

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Division of Forestry and Wildlife  
Honolulu, Hawaii 96813

Acceptance Date: December 19, 2008  
180-Day Exp. Date: June 17, 2009

April 6, 2009

**Board of Land and Natural Resources**  
**State of Hawaii**  
**Honolulu, Hawaii**

**REGARDING:** CONSERVATION DISTRICT USE PERMIT APPROVAL FOR THE  
EAST ALAKA'I PROTECTIVE FENCE PROJECT

**APPLICANT:** Kaua'i Watershed Alliance

**LANDOWNER:** A&B Properties and State of Hawaii, DLNR, DOFAW

**LOCATION:** Hanalei and Waimea Districts, Island of Kaua'i

**TMK:** (4) 5-8-001:001 and (4) 1-4-001:003

**PARCEL AREA:** TMK: 001 (A&B Properties) 1405 Acres  
TMK: 003 (State of Hawai'i) 595 Acres

**AREA OF USE:** Approximately 23,650 Linear Feet of Fencing

**SUBZONE:** Protective

**SUMMARY:**

This submittal requests the Board to approve and grant a conservation district use permit (CDUP) for activities identified in the conservation district use application (CDUA) and accompanying management plan for the East Alaka'i Protective Fence Project (Exhibit A). This project is part of the Kaua'i Watershed Alliance (coordinated by The Nature Conservancy and applicants), which was formed in 2003 for the long-term protection of Kaua'i's upper watershed areas. The Kaua'i Watershed Alliance is one of nine statewide watershed partnerships supported by the State's Watershed Partnerships Program which provides technical and financial resources for the conservation and protection of important mauka forests to ensure the state's water supply.

**DESCRIPTION OF AREA / CURRENT USE:**

The proposed project is located in the East Alaka'i area on the island of Kaua'i on Subject

Parcels TMK (4) 5-8-001:001 and (4) 1-4-001:003. The project area borders private lands of Gay and Robinson (TMK (4)-5-8-001:001) and other State of Hawaii parcels managed by the Division of Forestry and Wildlife. The elevation ranges from 4,400 feet to 5,168 feet. The 595 acres of State property to be fenced is part of the Alaka'i Wilderness Preserve. The 1405 acres of A&B property and the State property are included in the area managed by Kaua'i Watershed Alliance which is coordinated by The Nature Conservancy of Hawai'i. This area is managed by the Kaua'i Watershed Alliance to protect and preserve the portion of the Alaka'i which receives the greatest amount of rainfall in the islands and is home to a rich diversity of unique plants and animals. Currently, 202 native plant taxa have been documented within the proposed fenced area, including 66 species endemic to Kaua'i.

### ***Historic Sites***

An archeological assessment was conducted by Cultural Surveys Hawai'i, Inc. in 2008. No historic properties were identified near the project corridor. Ka'awako Shrine by Lake Wai'ale'ale lies inside the area to be protected by the fence and may be eligible for State and National Registers but it is located at a distance of approximately 1650 feet from the fence alignment. Being located within the fenced area will provide additional protection to the site from degradation by feral goats and pigs. The construction of the protective fence will not impact access to the area for cultural purposes. Along the fence alignment, several access gates will be located to accommodate access to the area. These gates will be located to promote a more direct route to the project area and to cultural sites.

According to the archeological assessment, "The isolation suggests that the level of use of the entire east end of the Alaka'i Plateau has always been exceedingly limited. Indeed it seems probable that in traditional Hawaiian times the vicinity was only frequented by the most hardy bird hunters and by people going to and from the Ka'awako Shrine. Informant testimony and the earliest historical accounts of visits to the shrine suggest these trips were typically via the steep ascent from the Wailua side which may not have brought pilgrims into the project area at all."

### ***Contemporary Cultural Resources and Practices***

Resources consist of diverse populations of native Hawaiian plants found within the project area. Many of these plants have cultural significance and are used traditionally. The fence will provide protection to these important cultural resources. The majority of these plants may also be found in numerous areas within easy access of paved roads, 4WD roads, and maintained trails in the Kokee State Park and State Forest Reserves. The project area is located in the very remote eastern portion of the Alaka'i Wilderness Preserve. The nearest State maintained trail is approximately 2 miles away. The terrain is rough, wet, and characterized by dense forests and steep stream gullies. A state camping permit can be obtained for over night trips to the State owned area. The project will not change access to the area or require any additional actions or measures to protect native Hawaiian rights.

Current hunting regulations related to hunting periods and bag limits will not be affected. We have received positive comments from most hunters who have provided oral or written testimony (see Exhibit B "February 4, 2009 Public Hearing – Summary of Testimony").

### ***Natural Environment***

The East Alaka'i is a diverse Montane Wet Forest ecosystem characterized by canopied wet forests

and shrublands, intermittent bogs, small drainages, streamlets, streams and the surrounding wet cliffs. Small headwater streamlets of the Alaka'i meander and flow on to join larger boulder strewn drainages that continue to the eastern windward slopes, eventually descending to the Wailua and Hanalei Rivers or falling to the north and creating the Wainiha and Lumaha'i Rivers. The Alaka'i Plateau also drains to the watersheds of western Kaua'i, eventually forming Makaweli and Waimea Rivers. The Alaka'i is the heart of the island, having an influence on almost every valley and crucial to the ground and surface waters across the entire island.

## **PROPOSED USE:**

The Kaua'i Watershed Alliance, with the approval of the landowners, A&B Properties and the State of Hawai'i, proposes to construct a protective hog wire fence, to intensively reduce feral pig populations, and to assemble weatherports and radio repeaters in an effort to safely support watershed management actions within a portion of the eastern Alaka'i Plateau. In April 2003, state and private landowners formed the Kaua'i Watershed Alliance (KWA). The KWA members continue to recognize that cooperation is the key to a timely and successful watershed management program that will protect Kaua'i's watershed from invasive alien animals, plants, and other threats.

The project will be located within a portion of the eastern Alaka'i plateau between Wainiha Valley and Mt. Wai'ale'ale, at the core of Kaua'i's watershed. The proposed protective fence will be approximately 7,208 meters (4.48 miles or 23,650 ft) in length and will enclose approximately 595 ac of the Alaka'i Wilderness Preserve (State of Hawai'i) and approximately 1,405 ac of A&B Properties land in the Conservation District. Natural barriers and the steep cliffs will make up the balance of the enclosure.

The project will involve the clearing of vegetation, several inches above ground level, up to a ten foot wide corridor along the length of the proposed fence alignment using hand operated tools (i.e., handsaw, pick ax, weed eater, chainsaw). A forty- eight inch high fence will be constructed using hog wire fence mesh supported by galvanized pipes and fence posts. The outside of the fence will be skirted along the base with a hog wire apron. After construction, the project will consist of natural resource management activities such as feral pig and goat removal, invasive weed control, fence maintenance, and monitoring to track the recovery of native plant populations.

To improve worker safety and communications during natural resource management activities, two (2) solar powered radio repeaters will be strategically placed within and adjacent to the project area. One will be placed near the existing United States Geological Survey (USGS) weather station at the summit of Mt. Wai'ale'ale, and another will be placed on La'au Ridge for the greatest range and coverage. The Radio repeaters will be housed in weather protective cases. To provide weather protection and safety for workers during natural resource management activities, three (3) weatherports will be assembled. The weatherports will consist of a pre-fabricated weather shelter that is assembled on a pre-fabricated raised platform. The approximate size of the shelter will be ten feet wide by twenty feet long and eight feet high.

## SUMMARY OF COMMENTS:

The Kaua'i Watershed Alliance requested comments from the following agencies regarding the proposed project: Department of Land and Natural Resources – Division of Forestry and Wildlife, Historic Preservation Division, Office of Conservation and Coastal Lands, Kauai District Land Office, Commission on Water Resource Management (CWRM), State Parks Division, Office of Hawaiian Affairs (OHA); County of Kauai, U.S. Fish and Wildlife Service and the Office of Environmental Quality Control (OEQC). Other organizations and individuals contacted are listed in Exhibit C "Pre-scoping Distribution List". The following comments to the Draft EA were received and were addressed in the Final EA and Management Plan:

### Wildlife Manager, Division of Forestry and Wildlife, Kauai District

Recommended use of solar panels instead of wind turbines to power weatherports to protect seabirds. Requested base camp locations be marked on project map.

