining lush, intact Hawaiian forest that once covered the entire mountains of East Molokai and are home to hundreds of endemic Hawaiian plant and animal species.

Developed over millions of years, this forest is uniquely adapted to Molokai and to its variety of climate and soil. The forest acts as a protective “sponge,” absorbing the abundant rainfall, preventing rapid soil loss, time releasing water into streams, and contributing water flow (and nutrients) to the reef as well.

The upper elevation rain forest above 3,500 feet elevation remains virtually intact between Haha Falls/Kuana ridge (Kamalo) east to Wawa‘a gulch (Kapuaelei). Surveys into this area have revealed minimal if any, signs of pigs or alien plant species. Pigs do occur west of Haha Falls/Kuana ridge, especially above “Kamalo flats,” at the head of the Kamalo gulch.

Feral animals have proven to be the main carriers, soil preparers, fertilizers and scarifiers of and for weed seeds. Pigs impact the low growing ground cover plant communities of this forest area, which diminishes the water carrying capacity and allows non-native weeds a chance to become established in open soils of this area. Goats are the primary reason for the degradation of the rugged “middle zone.” Goats roam in large numbers, free from natural predators and safe on the steep terrain, from hunters. These animals have pushed back the native forest and shrubland cover nearly two miles to about 3,500 feet in elevation, where a “browse line” is evident. The areas just below the browse line is denuded grass land with many dead tree stumps, remains of a dying forest. The last wild cattle were removed from these areas in 1972-73. Axis deer prefer the low elevation kiaue forest and are very rarely seen in the elevations above 3,000 feet.

Ka‘apahu, the most prominent landmark, is now a barren, stony desert where ‘ohi’a rain forest once stood and is representative of the bare, eroding ground that dominates the rugged landscape in the middle zone. There are still some small patches of remnant dry forest clinging to life on the steep walls. West of Kamalo gulch, remnants of native shrubland persists, spared from unrestricted
goat browsing, as hunters are able to access and hunt this area safely.

Kamehameha Schools Bishop Estate, TMK: 5-5-01:16 is a 1,193 acre parcel. Past land use of the lower elevations include cattle ranching. More recently the land is not in any agricultural use. Feral goat herders have severely impacted the upper dryland forest and are working their way up to the rain forest and nature preserves. Several endangered species occur in this area and the State DoFaW maintains several protected exclusions. Rainfall ranges from 30 inches to 150 inches per year at upper elevations. Soils are mostly rough broken land and severely eroded soils.

Kapuaei Ranch, TMK: 5-6-06:1 is a 1,678 acre parcel owned by James “Kimo” Austin. Land use at the lower elevations is cattle and horse grazing. Upper elevation is not in agricultural use and is in the State resource conservation district. Feral goat herders have severely impacted upper dryland forest and are working their way up to the rainforest and nature preserves. Several endangered species occur in this area and the State DoFaW maintains several protective exclusions. Rainfall ranges from 30 inches to 150 inches per year at upper elevations. Soils are mostly rough broken land and severely eroded soils.

2.2 Technical

The USDA Natural Resources Conservation Service has completed a site assessment and Conservation Plans and Resource Impact Summaries have been developed for both land parcels (Appendix B & C). Construction of a conventional fence between the 3,000 feet and 3,500 feet elevation is necessary to protect native forest from further damage caused by feral animals. The fence will be erected along the lower edges of the browse line where vegetation is minimal to none. This fenceline will need to be installed in both the Resource and Protective Conservation District Subzones (as noted in Figure 3).

The fence is a major component of this project. Large populations of goats have been destroying native plants and closed-canopy forests. Soil and wind erosion is occurring on denuded ridges and gulches. This fence is vital to the protection and preservation of the rainforest. It will provide a barrier, and keep goats from being pushed by hunting activities into the native forest.

Fencing will allow animal movement from the upper zone into the middle zone only and will restrict feral animals from entering into the upper zone. The total amount of fence will be approximately 5.5 miles in length. Access to hunters and resource gatherers will be provided through cross-over gates that will be installed throughout the entire length of the fence.

Fencing will consist of triple galvanized materials to ensure quality and long term sustainability as recommended by the Natural Resources Conservation Service (Appendix D). Use of these materials will minimize maintenance requirements due to limited access to this area. Maintenance of the fence line will include an annual inspection and any necessary repairs. If any damage is noted during project activities, repairs will be completed, as needed using galvanized materials.

As recommended by the State Historic Preservation Division of the Department of Land and Natural Resources, installation of this fenceline will be completed by hand only. No mechanical grubbing will be used to implement this project (Appendix E).

A helicopter staging area will be located in a pasture in the lower zone of Kapuaei. Helicopter landing areas are located along the fenceline and have been identified (Figure 6). Due to safety concerns, all selected areas are grassed only and void of any trees and shrubs. All materials will be hauled in by helicopter and only as needed due to limited weight requirements. Materials and personnel will be dropped off on a scheduled basis throughout the construction period at these selected sites only to prevent further damage to these watershed areas.
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT

Environmental Assessment

Proposed Fenceline and
Δ Helipad Sites

FIGURE 6
Implementation of conservation practices will help to reduce soil erosion from wind and water; improve soil quality through accumulation of organic matter and reduced soil compaction; protect surface and ground water quality from sediment, nutrients, and pesticides; enhance habitat for aquatic and terrestrial wildlife; improve water use efficiency; enhance forest productivity and sustainability; protect and restore grazing lands, and reduce risk of damage to air quality from feral animal/agricultural activities.

2.3 ECONOMIC

Investments in resource conservation will help landowners/agricultural producers remain economically viable through cost reduction plus long term income sustainability while providing environmental benefits to society, and the local economy. Fencing materials will be ordered through a local agricultural cooperative. This project will also generate short-term employment during the construction of the fenceline, and government revenues will be increased from income taxes paid by workers.

The proposed project will allow the population of the region and the community of Molokai subsistence hunting and resource gathering throughout the project area through a controlled-hunting program.

The East Molokai Watershed Partnership (Appendix A) will provide the necessary funding, resources, administration, and community support and involvement for management of the Kamalo/Kapualei Watershed Management Project.

2.4 PROJECT COSTS

<table>
<thead>
<tr>
<th>Budget Summary</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Fence</td>
<td>$ 220,000</td>
</tr>
<tr>
<td>Goat Herding</td>
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<tr>
<td>Community Hunt Program</td>
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</tr>
<tr>
<td>Remote Area Animal Removal</td>
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<tr>
<td>Feral Animal Monitoring</td>
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<tr>
<td>Weed Control</td>
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<tr>
<td>Monitoring</td>
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<tr>
<td>Partners – Coordinating Partnership</td>
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<td><strong>TOTAL</strong></td>
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KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

Funding Match Summary

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<th>Federal Funding Sources</th>
<th>Funds</th>
<th>Req. Match</th>
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<th>Funds</th>
<th>Inkind Services</th>
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<tbody>
<tr>
<td>USPWS PFWM</td>
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<td>KSBE Kapualeti Ranch</td>
<td>$ 40K</td>
<td>$ 5K</td>
</tr>
<tr>
<td>NRCS WHIP – Kamalo</td>
<td>$ 25K</td>
<td>3:1</td>
<td>Maui County Board of Water Supply</td>
<td>$ 50K</td>
<td>$ 25K</td>
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<tr>
<td>NRCS WHIP – Kapualeti</td>
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<td>3:1</td>
<td>TNCI</td>
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<td>$ 20K</td>
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<tr>
<td>Ke Aupuni Lokahi</td>
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<td>DOFAW MLSWCS</td>
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<tr>
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<td>$ 200K</td>
<td></td>
<td></td>
<td>$ 165K</td>
<td>$ 35K</td>
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</table>

2.5 SOCIAL

Protecting Moloka'i's environment is critical to the health of the island and to its' people. Through extensive community planning, this project has been determined high priority by the Molokai Enterprise Community (Appendix F). This proposed project has derived through an extensive community planning effort.

Through required consultation with the State of Hawaii Historic Preservation Division, cultural sites are existent (Appendix E). Cultural resources will be excluded from planned management activities as recommended.

A hunting program is being planned and both landowners have committed to allowing access for this program through an existing jeep trail. The community of Molokai will be allowed to hunt for recreation or subsistence and to gather resources. This hunting program is still in its planning stages and because of The Nature Conservancy of Hawaii's experiences through other similar existing projects, they will spearhead this program.

A request to the Office of Hawaiian Affairs to review the DRAFT Environmental Assessment was submitted in July 2009 in regards to native Hawaiian cultural practices. Information provided will be incorporated when received.

2.6 ENVIRONMENTAL

2.6.1 Soil

Soils Description Report

NAC3 – Nalwa silty clay loam, 7 to 15 percent slopes, severely eroded
This deep, well-drained soil occurs on moderately sloping uplands. It developed in volcanic ash and material weathered from basic igneous rock. Most of the surface layer and part of the subsoil have been removed by erosion. The surface layer is silty clay loam, and the subsoil is silt loam and loam. The soil is strongly acid in the surface layer and strongly acid to very strongly acid in the subsoil. Permeability is moderately rapid. Runoff is medium, and the erosion hazard is severe.

OFC - Olalo silty clay, 3 to 15 percent slopes
This is a very deep, well-drained soil on gently sloping to moderately sloping uplands. It formed in material derived from basic igneous rock. The surface layer and the subsoil are silty clay. The soil is very strongly acid. Permeability is moderately rapid. Runoff is slow, and the erosion hazard is slight.
rRO – Rock Outcrop
Rock outcrop consists of areas where exposed bedrock covers more than 90 percent of the surface. Slopes range from 3 to over 150 percent. The rock outcrops are mainly basalt and andesite. Included are small areas of coral outcrop along the coasts.

rRR – Rough Broken Land
Rough broken land consists of very steep land broken by numerous intermittent drainage channels. In most places it is not stony. Slopes are 40 to 70 percent. Runoff is rapid, and geologic erosion is active. The soils are 20 to more than 50 inches deep over soft, weathered rock. In most places some weathered rock fragments are mixed with the soil material. Small areas of rock outcrop, stones, and soil slips are common. Included in mapping are areas of colluvium and alluvium along gulch bottoms.

rRT – Rough Mountainous Land
This unit occurs in high rainfall mountainous areas. It consists of very steep land broken by numerous intermittent drainage channels. It is dominated by deep, V-shaped valleys that have extremely steep side slopes and narrow ridges between the valleys. Slopes range from 50 to 100 percent or more. The soil mantle is very thin over much of the area. It ranges from 1 inch to 10 inches in thickness over saprolite. In most places the saprolite is relatively soft and permeable to water. The soil material on the narrow ridgertops is deeper and similar to that of the Amalu and Olokui series. Rock outcrop, soil slips, and eroded spots make up 20 to 40 percent of the acreage.

Soils are described as being strongly acid at surface and strongly acid in subsurface layer. Little to no nutrient cycling as there is limited vegetative cover. Soil loss exceeds acceptable tolerance level. Sheet & rill erosion estimated at 70 tons/acre/year.

<table>
<thead>
<tr>
<th>Sheet &amp; Rill USLE</th>
<th>Area</th>
<th>Field</th>
<th>Tons/Ac/Yr</th>
<th>Tons/Ac/Yr</th>
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<tr>
<td>Kamalo</td>
<td>1</td>
<td></td>
<td>70.100</td>
<td>4.200</td>
<td>65.900 reduced</td>
</tr>
<tr>
<td>Kapualei</td>
<td>1a</td>
<td></td>
<td>70.100</td>
<td>4.200</td>
<td>65.900 reduced</td>
</tr>
</tbody>
</table>

Upper elevations of Kamalo and Kapualei are almost devoid of vegetation due to damage caused by goats and pigs. Stream banks and bottoms are not stabilized. Strong winds in this area contribute to erosion problem. Safety is a concern because of deposition, as severe flooding can occur if there is a high rainfall.

A Soil/Plant Analysis Report was completed in March 2000 (Figure 7).

2.6.2 Water

Due to lack of adequate vegetation, water accumulates or flows on the surface of the land with adverse effects during runoff/flooding as water conveyance channels are unable to remove water form the land in a safe and non-erasive manner. Suspended sediment and turbidity adversely affects aquatic habitat, recreational waters, and other intended uses. According to DOH (Hawaii's Assessment of Nonpoint Source Pollution Water Quality Problems, November 1990) report, state monitoring of South Moloka'i shows significant violations of water quality standards for suspended solids and nutrients. Due to poor infiltration, water quantity has been affected as excess amounts, runoff/flooding causes damage to cropland and residential areas.

Through planned management activities, the amount of sediment in runoff water will be minimized and the amount of vegetation will increase allowing improved water infiltration and a slowing of overland flow.
# Soil/Plant Analysis Report

**Client:** THE NATURE CONSERVANCY OF ATNB: Tina Lau, P.O. Box 220 Kulaapu, HI 96757

**Date Reported:** 03/29/2000

**Agent:** ARAKAKI, ALTON, Office: MOLOKAI P. O. BOX 317, KAUNAKAKAI MAUI, HI 96729 567-6833, Fax: 567-6818

## Sample Information

<table>
<thead>
<tr>
<th>Job Control No.</th>
<th>00-023028-001</th>
<th>Map Unit:</th>
<th>Soil Series:</th>
<th>Plant Grown:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Label:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date Received:</td>
<td>03/24/2000</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Send Copy To:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevation (ft.):</td>
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</table>

<table>
<thead>
<tr>
<th>Soil Category:</th>
<th>HEAVY SOIL</th>
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</thead>
<tbody>
<tr>
<td>Soil Depth (in):</td>
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</tr>
<tr>
<td>Latitude:</td>
<td></td>
</tr>
<tr>
<td>Longitude:</td>
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## Test Results and Interpretation

**HEAVY SOIL**

<table>
<thead>
<tr>
<th>Soil Analysis</th>
<th>Results</th>
<th>Expected</th>
<th>Very Low</th>
<th>Low</th>
<th>Sufficient</th>
<th>High</th>
<th>Very High</th>
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<tr>
<td>pH</td>
<td>4.8</td>
<td>6</td>
<td></td>
<td></td>
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<td>Fe ppm</td>
<td>22</td>
<td>37.5</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ca ppm</td>
<td>18</td>
<td>250</td>
<td></td>
<td></td>
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<tr>
<td>Mg ppm</td>
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<td>1250</td>
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<tr>
<td>OC %</td>
<td>15</td>
<td>150</td>
<td></td>
<td></td>
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<tr>
<td>Total N %</td>
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<td>Salinity_ECa</td>
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<tr>
<td>Mo ppm</td>
<td>Al ppm</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**INTERPRETATION:**

- No criteria found
- Sufficient
- High
- Very High
Problem Description
Kamalo, 1100m elevation, baseline data for EC project.
Soil management history: ungulate disturbance

Fertilizer and Lime Recommendations

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Fertilizer / Lime Material</td>
<td>Total Amount (lbs/1000sq-ft.)</td>
<td>Applications</td>
<td>Cost Estimate ($/1000sq-ft.)</td>
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<tr>
<td>Fertilizer: 10-20-20</td>
<td>45.9</td>
<td>split into 8 apphns.</td>
<td>8.26</td>
</tr>
<tr>
<td>Lime Material: Dolomite</td>
<td>175</td>
<td>split into 4 apphns.</td>
<td>17.5</td>
</tr>
<tr>
<td>Ca Material: Gypsum</td>
<td>22.9</td>
<td>split into 4 apphns.</td>
<td>2.29</td>
</tr>
</tbody>
</table>

Comments

--- GENERAL INFORMATION ---

0. Please indicate the soil series when submitting your soil samples.
0. Knowing levels of sulfur and micronutrients in plants is also important. For proper diagnosis, tissue analysis is needed.
0. Apply 1/4 of the total lime at individual applications before planting and thereafter once every four months.
0. Split the fertilizer into several applications before planting and thereafter once every 6-7 weeks until the total amount has been applied.
0. We recommend that you adopt a nutrient monitoring approach by retaining this sample report for comparison with future samples.

NOTE:
The interpretations are based on Fact Sheet No. 3 "Adequate Nutrient Levels in Soils and Plants in Hawaii."

To help improve future recommendations, please answer the following questions, photocopy this form and return it to above address.
1. Did you need to modify the recommendation? If so, how?
2. Did your plants improve? Please give unit area yield before and after the recommendation was applied.

FEEDBACK
Safety problems, property damage, and health problems are caused by airborne sediment due to bare soil areas. The lack of vegetation has also caused improper temperature, air movement, and humidity in this area causing poor development of plants and animals.

Once feral animal numbers are reduced and controlled, soil erosion will decrease, and plant health and vigor will be restored, thus, air quality will improve.

2.6.4 Plants

Plants provide the quantity and quality of crops, forage, cover, and habitat in the amount and timeliness of production needed. Remaining plants are in poor condition due to trampling, rubbing and lack of nutrient cycling. Dry land forest cover has been severely affected by uncontrolled grazing by overpopulation of feral goats. Presently, there is no management plan for plant protection or regeneration. Some threatened and endangered species are known to occur in this and adjacent locations, and are becoming adversely affected because of loss of habitat. DoFaW manages a few exclusions to protect some known locations. Plant productivity in the forest area has been decreasing due to severe damage caused by high numbers of feral animals and wind erosion.

Through planned activities to reduce feral animal numbers, plants will have the chance to reestablish themselves naturally. Implementation of a grazing management plan and installation of other appurtenant structures will increase forage production. The project area will be monitored to assess plant recovery. It is expected to take up to three years for the recovery of the natural vegetation. Areas around threatened and endangered plants will be excluded from operations.

The Department of the Interior Fish and Wildlife Service has identified threatened and endangered plant species that occur within the Kamalo/Kapualei Watershed Management Project (Figure 6).

2.6.5 Animals

Native wildlife is being adversely affected by loss of native habitat and habitat alteration. Feral goat and pig numbers are out of control and are seriously damaging the upland resources. Fencing, trapping, aerial shooting, and hunting will control animal numbers. Wildlife will benefit by improved vegetation.

The Department of the Interior Fish and Wildlife Service has identified threatened and endangered plant species that occur within the Kamalo/Kapualei Watershed Management Project (Figure 6).
In reply Refer To: JJS

Edwin T. Misaki
Director of Molokai Programs
The Nature Conservancy of Hawaii
P.O. Box 220
Kualapuu, HI 96757


Dear Mr. Misaki:

The U.S. Fish and Wildlife Service (Service) has received your letter of November 9, 1999, requesting a list of threatened and endangered species that occur within the Kamalo and Kapualei ahupuaa on the island of Molokai. We have reviewed the provided maps as well as other information contained in our files, including data prepared by The Nature Conservancy’s Hawaii (TNCH) Natural Heritage Program. The following is a list of the endangered and candidate species, and species of concern that occur within the boundaries of the two ahupuaa. There are no threatened species within these areas. The list of species of concern is limited to those species identified by the TNCH Heritage Database. Other species of concern may be present.

Endangered Animals
*Lasiurus cinereus semotus* (ope apea, Hawaiian hoary bat)

Endangered Plants
Prickardia munroi (loulu)
Melicope hawaiensis (alani)
Cyanea mamii (oha wai)
Labordia triflora (kamakahala)
Cyanea procera (haha)

Candidate Species
Phyllostegia hispida (no common name (cnc))

FIGURE 8
Species of Concern

*Asia flammeus sandwichensis* (pueo)
*Lentipes concolor* (oopu alamoo)
*Perodicella helena* (tree snail)
*Partulina proxima* (tree snail)
*Eurya sandwichensis* (anini, wanini)
*Lagenisera maviensis* (howalaulu)
*Cyanea solenocalyx* (haha)
*Phyllostegia stachyoides* (ncn)
*Exocarpos gaudichaudii* (hezu)

If you have questions or comments, please contact Fish and Wildlife Biologist John Schmerfeld by telephone at (808) 541-3441 or by facsimile transmission at (808) 541-3470.

Sincerely,

[Signature]

Paul Henson
Field Supervisor - Ecological Services
3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATIVE MEASURES
3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATIVE MEASURES

The environment surrounding the proposed project includes the physical or natural environment and the human or social environment. This section describes the existing conditions, the potential impacts to the environment and mitigation measures.

3.1 PHYSICAL CHARACTERISTICS

Located in the center of the Hawaiian Island Chain is Molokai, the fifth largest Hawaiian Island. Molokai is 38 miles long and 10 miles wide, with a land area of 284 square miles. The island is formed by two domes interconnected by a central plateau. The larger eastern dome, rises to an elevation of 4,974 feet. The project site is located in east Molokai at Kamalo and Kapualei. These two ahupua’a encompass approximately 5,000 acres.

3.1.1 Topography

The topography of the project site ranges from six feet mean sea level (msl) to 4,970 feet. Soils are mostly rough broken land and severely eroded soils. Soil loss exceeds acceptable tolerance level with sheet & rill erosion estimated at 70 tons/acre/year.

Potential Impacts

According to the State of Hawaii, Department of Land and Natural Resources, Conservation Subzones map (Figure 3): the majority of planned fenceline will be installed in "Resource" Conservation Subzone. A minimal portion of fenceline will need to be installed in "Protected" Conservation Subzone in the area of Hina Falls due to topography (Appendix F).

Mitigative Measures

To mitigate potential harm to the existing environment, all fence posts at the lower margins of the middle and upper zones will be installed by hand, with no mechanical grubbing or clearing of the fenceline corridors as recommended by the Hawaii Department of Land and Natural Resources Historic Preservation Division (Appendix E). Using this method, there will be no effect to any significant historic sites, which may be present in the project area.

3.1.2 Climate

Temperatures are relatively stable and uniform varying from high 60's around the coastal areas in winter months to 85°F in the summer. Rainfall ranges from 30” to 150” per year at upper elevations.

3.2 IMPACTS AND ALTERNATIVES CONSIDERED

No further negative impacts were identified as all activities have been thoroughly considered and developed through extensive community/partnership planning. Limited controlled hunting for the past 10-15 years in this area has had no significant impact due to the large quantity of animals and remote, inaccessibility of the area. No other alternatives have been considered due to past efforts, the terrain and the highly critical damage to Kamalo/Kapualei.

All management activities have been planned and will be implemented as required for the benefit of the environment and to the island of Molokai and its people. For example, activities planned for the initial movement of the ungulates is to allow controlled hunting on foot as well as aerial shootings.
3.3 PROPOSED MITIGATION MEASURES

None planned as both landowners and the entire community of Molokai is in full support of the project. County, State and Federal agencies are also involved in implementation of this project.

3.4 ANTICIPATED DETERMINATION

The proposed project is not anticipated to create any significant, long-term adverse environmental effects. Every effort to protect and enable the natural (native) plant community progression to occur has been kept in mind in all planning phases.

3.5 FINDINGS AND REASONS SUPPORTING THE ANTICIPATED DETERMINATION

The proposed project is not anticipated to have an adverse impact upon surrounding land uses. All proposed management activities are intended to restore health to the Kamalo and Kapualei watersheds and to protect and conserve its existing and surrounding resources for long-term sustainability.

3.5.1 EIS

An EIS is not required at this time.

3.5.2 REQUIRED PERMITS & APPROVALS

The following permits and approvals will be required prior to the implementation of the project.

State of Hawaii
DLNR Board Permit
DLNR Management Plan

County of Maui
No permits and approvals are required.
4.0 ATTACHMENTS
4.0 ATTACHMENTS

Molokai Advertiser News — East Moloka‘i Watershed Partners Sign Pact
Honolulu Advertiser — Public Key To Watershed Plan
HS&CPN — Notice of Public Hearing
Moloka‘i Advertiser News (The M.A.N.) — Public Comment Deadline
The Dispatch — Saving Moloka‘i’s Watershed

4.1 COMMENTS/RESPONSES

State of Hawaii, Office of Environmental Quality Control
Native Hawaiian Legal Corporation
Mr. Yama Kaholoa Sr.
Ke Aupuni Lokahi, Stacy Crivello
University of Hawaii, Environmental Center
Christmas Ornament Workshop

Quality Christmas craft projects were made at a workshop attended by Anita Vistoria, Rufina Kula, Vangie Antolin, and back row: Jo-Lynn Downey with Instructor Barbara Chung Ho.

Barbara Chung Ho presented a Christmas Ornament-making Workshop at the Mitchell Paule Center was sponsored by the County of Maui Molokai Senior Services. Participants learned the Chinese Square Knot and using colorful cordage learned how to craft a candy cane, a miniature Japanese doll and wreath - all useful as ornaments, or seasonal pins. Chung Ho is an instructor with Temari, located in Kaimuki, Oahu. Temari is a center for teaching various arts and crafts, mostly with Asian roots.

With Thanksgiving around the corner, the Hoolehua Homesteaders' Association Ho'olu'a'e on Saturday, the workshop was a reminder that Christmas holidays are around the corner.

Police Commission Meets Public Today
Barbara Chung Ho presented a Christmas Ornament-making Workshop at the Mitchell Pauleo Center on Saturday, the workshop was a reminder that Christmas holidays are around the corner.

Police Commission Meets Public Today
November 17, 1999: The Maui Police Commission meets public testimony at the Mitchell Pauleo Center at 3:00 p.m. Citizens file against police officers, but an effort is being made to allow new complaints to be aired before the commission at that time.

Homesteaders Meet Tonight Nov 17
Senators Jan Yagi Bunen and Colleen Hanabusa meet with Hawaiian Homesteaders tonight starting at 6:30 pm (locations) about HB 1675 — relating to Hawaiian Home Lands Trust and SB 1635 Relating to Public Land Trust.

MHIS Drama: “Medieval Madness”
Molokai High & Intermediate School theatre invites community to their performance of “Medieval Madness.” Four performances are planned on stage at the Molokai High School Cafeteria on November 12, 22, and 24. Doors open at 6:30pm. Tickets at the door cost $4. Advance tickets are $2 for students and $3 for Adults.

Ho‘olehua Homesteaders Association
Ho‘olaule‘a at Kulana ‘Oiwi
The Hoolehua Homesteaders Association invites the community to their annual on Saturday, November 20 from 8am-2pm.

Christmas Crafts, food sale, silent auction and entertainment fundraiser for scholarships are planned for the event scheduled at the Kulana ‘Oiwi Hall.

Adventist Book Center on Molokai
The Adventist Book Center on Molokai retails to Molokai this weekend, according to Pastor Lan Chesman. The annual book display and sale is to the community service of the Seventh-day Adventist Church. The display and sale to be held at the Valley Store will be held on Saturday, November 20, 9:30-11:30am and Sunday, November 21 at 9am-2pm.

Devotional books for seniors, women, teens, juniors, and children will be on sale. These books will aid in our spiritual growth as we start each day in the year 2000 with a devotional reading and prayer Bible, religious books, comic books, and other art will be available to purchase. There will be items that make great gifts for Christmas.

“Come visit, see and purchase gifts that last!” invited Pastor Chesman.

Barbara Chung Ho presented a Christmas Ornament-making Workshop at the Mitchell Pauleo Center was sponsored by the County of Maui Molokai Senior Services. Individuals learned the Chinese Square Knot and using colorful cordage learned how to craft a candy cane, miniature Japanese doll and wreath - all useful as ornaments, or seasonal picks. Chung Ho is an instructor with Tenari, located in Kaimaki, Oahu. Tenari is a center teaching various arts and crafts, mostly with Asian roots.

With Thanksgiving around the corner, the Hoolehua Homesteaders’ Association Ho‘olaule‘a on Saturday, the workshop was a reminder that Christmas holidays are around the corner.

A community-wide planning process identified wastewater protection as an environmental priority for Molokai’s, said Karen Holt, Executive Director of the Molokai Community Service Council, which administers Ke Aupuni Lokahi. "The people of Molokai share a commitment to a rural lifestyle that depends on the land and sea. Protecting these natural resources is key to the sustainability and health of Molokai’s culture and traditions and to our future economic stability."

Damage from introduced feral animals such as pigs, goats, and deer is converting East Molokai’s pristine cloud-capped native forests to open non-native grasslands and degraded ridges and gulches. A recent wildfire that burned thousands of acres, including some native forest, has further compounded the damage. The loss of watershed has reduced stream flows and native forest resources, diminished ground water recharge, and increased siltation and flooding, which in turn destroys coastal resources.

Ke Aupuni Lokahi Board President Stacy Cirrello said that other Molokai’s watershed landowners will be invited to join the partnership. "The primary advantage for landowners is that the partnership will help them locate resources and manage their watershed lands," she said.

The first initiative of the East Molokai’s partnership is to implement a $400,000, two-year fencing and animal control project on the lands of Kama‘u and Kapulau, a pair of neighboring shapua’s (hard divisions) that extend from the mountain tops to the sea. Kamehameha Schools Bishop Estate owns Kama‘u; Austin Estate owns Kapulau.

Together, the two shapua’s encompass about 5,000 acres. About 3,000 of these acres lie within the State Forest Reserve Conservation Zone. The upper zones of these shapua’s (above 3200 feet) contain some of the best remaining Hawaiian forest on East Molokai and are home to hundreds of endemic Hawaiian plant and animal species. The middle zones (from 1000 to 3200 feet) have been severely degraded by goats, which have pushed back the native forest and shrubland cover nearly two miles to an elevation of 3,200 feet, where a "browse line" is clearly evident.

The management plan calls for construction of a fence at 3,500 feet to prevent pigs and goats from moving into the upper zone. An organized hunting program will provide community members with access to safe, accessible areas of the upper middle zones to help reduce goat and pig populations.

"To maintain and even increase the watershed capacity, it is essential to keep the upper zone free of feral animals and reduce erosion of the middle zone by promoting recovery of vegetation," said Neil Hansen, a Regional Director with Kamehameha Schools Bishop Estate, a participating landowner. "Increased stream flow will directly benefit the landowners and tenants of these shapua’s by having water available for cultural and economic activities, while reducing the siltation that impacts the near-shore reefs and fishponds."

Aupuni Lokahi has committed $100,000 to the $400,000 Kama‘u-Kapulau project, with the other members of the partnership making up the balance.

Special Meeting: November 19, MYC 7:30
"Do we need a Skateboard Park?"
A special meeting is scheduled for Friday, November 19, 1999 at the Molokai Youth Center, beginning at 7:30pm. Youth Center staff invite everyone to “Please come and share your views!”
Pandemonium

It's Pokemon!

Surf's paradise at Sunset Beach

Public Key to Watershed Plan
Molokai: Public is key to watershed plan

FROM PAGE B1

birds and insects, and to preserve the conservation lands as prime watershed. Similar agreements were signed last year for West Maui and this year for the Molokai Mountains.

On Molokai, the project will include a fence at 3,900 feet elevation to keep goats and pigs out of the watershed and a hunting program to reduce the population of feral animals that damage the watershed.

"Ke Aupuni Lokahi will put in $100,000 toward the cost of the management plan, with other partners providing another $300,000.

Much of the watershed is protected as natural area, including Waikolu, Wailau and Pelekunu Valleys on North Molokai, the Kama'ono Preserve managed by Nature Conservancy. The agreement adds key parcels on the south slopes of East Molokai.

Although the project is primarily aimed at conservation of natural resources, Holt said there is a connection to Ke Aupuni Lokahi's goal of economic revitalization of Molokai. "Many of the economic development programs we envision are very dependent on use of natural resources and the quality of

Adequate water is needed to support taro production, fishpond developments, native plant nursery and reforestation projects, and just to assure the potential for future growth," he said.

Ke Aupuni Lokahi's overall program also lists erosion control and a comprehensive water management plan for the island as key elements of long-term economic development. "Our purpose is to build something for the children of tomorrow," said John Honolua, co-founder of Kanemakahele School. Holt and others, he said, increased agricultural productivity, is important to a "more sustainable island economy.\" Participation by Ke Aupuni Lokahi helps to ensure success on Molokai, said Ed Misaki, director of Molokai programs for Nature Conservancy. "To succeed on Molokai, conservation efforts required the support and commitment of the larger community. This partnership not only has that support, it is a product of the community," he said.
PUBLIC NOTICE
State of Hawai‘i
Department of Health
Public Notice on the Proposed FY 2000 - 2001 State Preventive Health Plan

Pursuant to the Public Health Service Acts, Title II, Sections 1866(a)(1)(XVIII) and (b), notice is hereby given that the Department of Health has scheduled a public hearing on the Proposed FY 2000 - 2001 State Preventive Health Plan.

STATE OF HAWAI‘I
DEPARTMENT OF HUMAN SERVICES
SOCIAL SERVICES DIVISION
NOTICE OF PUBLIC HEARING

Pursuant to sections 91-3 and 92-41, Hawaii Revised Statutes, notices of public hearing will be held to public hearing to consider the proposed Department of Human Services amendments to existing PUC rules for the Social Services Division, Adult and Community Care Services Branch, for the purpose of conforming to state statutes. A brief description of the proposed changes is as follows: Changes to Section 256-24.4520, to be added to the eligibility requirements for those individuals who are eligible for similar services through other programs.

Public hearing will be held at the following date, time and place:

Hearing Date: July 24, 2000
Time: 8:30 a.m.
Place: Liliuokalani Building
2nd Floor Conference Rooms 1 and 2
1390 Miller Street, Honolulu, HI 96813

All interested persons are invited to attend the hearing and to state their views relative to the proposed rule. Any person requesting that written testimony be considered, five copies shall be made available to the presiding officer at the public hearing or within seven days before the hearing.

Department of Human Services
Social Services Division
Adult and Community Care Services Branch
80 Richards Street, Suite 400
Honolulu, Hawaii 96813

Residents of Hawaii, Kauai, and Maui who wish to present oral testimony may also contact the Social Services Division (SSD) Adult and Community Care Services (ACCS) office on the respective islands within seven days before the Honolulu hearing date to have their testimony transcribed.

SSD-ACCS Section Administrator
East Hawaii Section
234 Hall Street
Hilo, Hawaii 96720 (935-2820)

SSD-ACCS Section Administrator
West Hawaii Section

NOTICE OF REQUEST
The Department of Human Services, Social Services Division, Adult and Community Care Services Branch, has received a request for a public hearing on the Social Services Division, Adult and Community Care Services Branch section on regular business days and hours. The public hearing may also be read at the Internet at: www.state.hi.gov/vrrm.

Special accommodations (i.e., Sign Language interpreter, large print, taped materials, or accessibility parking) can be provided, if requested at least five (5) working days before the scheduled public hearing on Oahu by calling 808-586-5500, on neighbor islands by contacting the Social Services Division, Adult and Community Care Services Branch Office on the respective islands with their requests.

DEPARTMENT OF HUMAN SERVICES
SOCIAL SERVICES DIVISION
ADULT AND COMMUNITY CARE SERVICES DIVISION
NOTICE OF PUBLIC HEARING

Pursuant to sections 91-3 and 92-41, Hawaii Revised Statutes, notices of public hearing will be held to consider the proposed amendments to the State of Hawaii, benefits program for the purpose of conforming to state statutes. A brief description of the proposed changes is as follows: Changes to Section 256-24.4520, to be added to the eligibility requirements for those individuals who are eligible for similar services through other programs.

Public hearing will be held at the following date, time and place:

Hearing Date: July 24, 2000
Time: 6:00 P.M.
Place: Kalani O Le‘ilani Building, QCAC Activity Room
Macaulay Highway
Honolulu, Hawaii 96817

The Department of Human Services, State of Hawaii, pursuant to Chapter 135-1, Hawaii Revised Statutes, will hold a public hearing to receive testimony on the following:

Conservation District Use Application (CDUA) MD-2946; Fence and Landscaping on private land at Kane‘ohe and Kapolei, Molokai, County of Maui

Any person may testify or present information on the application, if you have a legal interest that may be adversely affected by the application, you may have the right to request an administrative contested case hearing. However, you must make the request either orally or in writing by the close of the public hearing and file a written petition for a contested case hearing within 10 days after the date of the public hearing. If you do not make such a request, or fail to file a timely written petition with the Department of Human Services, you may be precluded from obtaining a contested case hearing and judicial review. See Chapter 135-1 Hawaii Administrative Rules of the Department of Human Services for all matters and Chapter 135-1 Hawaii Revised Statutes.

BOARD OF LAND AND NATURAL RESOURCES
TIMOTHY J. JOHNSTON, Chairperson
Dated: June 6, 2000
(808) 586-5500

ATTENTION LEGAL ADVERTISERS - DI

Notices that require two proofs prior to approval must be submitted:

FIVE (5) WORKING DAYS prior to the Monday of publication.

Notices that require one proof service prior to approval must be submitted:

FOUR (4) WORKING DAYS prior to the Monday of publication.

Both final corrections and camera-ready materials must be submitted

FOR THE KONA EDGE, 600 HAWAI‘I AVENUE, HONOLULU, HAWAII 96813.
East Molokai Watershed Management Project Fencing
Public Comment Deadline: July 24, 2000

MLSWCD proposes to install a fence along the ridgeline or browse line at Kanaloa Canyon and Kapuale on to protect forest and watershed areas from further degradation due to the presence of feral animals. Fencing is also proposed to be installed at Kaapahu. The total length of fencing will be approximately 5.5 miles in the Protective and Resource Subzones of the Conservation District. Fencing will be constructed of galvanized materials and will be installed by hand to avoid impacting possible archaeological sites. Helicopter landing sites and staging areas are identified in the application. Construction of the fence will take place over a period of approximately two years. Management land uses are proposed to consist of landscaping, the removal of non-desirable, non-native plant species and revegetation over a period of twenty years.

Send comments to: Molokai-Lanai Soil & Water Conservation District
P.O. Box 396, Hulahe, Hawaii 96729
Contact: Paul Elia (567-6809)
Department of Land and Natural Resources, 1151 Punchbowl Street, Room 220, Honolulu, Hawaii 96813. Contact: Eric Hill (587-0383)

Meat Business Gets Taxpayer Dollars?
First there was the $10-M bond approved by the Legislature.
Second- free lease rent until up and running...and then manini lease rent courtesy of the BLNR. This is a lot of Taxpayer dollars for the dead meat industry.
Third- this new $1.5-Million dollar GUARANTEED loan from USDA...not to forget saltwater beef courtesy of the taxpayers...and $50,000/year (more tax $5) for promoting the deathstock auction at the Farm Fair...all to give blatant violators of the Humane Slaughter Act a new killing plant, with all the attendant environmental dangers...built along the Kalaelea shore.

The USDA Rural Development Program has given a conditional commitment for a guaranteed loan of $1.5 million for a new slaughterhouse project in Campbell Industrial Park, according to U.S. Representative Patsy Mink. The loan to Hawaii Livestock Cooperative will be used for leasehold improvements, to purchase equipment and to install a wastewater treatment system at the slaughterhouse.

"The most dangerous man, to any government, is the man who is able to think things out for himself, without regard to the prevailing superstitions and taboos. Almost inevitably he comes to the conclusion that the government he lives under is dishonest, insane, and intolerable."—H.L. Mencken, 1919)
Saving Molokai’s Watershed - The Moloka’i Enterprise Community’s Kapua’eli Watershed Project

by: Moloka’i Enterprise Community

Moloka’i’s native rainforest is dying. Hundreds of acres of pristine forest are disappearing each year, as thousands of wild goats, pigs and deer eat the under-story plants that protect the roots of native trees. The southern slopes of Moloka’i are burned and barren from Mount Kaiehina. Silt washes down the mountains, suffocating the coastal reefs and filling the fishponds. The Kamalo/Kapua’eli rainforest is in the heart of the East Moloka’i watershed, and it is in grave danger.

The upper rainforest and shrub lands of Kamalo/Kapua’eli are home to one of the most pristine forests left on Moloka’i. The associated native forest shrub lands once provided dense vegetation as low as 2500 feet elevation. Over 90% of the flora and fauna of the forest are endemic (found only in Hawaii and nowhere else in the world). Due to Hawaii’s isolation and volcanic beginnings, our pristine native forest evolved without the presence of feral animals such as goats, pigs, and deer, and consequently the forest has no defenses to the browsing, trampling, and grazing of these introduced feral animals. Feral goats have denuded most of the shrub lands and are now destroying the upper forest, at about the 3000-3500 elevation.

To save the heart of our native watershed, the Moloka’i Enterprise Community has undertaken a watershed protection project that will help to reduce the number of animals that prey on the forest. The first step in this project is the construction of a protective fence, and the creation of an aggressive community hunting plan. A 6 mile protective fence is planned for construction high in the mountains in Kamalo and Kapua’eli. The fence will keep goats and other ungulate predators out of the forest. The edge of the forest is referred to as the “brown” line. The plan is to construct a fence along the contour just below the brown line to protect it from further damage. At the same time, residents of the Kamalo/Kapua’eli area are working to design an aggressive hunting plan which is being implemented as part of this comprehensive project. Kamahameha Schools and Kapua’eli Ranch, the private landowners whose lands will be fenced, are actively working with the residents to develop the hunting plan.

Support for this project is being provided by the Moloka’i Enterprise Community, The Nature Conservancy, Maui Community, the EPA, the state Division of Forestry and Wildlife, the state Department of Health, the US Fish & Wildlife Service, US Geological Survey, the Moloka’i’s Lanai Soil and Water Conservation District, USDA Natural Resource Conservation Service, Kalapana National Historic Park, and landowners Kamahameha Schools and Kapua’eli Ranch. $400,000 has been raised for the project to date, including funds to hire up to 2500 fence builders. The construction of the fence will cost approximately $500,000. The project partners are committed to this project because it is a comprehensive solution to a serious problem, and it is led by the Moloka’i community.

The watershed project will help to protect and restore the entire ecosystem, from mountains to sea. Below the forest is a wide, eroded zone that is badly denued due to years of impact from feral goats. The effects of the erosion can be seen clearly in the Kamalo/Kapua’eli Fishpond. This fishpond was one of the biggest on Moloka’i, but has been filled in over the years with tons of silt, so that now only a few acres of open water remain. Fisherman Moses Kalikulani has noticed the steady decline of the he’e grounds in the Kamalo reef due to the siltation. Thinning out the goat herd will help the vegetation recover in the eroded zone, which will in turn protect the reefs against further erosion damage.

The watershed protection project is one of the top priorities in the Moloka’i Enterprise Community plan. In 1999, Moloka’i became one of only 29 new federally-designated Enterprise Communities. This “EC” designation was based on the quality of the problem-solving plan that was developed by the Moloka’i community in the summer of 1998 through an island-wide grass-roots planning effort. This effort was a comprehensive process that involved seven subcommittees and hundreds of community members who met several times weekly for a period of about four months to develop a plan that maximizes economic development and natural resource conservation.

As the plan is put into action, various aspects of the project are being implemented. In addition to the fencing and hunting, the molana species (a type of fish) and the naia (a type of eel) will be protected by the restoration efforts. The community is also working to create a network of trails that will allow hikers and bikers to enjoy the beauty of the forest without disturbing the natural habitat.

In the long run, this project will provide valuable benefits for the environment, and for the people of Moloka’i. It will protect the coastal reefs from siltation and erosion, and it will help to preserve the unique native plants and animals that are found only on Moloka’i. It will also provide economic benefits to the community through the development of new eco-tourism opportunities. In addition, the project will aid in the Enterprise Community’s efforts to create a sustainable future for Moloka’i, and to ensure that the island’s rich cultural heritage is preserved for future generations.

Admissions Day

August 18, 2000

Celebrating 41 years as the 50th State of the United States of America

Council Chair Pat Kawano

bulk mailings, the local papers, and through the island’s “coconut wireless.”