### National Tropical Botanical Garden

Provide more detail on worker and equipment protocols to prevent weed introductions. Consider higher fencing that would exclude deer.

### County of Kauai, Planning Department

Supports these types of projects that protect and improve the watershed as well as unique biology of island.

### US Fish and Wildlife Service

Survey fence line for possible nesting burrows of listed seabirds. Increase fence visibility by weaving polytape through the top row of wire. Don't trim bat roosting plants during nesting season. Do not install wind towers near active seabird burrows.

### Office of Conservation and Coastal Lands, Dept. of Land and Natural Resources

Make corrections to the references to Protective Subzone (don't abbreviate as "P"). Attach management plan.

### State Historic Preservation Division, Dept. of Land and Natural Resources

There is a historic site, a shrine which is over 500m away from the fence line, but the fence contractor should be made aware of this significant historic property.

### Office of Hawaiian Affairs

Supports the goal of protection from ungulates and vital watershed forest habitat. Requests more information on how traditional and customary access will be protected. Requests assurance that should iwi, cultural, or traditional deposits be found, work will cease and appropriate agencies will be contacted.

### David Pratt, Hiker

Supports the project. Has observed damage caused by pigs in the area.

## ANALYSIS:

Following review and acceptance for processing, the applicant was notified by letter, dated

December 19, 2008 that:

1. The proposed use is an identified land use under Chapter 13-5: P-7, SANCTUARIES, requiring a board permit and submittal of a management plan;
2. Pursuant to Section 13-5-40(a), HAR, a public hearing will be required; and
3. In conformance with Chapter 343, (HRS), as amended, and Chapter 11-200, HAR, a finding of no significant impact (FONSI) to the environment is anticipated for the proposed project. The draft environmental assessment (DEA) for the project was submitted to OEQC (posted in the October 23, 2009 Environmental Notice) with the final EA to be submitted following the public hearing for the Conservation District Use Application.

### **PUBLIC HEARING:**

A Public Hearing was held on February 4, 2009 at the Chiefess Kamakahelei Elementary School, 4431 Nuhou St. Lihue regarding the proposed project. A variety of community interests were represented; local citizens, local biologists and scientists, Kaua'i Farm Bureau, Garden Island Resource Conservation & Development, Sierra Club, U.S. Fish and Wildlife Service, Kaua'i Planning Department, Kaua'i Invasive Species Committee, Kilauea Point Natural History Association and local tour companies. Also at the meeting were members of the Kaua'i Watershed Alliance; A & B Properties, Inc., Kamehameha Schools, National Tropical Botanical Gardens and the Department of Water. Forty-two people signed the attendance sheet and twenty provided supporting oral testimony. Two people provided testimony that raised concerns. One resident pig hunter thought it possible that the fence would affect pigs that might migrate through the area and thereby affect some people's ability to feed themselves in the future. Another pig hunter replied that he did not think it would have an impact since there are many pigs in many other areas. The Environmental Assessment does address the issue of reproduction in the "Reduction of Game Habitat" section citing evidence that this area is not conducive for feral pig breeding and therefore the project should not pose a threat to pig reproductive cycles. Another resident was concerned about the affect fences in general have on access and questioned whether there would be adequate maintenance of the fence and if the fence would have the desired result. The fence will offer access points to anyone who would venture up into the Alaka'i plateau project area and does not attempt to prevent anyone; Native Hawaiian, local resident, Hunter or Scientist, from visiting the area for any reason.

In addition to the testimony presented at the meeting, 61 letters in support of the project were received. One letter was in opposition and another expressed concern about methods of pig control.

### **FINAL ENVIRONMENTAL ASSESSMENT**

A Finding of No Significant Impact was issued for the project and published in the OEQC Environmental Notice on March 8, 2009.

### **13-5-30 CRITERIA**

The following discussion evaluates the merits of the proposed land use by applying the criteria

established in Section 13-5-30 HAR.

- 1) *The proposed use is consistent with the purpose of the Conservation District.*

The objective of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare. Staff is of the opinion that the proposed action will deter feral ungulates in the specific areas of the proposed fence project. The area's natural resources will be greatly preserved and potential impacts will be minimized, with mitigation measures.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

The objective of the Protective subzone is to protect valuable resources in designated areas such as restricted water-sheds, marine, plant, and wildlife sanctuaries, significant historic, archeological, geological, and volcanological features and sites, and other designated unique areas. Staff notes that proposed project is an identified land use in the Protective subzone, which is the most restrictive regarding land use development(s). In this case, staff notes the proposed project will protect the valuable resources located in the East Alaka'i watershed.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

The County of Kauai provided a statement that the proposed project is not located in the Special Management Area (SMA).

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

Staff notes there will be positive impacts to the environment due to the proposed project. Staff is of the opinion that minor impacts have been adequately mitigated, therefore the proposed project will not have any adverse impact to existing natural resources within the surrounding area, community or region.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

Staff is of the opinion the proposed fences will fit into the locality and surrounding areas, with appropriate mitigation measures and without significant or deleterious effects to the locality, surrounding area and parcels

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The applicant has taken the appropriate steps to mitigate any potential impacts, and to maximize and enhance the natural beauty and open space characteristics of the subject parcel.

The proposed project is intended to blend in visually with the surrounding area.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed project does not involve subdivision of Conservation District land.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

The proposed action will not be materially detrimental to the public health, safety and welfare.

### **DISCUSSION:**

The proposed use is an identified land use in the Protective subzone of the Conservation District, according to Section 13-5-22, Hawaii Administrative Rules (HAR), P-7, SANCTUARIES, D-1, "Plant and wildlife sanctuaries, natural area reserves (see Chapter 195, Hawaii Revised Statutes (HRS), and wilderness and scenic areas, including habitat improvements under an approved Management Plan;"

Staff notes the proposed project will have a direct positive impact on the native ecosystem and watershed. The proposed project will stop feral ungulate damage, which contributes to the decline of native forest ecosystems.

Due to uncertainties in the Watershed Partnership Program funding, the project term will be extended to allow for adequate time to obtain the funds required to complete the project.

Staff therefore recommends;

### **RECOMMENDATION:**

Based on the proceeding analysis, staff recommends that the Board of Land and Natural Resources (Board) APPROVE this application to construct the proposed East Alaka'i Protective Fence Project, subject to the following terms and conditions:

- 1) The applicant shall comply with all applicable statutes, ordinances, rules, regulations, and conditions of the Federal, State and County governments;
- 2) The applicant, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim or demand for property damage, personal injury or death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors and agents under this permit or relating to or connected with the granting of this permit;
- 3) Any work done on the land shall be initiated within one (1) year of the approval of such use (from the date of the Board's action), and unless otherwise authorized, be completed within five (5) years of the approval (from the date of the Board's action). An extension can be requested at the end of five years in the event that funding can not be acquired to complete

the project within that time. The applicant shall notify the Department in writing when construction activity is initiated and when it is completed;

- 4) The applicant shall comply with all applicable Department of Health administrative rules.
- 5) In issuing this permit, the Department has relied on the information and data that the applicant has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings;
- 6) The applicant acknowledges that the approved work shall not hamper, impede or otherwise limit the exercise of traditional, customary or religious practices in the immediate area, to the extent such practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law;
- 7) Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact HPD (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary. The contractor shall be made aware of the location of Ka'awako Shrine;
- 8) Other terms and conditions as may be prescribed by the Chairperson; and
- 9) Failure to comply with any of these conditions shall render this Conservation District Use Permit null and void.