The watershed protection project was given high priority in the EC plan based on feedback from the community that protection of the upper-elevation native rainforest, the community’s primary source of water, is critical to preserving Moloka’i’s cultural roots, reviving its rural economy, and preserving the island’s lifestyle. When Moloka’i won an “EC” designation, a Board was formed to implement the EC projects, including the watershed protection project.

The EC Board, led by Kauaihuki Lokoalani, has been working hard to inform the community about this project, and to support its implementation. The Board believes that the proposed fence is an integral part of the project because it will keep goats from being further into this forest once the hunting plan is implemented. Hunters know that if you put pressure on feral animals, they will move to other areas. The fence will help keep them from moving further into the forest, and, as local boy Kanahame Adams puts it, “The fence is 24/7. No hunting program [alone] can ensure protection of the forest on a 24/7: 365 days a week basis.”

Although it will stop animals, the fence will not interfere with human access. Climb-over gates will be installed at regular intervals to ensure that gatherers and hunters can climb over and enter the upper forest. As it is noted above, the landowners in this project are working to open access for a community-hunting program.

In the long run, this project will provide valuable benefits for the environment, and for the people of Moloka’i. It will protect the coastal reefs from siltation and erosion, and it will help to preserve the unique native plants and animals that are found only on Moloka’i. It will also provide economic benefits to the community through the development of new eco-tourism opportunities. In addition, the project will aid in the Enterprise Community’s efforts to create a sustainable future for Moloka’i, and to ensure that the island’s rich cultural heritage is preserved for future generations.
August 18, 2000

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Council Chair Pat Kawano and the Kawano Family

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Valuable benefits for the environment, and for the people of Molokai. It will protect the coastline, reefs and fishponds from runoff and silt, as it helps to reverse the erosion that is occurring in the hills above. It will protect native plants that are prized by cultural practitioners for la‘au lapa‘au, lei-making and hula. It will aid in protecting ancient cultural sites that are in danger of eroding away due to loss of ground cover. And it will help to restore the upper forest as a place of spiritual renewal that can be passed on to future generations.

In addition, the project will aid in the Enterprise Community's efforts to create cultural and traditional economic projects. Many of the ECS economic projects focus on aquaculture and agriculture, both of which depend on an adequate supply of water, and on a healthy ecosystem.

Community hunters will also benefit as they finally get permission to enter the hunting grounds through the "front" door, rather than the "back" way, in order to help protect our forest. For more information about this important project, contact Project Leader Ed Miski at 553-3230, Ke August Lokahi Chair Stacy Crivello at 558-8275, or ECS Administrator Molokai's Community Service Council (KeKen Holt, Executive Director) at 553-3244.

"Y'm sorry, but we're all out of worms. They went early."
MOLOKAI – LANAI SOIL AND WATER CONSERVATION DISTRICT

P.O. Box 396
Hoolehua, HI 96729
Phone (808) 567-6869
FAX (808) 567-9062

September 13, 2000

Ms. Genevieve Salmonson
Office of Environmental Quality Control
236 South Beretania Street Suite 702
Honolulu, HI 96813

Subject: Kamalo / Kapuael Watershed Management Project

Dear Ms. Salmonson:

The Moloka‘i-Lana‘i Soil and Water Conservation District would like to thank you for your July 8, 2000 letter commenting on the above subject. On behalf of the applicants, Kamehameha Schools Bishop Estate and Mr. James W. Austin, we would like to respond to your comments as follows:

1. Consultation with the Office of Hawaiian Affairs – The draft environmental assessment was forwarded in July 2000 to OHA for their review.

2. Revegetation – It is anticipated that the natural vegetation will rejuvenate itself almost immediately with the proper weather conditions. For areas with more severe damage, vegetation recovery will not be less than three years.

3. Expected Project cost – The proposed budget is expected to be $400,000.00 for the entire project. The fencing portion will be $220,000.00.

4. Measures to Handle Existing Feral Ungulates – Activities such as controlled hunting, trapping and aerial shootings will be used to prevent entrapping animals in the upper region. Before the final closure is completed, aerial sightings will be done.

Again, we appreciate your input and have addressed your concerns in the final assessment as recommended. If you have any questions or require additional information, please feel free to contact our office.

Sincerely,

[Signature]
Joseph C. Wampler
MLSWCD Vice-Chairman

JW:dk
July 8, 2000

Mr. Paul K. Elia
Moloka‘i-Lana‘i Soil and Water Conservation District
P.O. Box 396
Ho‘olehua, Moloka‘i, Hawai‘i 96729

Dear Mr. Elia:

The Office of Environmental Quality Control has reviewed the draft environmental assessment for the Kamalo/Kapua‘lei Watershed Management Project, dated April 2000, and offers the following comment for your consideration and response required by Section 11-200-9(b), item 7, Hawai‘i Administrative Rules (Department of Health, EIS Rules).

1. **CONSULTATION WITH THE OFFICE OF HAWAIIAN AFFAIRS:** On page 4 of the draft environmental assessment, we note that the Office of Hawaiian Affairs was not consulted in the preparation of this document. In all matters involving native Hawaiian gathering rights and/or ceded lands, it has been the practice of this office to recommend that applicants consult with the Office of Hawaiian Affairs. We recommend that prior to the preparation of the final environmental assessment and notice of determination for this project, you contact the Office of Hawaiian Affairs and obtain their advice regarding native Hawaii gathering and cultural practices in the general region of the project. In the final environmental assessment, please describe these gathering and cultural practices, if any.

Thank you for the opportunity to comment. If you have any questions, please call my Environmental Health Specialist, Leslie Segundo, at (808) 586-4185.

Sincerely,

GENEVIEVE SALMONSON, Director

c: Dean Uchida, Administrator, Land Division, DLNR
July 8, 2000

Mr. Paul K. Elia
Moloka'i-Lana'i Soil and Water Conservation District
P.O. Box 396
Ho'olehua, Moloka'i, Hawai'i 96729

Dear Mr. Elia:

This is a follow-up to our other July 8, 2000, letter sent to you concerning the draft environmental assessment for the Kamalo/Kapua'lei Watershed Management Project, dated April 2000. We offer the following additional comments for your consideration and response required by Section 11-200-9(b), item 7, Hawai'i Administrative Rules (Department of Health, EIS Rules).

2. **REVEGETATION - EXPECTED TIME TO OCCUR**: Please describe in the final environmental assessment the expected time for revegetation to occur after the project is completed.

3. **EXPECTED PROJECT COST**: Please provide in the final environmental assessment the expected cost of the project.

4. **MEASURES TO HANDLE EXISTING FERAL UNGULATES IN THE PROJECT AREA**: Please describe what measures you will take to remove existing feral animals from the project area prior to the start of your fencing project.

Thank you again for the opportunity to comment. If you have any questions, please call my Environmental Health Specialist, Leslie Segundo, at (808) 586-4185.

Sincerely,

[Signature]

Director

[Name]

for GENEVIEVE SALMONSON

[Date]

c: Dean Uchida, Administrator, Land Division, DLNR
July 13, 2000

Paul Elia
Molokai-Lanai Soil and Water
Conversation District
P. O. Box 396
Hoolehua, Hawai‘i 96729

Re: Public Comments on the Kamalo/Kapualei Watershed Management Project Draft Environmental Assessment

Dear Mr. Elia:

I am submitting on behalf of Walter Ritte, who is a Molokai resident and Native Hawaiian subsistence hunter, the following comments regarding the draft environmental assessment ("EA") for the Kamalo/Kapualei Watershed Management Project ("Project"). These comments largely concern the impact of the Project on subsistence hunting and other cultural activities which take place in the upper reaches of the ahupua‘a of Kamalo and Kapualei. However, they are not intended to be and should not be regarded as either promoting hunting or opposing the restoration of native forest habitat. Rather, the purpose of these comments is to direct your agency’s attention to several serious defects and omissions in the draft EA, and to point out several flaws in DLNR’s analysis in support of its anticipated negative declaration.

Project Description

Based upon the information contained in the draft EA, it appears that the primary structural component of the Project will be the construction of a four foot high-galvanized mesh barbed-wire fence across Kamalo and Kapualei, along the 3,000 to 3,500 foot elevation contour. A second lower fence will surround the land at Ka‘apahu, at about the 1,000 foot level. The purpose of the fencing project is to prevent feral ungulates from gaining access to the forest located above the upper fence line; however, the fence will also prevent human access to the upper forest. See, EA at pp. 5a and 5d, et seq. ("Construct a fence for use as a barrier to wildlife, livestock, or people. Fence will allow one way (down) animal movement only.").

Cultural Impacts Associated with the Fencing Project

As a preliminary matter, it should be noted that subsistence gathering, of which hunting forms a part, is of particular importance to Hawaiians on Molokai. Many Hawaiians rely upon subsistence gathering for a significant portion of their food, and approximately 25 percent of subsistence gatherers hunt. Governor’s Molokai Subsistence Task Force Final Report, June 1994, at pp. 4-5 and 48 ("Task Force Report"). As explained below, the proposed fencing project
will, by restricting feral animal foraging above the fence line, negatively affect subsistence hunting and other Hawaiian cultural practices. The draft EA is particularly deficient in this regard, as it omits any discussion of the cultural impact of the fencing project. Moreover, this omission is particularly troubling, in light of the fact that Kamalo is specifically identified in the Task Force Report as a subsistence hunting area.  Id. at 80.

Limiting foraging habitat will reduce the size of the feral ungulate populations that are among the objects of subsistence hunting on Molokai, resulting in a negative cultural impact. While restoring native forest arguably benefits the environment, Chapter 343 of the Hawaii Revised Statutes ("H.R.S.") was recently amended to include within the chapter's definition of "significant effect", adverse effects relating to "cultural practices of the community." See, Act 50, Relating to Environmental Impact Statements, 2000 Sessions Laws. Thus, the cultural impact of the fencing project must be analyzed in the EA.

Rules adopted by the Environmental Council pursuant to H.R.S. § 343-6 provide, at § 11-200-10 of the Hawaii Administrative Rules ("H.A.R."), that every environmental assessment must identify and summarize the impact of the proposed action. This administrative rule also requires that an applicant proposing an action subject to Chapter 343 consult with citizen groups and individuals who will be potentially affected by the project, as part of the due diligence required in conjunction with the preparation of an environmental assessment. Ibid. (incorporating by reference H.A.R. § 11-200-9(b)(1)).

Although the East Molokai Watershed Partnership Memorandum of Understanding ("MOU") (EA at pp. 4a, et seq.) states on page five of the MOU that numerous community meetings were convened under the auspices of the Coordinating Committee of the Molokai Enterprise Committee Governance Board, there is no discussion in the EA itself concerning whether the fencing project was disclosed to members of Molokai's subsistence hunting or gathering communities, and if it was, what their reaction was to the proposal. Moreover, the effect of feral ungulate population reduction on the island's subsistence hunting community and its concomitant secondary impact on bartering was neither identified nor summarized in the EA.

The primary function of an environmental assessment prepared under the auspices of Chapter 343 is to "set forth sufficient information to enable the decision-maker to consider fully the environmental factors involved and to make a reasoned decision after balancing the risks of harm to the environment against the benefits to be derived from the proposed action." Price v. Ohayashi Hawaii Corp., 81 Hawaii 171, 182 (1996), quoting Life of the Land v. Ariyoshi, 59 Haw. 156, 164-65 (1978). Because the environmental assessment that is the focus of these

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1 According to Mr. Ritz, only one informational meeting was held.
2 Bartering plays an important part in Molokai's economy, as subsistence-gathered items are either unavailable in stores or are very costly. Task Force Report at 6.
comments is absolutely devoid of any discussion relating to the impact of the fencing project on subsistence hunting and gathering, it fails to comply with the requirements of Chapter 343.

Impact on Traditional Cultural Properties

Aside and apart from its impact on subsistence hunting, the fencing project will, according to Mr. Rite, also have a cultural impact because Ka‘apahu where the lower encircling fence is proposed to be constructed, is a wahi pana or sacred site, being a kupua (demi-god) embodying Mo‘o, the guardian of Kamalo. Constructing a fence upon a wahi pana will defile a sacred site. Accordingly, the draft EA also fails to comply with the requirements set forth in Chapter 343 because there is no analysis and discussion of the cultural impact of the fencing project on Ka‘apahu and other sacred sites within the Project area.

Moreover, because the fence will be constructed with federal funds, EA at pp. 5f, et seq. (Natural Resources Conservation Service funds to be provided for fencing, constructing holding pens, and improving access roads in area), the fencing project is a “federal undertaking” within the meaning of Section 106 of the National Historical Preservation Act (“NHPA”). Actions subject to NHPA Section 106 require that project proponents consult with Native Hawaiian organizations in advance of any undertaking, where religious or cultural significance is attributed to historic properties eligible for inclusion on the National Register of Historic Places. The term “historic property” encompasses more than just archaeological sites and structures associated with human occupation, and includes natural landscapes which function as traditional cultural properties. See, Parker and King 1992, National Register Bulletin No. 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties.

Landforms associated with ethnic oral traditions, e.g., wahi pana, are among the types of traditional cultural properties eligible for inclusion on the National Register. National Register Bulletin No. 38, at 14. Therefore, it would not be unreasonable to anticipate that consultation with Native Hawaiian organizations will be required before the fencing project can meet the requirements set forth in the NHPA. As previously noted, in my review of the draft EA, I did not come across any analysis concerning the impact of the Project on traditional cultural properties, notwithstanding the fact that the EA discloses, at pp. 5b et seq., that cultural sites are known to exist at the lower elevations of Kamalo and Kapulei. Accordingly, the Molokai-Lanai Soil and Water Conservation District will need to evaluate for purposes of complying with Section 106, whether Ka‘apahu is a historic property eligible for inclusion on the National Register.

Analysis of Alternatives

In addition to the foregoing comments, I also note that the draft EA fails to meet the substantive requirements of Chapter 343 because there is no mention of alternatives other than fencing as a means to reduce the impact of feral ungulate foraging in native forests above the
3,000 foot elevation level at Kamalo and Kapu Halei, save for a single conclusory statement at page 7 of the EA, that "[l]imited controlled hunting for the past 10-15 years in this area has had no significant impact due to the large quantity of animals and remote, (sic) inaccessibility of the area." Analysis of alternatives to a proposed action is required pursuant to H.A.R. § 11-200-9(c), which provides that any agency approving a project subject to Chapter 343 "shall analyze the alternatives, in addition to the proposed action in the environmental assessment." H.A.R. § 11-200-10(6) further requires that an approving agency in its environmental assessment, identify and summarize the alternatives considered. These mandates are not to be taken lightly. "The purpose of preparing an environmental assessment is to provide the agency and any concerned member of the public with the information necessary to evaluate the potential effects of a proposed action. The public comment and notification provisions underscore the legislative intent to provide broad-reaching dissemination of proposed project so that the public may be allowed an opportunity to comment and the agency will have the necessary information to understand the potential environmental ramifications of their (sic) decisions." Kahana Sunset Owners Ass'n v. County of Maui, 86 Hawai'i 66, 72 (1997). Moreover, in order to comply with Chapter 343, an environmental assessment must contain information sufficient to enable the agency charged with approving the project to make a "reasonable choice" among alternatives. Price, supra, 81 Hawai'i at 183.

In the instant case, there is no discussion, information, or analysis in the draft EA offered in support of the proposition that a managed hunting program will not result in the reduction of feral ungulate populations above the 3,000 foot elevation level at Kamalo and Kapu Halei. To the contrary, Mr. Rite advises that helicopter and public access hunting have not to his knowledge been attempted in these areas of East Molokai. Accordingly, the draft EA lacks sufficient analysis of alternatives to comply with of Chapter 343. It is well settled than an agency "has a duty to study all alternatives that appear reasonable and appropriate for study... as well as significant alternatives suggested by other agencies or the public during the comment period." Dubois v. U.S. Department of Agriculture, 102 F.3d 1273, 1286 (1st Cir. 1996). Therefore, I strongly urge that the final environmental document for the Project incorporate a properly supported analysis of helicopter and public access hunting as an alternative to the fencing proposal, as "[t]he existence of a viable but unexamined alternative renders [the assessment] inadequate." Id. at 1286 (quoting Resources Ltd., Inc. v. Robertson, 35 F.3d 1300, 1307 (9th Cir. 1992) and Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992).

Anticipated Negative Declaration

H.R.S. § 343-5(b) provides that an EIS must be prepared under the following circumstances:

Whenever an agency proposes an action... that agency shall prepare an environmental assessment for such action at the earliest
practicable time to determine whether an environmental impact statement shall be required. For environmental assessments for which a negative declaration is anticipated, a draft environmental assessment shall be made available for public review and comment for a period of thirty days. ... The agency shall respond in writing to comments received during the review and prepare a final environmental assessment to determine whether an environmental impact statement shall be required. A statement shall be required if the agency finds that the proposed action may have a significant effect on the environment. (Emphasis added).

The key to determining whether an EIS must be prepared is whether the proposed action "may" have a significant effect on the environment. In *Molokai Homesteaders Cooperative Ass'n v. Cobb*, 63 Haw. 354 (1981), the Hawaii Supreme Court in reviewing the potential environmental impact of a water pipeline project on the island of Molokai, held that the standard under Chapter 343 for determining whether a project may have any significant impact is whether the action is "one with a probable 'significant effect'." Id. at 465 (emphasis added).

The draft EA discloses at pp. 9-11, that because the Project is not anticipated to create any significant adverse environmental effects, it is anticipated by the Molokai-Lanai Soil and Water Conservation District that an environmental impact statement ("EIS") will not be prepared. However, the operative criterion in determining whether an EIS must be prepared is not whether there will be any adverse impacts on the environment, but rather whether the action being proposed "may have a significant effect". See, H.A.R. § 11-200-12(b). It is thus improper for an accepting authority — which in this case is DLNR, the approving agency — to issue a negative determination for a proposed action which may have a beneficial effect which is significant, particularly where, as is the situation here, there is substantial controversy over the adverse cultural impact of a environmentally beneficial action. See, e.g., *Sierra Club v. U.S. Forest Service*, 843 F.2d 1190, 1193 (9th Cir. 1988) (controversy as to effect of proposed action requires preparation of an EIS). Moreover, as explicitly stated in Act 50, supra, an action may have a significant effect if it adversely affects the cultural practices of a community, independent of its effect upon the environment.

In order to assist accepting authorities in determining whether a project may have a significant effect on the environment, the administrative rules adopted to implement to Chapter 343 provide 13 significance criteria that the agency must consider in evaluating environmental impacts. See, § 11-200-12, H.A.R. This administrative rule expressly requires the agency to make a finding which will usually trigger the preparation of an EIS if any one of the significance criteria, partially quoted in parentheses below, apply to the project. In the case at bar, there are at least five criteria that are triggered by the fencing project.
First, reducing feral ungulate populations will in turn directly affect subsistence hunting, which is a cultural resource ("involves an irrevocable commitment to loss or destruction of any ... cultural resource"). The fence surrounding Ka'apahu will also irrevocably affect a wahi pana (ibid.). Second, providing fewer opportunities for subsistence hunting will curtail the range of beneficial uses of the environment ("curtails the range of beneficial uses of the environment"). Third, negatively impacting subsistence hunting will reduce the amount of food available for human consumption within Molokai's subsistence community ("substantially affects the economic or social welfare of the community"). Fourth, reducing feral ungulate populations will have a secondary impact, by affecting Molokai's subsistence bartering community ("involves substantial secondary impacts"). Fifth, the fencing project at Kamalo and Kapuakei involves a commitment to a larger action ("involves a commitment for larger actions"), as the EA discloses, at numbered paragraph 8 on pp. 15, et seq., that the Project "might lead to expanding the same type of plan in other degraded areas on Molokai or elsewhere."

Because adverse cultural impacts are now included within Chapter 343's definition of "significant effect", it is particularly important that a specific finding be made concerning whether the fencing project may significantly affect subsistence hunting, gathering, and traditional cultural properties. As no analysis has yet been undertaken in this regard, it is premature for DLNR to anticipate that a negative declaration will be issued by it, following receipt of public comments.

Conclusion

For the foregoing reasons, we urge that DLNR withdraw its anticipated negative declaration and issue an EIS preparation notice for the Project, and that the Molokai–Lanai Soil and Water Conversation District prepare a draft EIS which incorporates the comments set forth herein.

Very truly yours,

[Signature]

ARNOLD L. LUM

ALL:co
cc: Eric Hill, DLNR
    Walter Rittle
Covin/Paul Elia comments fr 7/13/00
September 25, 2000

Mr. Arnold L. Lum
Native Hawaiian Legal Corporation
1164 Bishop Street, Suite 1206
Honolulu, Hi 96813

Subject: Kamalo/Kapuaiele Watershed Management Project

Dear Mr. Lum:

The Moloka'i-Lana'i Soil and Water Conservation District would like to amend a statement made in our September 5, 2000 response to your comments.

Listed on page 2, section 3; "The Office of Hawaiian Affairs has been contacted in regards to native Hawaiian cultural practices in the general region of this project and we are awaiting their response. Any information OHA provides will be incorporated into the final Environmental Assessment."

Unfortunately, the information from OHA was just received after the final EA was resubmitted and will not be included.

Please contact our office if you have any questions.

Sincerely,

[Signature]

Joseph C. Wampler
MLSWCD Vice-Chairman

JW:dk
September 5, 2000

Mr. Arnold L. Lum
Native Hawaiian Legal Corporation
1164 Bishop Street, Suite 1205
Honolulu, HI 96813

Subject: Kamalo/Kapualei Watershed Management Project

Dear Mr. Lum:

The Molokai/Lanai Soil and Water Conservation District would like to thank you for your 7/13/00 letter, commenting on the Kamalo/Kapualei Watershed Management Project Draft Environmental Assessment for the applicants, Kamehameha Schools Bishop Estate and Mr. James W. Austin.