Respectfully submitted,

  
Paul J. Conry  
Administrator

Approved for submittal:

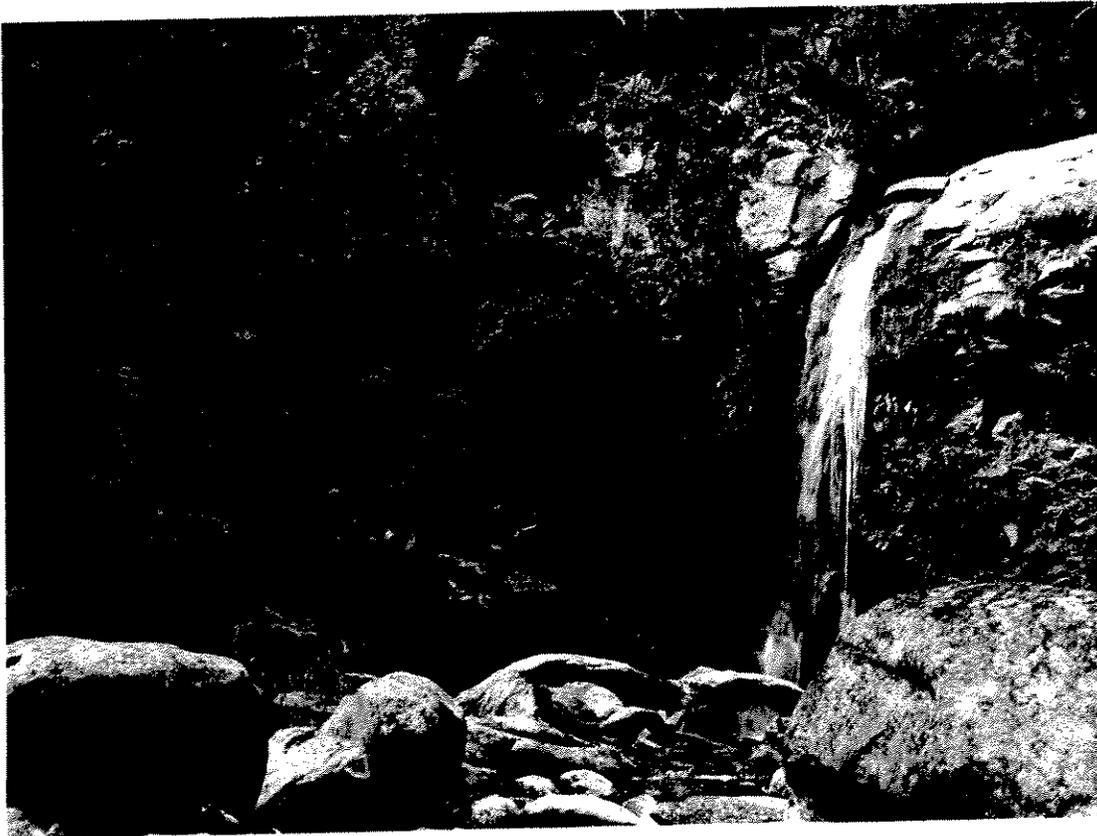
By:   
LAURA H. THIELEN, Chairperson  
Department of Land and Natural Resources

EXHIBITS A, B, AND C

Conservation District Use Permit  
Application  
For  
The East Alaka'i Protective Fence Project

Prepared by  
The Nature Conservancy, acting by and through its Hawai'i Chapter,  
Kaua'i Program  
Coordinator for the Kaua'i Watershed Alliance

October 2008



East Alaka'i

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

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Conservation District Use Application (CDUA)**

**CONSERVATION DISTRICT USE APPLICATION INSTRUCTIONS**

This is the Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands (OCCL), Conservation District Use Application (CDUA) form. This application is to be used to apply for land use(s) within the State of Hawaii Conservation District.

All land uses, pursuant to Title 13 Chapter 5, Hawaii Administrative Rules (HAR), must be an identified land use and require that a CDUA be filed with the Department and approved by the Board of Land and Natural Resources prior to its initiation. An application is not considered accepted for processing until the Department has found it complete. Once an application is considered "complete" by the Department, a letter of acceptance will be issued and the statutory 180-day time period will begin.

Should a "complete" application not be acted upon within the 180-day time limit, the applicant may automatically put said land to the use(s) requested in the application.

Unless provided for by Title 13, Chapter 5, HAR, land uses shall not be undertaken in the State Land Use Conservation District. Please utilize applicable sections of Title 13, Chapter 5 of the Hawaii Administrative Rules to complete this application.

All applications must include the following to be considered "complete" for processing:

- A completed CDUA form with signatures of the landowner(s) and applicant if different from the landowner. Where the landowner is a corporation, trust, association, etc., evidence of authorization for the application shall be included.
- Environmental information required pursuant to Department of Health, Chapter 343, Hawaii Revised Statutes.
- Compliance with applicable county Special Management Area (SMA) Rules and Regulations must be satisfied prior to action on the CDUA.
- The appropriate filing fees as specified pursuant to Title 13, Chapter 5, HAR.

**NOTE:** No application shall be processed by the Department until violations pending against the subject parcel are resolved pursuant to section 13-5-31(e).

Twenty (20) copies of the completed application and all attachments and twenty (20) copies of the environmental assessment as required must be submitted.

Application(s) and attachment(s) should be mailed to:

or hand delivered to:

Department of Land and Natural Resources  
Office of Conservation and Coastal Lands  
P.O. Box 621  
Honolulu, Hawaii 96809

Kalanimoku Bldg. Room 131  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

For information call: 587-0377

You may download this form and the Conservation District Rules, Chapter 13-5, Hawaii Administrative Rules, at [www.hawaii.gov/dlnr/occl/documents](http://www.hawaii.gov/dlnr/occl/documents).

## **REQUIRED ATTACHMENTS**

For information presented in the Environmental Assessment (EA), please reproduce and attach relevant information in the CDUA or cite specific section and page references to enable staff to locate it conveniently in the EA.

### **County Special Management Area Determination**

Applications may be subject to County Special Management Area (SMA) requirements. One of the following must be received from the applicable County thirty (30) days prior to Board action on your CDUA:

- A determination that the proposed land use(s) is outside the Special Management Area (SMA) administered by the County
- A determination that the proposed land use is exempt from the provisions of the County ordinances/regulations specific to Section 205A-29 (b), Hawaii Revised Statutes (HRS)
- A Special Management Area permit for the proposed use. (Note: An SMA permit or clearance **must** be received by the Department forty-five days prior to the 180 day expiration deadline on an application.)

Should you believe that the subject area is clearly not within the SMA, please state the reason and the OCCL shall make a determination regarding this matter.

### **Maps**

Maps should include a north arrow and graphic scale. Attach regional, vicinity and parcel maps. Utilities, roads and access should be presented on a map if available and applicable. If applicable, flora and fauna, and historic sites should also be presented on a map. Submit detailed contour maps for ocean areas and areas where slopes are 20% or more. If the area of proposed use is within fifty feet of the boundary of the Conservation District, please include a map

showing the interpretation of the boundary by the State Land Use Commission. This information may be included in the EA.

### **Photographs**

Current color photographs of the area should be submitted with each EA/CDUA . Electronic storage of information such as computer floppies and Cd Roms should be provided to OCCL to help expedite the processing of applications.

### **Plans**

All applications and EA shall contain associated plans such as a location map, site plan, floor plan, elevations, and landscaping plans drawn to scale. Additionally, all plans should include a north arrow and graphic scale.

Location/Area Plan. An area plan should include but not be limited to: the relationship of proposed uses to existing and future uses in abutting parcels; identification of major existing facilities; and names and addresses of adjacent property owners.

Site Plan/TMK. Site plans are maps that should include, but are not limited to: dimensions and shape of lot; metes and bounds (including easements and their use); existing features, (including vegetation, water area, roads, utilities, and existing structures).

Construction Plan. Construction plans should include, but not be limited to: existing and proposed changes in contours; all buildings and structures with indicated use and critical dimensions (including floor plans) in square footage; open space and recreation area(s); landscaping (including buffers and fences); roadways (including widths); off street parking area; existing and proposed drainage; proposed utilities and other improvements; revegetation plans; drainage plans including erosion sedimentation controls; and grading, trenching, filling, dredging and/or soil disposal.