Your comments as to the EA fall into several categories: (A) Discussion of cultural impacts; (B) Discussion of impacts on subsistence hunting and bartering; (C) Discussion of input of hunters into the planning process; (D) Discussion of alternatives to the fence to reduce feral ungulates.

We would like to note the following in response to your comments, which are shown in bold in quotes:

A. Cultural Impacts

1. "The draft EA ... omits any discussion of the cultural impact of the fencing project ... particularly troubling in light of the fact that Kamalo is specifically identified in the Task Force Report as a subsistence hunting area."

2. "[T]here is no analysis and discussion of the cultural impact of the fencing project on Ka'apahu and other sacred sites within the Project area."

   • The Watershed Management Project's fence is one aspect of a comprehensive management plan. This Project will have a positive cultural impact.

   • There are over 200 endemic (found nowhere else in the world) plants and animals that make up the native forest and shrublands of the Kamalo/Kapualei Watershed. By
fencing this upper watershed, the project will protect these endemic resources that are important component to the Hawaiian cultural practices such as the hula, la’au lapa’au, and lei making. Additionally, the intact forest is also significant in story telling (mo’olelo), for ceremonial protocol, and spiritual practices. It is essential to protect this forest which evolved with no natural defenses to introduced, feral animals such as goats, pigs and deer.

➢ The project will promote the long-term health of the fresh water resources flowing out of these ahupua’a. The native endemic forest has evolved and is the best forest community for the regeneration of our water resources. Culturally important practices such as taro farming, fishing, and fishpond restoration can be positively affected with the protection of the upper watershed.

➢ The wahi pana of Ka’apahu will also be protected by this project. Much of the ancient forest of Ka’apahu has been destroyed by goats and pigs, and the soil around the ancient stone structures in this area is eroding away. This erosion and the trampling and rooting of goats and pigs are destroying unique cultural sites.

➢ Under traditional Hawaiian culture, kapus were imposed by konohiki for protection of natural resources. The cultural resources found in these ahupua’a can’t migrate like feral animals can, nor can they escape the destruction from feral animals. Kapus maintain natural resource balance and controls.

➢ The Watershed Management Project will limit this destruction and begin the process of healing at Ka’apahu and throughout the uplands of Kamalo and Kapualie.

3. “Landforms associated with ethnic oral traditions, e.g., wahi pana, are among the types of traditional cultural properties eligible for inclusion in the National Register [citation omitted]. Therefore, it would not be unreasonable to anticipate that consultation with Native Hawaiian organizations will be required before the fencing project can meet the requirements set forth in the NHPA....Accordingly, the Molokai-Lanai Soil and Water Conservation District will need to evaluate for purposes of complying with Section 106, whether Ka’apahu is a historic property eligible for inclusion on the National Register.”

➢ The Office of Hawaiian Affairs has been contacted in regards to native Hawaiian cultural practices in the general region of this project and we are awaiting their response. Any information OHA provides will be incorporated into the final Environmental Assessment.

B. Impact on Subsistence Hunting and Human Access

4. “The purpose of the fencing project is to prevent feral ungulates from gaining access to the forest located above the upper fence line; however, the fence will also prevent human access to the upper forest.”
5. “Limiting foraging habitat will reduce the size of the feral ungulate populations that are among the objects of subsistence hunting on Moloka‘i, resulting in a negative cultural impact.”

6. “Moreover, the effect of feral ungulate population reduction on the island’s subsistence hunting community and its concomitant secondary impact on bartering was neither identified nor summarized in the EA.”

7. “[T]he environmental assessment that is the focus of these comments is absolutely devoid of any discussion relating to the impact of the fencing project on subsistence hunting and gathering.”

- Hunters will be recruited/asked to participate in the effort to reduce the numbers of goats. This will greatly increase hunting opportunities. The project will make these areas much more accessible to community members desiring to hunt. The present goat population is excessively high, so much so that they are virtually eating themselves out of their food source. The project’s goal is to reduce goat number and maintain an appropriate population for subsistence use in the middle, eroded zone. It will take some time, effort and experience to determine the appropriate numbers that will help reverse the erosion levels, and still maintain a population for subsistence use.

- The Watershed Management Project will reduce the number of feral animals in the uplands of Kamalo and Kapua‘el and the area of land that they range over. The project will not bring an end to subsistence hunting in the area. At present, the number of animals above the proposed fence is quite small. The main purpose of the fence is to prevent animals from the lower elevations from being pushed up into the upland forests as a result of increased community hunting pressure in the lower elevations.

- Populations of feral animals vary all the time in all places in nature, whether due to controls, hunting, drought, development, or other causes. There is never any guarantee as to the numbers of feral animals available in any location or at any time for hunting. The fence itself will not reduce populations of feral animals.

- In the much larger land area below the fences (approximately 3,500 acres), the project will facilitate improved access for community hunters who will reduce feral animal populations through subsistence hunting to a level that allows watershed vegetation to recover while maintaining animals for continued subsistence use.

- The proposed fence will not block access to people. “Climb-over” gates will be installed at intervals along the entire length of the fence to allow hunters and others to cross freely. The fence is a barrier to animals and not to humans. The locations of these gates will be selected based on input by landowners, hunters, and other community members. Because of the openness of the applicant landowners to
community involvement in this project, it is expected that the project will actually facilitate greater community access to subsistence resources.

C. Community Involvement in Planning

8. “There is no discussion in the EA itself concerning whether the fencing project was disclosed to members of Moloka‘i’s subsistence hunting or gathering communities, and if it was, what their reaction was to the proposal.”

- The planning process that led to the design of this project involved one of the highest levels of community involvement ever seen on Moloka‘i. This project is one element of a strategic plan submitted to the Federal Government in application for an Empowerment Zone (EZ) designation. The planning process was extensive and included numerous open meetings by literally hundreds of Moloka‘i citizens who responded to the open invitation to participate. Walter Rite, whom you are representing, was one of those participants. This watershed project was discussed extensively during several environmental subcommittee public meetings.

- The task of the subcommittees meetings was to bring forth projects for the EZ application. There were a total of seven subcommittees and 40 projects were brought developed over a period of about 2-3 months and numerous meetings. The projects were all brought together before a larger “lokahi” group that met to discuss and prioritize all the projects. This Watershed Management Project was voted as one of the top projects.

- Upon designation as an Enterprise Community, the Ke Aupuni Lokahi Board was formed whose task was to implement the projects. Subsequent to the board formation, a public meeting was conducted for the watershed project at Kiloohana Community Center. At that meeting most community members were in favor of the fence. The testimony against the fence received at that meeting was considered and discussed at a Ke Aupuni Lokahi meeting. After this deliberation, a vote was taken on the project. The vote was unanimous in favor of the project in its entirety, including the fence.

- Additionally, a Kamalo/Kapualei community task force has been formed and been meeting regularly to help with the project, including the fence. The task force consists of long-time Hawaiian families, residents, hunters, fisherman, cultural practitioners, area landowners, and The Nature Conservancy. The task force is primarily focusing on the animal control and subsistence use, but is also planning to look into other aspects of the project. The task force supports the fence and takes pride in their ahupua‘a.

- The applicants also regard the involvement of the community in this project as a significant, positive cultural impact. The project has been designed and will be implemented with widespread involvement of the Moloka‘i community and, especially, the residents of the ahupua‘a of Kamalo and Kapualei. This involvement
reflects the traditions of ahupua'a management and is a positive step toward maintaining the connection of the people with the land.

D. Alternatives to Fencing

9. “[T]here is no mention of alternatives other than fencing as a means to reduce the impact of feral ungulate foraging in native forests above the 3,000 foot elevation level at Kamalo and Kapuakea, save for a single conclusory statement at page 7 of the EA, that ‘[l]imited controlled hunting for the past 10-15 years in this area has had no significant impact due to the large quantity of animals and remote, (sic) inaccessibility of the area.'”

10. “[T]here is no discussion, information, or analysis in the draft EA offered in support of the proposition that a managed hunting program will not result in the reduction of feral ungulate populations above the 3,000 foot elevation level at Kamalo and Kapuakea. To the contrary, Mr. Ritte advises that helicopter and public access hunting have not to his knowledge been attempted in these areas of East Molokai.... Therefore, I strongly urge that the final environmental document for the Project incorporate a properly supported analysis of helicopter and public access hunting as an alternative to the fencing proposal....”

- The project committee considered the full range of alternatives available to achieve the project’s goal, based on the extensive experience of local hunters, land managers, and conservation agencies that have worked in Moloka‘i forests to manage feral animals over the past decades. These alternatives include:
  - more extensive use of fencing than is proposed here
  - hunting without the use of fences
  - hunting augmented by helicopter access or shooting from helicopters by trained agency personnel
  - trapping of animals
  - driving animals out of sensitive areas with helicopters and ground personnel
  - taking no action.

- Management of feral animals in the adjacent Kamakou Preserve, Pelekunu valley, and Pu‘u Ali‘i Natural Area Reserve has demonstrated that the strategic use of fences is necessary to prevent feral animals from entering rugged, forested areas. It has shown that without the aid of fences, hunters are not able to prevent all damage to fragile, upland rain forests by these animals. It has also demonstrated that hunting by organized community volunteers in areas already heavily impacted by feral animals can successfully harvest animals for subsistence use in a manner that is safe to the hunters, with a resulting reduction of vegetation damage. Finally, experience from Moloka‘i and other Hawaiian islands has shown that while hunting from helicopters can be a necessary tool for removing animals from remote, rugged sites, it is not
effective in dense vegetation such as exists in the uplands of Kamalo and Kapualei and cannot prevent animals from moving into these forested areas from adjacent lands. There are no natural barriers to animal movement in the project area that would substitute for the proposed fence. The fence is an essential tool in the overall Watershed Management Project.

> Other fencing projects in Hawai‘i’s natural areas vary in scope. They are a necessary tool for protection of natural and cultural resources. Fencing allows for a graduated approach to feral animal control which permits feedback over time to refine how the fence works with hunting. With the fence, managers can adapt techniques to the terrain based on other experience on a continual basis. The fence allows for and is part of an ongoing discussion on management of natural areas.

11. “[T]here are at least five [significance] criteria that are triggered by the fencing project.”

A. significance criteria: “involves an irrevocable commitment to loss or destruction of any ... cultural resource”
   1. NHLC assertion: “reducing feral ungulate populations will in turn directly affect subsistence hunting, which is a cultural resource”

> There is no irrevocable commitment to loss or destruction of any cultural resource. Subsistence hunting will continue in the project area. Even if the project were designed to remove all feral animals from the project area, this loss of subsistence resources would not be irrevocable; the lands could easily be restocked with feral animals at any time the landowners and the community decided to do so. The same is not true of the other cultural resources that are threatened by unabated damage from feral animals. The native plants and animals, water resources, cultural sites, and the cultural knowledge and traditions that stem from these, will be lost irrevocably if the current level of feral animal activity is allowed to continue.

B. significance criteria: “curtails the range of beneficial uses of the environment”
   1. NHLC assertion: “The fence surrounding Ka‘apahu will also irrevocably affect a wahi pana”

> As already described, the project will maintain the current range of cultural activities, and, as the forest and cultural sites on the land recover, cultural activities are expected to expand as the resources are more able to support them. The fence will increase the protection of the wahi pana from destruction from feral ungulates.

C. significance criteria: “substantially affects the economic or social welfare of the community:”
1. NHLC assertion: “negatively impacting subsistence hunting will reduce the amount of food available for human consumption within Moloka‘i’s subsistence community.”

➢ Addressed above. Subsistence hunting will continue, water resources and other economically and socially important resources will be protected from further degradation and, hopefully, expanded. This project was identified as one of the top five priorities among 40 community-designed projects to increase the economic and social health of Moloka‘i. The fence actually will enhance other cultural activities in these ahupua‘a and other Moloka‘i communities.

D. significance criteria: “involves substantial secondary impacts”
1. NHLC assertion: “reducing feral ungulate populations will have a secondary impact, by affecting Moloka‘i’s subsistence bartering community”

➢ As addressed above, subsistence hunting will continue, and the abundance and accessibility of subsistence resources both on land and in the adjacent coastal and reef areas are expected to grow as a result of improved watershed health from this project. This will be a positive influence on subsistence bartering in the community.

E. significance criteria: “involves a commitment for larger actions”
1. NHLC assertion: “the fencing project might lead to expanding the same plan in other degraded areas on Molokai or elsewhere.”

➢ While the Watershed Management Project is expected to be a successful model that may be usefully applied in other places on Moloka‘i, there is no element of this project that automatically leads to its expansion to other lands. The fence is very specific to this geographic area. The applicants expect that any subsequent, similar projects on other lands will require the consent and commitment of the affected landowners and community members, just as was the case in this project.

We thank you for your comments and recommendations. They will be very helpful in preparing the final EA for this project.

If you have any questions or require additional information, please feel free to contact our office.

Sincerely,

Paul K. Elia
MLSWCD Chairman
Yama Kalolona Jr.  
Box 194  
Hoolehua 96729  
Ph. 567-9410

We, the undersigned residents of Molokai, have concerns about a plan to construct over five miles of fence line from Kamalo eastward to control feral animals. The Molokai community knows very little about this fence line, and has not been allowed sufficient input into this matter. Therefore, we strongly recommend that more community meetings be held, and that community concerns be addressed and incorporated into this plan.

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3. J. J. Jicin, Jr.  
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5. Carey Akinoto  
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6. Renie Inayoshi  
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8. John L. Davis  
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11. Tracy Ann K. Davis  
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12. Chuck Miller  
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13. Aloke Kim  
    96757-0217

14. Rusty Marcellino  
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15. Walter Roth  
    5679415

Total: 238 signatures

239
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15 Julius Dingat HC-01 Box 806 HI 96748
16 Melia McDonald P.O. Box 1344 HI 96727
17 Kehau Low P.O. 04 Kualapuu HI 96757
18 Dixie Low P.O. Box 61 Kualapuu HI 96757
19 Kaz Inouye P.O. Box 174 Hookulua HI 96727
20 Ula Good P.O. Box 4 HI Hookipa HI 96745
21 Janice Kahoaloha P.O. Box 196 Hookiinu HI 96724-0196
22 Rikye Sohikanabo P.O. Box 61 Hookipa HI 96727-0196
23 Edward K. Kau P.O. Box 71 Maunaloa HI 96770
24 Oskar Kau P.O. Box 222 Kekai HI 96755
25 David Namad P.O. Box 70 Kekai HI 96755
26 Herbert Hoe P.O. Box 155
27 Julius Hoe P.O. Box 155 K. K. K. HI 96745
28 George Gromberg Maculani K. K. K. HI 96755
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Name (PLEASE PRINT)          Address

Henry Kaipo Kanoa          P.O. Box 634 K‘Kai 96748
Peter C. Dunai Jr.         P.O. Box 82 K‘Kai 96748
Glenn Gaffney               580-Ko e 151- K‘Kai 96748
Scott Dudoit                P.O. Box 721 K‘Kai 96748
Jeremy Bush                 P.O. Box 515 K‘Kai 96748
Kauahi Gorey               P.O. Box 1454 K‘Kai 96748
Karlo Nakashiki            P.O. Box 524 K‘Kai 96748
Paul Nakashiki             P.O. Box 241 K‘Kai 96748
Peter Manana               P.O. Box 82 K‘Kai 96748
Ernest Kauai               P.O. Box 1074 K‘Kai 96748
Gavin Wong                 P.O. Box 1454 Kauhi Pl, K‘Kai 96749
Jeanie Manawaipo           P.O. Box 312 Ne`anu 96748
Peter G. Manawaipo Jr.     P.O. Box 312 Ne`anu 96748
Mark Nave Jr.              P.O. Box 350
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Name (PLEASE PRINT) Address

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George Rebar

Melvin Chung P.O. Box 1200 Kaunakakai, Hi, 96748
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<tr>
<td>Henrietta Makao</td>
<td>P.O. Box 482, K'iai Hi 96745</td>
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<td>Stella Ieia</td>
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<td>Lawrence Reyes</td>
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<td>Devere Kamalu</td>
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<td>Reoce Domingo</td>
<td>P.O. Box 434</td>
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<td>Eldridge Spencer</td>
<td>P.O. Box 41</td>
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<td>Sonia V. Delbit</td>
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<td>Brian Iabe</td>
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<td>Alfred Demile</td>
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<td>Margaret Ishii</td>
<td>P.O. Box 739</td>
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<td>Patrick Kanawana</td>
<td>P.O. Box 1433</td>
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<td>Heni Kino</td>
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<td>Baron Okin</td>
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<td>Dr. Nameru</td>
<td>P.O. Box 87, K'iai</td>
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Han Lokelani  "  34 Hoohehua
Mawae Joseph Jr.  P.O. Box
Mawae, Jeanette
Mawae, Joseph Jr  "  Wailoa  967
Han James Jr  Hoolehua
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<tr>
<td>William Sr. Kaholoaq</td>
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<td>Caroline</td>
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<td>William Jr.</td>
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<td>Ishaq</td>
<td>Kaholoaq</td>
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<td>Jeremiah</td>
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<td>Elias</td>
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<td>Steven</td>
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<td>Annie</td>
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<td>Julie Agyan</td>
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<td>Rufino Agyan Sr.</td>
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<td>Rufino Agyan Jr.</td>
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<td>Fina Agyan</td>
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<tr>
<td>Helene Stone</td>
<td>P.O. Box 67 Hilo</td>
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</table>
August 01, 2000

Mr. Yama Kaholoaa Sr.
P.O. Box 194
Hoolehua, Hawaii 96729

Subject: Kamalo / Kapualei Watershed Management Project

Dear Mr. Kaholoaa:

The Molokai - Lanai Soil and Water Conservation District would like to thank you for attending the July 07, 2000, Public Hearing and for submitting your testimony and petition commenting on the above subject. On behalf of the applicants, Kamehameha Schools Bishop Estate and Mr. James W. Austin, we would like to note the following.

There was an extensive community process that led to the creation of this project. This watershed project was proposed approximately two years ago. An Environment Committee comprised of volunteers from many segments of the community was convened for the EZ/EC application. This committee discussed the watershed project extensively and the fence was debated fully. The original plan was to construct a fence 25 miles in length. A compromise was reached and the fence was scaled down to the proposed 5.5 miles in length.

This project was presented at several community-wide meetings between August 1998 through January 2000. A copy of the Molokai Enterprise Community News, January 1, 2000 issue, was distributed to Box Holders Island-wide. Included in this newsletter was an announcement of a community meeting to be held on January 13, 2000, and invited everyone on Moloka'i to learn more about EC's projects including the Watershed Project. The Moloka'i Enterprise Community also provided the community with copies of the 40 Projects in Moloka'i's 10-Year Strategic Plan that listed the Watershed Project and discussed fencing and open access for hunters. The public hearing notice was published in the June 12, 2000 issue of the Hawaii State & County Public Notices that also noted the project's Environmental Assessment was available at the Molokai Public Library for review and comments. The June 28, 2000 issue of the Molokai Advertiser News included an article regarding the project fencing and public comment deadline. Copies of the underlined publications have been enclosed for your review.

Access for hunters and gatherers will not be restricted by the proposed fence, as plans call for gates to be made along its entire length, so that human visitors can easily enter and leave the native forest. With respect to hunters, both of the landowners on whose property the fence will be constructed have agreed to provide even greater access to their lands for hunting. Kamehameha Schools would like a community-based and community-controlled hunting plan, to increase the numbers of hunters using the area.
Through the installation of the proposed fence and the increased hunting access, the number of feral animals in Kamalo and Kapuaelei should decrease allowing the severely eroded environment a chance to heal itself.

We believe that this has been a fair process for the Molokai community, and that two years of extensive planning through a committee and community members throughout our island home is sufficient. Thank you for your comments and concerns. They will be included in the final Environmental Assessment.

If you any questions or require additional information, please feel free to contact our office.

Sincerely,

Paul K. Elia
MLSWCD Chairman

PE:zp
August 02, 2000

Mrs. Stacy Crivello, President
Ke Aupuni Lokahi
The Moloka‘i Enterprise Community Governance Board
P.O. Box 1046
Kaunakakai, Hawaii 96748

Subject: Kamalo / Kapuaieki Watershed Management Project Draft Environmental Assessment

Dear Mrs. Crivello:

The Molokai – Lanai Soil and Water Conservation District would like to thank you for your July 24, 2000 comment letter supporting the above subject. This project is truly a community-driven project, and on behalf of the applicants, Kamehameha Schools Bishop Estate and Mr. James W. Austin, we would like to thank you for your assistance and continued support.

We look forward to completing the final Environmental Assessment for the Kamalo / Kapuaieki Watershed Management Project in which your comments will be included.

If you have any questions or require additional information, please feel free to contact our office.

Sincerely,

[Signature]

Paul K. Ella
MLSWCD Chairman
PE:zp
University of Hawai'i at Mānoa
Environmental Center
A Unit of Water Resources Research Center
2550 Campus Road • Crawford 317 • Honolulu, Hawai‘i 96822
Telephone: (808) 956-7381 • Facsimile: (808) 956-3980

July 24, 2000
EA: 1203

Mr. Paul Elia
Molokai-Lanai Soil and Water Conservation District
P.O. Box 396
Hoolehua, Hawaii 96729

Dear Mr. Elia:

Kamalo/Kapualei Watershed Management Project
Draft Environmental Assessment
Kamalo/Kapualei, Molokai

Kapualei Ranch and the Kamehameha Schools Bishop Estate propose to install a fence within the Kamalo and Kapualei Watersheds. Additionally, the applicants plan to monitor feral animal populations and vegetation reestablishment in animal-degraded areas. The purposes of the project are to reduce soil erosion, to improve soil quality, to protect surface and ground water quality, to enhance habitat for aquatic and terrestrial wildlife, to improve water use efficiency, to enhance forest productivity and sustainability, to protect and restore grazing lands, and to reduce the potential for air pollution. This review was conducted with the assistance of Sherri Hirnoka, Environmental Center.

General Comments

The draft Environmental Assessment (EA) was a confusing document that could have benefited from a closer adherence to the EA content guidelines in the Hawaii Administrative Rules §11-200-10. Some of the documents that were included in the EA, while helpful, would probably be better placed in an appendix section, with their contents and relevant information summarized in the actual body of the document. Such documents include: Memorandum of Understanding, East Molokai Watershed Partnership (page 4a); KSBE Conservation Plan (page 5b); Kapualei Ranch Conservation Plan (page 5c); excerpts from the Moloka‘i Enterprise Community News, dated January 1, 2000 (page 5d); article from the Molokai Advertiser-News, dated November 17, 1999; article from the Honolulu Advertiser, dated November 12, 1999; Soil/Plant Analysis Report by UH College of Tropical Agriculture and Human Resources.

An Equal Opportunity/Affirmative Action Institution
Additionally, correspondence should be grouped in a separate correspondence section or appendix. References may be made to individual letters in the text to clarify or substantiate claims. Such letters include: letter from Larry Shinshiro, Conservation Agronomist, USDA, dated May 8, 2000 (page 5d); letter from Timothy Johns, State Historic Preservation Office, dated June 29, 1999 (page 5f); and letter from Paul Henson, Fish and Wildlife Service, dated December 16, 1999.

This document lacks the level of detail found in most EAs prepared under Chapter 343, Hawaii Revised Statutes. The section on Plants found on page 5g, for example, doesn’t list any of the endangered species found in the area. This is standard in most other assessments. The section on Water, also numbered 5g contains references to a DOH report without a citation or even a summary of what the DOH says in that report.

This draft EA would have been much easier to review had it used a more understandable method of pagination.

Purpose of Project

The purpose of the project is stated on page 1 to be the “installation of wildlife/native forest protection fence line and monitoring of feral animal numbers and vegetation regrowth in animal damaged areas.” This is actually a summary of the project and not its purpose. The purpose seems to be listed on the section on Economics (page 5e) that indicates that this project, as a “conservation practice” will help to reduce soil erosion, improve soil quality, protect surface and ground water, enhance habitat for aquatic and terrestrial wildlife, improve water use efficiency, enhance forest productivity and sustainability, protect and restore grazing lands, and reduce the risk of air quality degradation.

Technical

The article in the Molokai Advertiser-News (November 17, 1999) stated that “the first initiative of the East Moloka‘i Partnership is to implement a...fencing and animal control project.” This implies that there is a greater plan for the area than just this project. Eventual goals should be discussed, as well as how this project fits into those goals.

The technical section covers the fencing portion of this project. If revegetation is a goal, what other efforts might be employed to achieve those objectives? Active feral animal control (i.e. hunting) coupled with outplanting may speed up the areas’ recovery. The article in the Molokai Advertiser-News (November 17, 1999) states that “an organized hunting program will provide community hunters with access to safe, accessible areas of the upper middle zones to help reduce goat and pig populations.” This aspect of the project should be discussed. If these methods are not included in this phase of your plan, then that should also be stated. When might they be included, if at all?
Fence Specifications

The proposed fence is intended to allow for the movement of feral animals from the upper zone into the middle zone, with no reverse movement allowed (page 5a). How will this be accomplished?

The Resources Management (RM) Division of the National Park Service has begun increasing fence heights for their enclosures. This height increase was made in response to the occurrence of Mouflon sheep jumping over the existing fencing. Although there are no sheep in the area of your project, it is likely that Axis deer are able to jump at least as high as sheep. Recent fencing operations at Kalaupapa used 6' hog wire fencing and 2 to 3 barbed wire strands placed above. The total height is at least 7' to prevent deer ingress.

To ensure that the fence will exclude pigs, the fence should be clipped at ground level. Substrate is also important. If the ground is soft and loose, the fence should be low and tight because pigs may dig and lower the ground level.

For more information regarding the best fencing methods, it may be useful to consult the Resources Management Division of the National Park Service at either Haleakala or at the Hawaii Volcanoes National Park (HAVO). Both parks currently run programs that are trying to control feral animal populations through such methods as fencing, and may be able to provide advice and/or assistance in designing a proper enclosure for your needs. Additionally, RM-HAVO has previously been contracted to construct fencing on Molokai by the Nature Conservancy, and may therefore have useful knowledge on materials and methodology.

Social

Are there currently cultural sites located in the two watersheds? If so, will there be any restrictions on access to those sites once the project begins?

What is the extent of the hunting that exists within these two watersheds? There has been much conflict on other islands between hunters and those who wish to construct animal enclosures. What has been the reaction of hunters to this plan?

Conclusion

We approve of every effort to improve the health of our watersheds and we appreciate the concerted efforts of the many agencies and organizations that are collaborating on this project. This project has the opportunity to become a blueprint for future partnerships between government and private organizations in restoring our natural systems. Therefore, it is important that the proper planning be done. We believe, however, that a well written environmental assessment is an important part of the planning effort. This document is poorly written and confusing to the reviewer. It also lacks the detail normally found in this type of document. We believe that the project proponents should use the guidelines published by the Office of Environmental Quality Control or seek the assistance of one of the local consulting firms to prepare the final EA.
We hope that our suggestions will be helpful in preparing the final Environmental Assessment, and in developing a long-range plan for protecting the Kamalo and Kapualei watersheds.

Thank you for the opportunity to comment on this drafts environmental assessment.

Sincerely,

[Signature]

Peter Rappa  
Environmental Review Coordinator

cc:  Eric Hill, DLNR  
     OEQC  
     James Moncur, WRRC  
     Sherri Himoka, Environmental Center
August 01, 2000

Mr. Peter Rappa, Environmental Review Coordinator
University of Hawaii, Environmental Center
2550 Campus Road, Crawford 317
Honolulu, Hawaii 96822

Subject: Kamalo / Kapualei Watershed Management Project

Dear Mr. Rappa:

The Molokai – Lanai Soil and Water Conservation District would like to thank you for your July 24, 2000 letter commenting on the above subject. On behalf of the applicants, Kamehameha Schools Bishop Estate and Mr. James W. Austin, we would like to note the following.

The Kamalo / Kapualei Watershed Management Project Draft Environmental Assessment was prepared through a partnership effort, and is the first EA completed by MLSWCD. We apologize for the confusion you encountered during your review and thank you for your comments and recommendations. It will be very helpful in preparing the final EA for this project. Your questions and concerns will be included.

If you any questions or require additional information, please feel free to contact our office.

Sincerely,

Paul K. Ella
MLSWCD Chairman

PE:zp
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

APPENDICES
INTRODUCTION

The Kamalo/Kapualei Management Project Proposal reflects goals of the East Molokai Watershed Partnership (attachment 1). The plan proposes management activities over a two-year period that will begin long term management practices for the protection and preservation of this watershed area. The Kamalo/Kapualei Project Proposal is a product of the recent USDA Empowerment Zone (EZ) application process, where broad based community planning has identified and developed this project as a key component to the sustainability and health of Molokai’s culture, traditions, and natural resources, and to the improvement of the island’s economic stability.

Kamalo is dominated by a steep canyon, 1500 feet deep and over half a mile wide at its head. The canyon is the most striking feature of East Molokai’s ruggedly beautiful southern slopes (Figure 1). The incredible topography of the canyon and the stream-cut upper slopes that feed into it limits human access to the region. In the 1500 years human have been on Molokai, probably only a few dozen people have explored the lands above Kamalo’s famous waterfalls, Hina, Haha and Mo‘oloa. Kamalo is owned by Kamehemeha Schools Bishop Estate.

Kapualei is comprised of a series of steep gulches/ridges east of Kamalo Canyon. The steep ridges culminate at the highest peak on Molokai, Kamakou (4974’). Like Kamalo, the upper reaches of Kapualei have remained relatively unexplored. Kapulei is owned by the Austin Estate.

Together, the two ahupua'a (land division) encompass about 5,000 acres, with about 3,000 of those acres within State Forest Reserve Conservation Zone. The “upper zone”, above 3,500' elevation, contain the heart of some of the best remaining lush, intact Hawaiian forest that once covered the entire mountains of East Molokai and are home to hundreds of endemic Hawaiian plant and animal species.

Developed over millions of years, this forest is uniquely adapted to Molokai and to its variety of climate and soil. The forest acts as a protective “sponge,” absorbing the abundant rainfall, preventing rapid soil loss, time releasing water into streams, and contributing water flow (and nutrients) to the reef as well.
Degradation of the Watershed

The upper elevation rain forest above 3,500' elevation remains virtually intact between Haha falls/Kuana ridge (Kamalo) east to Wawaia gulch (Kapulei). Surveys into this area have revealed minimal if any, signs of pigs or alien (introduced, non-native) plant species. Pigs do occur west of Haha falls/Kuana ridge, especially above "Kamalo flats", at the head of the Kamalo gulch.

Feral animals have proven to be the main carriers, soil preparers, fertilizers and scarifiers of and for weed seeds. Pigs impact the understory (low growing ground cover plant communities) of this forest area which diminishes the water carrying capacity and allows non-native weeds a chance to become established in open soils of this area. Goats are the primary reason for the degradation of the rugged "middle zone". Goats roam in large numbers, free from natural predators and safe on the steep terrain, from hunters. These animals have pushed back the native forest and shrubland cover nearly 2 miles to about 3,500 feet in elevation, where a "browse line" is quite evident. The areas just below the browse line is a denuded grass land with many dead tree stumps, remains of a dying forest. The last wild cattle were removed from these areas in 1972-73. Axis deer prefer the low elevation kiawe forest and are very rarely seen in the elevations above 3,000 feet.

Ka‘apahu, the most prominent landmark, is now a barren, stony desert where ‘ōhi‘a rain forest once stood and is representative of the bare, eroding ground that dominates the rugged landscape in the middle zone. There are still some small patches of remnant dry forest clinging to life on the steep walls. West of Kamalo gulch, remnants of native shrubland persists, spared from unrestricted goat browsing as hunters are able to access and hunt this area safely.

To maintain and/or increase the watershed capacity, it is essential to keep the upper zone free of animal intrusion and reduce erosion of the middle zone by promoting recovery of vegetation. Increased stream flow will directly benefit the landowners and tenants of these ahu‘upa‘a by having water available for cultural and economic activities, while reducing siltation that impact the near-shore reefs and fishponds.
Management Plan

The Management Plan reflects priority strategies and costs for a two year period. The implementation of the strategies of this plan will help determine the long term management strategies. The plan is divided into four programs: Ungulate Control, Weed Control, Monitoring, and Partners. The goals and strategies for each program are discussed first, followed by a table projecting specific jobs and associated costs. Staff time allocations in person days are estimated with cost averaging $100 a day. This includes a wide range of personnel levels and covers taxes, benefits, administrative and overhead costs.

Feral Animal Control

Goal: To keep the upper zone free of feral animals by preventing their movement into the upper zone and eliminating animals that may enter, and to reduce the number of goats in the middle zone to a level that will allow for vegetation recovery.

The protection of the rainforest in the upper zone (3500 feet to the summit) from feral animal (mainly pig and goat) intrusion and the reduction of goats in the "middle" zone (1000 -3500 feet elevation) will be the main management priorities in the first two years.

The construction of a fence along the lower edge of the upper zone is a key strategy to reduction and control efforts. The fence is needed primarily to control the movements of animals during control activities. The fence will be designed to allow animals to pass through the fence from the upper zone to the middle zone, but will prevent movement from the middle zone to the upper. Aerial shooting will be employed as a "last resort" effort, in the steep, inaccessible areas, of the upper zone (at the browse line) where fences cannot be constructed.

In the steep areas of the middle zone, helicopter herding will be used to push large goat herds from the steep walls of Kamalo canyon and Kapualei gulches into holding pens. The captured goats will then be distributed to the community.

A hunting program will be developed that organizes and involves community hunters in the safe, accessible areas of the upper middle zones to help reduce goat and pig populations.

Finally, Feral animal monitoring detects the level animals by actual sighting or by detecting their level of activity. Both methods will be deployed. In the upper zone, where vegetation dominates, survey transects will be established to detect...
feral animal activity levels. In the middle zone, where vegetation is void, surveys can be conducted to estimate feral animal population numbers. Monitoring is essential in gauging the programs progress in the control of feral animal levels.

1. **Construct Upper Zone Fence**—complete by end of year 1

<table>
<thead>
<tr>
<th>person days</th>
<th>costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey/Mark Fence Route</td>
<td>10</td>
</tr>
<tr>
<td>Hire/Train Fence Crew (5)</td>
<td>10</td>
</tr>
<tr>
<td>Purchase fence materials for 7 miles</td>
<td></td>
</tr>
<tr>
<td>Develop Campsites/remote shelters</td>
<td>10</td>
</tr>
<tr>
<td>Construct Fence</td>
<td>400 wks</td>
</tr>
</tbody>
</table>

Fencing Total: 220,000

2. **Reduce middle zone goat populations**—helicopter herding, holding pens

<table>
<thead>
<tr>
<th>person days</th>
<th>costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct Wing Fences and holding pens</td>
<td>40</td>
</tr>
<tr>
<td>Helicopter herding</td>
<td>30</td>
</tr>
</tbody>
</table>

Total: 54,000
3. Community Animal Removal Hunting Program

<table>
<thead>
<tr>
<th>Activity</th>
<th>Person Days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Improvement-access to middle zone</td>
<td></td>
<td>4,000</td>
</tr>
<tr>
<td>Trail Improvement-access to upper zone</td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td>Liability issues/legal costs</td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>15,000</td>
</tr>
</tbody>
</table>

4. Remote Areas Animal Removal

<table>
<thead>
<tr>
<th>Activity</th>
<th>Person Days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Pig Hunter-upper remote areas</td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Limited aerial shooting-middle zone</td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>30,000</td>
</tr>
</tbody>
</table>

5. Feral Animal Monitoring

<table>
<thead>
<tr>
<th>Activity</th>
<th>Person Days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish 8 pig activity transects 500 meters each in upper zone, and goat population surveys in middle eroded zones</td>
<td>15</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>6,000</td>
</tr>
</tbody>
</table>

Weed Control Planning

Goal: To identify, map and develop strategies for the prevention and removal of key weed species that may cause further degradation.

The development of strategies for the prevention and/or removal of key weed species is essential for long-term management of watershed areas, especially in the upper zone.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Person Days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weed Survey/Mapping</td>
<td>15</td>
<td>1,500</td>
</tr>
<tr>
<td>Prevention/Removal Strategic Plan</td>
<td></td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>3,000</td>
</tr>
</tbody>
</table>

Kamala/Kapaaiki
January 1999
Page 7
Water/Soil Monitoring and Planning

Goal: To gather baseline information for measuring resource change to provide information needed for decision making in the management of the watershed.

Measuring changes in natural resources is an essential component to any land management program. Water and vegetation monitoring will measure the changes in the overall increase (or decrease) of these resources over time. Changes may not be detected in the first two years, and the methods deployed will be used to detect long term changes.

<table>
<thead>
<tr>
<th>Activity</th>
<th>person days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install stream/rain gauge station</td>
<td></td>
<td>USGS Program (shared cost) 30,000</td>
</tr>
<tr>
<td>Field Survey/Planning for Erosion strategies</td>
<td></td>
<td>MLSWCD 20,000</td>
</tr>
<tr>
<td>Establish Vegetation and Photo plots</td>
<td>10</td>
<td>personnel/supplies 2,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 52,000</td>
</tr>
</tbody>
</table>

D. Partners

Goal: To establish a partnership that will provide funding, resources, administration, and community support and involvement for management of the Kamalo/Kapuaelei watershed.

The establishment of the East Molokai Watershed Partnership (EMoWP) is essential to provide the resources and coordination needed to implement management for this project. The EMoWP Memorandum of Understanding is the legal document that expresses the commitment of the signed members of the EMoWP.

<table>
<thead>
<tr>
<th>Activity</th>
<th>person days</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinating meetings, planning, reporting, and field activities</td>
<td>30</td>
<td>Personnel 4,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>supplies 1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Travel/vehicles 2,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>helicopter 3,000</td>
</tr>
<tr>
<td>Recruit and Develop funding sources</td>
<td>30</td>
<td>Personnel 3,000</td>
</tr>
<tr>
<td>Outreach planning and activities</td>
<td>30</td>
<td>Personnel 3,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>supplies 1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Helicopter 3,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 20,000</td>
</tr>
</tbody>
</table>
### Budget Summary

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Fence</td>
<td>220,000</td>
</tr>
<tr>
<td>Wing Fences/Goat Herding</td>
<td>54,000</td>
</tr>
<tr>
<td>Community Hunt Program</td>
<td>15,000</td>
</tr>
<tr>
<td>Remote Area Animal Removal</td>
<td>30,000</td>
</tr>
<tr>
<td>Feral Animal Monitoring</td>
<td>6,000</td>
</tr>
<tr>
<td>Weed Control</td>
<td>3,000</td>
</tr>
<tr>
<td>Monitoring</td>
<td>52,000</td>
</tr>
<tr>
<td>Partners - Coordinating Partnership</td>
<td>20,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400,000</strong></td>
</tr>
</tbody>
</table>

### Funding/Match Summary

<table>
<thead>
<tr>
<th>Federal Funding Sources</th>
<th>Funds</th>
<th>Require dMatch</th>
<th>State/County/Private Funding Sources</th>
<th>Funds</th>
<th>Inkind Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>USFWS PFW</td>
<td>50K</td>
<td>1:1</td>
<td>KSBE Kapualei Ranch</td>
<td>40K</td>
<td>5K</td>
</tr>
<tr>
<td>NRCS WHIP -- Kamalo</td>
<td>25K</td>
<td>3:1</td>
<td>Maui County Board of Water Supply</td>
<td>50K</td>
<td>25K</td>
</tr>
<tr>
<td>NRCS WHIP -- Kapualei</td>
<td>25K</td>
<td>3:1</td>
<td>NHC</td>
<td>50K</td>
<td>20K</td>
</tr>
<tr>
<td>Ke Aupuni Lokahi</td>
<td>100K</td>
<td></td>
<td>DOFAW MLSWCP</td>
<td>5K</td>
<td>5K</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td></td>
<td><strong>165</strong></td>
<td><strong>35</strong></td>
<td></td>
</tr>
</tbody>
</table>
Attachment 1: Partners Description and Roles

Kamehameha Schools Bishop Estate (KSBE): KSBE was established in 1884 under the Will of Bernice Pauahi Bishop. Princess Pauahi was a great granddaughter of Kamehameha and the last descendant of his line of Hawai‘i ali‘i. Through her Will, Pauahi committed more than 378,500 acres of her inherited lands to the creation and maintenance of Kamehameha Schools. Thousands of Hawaiian youth from across the state are served through the programs of the Schools. On the island of Moloka‘i, KSBE has joined with other ali‘i trusts and Hawaiian organizations to create the Kulana ‘Oiwi multi-service center at Kalama‘ula. The Estate’s landownership includes the 4,000 acre ahupua‘a of Kamalo, running from the ridgeline adjoining Pelekunu to Kamahu‘ehu‘e fish pond.

Kapualei Ranch: Kapualei Ranch is headed by James Austin of the Austin family, who are the landowners of the Kapualei Ahupua‘a. The Ranch is located in the lower elevations of the property. The upper elevations contain some of the best intact native rainforest ecosystems on Moloka‘i’s south slope. The Austin family sees an opportunity to manage their upper forested watershed area through the East Moloka‘i Watershed Partnership for watershed protection and preservation of native ecosystems. The ElMoWP could provide necessary resources that would otherwise not be available.

Maui Board of Water Supply (Board): The Board is responsible for the control, management and operation of the county’s water systems and water sources. The Board is required to implement with the county general and community plans in carrying out its responsibilities. The mission of the Board is to “provide clean water efficiently.” Recognizing that resources protection is inherent in both preserving water quality, and efficient use of resources, the Board’s commitments to water resources protection and management have increased steadily over the past decade. Public-private partnerships such as the East and West Maui Mountains Watershed Partnerships have already proven to be useful for several reasons. The combined efforts of many, bring more energy, expertise, and focus to the protection of the watershed. United decision making and work management helps to improve planning and implementation, make projects run more smoothly, and to leverage funds for resource protection. The higher profile attached to partnerships increases the public’s interest level and assists in generating public awareness and thereby in educating the general public as to their role in water protection. For these reasons, the Board is committed to on-going participation in partnerships, and in the East Moloka‘i Watershed Partnership specifically. The Board is prepared to dedicate as needed, staff assistance, public outreach efforts and funding as appropriate.

Mau County is a political subdivision of the State of Hawaii, encompassing the islands and surrounding waters and islets of Maui, Moloka‘i, Lana‘i, and Kaho‘olawe, except Kalua‘papa Settlement on Moloka‘i. Under the State constitution, the State and its political subdivisions have responsibility to conserve and protect Hawaii’s natural beauty and all natural resources, including land, water, air, mineral, and energy sources.
and to promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. As a political subdivision of the State, then, the County has responsibility to monitor and protect its resources in a manner consistent with State policy. In recent years, the county has increased its commitments to resource protection in general, and to watershed protection specifically. The county has provided funding for watershed protection and miconia removal in Maui County over and above that contribution made by its semi-autonomous water board. The County will support the East Moloka‘i Watershed Partnership with funding or assistance from County personnel as appropriate.