Maintenance Plans. For all uses involving power transmission, fuel lines, drainage systems, unmanned communication facilities and roadways not maintained by a public agency, plans for maintenance shall be included.

Management Plans. If required, refer to Title 13 Chapter 5-39 of the Hawaii Administrative Rules and Exhibit 3, entitled "Management Plan Requirements: September 6, 1994."

Historical or Archaeological Site Plan. Where there exists historic or archaeological sites on the property, a plan must be submitted including a survey of the site(s); significant features; protection, salvage, or restoration plans.

## Environmental Requirements

Pursuant to the Department of Health, Chapter 343, Hawaii Revised Statutes (HRS), and in accordance with Title 11, Chapter 200, Environmental Impact Statement Rules for applicant actions, a Draft Environmental Assessment of the proposed use must be attached. The Final Environmental Assessment (FEA) must be published forty-five (45) days prior to the 180-day expiration deadline. Failure to meet this deadline may result in negative action on the applicant by the BLNR.

If the proposed actions are within the scope of exemption as defined in Title 11, Chapter 200-8 of the Hawaii Administrative Rules, the applicant should provide written justification for the exemption. For more information, contact the Office of Environmental Quality Control at (808) 586-4185.

## Conservation District Use Application (CDUA) fees

All fees shall be in the form of cash, certified or cashier's check, and payable to the State of Hawaii. Refer to Title 13 Chapter 5, sections 13-5-32 to 13-5-39 to determine fees and permit type.

### Board Permit

\$100 application fee, plus an additional \$100 per potential developed acre, or major fraction thereof, up to a maximum of \$2,000.

Departmental Permit  
\$50 application fee

Site Plan Approval  
\$50 fee

Emergency Permit  
Waived

Subzone Boundary Determination  
\$50 fee

Temporary Variance  
\$100 application fee

A fee of \$250 will be required for a public hearing pursuant to the Hawaii Administrative Rules (HAR), Title 13, Chapter 5, sections 13-5-33, 13-5-34 and 13-5-36.

A Public Hearing(s) shall be held for all applications involving the following:

- Land use(s) for commercial purposes
- Change of subzone(s) or boundaries
- Land use(s) in the Protective "P" subzone
- Land uses(s) as determined by the Chairperson where the scope of the proposed use, or the public interest require one

## Conservation District Use Application (CDUA)

For DLNR Use	
File #	_____
Reviewed by	_____
Date	_____
Accepted by	_____
Date	_____
180-Day Exp. EA/EIS Required	_____
PH Required	_____
Decision	_____
Date	_____

Project Location/Address: Eastern Portion of The Alaka'i Wilderness Preserve, Lands belonging to the State of Hawaii and McBride Sugar Company Limited (no address).

District: **Waimea & Hanalei Districts**      Island/County: **Kauai County**

Subzone: **P1 Restricted**      Tax Map Key(s): **[4] 5-8-001:001 & 1-4-001:003**

Total Area of Parcels  
in sq. ft or acres: **31,220 acres**      Area of Proposed Use  
in sq. ft. or acres: **Fence alignment and support  
approx 10 acres, protected area is approx. 2,000  
acres**

Commencement Date: **July 2009**      Completion Date: **July 2010**

Indicate which of the following approvals are being sought, as specified in the Hawaii Administrative Rules (HAR), Chapter 13-5.

- Board Permit**
- Departmental Permit**
- Emergency Permit**
- Temporary Permit**
- Site Plan Approval**

**APPLICANT**

Legal Name: **Kauai Watershed Alliance (KWA), c/o The Nature Conservancy**  
Street Address: **TNC Kauai Program, 4180 Rice Street, Suite 102B**  
City, State and Zip+4 Code: **Lihue, HI 96766**  
Mailing Address: **Same as above**  
City, State and Zip+4 Code:  
Contact Person & Title: **Allan Rietow, TNC Field Representative Kauai Program**  
Phone No: **(808) 639-7544 Cell** Fax No: **(808)245-1642**  
Email: **arietow@tnc.org**  
Interest in Property: **Coordinator for the East Alaka'i Protective Fence Project and KWA**

**\*Signature** \_\_\_\_\_ **Date** \_\_\_\_\_  
\*If for a Corporation, Partnership, Agency or Organization, must be signed by an authorized officer.

**AGENT**

Name: **n/a**  
Mailing Address: \_\_\_\_\_  
City, State and Zip+4 Code: \_\_\_\_\_  
Contact Person & Position: \_\_\_\_\_  
Phone No.:( ) \_\_\_\_\_ Fax No.:( ) \_\_\_\_\_  
Email: \_\_\_\_\_  
**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**PROPERTY OWNER(S) (If other than the applicant)**

Legal Name: **McBryde Sugar Company, Limited**  
Street Address:  
City, State and Zip+4 Code:  
Mailing Address: **P.O. Box 430**  
City, State and Zip+4 Code: **Koloa, HI 96756**  
Contact Person & Title: **Tom Shigemoto of A&B Properties (Vice President)**  
Phone No: **(808) 335-2836** Fax No: **(808) 335-9708**  
Email: **tshigemoto@abprop.com**  
Relationship to applicant: **Member of the KWA**

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**PROPERTY OWNER(S) (If other than the applicant)**

Legal Name: **State of Hawaii**  
Street Address:  
City, State and Zip+4 Code:  
Mailing Address: **Watershed Partnerships Program**  
**Division of Forestry & Wildlife/DLNR**  
**1151 Punchbowl St., Rm.325**  
City, State and Zip+4 Code: **Honolulu, HI 96813**

Contact Person & Title: **Lisa Ferentinos, Planner**

Phone No: **(808) 586-0917** Fax No: (808) 587-0160

Email:

Relationship to applicant: **Member of the KWA**

Signature \_\_\_\_\_ Date \_\_\_\_\_

CONTRACTOR

Name: **n/a** Contractor I.D. # \_\_\_\_\_

Scope of Work: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Contact Person & Position Title: \_\_\_\_\_

Phone No.:( ) \_\_\_\_\_ Fax No.:( ) \_\_\_\_\_

Email: \_\_\_\_\_

**Emergency Contact Information**

Company/Organization Name: **TNC Kauai Program, KWA Coordinators**

Contact Person and Title: **Melissa Fisher, Program Coordinator**

Phone No: **(808)246-0543 Office** Phone No:

**PRIOR CONSERVATION DISTRICT USE PERMITS (CDUP)**

Please specify all prior CDUP received for the subject parcel.

N/A

**PROPOSED USE**

Total Area of Proposed Use: (indicate in acres or sq. ft): **Fenced area approximately 2,000 acres.**

Describe the proposed use in detail. Include secondary improvements such as grading, septic tank placement, utilities, roads, driveways, fences, landscaping, etc. Illustrate general location of improvements on a TMK map; include preliminary architectural renderings with elevations and building footprints with application. Include existing (before) and proposed (after) graphics. If the parcel is or has been the subject of a violation, please include the violation number:

Description and Secondary Improvements:

**The project will involve the clearing of vegetation, several inches above ground level, from up to a 10 ft wide corridor along the length of the proposed fence alignment using small power and hand operated machinery (i.e., handsaw, pick ax, weed eater, chainsaw). A 48 inch (in) high fence will be constructed using hog wire fence mesh supported by galvanized pipes and fence posts. The outside of the fence will be skirted along the base with a hog wire apron.**

**After construction, the project will consist of natural resource management activities such as feral pig and goat monitoring and removal, invasive weed control, fence maintenance, and monitoring to track the recovery of native plant populations.**

**To improve worker safety and communications during natural resource management activities, 2 solar powered radio repeaters and other monitoring instruments will be strategically placed within and adjacent to the project area. One will be placed near the existing United States Geological Survey (USGS) weather station at the summit of Mt. Wai'ale'ale, and another will be placed on La'au Ridge for the greatest range and coverage. The radio repeaters will be housed in weather protective cases, additional instrumentation may be added to repeater structure.**

**To provide weather protection and safety for workers during natural resource management activities, 3 weatherports will be assembled. The weatherports will consist of a pre-fabricated weather shelter that is assembled on a pre-fabricated raised platform. The approximate size of the shelter will be 10 ft wide by 20 ft long and 8 ft high. Outhouse facilities will consist of a "Bio-Toilet" which consists of an elevated seat with a single use biodegradable bag attached. An earthen disposal hole approximately 16 inches in diameter and 2 to 4 ft deep will receive human waste, enclosed in the biodegradable bag, which will be covered with lime and partially covered with approximately 10 inches of soil and *Bacillus thuringiensis* pellets**

**(See *The East Alaka'i Protective Fence Project Management Plan, Pg 5 – 9*)**

Violation(s): None

**CONSERVATION DISTRICT REQUIREMENTS**

Demonstrate that the proposed use is consistent with the following criteria. Refer to HAR, Section 13-5-30, to review criteria. Attach additional sheets if necessary.