Moloka‘i Enterprise Community Governance Board (Ke Aupuni Lokahi): The Moloka‘i Rural Empowerment Zone application was prepared in the summer of 1998 as part of a national competition between rural communities for USDA designation as a Rural Empowerment Zone (EZ) or an Enterprise Community (EC). The community planning process was spearheaded by a volunteer Coordinating Committee made up of representatives of Moloka‘i’s business, academic, social service, and government sectors. Seven subcommittees were created to address specific subject areas within the plan: Economic Development, Education, Environment, Hawaiian Culture, Health and Human Services, Recreation and Fine Arts, and Youth Leadership Development. In all, over 60 meetings were held by the various committees during a four month planning period, and these meetings involved nearly 200 individuals from all walks of life on Moloka‘i. Two general public meetings were also held and about 300 people attended these meetings. Moloka‘i’s strategic plan is based on a vision statement that describes the way the island should be a decade from now. The statement paints a picture of strong and self-reliant community, a healthy and productive natural environment, and a living Hawaiian culture that nurtures and sustains the island and her people. Protection and enhancement of the island’s environment was deemed critical to the health of Moloka‘i’s people and economy, and projects in this area were given high priority in the plan. Protection of water resources was a major concern, since a project looks at the islands natural resources as being connected through the ancient ahupua‘a (mountain to seashore) system. Fittingly, the ahupua‘a system also links natural resources to economic and human health activities.

Moloka‘i-Lana‘i Soil and Water Conservation District (MLSWCD): On August 19, 1948, a charter was received recognizing the Moloka‘i Conservation District, and a Certificate of Organization was issued by the Secretary of the Territory of Hawaii. The Moloka‘i Soil Conservation District was the third Conservation District to be formed. In 1962, after a Certificate of Inclusion was issued to add the entire island of Lanai, the name was changed to the Moloka‘i-Lana‘i Soil and Water Conservation District. Today, there are 16 Conservation Districts Statewide. The function of the MLSWCD is to take available technical, financial, and educational resources, whatever their source, and focus or coordinate them so they meet the needs of the local land user relating to the conservation of soil water and other natural resources. Current projects include the Manawainui Watershed Implementation Project, Mo‘omomi and Waiheawahe...
Watersheds, Moloka‘i Heifer Project, the Moloka‘i Agricultural Community (MAC) Program, and County Grading Reviews, Etc. The District continues to promote an awareness of our environment by working with community members and cooperation partners.

The Nature Conservancy of Hawaii (TNCH): TNCH is an affiliate of The Nature Conservancy, an international non-profit organization, whose mission is to preserve plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. TNCH manages three preserves on Moloka‘i: Kamakou (Mountain/Leeward rainforest, shrublands and bog cypress); PeleKunu (Windward rainforest and river systems); and Moomomi (coastal sand dunes). TNCH manages the three preserve out of their Moloka‘i Office/baseyard located at the Moloka‘i Industrial Park, off highway 760 in Kalamaula. TNCH also conducts Island wide community outreach and volunteer programs out of this office. Presently, there is a staff of 6 people. TNCH’s role in the East Moloka‘i Partnership is to: assist with the formation of the Partnership, develop community support and involvement, and provide administrative and operational support for the Kamalo-Kapuaiele watershed project.

Natural Resource Conservation Services (NRCS): NRCS, an agency of the U.S. Department of Agriculture works hand-in-hand with people and organizations, conservation districts, and other agencies to conserve natural resources primarily on private lands. The mission of NRCS is to provide leadership in a partnership effort to help people conserve, improve, and sustain our natural resources and environment. NRCS has a number of cost-share programs designed to provide technical assistance, coordination and funding for conservation projects. NRCS can contribute to the East Moloka‘i Partnership in any of these ways.

State Division of Forestry and Wildlife (DOFAW): The Division of Forestry and Wildlife under the Department of Land and Natural Resources (DLNR) is responsible for the management and protection of all State-owned Forest Reserve lands, Natural Area Reserves, Bird and Plant Sanctuaries, and public hunting areas. The division has a number of programs in cooperative forest and wildlife management with private and public agencies and individuals that provide technical assistance and cost-sharing. The role of DOFAW in this partnership will be to provide technical assistance and in-kind services in the feral ungulate and alien plant control programs, and fire protection.

State Department of Health, Polluted Runoff Control (PRC) Program: The Polluted Runoff Control Program is a section within the Department of Health’s Clean Water Branch. The mission of the PRC is to protect and improve the quality of water resources for enjoyment of and use by the people of Hawaii through preventing and reducing nonpoint source pollution, balancing health, environmental, economic and social concerns. The program is committed to the watershed initiative and recognizes the importance of watershed management as a tool in reducing polluted runoff. The PRC Program distributes federal CWA Section 319(h) grants along with state revolving fund loans to local entities for the promotion of practices or activities that reduce
polluted runoff, assists in the development of a coastal nonpoint pollution control program that is consistent with federal CZARA Section 6217; and sponsors numerous environmental outreach and educational activities.

United States Fish and Wildlife Services (USFWS): The mission of the USFWS is working with others to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people. This statement acknowledges that working cooperatively with partner organizations, private landowners, and local communities is the best way to approach long-term conservation of our native ecosystems. The USFWS has a number of programs designed to provide technical assistance, coordination, and cost-share funding for conservation projects. It is anticipated that the USFWS will contribute to the East Moloka'i Partnership in all these ways.

U.S. Environmental Protection Agency (EPA): EPA Offers a variety of training and assistance programs to support local watershed management efforts. EPA's Watershed Academy provides technical watershed information and outreach through live training courses, the internet, and published documents. EPA has a variety of grant programs that may provide financial support for projects on Moloka'i, including Environmental Justice, Sustainable Development Challenge Grants, Environmental Education, and Wetlands Protection Grants. In addition, EPA has obtained new funding to assist in the restoration of fish ponds on Moloka'i.
MEMORANDUM OF UNDERSTANDING
East Molokai Watershed Partnership
MEMORANDUM OF UNDERSTANDING
East Moloka‘i Watershed Partnership

THIS MEMORANDUM OF UNDERSTANDING, made and entered into on the 12th day of
November, 1999, by and between the US Environmental Protection Agency, Hawai‘i
Department of Health, Hawai‘i Division of Forestry and Wildlife, Kalaupapa National
Historical Park, Kamehameha Schools Bishop Estate, Kapualii Ranch, Maui County, Maui
Board of Water Supply, Moloka‘i Enterprise Community Governance Board, Moloka‘i-Lana‘i
Soil and Water Conservation District, USDA Natural Resources Conservation Service, The
Resources Division, herein known as the EAST MOLOKA‘I WATERSHED PARTNERSHIP
(EMoWP) and hereinafter called the PARTNERS, agree to participate in cooperative
management activities of the East Moloka‘i watershed, on the basis of the following facts
and circumstances:

WHEREAS, East Moloka‘i’s native ecosystems are important to the water resources for the
island of Moloka‘i; and

WHEREAS, active management is needed to maintain a healthy watershed in order to
sustain the future quality and quantity of Moloka‘i’s water supply; and

WHEREAS, active management of these watersheds would also benefit Hawai‘i’s native
flora and fauna; and

WHEREAS, the Hawaiian concept of the ahupua‘a acknowledges that all parts of a
watershed, from the mountains to the sea, are interconnected, and that activities carried out
in one portion of a watershed can affect the rest of the watershed; and

WHEREAS, active management of the East Moloka‘i watershed is also important to the
programs of each the PARTNERS (Attachment 1); and

WHEREAS, the lands managed by some of the PARTNERS share common boundaries
(Figure 1); and

WHEREAS, many of the threats to the forested watershed, such as feral ungulates, fire,
insects, diseases, and invasive non-native plants, occur across these common boundaries;
and

WHEREAS, significant economic and staffing advantages will accrue to the PARTNERS if
the management of these threats is shared; and

WHEREAS, effective management is best achieved through the coordinated actions of all
major landowners in the watershed.
NOW, THEREFORE, the PARTNERS hereby agree in principle as follows:

1. To develop jointly, where appropriate, watershed management plans for areas within the East Moloka'i Watershed Partnership, that will document resource values and identify priority watershed management objectives and strategies within the areas included in the Partnership.

2. To consider jointly, at such places and at such intervals as may be mutually agreed upon by the PARTNERS, general programs and management projects for the East Moloka'i Watershed Partnership.

3. To determine costs of watershed management programs and projects agreed upon in #2, and join in cooperative efforts to raise outside funds for those projects to the extent each PARTNER is authorized by law.

4. To develop and implement specific agreements and working plans for individual projects considered by all or some of the PARTNERS having mutual interests. Such agreements and working plans may be developed whenever appropriate.

5. To enter into specific agreements between all or some of the PARTNERS, as the occasion demands and to the extent each PARTNER is authorized by law, for the use of specialized equipment, hiring and supervision of personnel, transfer of funds, purchasing of supplies, and other matters pertaining to the general purposes of management agreed upon by all or some of the PARTNERS, on terms and conditions to be agreed upon between the affected PARTNERS. Expenditures under this Memorandum of Understanding will be determined by specific working agreements entered into under authority of this instrument.

6. That any partner may terminate its involvement in this Memorandum of Understanding by providing 90 days prior written notice to the other PARTNERS.

7. That this Memorandum of Understanding is not to be construed as an instrument which commits any "partner" to any specific expenditure of funds or to any exchange of funds for any purpose.

8. That additional partners may join the EMoWP, at a later date, by amendment of this agreement, if such addition is deemed appropriate by the current partners.

9. The use of the term "partnership" in this document is not intended to evidence formation of a legal partnership but rather to express a spirit of cooperation in attaining mutual goals among those identified as "partners." Hence there shall be no sharing of profits or losses, assets or liabilities. Those identified as "partners" shall not have the liability of partners, nor the power to bind others identified as partners. Rather each "partner" organization agrees that it shall be responsible for
any contract it makes or any injury it causes or any injury or damage suffered by it or by its own personnel or equipment.

10. That this Agreement does not modify any agency's existing authorities by reducing, expanding, or transferring any of the statutory or regulatory authorities and responsibilities of any of the signatory agencies.

IN WITNESS WHEREOF, the PARTNERS hereto have executed this Memorandum of Understanding as of the first date above written.

KAMEHAMEHA SCHOOLS BISHOP ESTATE
By: [Signature]
Date: 11-12-99

HAWAI'I DEPARTMENT OF HEALTH
By: [Signature]
Date: 11-17-99

KAPUALEI RANCH/JAMES AUSTIN OWNER'S REPRESENTATIVE
By: [Signature]
Date: 11-18-99

HAWAI'I DIVISION OF FORESTRY AND WILDLIFE
By: [Signature]
Date: 11-12-99

MOLOKA'I ENTERPRISE COMMUNITY GOVERNANCE BOARD
By: [Signature]
Date: 11-12-99

KALAUPAPA NATIONAL HISTORICAL PARK
By: [Signature]
Date: 11-12-99

US ENVIRONMENTAL PROTECTION AGENCY
By: [Signature]
Date: 11-28-99

MAUI COUNTY
By: [Signature]
Date: 11-12-99
MAUI BOARD OF WATER SUPPLY
By:  
Date:  Nov. 12, 1999

MOLOKA'I-LANA'I SOIL & WATER CONSERVATION DISTRICT
By:  
Date:  12 Nov. 99

USDA NATURAL RESOURCES CONSERVATION SERVICE
By:  
Date:  Nov. 21, 1999

THE NATURE CONSERVANCY
By:  
Date:  Nov. 12, 1999

US FISH AND WILDLIFE SERVICE
By:  
Date:  November 17, 1999

US GEOLOGICAL SURVEY - WATER RESOURCES DIVISION
By:  
Date:  Nov. 22, 1999
Attachment 1: Partners Description and Roles

Kamehameha Schools Bishop Estate (KSBE): KSBE was established in 1884 under the Will of Bernice Pauahi Bishop. Princess Pauahi was a great granddaughter of Kamehameha and the last descendent of his line of Hawai‘i ali‘i. Through her Will, Pauahi committed more than 378,500 acres of her inherited lands to the creation and maintenance of Kamehameha Schools. Thousands of Hawaiian youth from across the state are served through the programs of the Schools. On the island of Moloka‘i, KSBE has joined with other ali‘i trusts and Hawaiian organizations to create the Kulana ‘Owi multi-service center at Kalama‘ula. The Estate’s landownership includes the 4,000 acre ahupua‘a of Kamalo, running from the ridgeline adjoining Pelekunu to Kamahu‘ehu‘e fish pond.

Kapuaile Ranch: Kapuaile Ranch is headed by James Austin of the Austin family, who are the landowners of the Kapuaile Ahupua‘a. The Ranch is located in the lower elevations of the property. The upper elevations contain some of the best intact native rainforest ecosystems on Moloka‘i’s south slope. The Austin family sees an opportunity to manage their upper forested watershed area through the East Moloka‘i Watershed Partnership for watershed protection and preservation of native ecosystems. The EMoWP could provide necessary resources that would otherwise not be available.

Moloka‘i Enterprise Community Governance Board (Lokahi Committee): The Moloka‘i Rural Empowerment Zone application was prepared in the summer of 1998 as part of a national competition between rural communities for USDA designation as a Rural Empowerment Zone (EZ) or an Enterprise Community (EC). The community planning process was spearheaded by a volunteer Coordinating Committee made up of representatives of Moloka‘i’s business, academic, social service, and government sectors. Seven subcommittees were created to address specific subject areas within the plan: Economic Development, Education, Environment, Hawaiian Culture, Health and Human Services, Recreation and Fine Arts, and Youth Leadership Development. In all, over 60 meetings were held by the various committees during a four month planning period, and these meetings involved nearly 200 individuals from all walks of life on Moloka‘i. Two general public meetings were also held and about 300 people attended these meetings. Moloka‘i’s strategic plan is based on a vision statement that describes the way the island should be a decade from now. The statement paints a picture of strong and self-reliant community, a healthy and productive natural environment, and a living Hawaiian culture that nurtures and sustains the island and her people. Protection and enhancement of the island’s environment was deemed critical to the health of Moloka‘i’s people and economy, and projects in this area were given high priority in the plan. Protection of water resources was a major concern, since a project looks at the islands natural resources as being connected through the ancient ahupua‘a (mountain to seashore) system. Fittingly, the ahupua‘a system also links natural resources to economic and human health activities.
The Nature Conservancy of Hawaii (TNCH): TNCH is the Hawai‘i program of The Nature Conservancy, an international non-profit organization, whose mission is to preserve plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. TNCH manages three preserves on Moloka‘i: Kamakou (Mountain/Leeward rainforest, shrublands and bog systems); Pelekunu (Windward rainforest and river systems); and Mo‘omomi (coastal sand dunes). TNCH manages the three preserve out of their Moloka‘i Office/baseyard located at the Moloka‘i Industrial Park, off highway 760 in Kalama‘ula. TNCH also conducts Island wide community outreach and volunteer programs out of this office. Presently, there is a staff of 6 people. TNCH’s role in the East Moloka‘i Partnership is to: assist with the formation of the Partnership, develop community support and involvement, and provide administrative and operational support for the Kamalo-Kapualei watershed project.

United States Fish and Wildlife Service (USFWS): The mission of the USFWS is: Working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. This statement acknowledges that working cooperatively with partner organizations, private landowners, and local communities is the best way to approach long-term conservation of our native ecosystems. The USFWS has a number of programs designed to provide technical assistance, coordination, and cost-share funding for conservation projects. It is anticipated that the USFWS will contribute to the East Moloka‘i Partnership in all these ways.

U.S. Environmental Protection Agency (EPA): EPA Offers a variety of training and assistance programs to support local watershed management efforts. EPA’s Watershed Academy provides technical watershed information and outreach through live training courses, the Internet, and published documents. EPA has a variety of grant programs that may provide financial support for projects on Moloka‘i, including Environmental Justice, Sustainable Development Challenge Grants, Environmental Education, and Wetlands Protection Grants. In addition, EPA has obtained new funding to assist in the restoration of fish ponds on Moloka‘i.

State Division of Forestry and Wildlife (DOFAW): The Division of Forestry and Wildlife is the largest land management entity in the State of Hawaii, with direct responsibility for approximately 800,000 acres of state trust lands. These lands are managed through an integrated system of forest and natural area reserves, plant and wildlife sanctuaries, and wilderness and game management areas. Responsibility is statewide for watershed and endangered species protection, wildlife fire suppression, public trails and access, and game management programs. Cooperative natural resource programs are also planned and implemented on other public and privately owned lands through natural area and watershed partnerships, forest stewardship programs, urban forestry projects, and other agreements. DOFAW has been a founding member of the East Maui, West Maui, and Koolau Watershed Partnerships. The role of DOFAW in this partnership will be to provide technical assistance and in-kind services in watershed and other natural resource management activities.
Kalaupapa National Historical Park (NPS): The National Park Service mission is to manage units of the national park system so as to conserve the scenery and the natural and historic objects and the wild life therein in an unimpaired condition for the enjoyment of future generations. The NPS strives to manage natural resources at the ecosystem scale, and recognizes the essential role of cooperative partnerships to preserve ecosystems across administrative boundaries. Cooperative management of Kalaupapa NHP land with adjoining land managers in the control of feral ungulates, alien plants, and water quality and quantity has proven to be cost effective and efficient. The NPS will provide technical assistance in the monitoring and management of feral ungulates and invasive alien plants.

State Department of Health, Polluted Runoff Control (PRC) Program: The Polluted Runoff Control Program is a section within the Department of Health’s Clean Water Branch. The mission of the PRC is to protect and improve the quality of water resources for enjoyment of and use by the people of Hawaii through preventing and reducing nonpoint source pollution, balancing health, environmental, economic and social concerns. The program is committed to the watershed initiative and recognizes the importance of watershed management as a tool in reducing polluted runoff. The PRC Program distributes federal CWA Section 319(h) grants along with state revolving fund loans to local entities for the promotion of practices or activities that reduce polluted runoff, assists in the development of a coastal nonpoint pollution control program that is consistent with federal CZARA Section 6217; and sponsors numerous environmental outreach and educational activities.

Moloka'i-Lana'i Soil and Water Conservation District (MLSWCD): On August 19, 1948, a charter was received recognizing the Moloka'i Conservation District, and a Certificate of Organization was issued by the Secretary of the Territory of Hawaii. The Moloka'i Soil Conservation District was the third Conservation District to be formed. In 1962, after a Certificate of Inclusion was issued to add the entire island of Lana'i, the name was changed to the Moloka'i-Lana'i Soil and Water Conservation District. Today, there are 16 Conservation Districts Statewide. The function of the MLSWCD is to take available technical, financial, and educational resources, whatever their source, and focus or coordinate them so they meet the needs of the local land user relating to the conservation of soil water and other natural resources. Current projects include the Manawaiul Watershed Implementation Project, Mo'o'momi and Wahehawe Water Watersheds, Moloka'i Heifer Project, the Moloka'i Agricultural Community (MAC) Program, and County Grading Reviews, Etc. The District continues to promote an awareness of our environment by working with community members and cooperation partners.

USDA Natural Resource Conservation Services (NRCS): NRCS, an agency of the U.S. Department of Agriculture works hand-in-hand with people and organizations, conservation districts, and other agencies to conserve natural resources primarily on private lands. The mission of NRCS is to provide leadership in a partnership effort to help people conserve, improve, and sustain our natural resources and environment. NRCS has a number of cost-share programs designed to provide technical assistance, coordination and funding for
conservation projects. NRCS can contribute to the East Moloka’i Partnership in any of these ways.

Maui Board of Water Supply (Board): The Board is responsible for the control, management and operation of the county’s water systems and water sources. The Board is required to implement with the county general and community plans in carrying out its responsibilities. The mission of the Board is to "provide clean water efficiently." Recognizing that resources protection is inherent in both preserving water quality, and efficient use of resources, the Board’s commitments to water resources protection and management have increased steadily over the past decade. Public-private partnerships such as the East and West Maui Mountains Watershed Partnerships have already proven to be useful for several reasons. The combined efforts of many, bring more energy, expertise, and focus to the protection of the watershed. United decision making and work management helps to improve planning and implementation, make projects run more smoothly, and to leverage funds for resource protection. The higher profile attached to partnerships increases the public’s interest level and assists in generating public awareness and thereby in educating the general public as to their role in water protection. For these reasons, the Board is committed to on-going participation in partnerships, and in the East Moloka’i Watershed Partnership specifically. The Board is prepared to dedicate as needed, staff assistance, public outreach efforts and funding as appropriate.

Maui County: Maui County is a political subdivision of the State of Hawaii, encompassing the islands and surrounding waters and islets of Maui, Moloka’i, Lana’i, and Kaho’olawe, except Kalaupapa Settlement on Moloka’i. Under the State constitution, the State and its political subdivisions have responsibility to conserve and protect Hawaii’s natural beauty and all natural resources, including land, water, air, mineral, and energy sources and to promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self sufficiency of the State. As a political subdivision of the State, then, the County has responsibility to monitor and protect its resources in a manner consistent with State policy. In recent years, the county has increased its commitments to resource protection in general, and to watershed protection specifically. The county has provided funding for watershed protection and micona removal in Maui County over and above that contribution made by its semi-autonomous water board. The County will support the East Moloka’i Watershed Partnership with funding or assistance from County personnel as appropriate.
LAND UNITS | FLANDED | TRACT | FIELD | AMOUNT | MONTH Year | PLANTED CONSERVATION TREATMENT
--- | --- | --- | --- | --- | --- | ---
| | | | | dryland forest

**0649**

| 1 | 1596.0ac | | 1999 | FENCE (102) | Construct a conventional fence to control livestock movement at location shown on plan map.
| | | | | | An exclusion fence will be erected between the 3500' and 3800' elevation to protect native forest from damage by feral animals.

**0692**

| 1 | 1400.0ac | 06 | 1999 | UPLAND WILDLIFE HABITAT MANAGEMENT |
| | | | | Create, maintain or enhance area(s) to provide upland wildlife food and cover.
| | | | | After fencing is complete area will be monitored to document regrowth of native
| | | | | forest.

HONIDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, sex, religion, sexual orientation or disability. To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

APPENDIX B
RESOURCE IMPACT SUMMARY
FOR
Kam Schools Bishop Estate

<table>
<thead>
<tr>
<th>Tract</th>
<th>Field</th>
<th>Subfield</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1400ds fence</td>
<td>0869</td>
<td>1</td>
<td>1400.0</td>
</tr>
<tr>
<td>outside fence</td>
<td>0869</td>
<td>2</td>
<td>198.0</td>
</tr>
</tbody>
</table>

**BENCHMARK SYSTEM**
Plateau, Benchmark

Land use/history: TKC 5-5-01:10 is a 1193 acre parcel owned by Kamalama Schools Bishop Estate. Past land use of the lower elevations include cattle ranching. More recently the land is not in any agricultural use. Feral goat herds have severely impacted the upper dryland forest and are working their way up to the rain forest and nature preserves. Several endangered species occur in this area and the State DOPW maintains several protected exclusions. Rainfall ranges from 10" to 15" per year at upper elevations. Soils are mostly rough broken land and severely eroded soils.

**Planned SYSTEM**
Plateau, Grazing

Pasture will be intensively grazed and managed. The proposed grazing management system will improve or maintain forage production, reduce erosion, and protect nearby coastal waters from sedimentation and other pollution.

**BENCHMARK PRACTICES**

**Planned PRACTICES**

**FENCE (1982)**
UPLAND WILDLIFE HABITAT MANAGEMENT

**RESOURCE CONCERN**

<table>
<thead>
<tr>
<th>Category</th>
<th>EFFECTS</th>
<th>IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANIMALS (WILDLIFE) HABITAT</td>
<td>Native wildlife is being adversely affected by loss of native habitat and habitat alteration.</td>
<td>Wildlife will benefit by improved vegetation.</td>
</tr>
<tr>
<td>ANIMALS MANAGEMENT, Population-Resource Balance</td>
<td>Feral goat numbers are out of control and are seriously damaging the upland resources.</td>
<td>Fencing, trapping, aerial hunting and on foot hunting will control animal numbers.</td>
</tr>
<tr>
<td>HUMAN CULTURAL, Absence or Presence</td>
<td>Cultural sites are known to exist at the lower elevations of this property. No archaeological survey available for higher elevations.</td>
<td>Cultural resources will be excluded from planned agricultural activities.</td>
</tr>
<tr>
<td>HUMAN SOCIAL, Private &amp; Public Values</td>
<td>This effort is part of a community supported plan to restore degraded areas of the island.</td>
<td>Good public relations effort which will focus on environmental restoration.</td>
</tr>
</tbody>
</table>

APPENDIX B
<table>
<thead>
<tr>
<th>RESOURCE CONCERN</th>
<th>EFFECTS</th>
<th>IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>EFFECTS</td>
<td>IMPACTS</td>
</tr>
<tr>
<td></td>
<td>Benchmark</td>
<td></td>
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<td></td>
<td>Planned</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Difference/Change)</td>
<td></td>
</tr>
<tr>
<td>PLANTS CONDITION. Plants</td>
<td>Plants will have the chance</td>
<td></td>
</tr>
<tr>
<td>Health &amp; Vigor</td>
<td>to re-establish naturally.</td>
<td></td>
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<tr>
<td>Dryland forest cover has</td>
<td></td>
<td></td>
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<tr>
<td>been severely affected by</td>
<td></td>
<td></td>
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<tr>
<td>uncontrolled grazing</td>
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<tr>
<td>by overpopulation of feral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>goats.</td>
<td></td>
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</tr>
<tr>
<td>PLANTS MANAGEMENT. Other</td>
<td>Area will be monitored to</td>
<td></td>
</tr>
<tr>
<td>Presently, there is no</td>
<td>assess plant recovery.</td>
<td></td>
</tr>
<tr>
<td>management plan for plant</td>
<td></td>
<td></td>
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<tr>
<td>protection or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>regeneration.</td>
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<tr>
<td>PLANTS MANAGEMENT.</td>
<td></td>
<td></td>
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<tr>
<td>Threatened and Endangered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
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<td></td>
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<tr>
<td>Some threatened and</td>
<td></td>
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</tr>
<tr>
<td>endangered species are</td>
<td></td>
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<tr>
<td>known to occur in this</td>
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<tr>
<td>and adjacent locations.</td>
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<tr>
<td>DofIaW manages a few</td>
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<tr>
<td>exclusions to protect</td>
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<td>some known locations.</td>
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<tr>
<td>SOIL CONDITION. Other</td>
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<tr>
<td>Soils are described as</td>
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<tr>
<td>being strongly</td>
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<td>acid at surface and</td>
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<td>strongly acid in</td>
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<tr>
<td>subsurface layer.</td>
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<tr>
<td>Little to no</td>
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<tr>
<td>nutrient cycling as there</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is limited</td>
<td></td>
<td></td>
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<tr>
<td>vegetative cover.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOIL EROSION. Sheet &amp;</td>
<td></td>
<td>Significant</td>
</tr>
<tr>
<td>Hill</td>
<td>Sheet &amp; rill erosion will be</td>
<td>Reduction</td>
</tr>
<tr>
<td></td>
<td>reduced to an acceptable soil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>loss tolerance.</td>
<td></td>
</tr>
<tr>
<td>Tons/acre/yr</td>
<td>6.200</td>
<td>4.200</td>
</tr>
<tr>
<td>Tons/acre/yr</td>
<td>65.900 reduced</td>
<td>65.900 reduced</td>
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<tr>
<td>Streambank</td>
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<tr>
<td>Stream banks and bottoms</td>
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</tr>
<tr>
<td>are not stabilized.</td>
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<td></td>
</tr>
<tr>
<td>APPENDIX B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESOURCE CONCERN</td>
<td>EFFECTS</td>
<td>IMPACTS</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Strong winds in this area contribute to erosion problem.</td>
<td>Amount and velocity of wind will be reduced in treated area.</td>
<td>Slight reduction</td>
</tr>
<tr>
<td>Amount of sediment in runoff water is minimized.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floodwaters cause damage to cropland and residential areas.</td>
<td>Amount of vegetation will increase allowing improved water infiltration and a slowing of overland flow.</td>
<td></td>
</tr>
</tbody>
</table>

**Nondiscrimination Statement**

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**Appendix B**
<table>
<thead>
<tr>
<th>TRACT</th>
<th>FIELD</th>
<th>AMOUNT</th>
<th>MONTH</th>
<th>YEAR</th>
<th>PLANNED CONSERVATION TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>la</td>
<td>$50.00</td>
<td>6</td>
<td>2000</td>
<td>Upland reserve</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>THE 5–6-92:1 is a 1.978 acre parcel owned by James &quot;Kim&quot; Austin. Land use at the</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>lower elevations is cattle and horse grazing. Upper elevation is not in agricultural</td>
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<tr>
<td></td>
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<td></td>
<td>use and is in the State resource conservation district. Pastoral cattle have</td>
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<td></td>
<td>severely impacted upper dryland forest and are working their way up to the</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>rainforest and native preserves. Several endangered species occur in this area and</td>
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<td></td>
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<td></td>
<td></td>
<td>the State Dept of Forestry maintains several protective exclusions. Rainfall ranges from 30&quot;</td>
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<td></td>
<td></td>
<td></td>
<td>to 150&quot; per year at upper elevations. Soils are mostly rough broken land and</td>
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<td></td>
<td></td>
<td></td>
<td>severely eroded soils.</td>
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<tr>
<td>001</td>
<td>la</td>
<td>$140.00</td>
<td>03</td>
<td>2004</td>
<td>FENCE (328)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Construct a fence for use as a barrier to wildlife and livestock.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A barrier fence will be used to protect upland forest from further damage by goats.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fences will allow one way (down) animal movement only.</td>
</tr>
<tr>
<td>001</td>
<td>la</td>
<td>$90.00</td>
<td>09</td>
<td>2000</td>
<td>UPLAND WILDLIFE HABITAT MANAGEMENT</td>
</tr>
<tr>
<td></td>
<td>la</td>
<td>$90.00</td>
<td>03</td>
<td>2001</td>
<td>Areas inside protective fence will be monitored periodically to establish the rate</td>
</tr>
<tr>
<td></td>
<td>la</td>
<td>$90.00</td>
<td>03</td>
<td>2002</td>
<td>of plant regeneration and the amount. Information from this project may be used as</td>
</tr>
<tr>
<td></td>
<td>la</td>
<td>$90.00</td>
<td>03</td>
<td>2003</td>
<td>the basis of other funding requests for various agencies.</td>
</tr>
</tbody>
</table>

**Nondiscrimination Statement**

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

**Appendix C**
RESOURCE IMPACT SUMMARY

FOR

Kapaaui Ranch

<table>
<thead>
<tr>
<th>Tract</th>
<th>Field</th>
<th>Subfield</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1a</td>
<td>550.0</td>
</tr>
</tbody>
</table>

**Upland habitat**

**Benchmark SYSTEM**

Plateau, Benchmark

---

Upper elevation fencelines will protect forest from further goat damage and will allow for regeneration. Goat numbers will be reduced by trapping and hunting and plant populations are expected to increase as grazing pressure is reduced.

**Planned SYSTEM**

Plateau, Grazing

---

TMK 5-6-96:1 is a 1673 acre parcel owned by James "Kimo" Austin. Land use at the lower elevations is cattle and horse grazing. Upper elevation is not in agricultural use and is in the State resource conservation district. Feral goat herds have severely impacted upper dryland forest and are working their way up to the rainforest and nature preserves. Several endangered species occur in this area and the State DofAW maintains several restrictive exclusions. Rainfall ranges from 30" to 59" per year at upper elevations. Soils are mostly rough broken land and severely eroded soils.

**Planned PRACTICES**

---

**UPLAND WILDLIFE HABITAT MANAGEMENT**

**FENCE (1982)**

**ANIMALS (WILDLIFE) HABITAT. Upland Wildlife Habitat**

Native wildlife is being adversely affected by loss of native habitat and habitat alteration.

Wildlife will benefit by improved vegetation.

**ANIMALS MANAGEMENT. Population-Resource Balance**

Feral goat numbers are out of control and are seriously damaging the upland resources.

Fencing, trapping, aerial hunting and on foot hunting will control animal numbers.

**HUMAN CULTURAL. Absence or Presence**

Cultural sites are known to exist at the lower elevations of this property. No archeological survey available for higher elevations.

Cultural resources will be excluded from planned agricultural activities.

**HUMAN SOCIAL. Private & Public Values**

This effort is part of a community supported plan to restore degraded areas of the island.

Good public relations effort which will focus on environmental restoration.

APPENDIX C
<table>
<thead>
<tr>
<th>RESOURCE CONCERN</th>
<th>EFFECTS Benchmark</th>
<th>EFFECTS Planned</th>
<th>IMPACTS (Difference/Change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLANTS CONDITION, Plants Health &amp; Vigor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>These plants remaining are in poor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>condition due to trampling, rubbing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and lack of nutrient cycling.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLANTS CONDITION, Productivity, Kinds, Amel. &amp; Distrib. Plant pred</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dryland forest cover has been</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>severely affected by uncontrolled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>grazing by overpopulation of females</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>goats.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PLANTS MANAGEMENT, Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presently, there is no management</td>
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<tr>
<td>plan for plant protection or</td>
<td></td>
<td></td>
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<tr>
<td>regeneration.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PLANTS MANAGEMENT, Threatened and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endangered Species</td>
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<td></td>
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<tr>
<td>Some threatened and endangered</td>
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<td></td>
</tr>
<tr>
<td>species are known to occur in this</td>
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<td></td>
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<tr>
<td>and adjacent locations. DoFar manages</td>
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<td></td>
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<tr>
<td>a few exclusions to protect these</td>
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<tr>
<td>known locations.</td>
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</tr>
<tr>
<td>SOIL CONDITION, Other</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Soils are described as being strongly</td>
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<tr>
<td>acid at surface and strongly acid in</td>
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<tr>
<td>subsurface layer. Little to no</td>
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<tr>
<td>nutrient cycling as there is limited</td>
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<td></td>
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<tr>
<td>vegetative cover.</td>
<td></td>
<td></td>
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<tr>
<td>SOIL EROSION, Sheet &amp; Rill</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Soil loss exceeds acceptable</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>tolerance level. Sheet &amp; Rill erosion</td>
<td></td>
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<tr>
<td>estimated at 70 tons/acre/year. Upper</td>
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<tr>
<td>elevations of this tract are</td>
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<td></td>
</tr>
<tr>
<td>almost devoid of vegetation due to</td>
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<td></td>
<td></td>
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<tr>
<td>goat damage.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOIL EROSION, Sheet &amp; Rill, USLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tract  Field Subfield Tons/acre/Year</td>
<td>Tons/acre/Year</td>
<td></td>
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<td>001  la  Subfd  70.100</td>
<td>4.200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55.900 reduced</td>
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</tr>
<tr>
<td>SOIL EROSION, Streambank</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Stream banks and bottoms are not</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>stabilized.</td>
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<td></td>
<td></td>
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<tr>
<td>SOIL EROSION, Wind</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong winds in this area contribute</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount and velocity of wind</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**APPENDIX C**
RESOURCE IMPACT SUMMARY

FOR
Kapaailei Ranch

RESOURCE CONCERN

WATER QUALITY. Surface Water Contaminants, turbid surface water
suspended sediment and turbidity adversely affects aquatic habitat,
recreational waters, and other intended uses. According to DOH
reports, state water quality standards have been exceeded for
turbidity in some coastal waters.

WATER QUANTITY. Excess amounts, runoff/flooding
floodwaters cause damage to cropland and residential areas.

EFFECTS

BENCHMARK

Amount of sediment in runoff water is
minimized.

Planned

Amount of vegetation will increase
allowing improved water infiltration
and a slowing of overland flow.

IMPACTS

(Difference/Change)

reduced in treated area.

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color,
national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program
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Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider
and employer.
TO: Sheila Cox
USDA Natural Resources Conservation Service
Hooluhua Field Office

SUBJECT: Fence Standards

I would recommend the use of triple galvanized fencing materials to prolong the effective life span of the fencing project. It is especially pertinent for this wildlife fencing project since access is extremely difficult.

Please call me at (808) 541-02600 x 111 if you have any questions.

Sincerely,

LARRY SHINSHIRO
Conservation Agronomist

cc: Terrell Kelley, Biologist
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

Kamalo/Kapualei Fence Specifications

- 47" Hog wire mesh, triple-dipped galvanized
- 7' galvanized t-post
- Standard galvanized barbed-wire – two top strands (4"-6" spacing between each barbed wires and top of mesh), one bottom strand below bottom of wire mesh (if possible embedded in surface of the ground)
- 8 fence clips per post – 5 on wire mesh, 3 for each barbed wire
- Corner bracing – see attachment
- Kamalo Section Approx. 3.0 miles
- Kapualei section Approx. 2.5 miles

APPENDIX D
Wedge-Loc™ Bracing Hardware for T-posts

**You'll Never Have to Dig Another Post Hole; Pour Concrete (or Set Expensive, Heavy Wooden Posts)**

**ERECT A CORNER IN APPROXIMATELY 15 MINUTES OR LESS!** Now you can quickly and economically erect a corner with the bracing needed for light to medium weight fencing using regular steel fence posts, commonly known as "T-posts".

**Wedge-Loc™ hardware fits all steel U.S., Canadian, & Mexican T-posts and works with all types of fence material for both permanent and temporary fencing needs. The Wedge-Loc™ collar will hold up to 4 sockets to let you build 2, 3 or 4 way corners. Shut and finish a fence line or barricade fence anywhere! Build a fence for rotational grazing, temporary pastures, snow fences, hoarding for fruit... virtually any kind of fence you want that needs to be braced. BUILD A CORNER IN NO TIME!!!**

**ACCESSORIES FIT ON THE COLLAR.**

- **Bracing System**
  - For securing 3x3, 3x5, or other size fence posts.
  - Includes the collar and wedge.

**Fencing Pliers**

- For installing Wedge-Loc™ hardware without the need for tools.

**Tests performed at the University of Arizona proved the durability of Wedge-Loc™ hardware. The wire broke at 2,900 lbs. of pull and the testing was stopped. (The average combined pull on a 4-foot 12.5 ga. wire fence is 500 - 700 lbs.)**

**WEDGE-LOC™ HARDWARE WAS STILL STRAIGHT AND DURABLE.**

*Made in USA - ©1991 Wedge-Loc™ All rights reserved.*
INSTALLATION with a POST DRIVEN and STEEL PLIERS

Dracing system using T-posts with T-posts-Fits all U.S., Canadian & Mexican steel T-Posts
• IMPORTANT • Follow these instructions for best results.

For maximum strength, use hogs on T-Post in direction of brace where Wedge-Loc™ hardware is installed. Choose the type of bracing system you need (in-line or corner brace).

"BE SURE ALL POSTS ARE IN LINE & SQUARED UP!!!"

HORIZONTAL BRACE
- 2 collar 2 wedges 2-9/16" sockets

DIAGONAL BRACE
- 3 collar 3 wedges 4 6d sockets

CORNER BRACE
- 2 collar 2 wedges 2 6d sockets

WOOD POST BRACE
- Position 2 nails 3/4" apart. Slide brace socket in place

UNIVERSAL COLLAR

Position the collar BETWEEN the hogs.

Turn collar to position

Slip sockets or accessories on collar.

TIPS:
1. On main corner & end posts, wrap wires alternately, first one direction, next the other direction, to prevent post from twisting.
2. Use 7 or 8" T-Post in corners, drive in 2'-3' where needed in some soils (17" or 8" T-Posts are unavailable, drive two posts back to back with one post deeper.)
3. Install bottom wire first. Use additional strength use cross wires.
4. On the brace T-post, remove spikes with hammer. To adjust tension on brace if it's too loose or tight, tap one or the other top right-post deeper into the ground.
5. For additional strength, add a diagonal brace when using horizontal brace.

HEAVY WEDGE INSTALLATION WITH UNIVERSAL COLLAR

STEP 1

Wedge positions for brace assembly

STEP 2

Hold collar tightly and slide wedge down between back side of T-post and collar. Pry tab out to lock wedge in place.

NOTE:
For Canadian T-post bracket assembly position of wedge... use 1/4" bolt to secure.

ALL WEDGE-LOC™ PARTS ARE REUSEABLE AND COMPLETELY GUARANTEED.
MEMORANDUM

TO: Denise Light
USDA-Natural Resources Conservation Service
Molokai Field Office
P.O. Box 396
Ho‘olehua, Hawaii 96729

FROM: Timothy Johns, Chairperson, and
State Historic Preservation Officer

TMK: 5-6 and 5-6

Thank you for the opportunity to review the proposed partnership among Kamehameha Schools Bishop Estate (KSBE), The Nature Conservancy, and Kapualei Ranch. These entities plan to establish, over the initial two-year period, a long-term program of protection and preservation of the relatively intact rain forest which exists above the 3,500-foot elevation (the “upper zone”) between Haha Falls and Kuana Ridge in Kamalo east to Wa华‘ia Gulch in Kapualei. The major management problem for this region is the presence of feral ungulates (pigs and goats) whose foraging destroys the vegetation and degrades the ground surface. A secondary goal is the reduction of feral ungulates in the “middle zone,” between the 3,500-foot and 1,000-foot elevations, and restoration of the vegetation. In order to protect the upper zone, the partnership plans to construct a fence along its lower border. Additional activities in the upper zone include the development of campsites or remote shelters and the improvement of trails in the area. In the middle zone, the management plan calls for the construction of wing fences and holding pens, and the improvement of access roads in the area. The role of the National Resources Conservation Service (NRCS) is financial, with federal funds being supplied to the participants through the WHIP program.

APPENDIX E
According to our records, SIHP No. 50-60-04-305, an old fort or heiau, was said to be on top of Ka'apahu Peak, which is near the fenceline separating the upper and middle zones of the subject project area. A field inspection conducted in 1968 did not confirm the site’s presence in that location. It is possible that other pre-Contact Hawaiian sites are present on the ridge flats of the upper zone: such sites would include temporary habitation and agricultural features. The ridge flats of the middle zone may also have some archaeological sites of similar types. Portions of SIHP No. 50-60-04-308, a large archaeological site complex comprising over 500 features may lie in the lowest reaches of the middle zone (between the 250-foot and the 500-foot elevation lines in the Wawaia and Kapualei drainages). SIHP No. -308 includes habitation, religious, agricultural, and burial features. There may be similar types of features on other ridge flats at these elevations in the project area.

In view of these facts, we would recommend that the fenceposts at the lower margins of the middle and upper zones be installed by hand, with no mechanical grubbing or clearing of the fenceline corridors. If this is done, then we believe that there will be "no effect" on significant historic sites which may be present in the project area.

Should you have any questions, please feel free to call Sara Collins at 692-8026.

c: Cultural Resources Comm, Maui Ping Dept, 250 S. High St, Wailuku, HI 96793
Ms. Barbara Hallniak, Chair, Molokai Ping Comm, P.O. Box 976, Kaunakakai 96748
Ms. Carol T. Kawachi, Cultural Resource Specialist, USDA, Natural Resources
Conservation Service, P.O. Box 636, Kekalakeua, HI 96750
MOLOKA‘I ENTERPRISE COMMUNITY

40 Projects in Moloka‘i’s 10-Year Strategic Plan

- Purchase/Acquire Land from ‘Ohana Owners for the Community

- ‘Ohana Owners for the Community. 35% of Moloka‘i’s land is owned by large farms. Most of whom are not residents of Moloka‘i. In fact, Moloka‘i has the highest percentage of farmland-owned land of any island in Hawaii. Currently, the island’s land is classified as non-residential. The Moloka‘i community will never have the ultimate say over how these resources are used. The problem is compounded by the fact that Moloka‘i is not self-governing, and thus must look to off-island politicians and administrators to protect its interests. Other communities across the nation have resolved similar problems by creating community-based trusts and negotiating with the state or federal agencies that control those lands. This project calls for the creation of such a trust, governed by the community, in addition to what we may eventually bring to the table that we may potentially acquire back home to the people who live here.