Is the proposed land use consistent with the purpose of the Conservation District?

The proposed project area falls under the Hawaii Administrative Rules (HAR) Conservation District Protective (P) subzone. This HAR §13-5-11 designation is used "to protect valuable resources in designated areas such as restricted watershed, marine, plant, and wildlife sanctuaries, significant historical, archaeological, geological, and volcanological features and sites, and other designated unique areas." Subzone P, as stated in the law, encompasses the protection of watersheds, water sources, and water supplies.

The Alaka'i Protective Fence Project is a conservation project conceived and planned to protect and preserve the portion of the Alaka'i which receives the greatest amount of rainfall, and is home to a rich diversity of unique Hawaiian plants and animals that make up this watershed. Currently, 202 native plant taxa have been documented or observed within the estimated 2,000 ac of the proposed protective fence, which include 66 single island endemic taxa.

*(See The East Alaka'i Protective Fence Project Management Plan, Pages 10 – 14, Wood, K.R., 2007 Pg 38)*

Is the proposed use consistent with the objectives of the subzone of the land in which the use will occur?

**Yes, the proposed use is consistent with the objectives of the protective subzone of the land in which the use will occur. It will take measures to prevent the degradation of the native Hawaiian Montane Wet Forest and associated bogs and wet cliffs and it will protect the watersheds associated with these forests.**

*(See The East Alaka'i Protective Fence Project Management Plan, Pages 10 – 14)*

Does the proposed land use comply with provisions and guidelines contained in Chapter 205A, Hawaii Revised Statutes (HRS), entitled "Coastal Zone Management," where applicable?

**N/A - The project is located in the mountains, in the Alaka'i Wilderness Preserve.**

Describe how the proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.

**There will be no adverse impacts to the area. The proposed project has been carefully planned to protect and preserve the existing natural resources within the project area and will have no lasting effects or impacts within the surrounding area. To accommodate the construction of the fence during the short construction phase, a minimum of disturbance to the vegetation of no greater than ten feet in width along the fence alignment will occur.**

Describe how the proposed land use, including buildings, structures and facilities, will be compatible with the locality and surrounding areas, and to the physical conditions and capabilities of the specific parcel or parcels.

**The physical components of this project, the fence, repeaters, and weather ports are necessary to protect this unique ecosystem and watershed from continuous degradation by feral ungulates and invasive weeds. They have been designed specifically for use and compatibility in very remote, sensitive forested locations.**

*(See The East Alaka'i Protective Fence Project Management Plan, Pg 4, 6, 8 - 9)*

Describe how the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon.

**The construction of the protective fence and supportive components will facilitate the removal of feral pigs, feral goats, and invasive weeds that, if left unchecked, will ultimately lead to irreparable damage of this important native Hawaiian ecosystem. In addition, the above mentioned items present a very low profile, with a maximum of 4 feet in height for the fence and 8 feet in height for the weatherport therefore, due to the forest canopy and remote location, will not impact the natural beauty and open space characteristics of the preserve.**

If applicable, describe how subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.

**N/A - There will be no subdivision of the land.**

Describe how the proposed land use will not be materially detrimental to the public health, safety and welfare.

**The project is located within the eastern portion of the Alaka'i Wilderness Preserve. This area is one of the most remote locations on the island, far from access of the general public at large. The project will be limited to the construction of a hog wire fence (approximately 4.5 miles in length) designed to keep out destructive feral pigs, 2 radio repeaters, and 3 weatherports. The project is designed to protect native Hawaiian forests and the remote watershed from continuous degradation. Therefore there will be no negative impacts to public health, safety and welfare. The project will enhance public health and safety by protecting important watershed areas from degradation and as well as improve water quality and quantity.**

*(See The East Alaka'i Protective Fence Project Management Plan, Pages 5, 6, 8-12)*

## **ADDITIONAL INFORMATION**

Articles IX and XII of the State Constitution, other state laws, and the courts of the State require government agencies to promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups. The Department of Health (DOH), Chapter 343, also requires an Environmental Assessment (EA) of cultural resources in determining the significance of a proposed project.

If applicable, please provide the identity and scope of "valued cultural, historical and natural resources" in which traditional and customary native Hawaiian rights are exercised in the area.

**The construction of the protective fence will not impact access to the area for cultural purposes. Within the surveyed fence alignment, several access gates will be located to accommodate access to the enclosed area. These gates will be located to promote a more direct route to the project area and to cultural sites, Lake Wa'iale'ale and Ka'awako Shrine at Wai'ale'ale, located within the fenced area. (See Historical, Archeological, Cultural Resources map see exhibit N and The East Alaka'i Protective Fence Project Management Plan Access map, page 27). They are positioned within the project area at a distance of approximately 500 meters from the fence alignment. Being located within the fenced area will provide additional protection to these sites from degradation by feral goats and pigs. Most of the fenced area belongs to a private land owner, and is regulated by their right of entry protocols. Some portions are regulated by the State of Hawai'i as a Conservation District land area and Wilderness Preserve.**

**The project area is located in the very remote eastern portion of the Alaka'i Wilderness Preserve. The nearest State maintained trail being approximately 2 miles away (See The East Alaka'i Protective Fence Project Management Plan map, page 27) The terrain is rough, wet, and characterized with dense forests and steep stream gullies. A state camping permit is required for over night trips.**

**The natural resources consist of the diverse populations of native Hawaiian plants found within the project area, which is approximately 2,000 acres. (See The East Alaka'i Protective Fence Project Management Plan Natural Resources map, page 17) Many of these plants have cultural significance and are used traditionally. The fence will provide protection to these important cultural resources. It is important to note that the majority of these plants may also be found in numerous areas within easy access of paved roads, 4WD roads, and maintained trails in the Kokee State Park and State Forest Reserves.**

Identify the extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action.

**No resources will be impaired by this project. The protective fence project will positively affect those resources, protecting both the historical sites and natural resources valued by cultural practitioners from damage and possible destruction. Also, the fence will have access gates (See The East Alaka'i Protective Fence Project Management Plan Access map, page 27)**

What feasible action, if any, could be taken by the Board of Land and Natural Resources in regards to your application to reasonably protect native Hawaiian rights?

**The project will not change or require any additional actions or measures to protect native Hawaiian rights. The project is located within a remote area, the Alaka'i Wilderness Preserve, the protective fence will have access gates, and both the State of Hawaii and the private land owner retain control of access to the parcels as both entities have historically, prior to this application.**

Does the proposed land use have an effect (positive/negative) on public access to and along the shoreline or along any public trail?

**No, the project is located within a remote area of the Alaka'i Wilderness Preserve far from the shoreline. The closest maintained public trail (State maintained foot trail) is approximately 2 miles away from the project area (See The East Alaka'i Protective Fence Project Management Plan Access map, page 27).**

Does the proposed use have an effect (positive/negative) on beach processes?

**N/A - The project is located in the mountains.**

Will the proposed use cause increased runoff or sedimentation?

**There may be a very slight opportunity for limited runoff or sedimentation along the fence alignment for a very short duration during the construction phase of the project. The construction of the fence will have very limited soil disturbance to the area as the foot print of the protective fence is less than 10 acres. Required clearing will cut back vegetation to several inches above the soil level not to bare earth. The contractor (experienced in remote fence construction) will roll out the hog wire on the ground to use as a walking mat during the post setting then use the outside wire apron. The actual on the ground construction time will be less than 3 months (See *The East Alaka'i Protective Fence Project Management Plan F-1, page 33*).**

**There will be little to no disturbance during the assembling of the pre-constructed weatherports and radio repeaters (See *The East Alaka'i Protective Fence Project Management Plan, pages 8 & 9*)**

Will the proposed use cause any visual impact on any individual or community?

**No, the project is located in a remote area of the eastern Alaka'i Wilderness Preserve, far from public view. The closest State maintained trail is approximately two miles away. (See *The East Alaka'i Protective Fence Project Management Plan Access map, page 27*). The hog wire fence measures approximately 4 feet in height and 4.5 miles in length, the 3 weatherports measure a maximum height of 8 feet each and 2 radio repeaters with solar power measure under 8 feet in height. These heights will not clear the mid-understory and definitely not the canopy of the region's forests. During periods of clear weather they may be visible by aircraft.**

**Existing Site Information**

Are there existing structures on the parcel?  Yes  No  
If yes, please describe below and include/illustrate on a map entitled *existing structures*.

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Will any existing structures be demolished or removed?  Yes  No  
If yes, describe how below. Please indicate/illustrate demolished structure on a map entitled *structures to be demolished/removed*.

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Has the parcel been graded or landscaped?  Yes  No  
If yes, describe below. Please describe cubic yards affected and/or area of landscaping on a map entitled *areas previously graded or landscaped*.

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Describe existing utilities. Include electricity, water, telephone, drainage, and sewerage. Please illustrate on a map entitled *existing utilities*.

**N/A - The project area is located in a remote location, no utilities are available or required.**

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Describe existing access. Illustrate and include roadways and public trails on a map entitled *existing access*. Give major street names if available.

**There are no existing accesses. Roadways and State maintained foot trails do not access the project area; the closet State trail is approximately 2 miles away across rough dangerous terrain. The location is the very remote eastern Alaka'i Wilderness Preserve. (See *The East Alaka'i Protective Fence Project Management Plan Access map, page 27*)**

Describe Flora and Fauna. Illustrate general location and types of flora and fauna on a map entitled *resources*. Indicate if rare or endangered native plants and/or animals are present.

**The project area consists of predominantly native plants and animals. It is estimated that 95 % of the forest is intact native forest. Native fauna consist of invertebrates, forest birds such as the 'Apapane, 'Iiwi, Kaua'i 'Elipai, Puaiohi and seasonal sea birds 'Ua'u and 'A'o and the Hawaiian Hoary Bat.**

**Plant Types - Native plant and plant community types:**

- 1.) Montane Bog Habitat
  - 2.) Montane Wet Forest and Shrubland.
  - 3.) Montane Wet Cliff
  - 4.) Rare Plants include species Endangered, Proposed Endangered, Candidate for Listing, Species of Concern.
- Introduced non-native species.

**(See *The East Alaka'i Protective Fence Project Management Plan Resource map, page 17; B-1 Biological Resources, page 18; Table-1: Rare Plants, page 19; Table-2: Native Flying Vertebrates, page 20*)**

Describe topography and submit a map entitled *topography*. If ocean area, give depths. Submit detailed contour maps for ocean area and areas where slopes are 20% or more. Contour maps will also be required for uses involving tall structures, gravity flow and other special cases.

**Specific to the project area: The topography – Varied (See: *Topography map, Exhibit J*).**

If shoreline area, describe shoreline and surrounding area. Indicate and illustrate if shoreline is sandy, muddy, rocky, cliffs, reefs, or other features (such as access to shoreline) on a map entitled *coastal resources*. A current shoreline certification is required for uses that may affect shoreline resources.

**N/A - The project is located in the Alaka'i Wilderness Preserve (mauka).**

**CERTIFICATION**

I HEREBY CERTIFY THAT I HAVE READ THIS COMPLETED APPLICATION AND THAT, TO THE BEST OF MY KNOWLEDGE, THE INFORMATION IN THIS APPLICATION AND ALL ATTACHMENTS AND EXHIBITS IS COMPLETE AND CORRECT. I UNDERSTAND THAT THE FAILURE TO PROVIDE ANY REQUESTED INFORMATION OR MISSTATEMENTS SUBMITTED IN SUPPORT OF THE APPLICATION SHALL BE GROUNDS FOR EITHER REFUSING TO ACCEPT THIS APPLICATION, FOR DENYING THE PERMIT, FOR SUSPENDING OR REVOKING A PERMIT ISSUED ON THE BASIS OF SUCH MISREPRESENTATIONS, OR FOR SEEKING OF SUCH FURTHER RELIEF AS MAY SEEM PROPER TO THE LAND BOARD.

I HEREBY AUTHORIZE REPRESENTATIVES OF THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO CONDUCT SITE INSPECTIONS ON MY OR MY CLIENT'S PROPERTY. UNLESS ARRANGED OTHERWISE, THESE SITE INSPECTIONS SHALL TAKE PLACE BETWEEN THE HOURS OF 8:00 A.M. AND 4:30 P.M.

\_\_\_\_\_  
\_\_\_\_\_  
*Signature of Authorized Agent(s) or if no agent, signature of Applicant*

**AUTHORIZATION OF AGENT**

I HEREBY AUTHORIZE \_\_\_\_\_ TO ACT AS MY REPRESENTATIVE AND TO BIND ME IN ALL MATTERS CONCERNING THIS APPLICATION.

\_\_\_\_\_  
\_\_\_\_\_  
*Signature of Applicant(s)*

**Allan Rietow**

**From:** Mike Laureta [mlaureta@kauai.gov]  
**Sent:** Tuesday, July 22, 2008 7:26 AM  
**To:** Allan Rietow  
**Subject:** RE: Alakai Protective Fence Project SMA Determination

Alakai is not in the Special Management Area of the County of Kauai

LoNGbOArDs rULe!

Michael Laureta

Confidentiality Notice: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.

**From:** Allan Rietow [mailto:arietow@TNC.ORG]  
**Sent:** Monday, July 21, 2008 2:09 PM  
**To:** Mike Laureta  
**Subject:** Alakai Protective Fence Project SMA Determination

Aloha Michael,

On September 14, 2006 you kindly wrote us a letter, the Subject: SMA Determination for the protective fence project up at Kanaele (Bog) above Kalaheo.

We are currently working on an EA and CDUP application for a protective fence project in the eastern Alakai. The project has been approved by the landowners A&B and DOFAW and is a project sponsored by the Kauai Watershed Alliance (KWA). We have progressed to the point where we will be submitting it to DLNR in Honolulu for review.

Prior to this we would need a letter from the County stating that the project area is not located within the Special Management Area of the County of Kauai.

Please let me know if you are able to help us out. I can pick it up from your office or you might mail it to our office at: *The Nature Conservancy; 4180 Rice St, Suite 102B; Lihue, Hawaii 96766*. Thanks in advance for your assistance. Please e-mail me or call me (639-7544) with any concerns or questions. Below are the TMK #s and some additional information.

Mahalo Michael!

Best regards,

Allan Rietow

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**Project Name:** East Alaka'i Protective Fence Project  
**Proposing Agency:** Kaua'i Watershed Alliance c/o The Nature Conservancy in Hawai'i, Kaua'i Program

8/13/2008

**Approving Agency:** State Department of Land and Natural Resources (DLNR)

**Project Location:** Alaka'i Summit and Wainiha Summit  
TMK Kaua'i: #4-5-8-001-001  
McBryde Sugar Co.  
TMK Kaua'i: #4-1-4-001-003  
State of Hawai'i

**Property Owner(s):** McBryde Sugar Company, Limited and  
State of Hawai'i

**LU Classification:** Conservation, Subzone P (wilderness preserve)

In April 2003, state and private landowners formed the Kaua'i Watershed Alliance (KWA). The KWA members continue to recognize that cooperation is the key to a timely and successful watershed management program that will protect Kaua'i's watershed from invasive alien animals, plants, and other threats.