- Watershed Protection for East End Native Forests

- Moloka‘i’s last native forests are disappearing as a result of cattle, deer, and pigs. These East End forests serve as the watershed for most of the island. This project combines fencing with access control for hunters in areas where private landowners are willing to enter into conservation partnerships. This helps to keep the animals from moving freely into and out of the forest, enabling hunters to capture more easily. This combination of fences and increased access for hunters with the private landowners are willing to enter into conservation partnerships. This project will help to keep the animals from moving freely into and out of the forest, enabling hunters to capture more easily. Reduced movement of fences and increased access for hunters who are hunting or taking their animals to reduce our water sources.

- Leadership & Associate Training

- Moloka‘i’s residents do not have access to educational facilities. The Headstart program has been phased out, leaving just one site in Kaunakakai. Pre-school children from Maunalei or the East End must now be bused to 20 miles each way in order to attend classes in town. As a result, fewer children from Moloka‘i’s rural areas now attend Headstart. This lack of resources for continuing their educations has similarly limited opportunities. This project would consolidate Headstart centers in each of Moloka‘i’s geographical areas, where classes would be offered. These centers could be access to existing community facilities in order to minimize costs.

- Food processing facilities (commercial kitchens, packing plants, food stores). If Moloka‘i is to be a production-based, agricultural community, we need access to process the food that we produce. Many people expressed a need for these kinds of facilities, from small growers on the east end to farmers in Ho‘olehua.

- Monitor and Additional Water Transfers Pending a Water Management Plan

- The most recent scientific estimates of Moloka‘i’s sustainable water resources show that the island does not have enough water for all of the developments planned by the island’s major landowners. The most recent estimates put Moloka‘i’s total sustainable water yield at only 25.3 million gallons per day (mgd). The estimated future demand for water is 81.95 mgd, much of it for the dry West End. The most heated controversies on the subject have involved attempts by West End landowners to transport water from the East End to the dry western part of the island. Because water in the island’s main wellheads at Kaua‘au are becoming saltier, and because recent large-scale diversions of stream water from the forests of the East End have caused concern among farmers and aquatic resource experts, this project proposes a moratorium on the transfer of any more water from east to west until a comprehensive state management plan can be prepared. This water management plan will be due on the report issued by the DLNR Water Working Group in 1993. and on recent water studies by the U.S. Geological Survey.

- Multi-Disciplinary Human Services Center

- Moloka‘i’s current human services are limited and non-uniform. The community sees there are up to seventeen government contracts for
Molokai Enterprise Community – 40 Projects in Molokai’s 10-Year Strategic Plan

- Molokai Museum Improvements. The Molokai Museum already exists. This project would expand and improve its facilities. The Museum is a tourist attraction, and the number of people who visit it has been increasing. With the additional proposed improvements, it would be even more attractive to visitors.

- Improve Transportation On and Off Island. Molokai has no public transportation on island, and off island transportation is prohibitively expensive. Poor transportation is a substantial barrier to sports teams, especially youth teams, that want to compete in county or state events. A planning process to improve transportation should be started.

- Slaughterhouse. Molokai cattle ranchers recently received a state appropriation to build a new slaughterhouse. This project will help backyard ranchers to sell their animals commercially, since they need a state-certified slaughterhouse in order to do so. Molokai markets must currently import all of the meat and the slaughterhouse could enable Molokai ranchers to meet the 650 head annual market demand on island.

- Education Coordinator. Molokai needs someone to coordinate all of the educational programs on the island, including those described above. At this point, the various public schools do not always communicate effectively, and the island’s private schools and non-DOE education programs are even less connected. For all of these various programs to work effectively, a better network must be established between them. An education coordinator would work to create such a network, and also to address the governance issues that arise, especially between DOE and local school personnel.

- Waste Management Plan and Implementation. Molokai’s new landfill is rapidly filling up with solid wastes that should be reused or recycled. The existing Molokai recycling program only accepts a few kinds of waste items, and it is not widely used by the community. Many people regularly scavange the dump for car parts and other useful refuse that might be turned into a junkyard business. For waste water, our sewage treatment facility simply treats the water and discharges the treated effluent into the ocean. We need to create a more effective plan to manage our wastes, and to explore ways to make economic use of these wastes wherever possible.

- Recreation Coordinator. This new County worker would devote full attention to coordinating the recreational activities on the island. At this point, our County Parks and Recreation department is minimally staffed, and most of its activity centers on park management. A Recreation Coordinator would help to minimize scheduling conflicts, would concentrate on ensuring that our recreational facilities are in good repair, and would provide a link between the multiple organizations, from Little League to volleyball tournaments, that use the facilities.

- Molokai Logo/Group Insurance. A Molokai logo label for quality local products would help to establish a marketing niche for the island. Local producers often have difficulty in acquiring the insurance needed to sell their products off-island, and this project proposes to create a group insurance program for those who agree to put the Molokai label on their products.

- [Green Molokai]. This project calls for the greening of the entire island of Molokai. It complements the reforestation and rewash projects proposed at specific sites for environmental and/or economic reasons. The native plant nursery could produce the plants needed for this project, as well as the others.

- Kaunakakai Harbor Improvement for Recreation. The Kaunakakai Harbor should be improved to accommodate ocean recreation activities such as swimming, canoeing and boating. Its central location and calm waters make it an ideal place for these kinds of activities, but facilities must be upgraded before it can be used to maximum advantage by the community and visitors.

- Improve Access to Outdoor Recreation. Molokai’s outdoor recreational facilities are limited for activities such as camping, archery, art, biking, and golf practice. Access to hunting areas is also a problem for many local residents. A planning process should be implemented to study ways to improve outdoor recreation opportunities, and any resulting plan should be implemented.

- Molokai General Hospital Information System. The Hospital is developing a computer information system that will collect patient data, support telemedicine services, assist in coordinating patient care and providing case management, and enable research projects based on data analysis. The Hospital needs assistance in order to fully develop this system.

Molokai was designated by the USDA as a rural Enterprise Community in December 1998. Molokai won this designation based on its 10-year strategic plan to improve the island’s economy, environment, community well-being, and control over its own resources. The 40 projects listed in this flyer are the heart of Molokai’s strategic plan.

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Kaunakakai, Hawaii 96748
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e-mail: mesc@moloka.net
3 Moloka'i Enterprise Community - 40 Projects in Moloka'i's 10-Year Strategic Plan

- Fish Hatchery. A fish hatchery with associated research and technical facilities is needed to provide fry to stock the streambeds, and the reefs. Plans are already underway and some funds have been received to establish such a facility in and owned by Bishop Estate at Keawaula. This "aquaculture institute" has already received start-up funding, but may need additional assistance to develop fully.

- West End Erosion Control. Erosion in the West End has reached disastrous proportions, and is threatening to destroy the coastal resources on that part of the Island. Although erosion has been a problem on the south shore ever since cattle were introduced over a century ago, current overgrazing is increasing soil movement on the relatively pristine north shore, and the damage to reefs there is of special concern to those who are working to preserve the north shore's ocean resources. This project proposes aggressive erosion control measures in the main gulch that flows into the Mo'orea area, Ka'akau'a Gulch. These measures will include rock dikes, gabions, hedgerow plantings, siltation ponds, and reforestation at the top of the Mauka'a mountain. If this demonstration project is successful at Ka'akau'a Gulch, it should be expanded to other West End Gulches.

- Disinfection Plant. Moloka'i is the only major agricultural island without the papaya ring-spot virus. We can market papayas locally if we have adequate treatment facilities. UH - OHTHR calculates that a family can earn enough to support itself completely with just one ton of papayas. Several large Moloka'i commercial growers have set up treatment facilities, but they cannot accommodate even some farmers' crops. Plans are to build a larger facility next to the Halaula Plant, and charge papaya farmers for treating their crops.

- 500-Seat Theater. Moloka'i has no theater that can accommodate groups as large as 500 people. Plays, musical performances, community meetings, and similar events must currently be scheduled for community hall facilities or for the various school interiors. A 500-seat theater could accommodate theater and artistic events, and could also serve the dual purpose of being a "community center" that could house conferences for visitors.

- Special Management Area (SMA) Designation for the Whole Island. Businesses in Kaunakakai and at Kaikai have now applied for SMA designations. Business permits before constructing anything that might harm the shoreline or the ocean. Most of the rest of the island is not in the SMA zone, however, and this means that many large-scale developments can proceed without any analysis of the effect they may have on coastal resources. For the last 15 years, Moloka'i's Community Plan has called for SMA boundaries to be expanded, but the County has not acted to implement this provision of the Plan. In order to provide the highest degree of environmental protection to our ocean, the County should designate the entire island of Moloka'i as an SMA permit area.

- Clean-Up Old Moloka'i Electric Plant, Build a Shared Warehouse, Business Incubator, Movie Theater. The old Moloka'i Electric site is badly contaminated from years of oil spills at the old plant. Using federal incentives for cleaning us "brownfields," we would clean up the site and establish a shared warehouse for local merchants, many of whom lack adequate space to hold inventory, a business incubator for small businesses, and a family amusement center, including a theater. The shared warehouse could enable local merchants to buy in bulk, thus reducing prices in our stores. The business incubator center could be one of the Learning Centers described above, with telecommunications equipment. And a family amusement center would bring the focus of our island's indoor recreational activities back to Kaunakai, which has been identified in our Community Plan as the "urban" core of our island.

- Affordable Housing. Although Moloka'i has a few "affordable" housing projects, most Moloka'i residents cannot afford to buy these homes because their prices are based on Maui County's higher average income, rather than on Moloka'i's income. Habitat for Humanity has a Moloka'i chapter, and would like to promote more self-help housing construction. This project would create a revolving affordable housing loan program for self-help builders.

- Hawaiian Rights Research and Education Initiative. Many Moloka'i residents are unfamiliar with the laws and court rulings that protect the rights of native Hawaiians. Since Moloka'i's population is largely Hawaiian, this project is proposed as a way to educate our entire community on the legal rights of the descendants of the first inhabitants of Hawai'i. Such educational programs may help to minimize conflicts over traditional laws in the future.

- Inventory of Hawaiian Sites. Because it is largely undeveloped, relative to the other Hawaiian islands, Moloka'i has a wealth of ancient Hawaiian sites. They have not been documented accurately for future generations. This project would create an inventory of historic sites, which includes interpretation of their cultural significance. The project would be overseen by archaeologists and would create both visual and written records of the sites.

- Long-Distance Laser. The Moloka'i branch of Maui Community Colleges cannot meet local demand for advanced degrees. Residents want to further their educations, but must often move away in order to attend school. Modern technology makes it possible to link us to distant learning centers, and we want to know what limitations programs now offer here.

- Renovate County Recreational Facilities and the MHS Softball Fields. The County's recreational facilities are badly deteriorated, and the Moloka'i High and Intermediate School softball field needs improvements. This project would provide the needed improvements. We will renovate these facilities, Moloka'i will be able to host State tournaments and other events that will create additional economic benefits to the community.

- Ho'olehua Wind Breaks. Although the Ho'olehua plan has extremely fertile soil and access to irrigation water, its winds cause crop damage and loss of water due to evaporation. This project will build on an earlier 1989 Ho'olehua windbreak plan, and will extend the Paia to Ho'olehua project that was completed half a century ago. The windbreaks will be planted along the coastal path, around the central plain, and eventually along individual farmers' lots. Native trees and those with secondary market value (trees and hardwoods) will be used in the windbreaks.

- New Recreational Complex. Moloka'i's existing Kaunakakai recreational complex is outdated and
4 • Molokai Enterprise Community—40 Projects in Molokai’s 10-Year Strategic Plan

Inadequate to serve the needs of our community, or of sports events that could grow off-site condominiums and recreation. In the long range, a new recreational complex is needed that will include a larger gym, an enclosed track and field, a regulation-sized pool, outdoor courts, and rooms for various activities from weight-lifting to hula practice.

- Molokai Museum Improvements. The Molokai Museum already exists. This project would expand and improve its facilities. The Museum is a tourist attraction, and the number of people who visit it has been increasing. With the additional proposed improvements, it would be even more attractive to visitors.

- Improve Transportation On and Off-Island. Molokai has no public transportation on-island, and off-island transportation is prohibitively expensive. Poor transportation is a substantial barrier to sports teams, especially youth teams, that want to compete in county or state events. A planning process to improve transportation should be started.

- Slaughterhouse. Molokai cattle ranchers recently received a state appropriation to build a new slaughterhouse. This project will help local ranchers to sell their animals commercially, since they need a state-certified slaughterhouse in order to do so. Molokai’s markets currently import all of the meat for the island, and the new slaughterhouse could enable Molokai ranchers to meet the ~500 head annual market demand on-island.

- Education Coordinator. Molokai needs someone to coordinate all of the educational programs on the island, including those described above. At this point, the various public schools do not always communicate effectively, and the island’s private schools and non-DOE education programs are even less connected. For all of these various programs to work effectively, a better network must be established between them. An education coordinator would work to create such a network, and also to address the governance issues that arise, especially between DOE and local school personnel.

- Waste Management Plan and Implementation. Molokai’s new landfill is rapidly filling up with solid waste that could be reused or recycled. The existing Molokai recycling program only accepts a few kinds of waste items, and it is not widely used by the community. Many people regularly scavenge the dump for car parts and other useful refuse that might be turned into a junkyard business. As for waste water, our sewage treatment facilities simply treat the water and discharge the treated effluent into the ocean. We need to create a more effective plan to manage our wastes, and to explore ways to make economic use of these wastes wherever possible.

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Moloka‘i Enterprise Community News

January 1, 2000  Vol I, No. 1

10-Year “EC” Designation Brings Federal Help for Moloka‘i

In a national competition with more than 160 other rural communities, Moloka‘i was picked by the federal government to be one of only 20 new Rural Enterprise Communities (“EC’s”). This federal designation gives Moloka‘i many benefits, including the following:

- Tax credits of up to $2,400 per employee for businesses that hire workers with challenges, like welfare recipients, vocational rehab clients, and at-risk youths.
- Tax deductions for cleaning up polluted “brownfields.”
- Extra points on grant applications for federal funds.
- Special tax-credit bonds for schools.
- $250,000 in cash each year for the next 10 years.
- Eligibility (along with other EC’s) for $109 million in USDA housing, infrastructure, and economic development funds.

The U.S. Department of Agriculture oversees the rural Enterprise Community program, which is a White House initiative set up 5 years ago to help revitalize economically depressed communities across the nation. Hawai‘i was not eligible to compete in the first round of funding, but legislation spearheaded by Sen. Dan Inouye gave Hawai‘i the chance to apply. Of the 4 Hawai‘i applications submitted (from Kaua‘i, O‘ahu, Ka‘u, and Moloka‘i), Moloka‘i was the only community to win an EC designation, which is good through the year 2009.

Moloka‘i’s EC Plan

Moloka‘i won its EC designation based on a 10-year strategic plan that was developed by hundreds of community volunteers in the summer of 1998. Moloka‘i’s strategic plan was judged among the best in the nation. Many other communities used paid consultants to design their plans, but on Moloka‘i, the process was truly grassroots. Anyone who wanted to help was welcome, and all of the ideas in the plan came from Moloka‘i people. The 40 projects in Moloka‘i’s plan fall into 4 main categories:

Environment: Protection the island’s environment is critical to the health of Moloka‘i’s people and economy, and projects in this area were given high priority in the plan. Protection of water resources was a major concern, since a sustainable supply of clean water is necessary to support agriculture and aquaculture, as well as to meet the island’s domestic needs. Erosion was another area of critical concern, since Moloka‘i’s rich coastal ecosystem cannot survive much much more silt run-off.

Economy: The island’s economic recovery plan is based on diversified agriculture, aquaculture, small entrepreneurial businesses, and cultural tourism. Moloka‘i’s future economy should be primarily production-driven, rather than service oriented. Many of the economic projects in the plan will create an infrastructure that supports these kinds of economic activities, from food-production facilities to agricultural cooperatives to a cultural park where traditional handicrafts can be made and marketed, and tourists can learn about the authentic culture of the island.

Self-Governance: Because 85% of Moloka‘i is owned by off-shore landlords, and has no local government, many decisions about Moloka‘i are made by those who do not live here. Moloka‘i’s plan addresses this problem by strengthening educational and leadership development opportunities for island residents, encouraging local ownership of Moloka‘i lands, and strengthening local regulatory control over the island’s resources.

Healthy Community: Health, housing, recreational, and human services on Moloka‘i need to be improved in order to nurture the physical, mental and spiritual strength of Moloka‘i’s people so that we can meet the challenge of building a healthier community. A multi-disciplinary human services complex, a revolving self-help housing loan program, and a new hemodialysis facility are some of the projects in this category of the plan.

Moloka‘i Community Service Council
P.O. Box 1046
Kaunakakai, Hawaii 96748

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 Permit No. 48

To: BOX HOLDER
Two-Year Workplan

Of the 40 projects in Molokai's 10-year strategic plan, 15 are slated for immediate implementation. The $500,000 that Molokai will receive in EC funds for the next two years will be divided between these projects and the expense of administering the EC program. The majority of funds for all of these EC projects will be raised from other sources.

<table>
<thead>
<tr>
<th>1999 – 2001 EC Projects</th>
<th>EC Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquaculture/Fishponds</td>
<td>30,000</td>
</tr>
<tr>
<td>Molokai Electric Site Redevelopment</td>
<td>5,000</td>
</tr>
<tr>
<td>Community Land Trust</td>
<td>10,000</td>
</tr>
<tr>
<td>Dialysis Facility</td>
<td>40,000</td>
</tr>
<tr>
<td>Historic Sites Inventory</td>
<td>17,000</td>
</tr>
<tr>
<td>Ho'olehua Commercial Kitchen</td>
<td>20,000</td>
</tr>
<tr>
<td>Learning Centers</td>
<td>50,000</td>
</tr>
<tr>
<td>Molokai Logo and Marketing Plan</td>
<td>23,475</td>
</tr>
<tr>
<td>Native Plant Nursery</td>
<td>---</td>
</tr>
<tr>
<td>Slaughterhouse</td>
<td>25,000</td>
</tr>
<tr>
<td>Taro Production</td>
<td>53,625</td>
</tr>
<tr>
<td>Visitor Coordinator</td>
<td>30,000</td>
</tr>
<tr>
<td>Waste Management</td>
<td>17,000</td>
</tr>
<tr>
<td>Watershed Protection</td>
<td>100,000</td>
</tr>
<tr>
<td>Youth Leadership</td>
<td>3,900</td>
</tr>
<tr>
<td>EC Administration</td>
<td>25,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>500,000</strong></td>
</tr>
</tbody>
</table>

Who's In Charge?

One of the most important requirements for a rural EC is that the community must be actively involved in planning and implementing EC projects. The Molokai community created the 10-year strategic plan, and now a team of citizen volunteers is leading the implementation process. The 20-member EC Board is made up of the following community servants:

- **Ke Aupuni Lākahi Board Members**
  - Scott Adams
  - Charlene Aquino
  - Charles Coggins
  - Rick Cooke
  - Shannon Crivello
  - Stacy Crivello, President
  - April DeMello
  - B.J. Duder, Treasurer
  - Frances Feeter
  - Dean Fujii, Secretary
  - U'ilani Lima, 2nd Vice President
  - Iwalani Kadowaki
  - Ed Misaki
  - Stephen Petro
  - Walter Ritte, 1st Vice President
  - Gandhiya Ross
  - Claudia Sutcliffe
  - Larry Swenson
  - Benny Venenciano
  - Sonya Yuen

The Board's name, Ke Aupuni Lākahi, may be loosely translated as "leaders working together." Members serve two year terms, and meet at least once a month.

The volunteer Ke Aupuni Lākahi Board has contracted with the Molokai Community Service Council (MCSC) to administer the EC program requirements. MCSC produced the Molokai's EC application to the federal government, and its staff is working to help the Board to implement the EC plan. Founded in 1974, MCSC is one of Molokai's oldest non-profit organizations, and besides the EC program, it administers the Friendly Isle United Way campaign, the Molokai Youth Center, and other community projects. MCSC's administrative staff members are:

- Karen Holt, Executive Director
- Jessica Apiki, Deputy Director
- Punahoe Ako, Bookkeeper
- Ian Chun, Program Developer
- Alma Trinidad, Program Developer

MCSC is the contact point for all questions regarding the Molokai Enterprise Community. The MCSC office is located in the old MCC building, across from the Phone Mart. Office hours are from 8:00am – 5:00pm.

E Komo Mai

Information about the Molokai Enterprise Community will be shared in town meetings 3 times a year, and in newsletters. Members of the public are welcome to get involved on the Board's seven subcommittees: Economy, Education, Environment, Hawaiian Culture, Health & Human Services, Recreation & Fine Arts, or Youth Leadership. To apply for a subcommittee, contact MCSC:

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P.O. Box 1046
Kaunakakai, Hawaii 96748
Phone: (808) 553-3244
Fax: (808) 553-3370
E-mail: mcisc@aloha.net

Community Meeting
Thursday, January 13

Ke Aupuni Lākahi invites everyone on Molokai to learn more about the Molokai Enterprise Community at a Community Meeting on January 13, 2000. Learn about the EC's Watershed Protection, Aquaculture, and Dialysis Treatment projects, all of which are moving quickly. The meeting will be held at Mitchell Paulele Center from 6:30 – 9:00 pm. Please come and join us!
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

Area Designated Protective Subzone

See Enlarged View

Kamalo / Kapualei Watershed Project
(Area indicated is Hina Falls)

Arrows indicate where fenceline will be installed.
Small arrows indicate placement of fence line.

Kamalo / Kapualei Watershed Project
( Areas indicate where animal damage continues upward towards dense vegetation)
KAMALO / KAPUALEI WATERSHED MANAGEMENT PROJECT
Environmental Assessment

Kamalo / Kapualei Watershed Project
(Indications of movement towards dense vegetation. Project is to prevent or control
this type of degradation from continuing.)