The objective of this project is to protect and preserve approximately 2,006 acres (ac) of the unique native ecosystem and watershed<sup>[cso1]</sup> as well as the rare and endangered species it supports. The project will be located within a portion of the eastern Alaka'i plateau between Wainiha Valley and Mount Wai'ale'ale, at the core of Kaua'i's watershed.

[cso1]





**East Alaka'i  
Protective Fence Project  
Management Plan**

Prepared by  
The Nature Conservancy, acting by and through its Hawai'i Chapter, to benefit  
The Kaua'i Watershed Alliance

October, 2008

**East Alaka'i  
Protective Fence Project  
Management Plan**

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## **East Alaka'i Protective Fence Project Management Plan**

### **I. General Description:**

The Nature Conservancy (TNC), with the approval of the landowner(s), A & B Hawai'i, Inc. and the State of Hawai'i, proposes to construct a protective hog wire fence; to assemble weatherports and radio repeaters, monitor invasive species and maintain ungulate control, through the placement of traps, in an effort to safely support watershed management actions within a portion of the eastern Alaka'i Plateau.

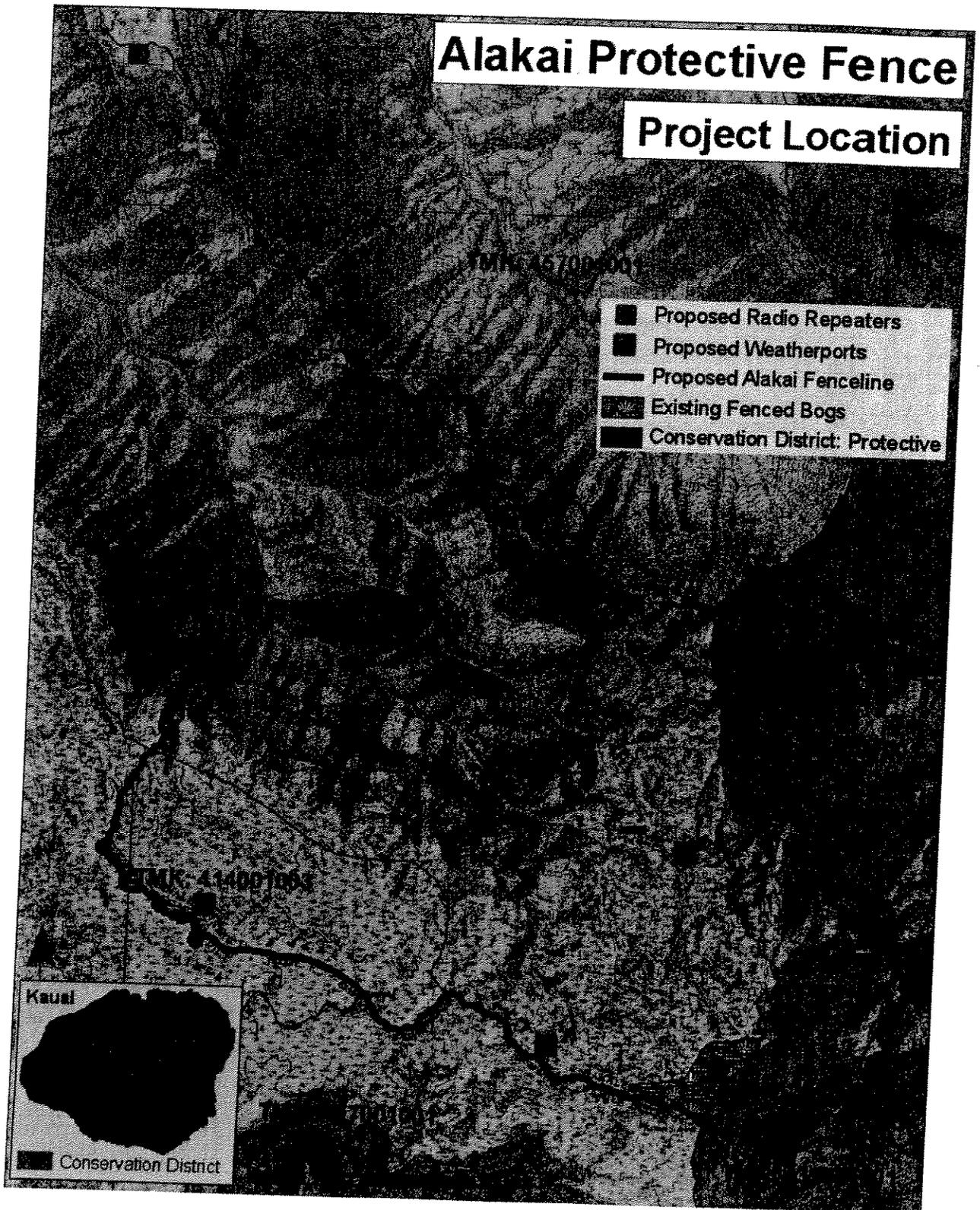
In April 2003, state and private landowners formed the Kaua'i Watershed Alliance (KWA). The KWA members continue to recognize that cooperation is the key to a timely and successful watershed management program that will protect Kaua'i's watershed from invasive alien animals, plants, and other threats.

The objective of this project is to protect and preserve approximately 2,000 acres (ac) of irreplaceable watershed, unique native ecosystem, as well as the rare and endangered species it supports. The project will be located within a portion of the eastern Alaka'i Plateau between Wainiha Valley and Mt. Wai'ale'ale, at the core of Kaua'i's watershed.

The proposed protective fence will be approximately 7,208 meters (4.48 miles or 23,650 ft) in length and will enclose approximately 595 ac of the Alaka'i Wilderness Preserve (State of Hawai'i) and approximately 1,405 ac of McBryde Sugar Co. land, both in the Conservation District. Natural barriers and the steep cliffs will make up the balance of the enclosure. (*See Alaka'i Protective Fence Project Location Map pg 4*)

# Alakai Protective Fence

## Project Location



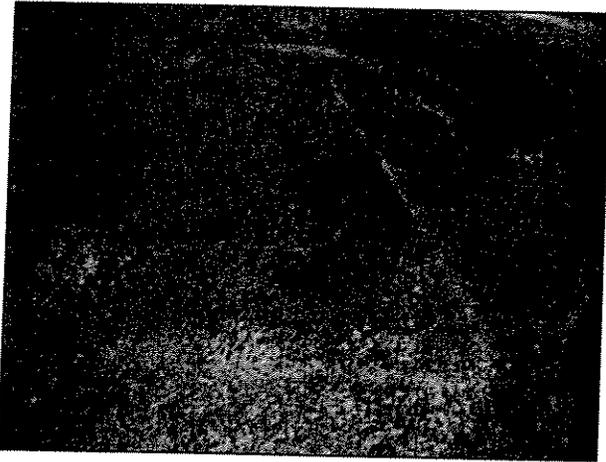
**A. Proposed land use in general terms:**

The project will involve the clearing of vegetation, several inches above ground level, from up to a 10 ft wide corridor along the length of the proposed fence alignment using small power and hand operated machinery (i.e., handsaw, pick ax, weed eater, chainsaw). A 48 inch (in) high fence will be constructed using hog wire fence mesh supported by galvanized pipes and fence posts. The outside of the fence will be skirted along the base with a hog wire apron. *(See Examples of Fence Construction pg 6 & 7)*

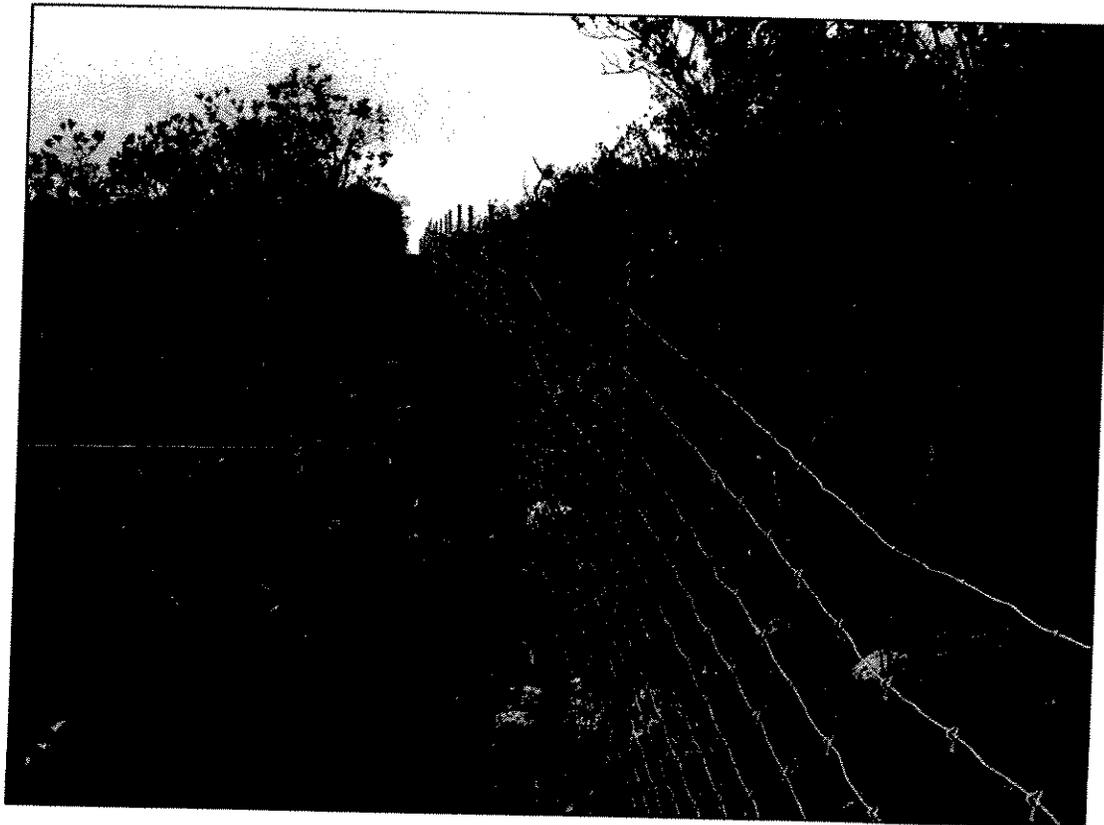
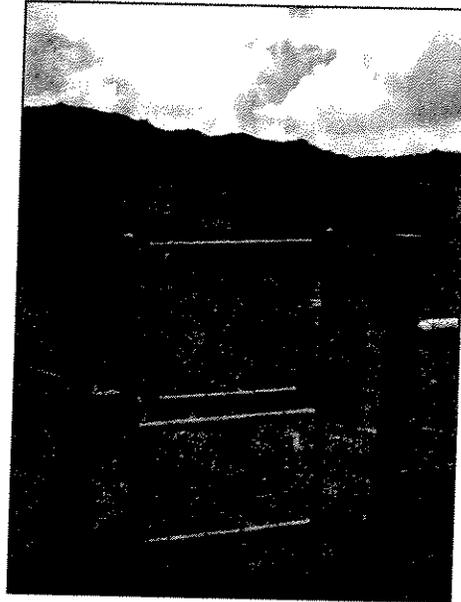
After construction, the project will consist of natural resource management activities such as feral pig and goat monitoring and removal, invasive weed control, fence maintenance, and monitoring to track the recovery of native plant populations.

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## Examples of Fence Construction

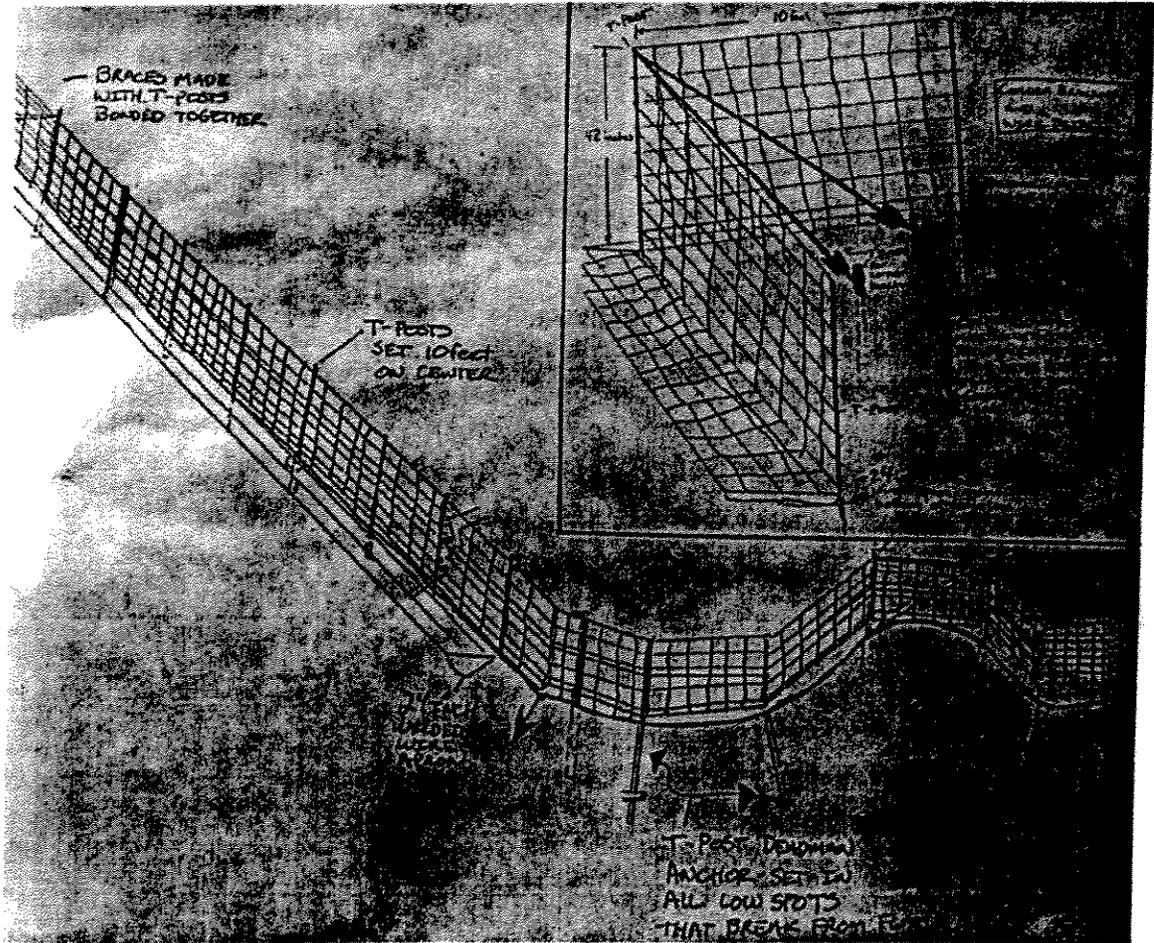


The fence line encloses Kanaele Bog & excludes feral pigs. Step-over gates provide foot access.



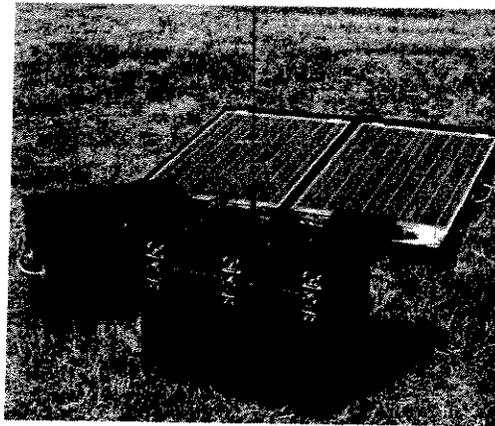
The mesh is secured tightly to the ground every four feet with t-posts and anchor pins. Pigs cannot squeeze underneath.

**FENCE DESIGN DETAILS**



To improve worker safety and communications during natural resource management activities, 2 solar powered radio repeaters and other monitoring instruments will be strategically placed within and adjacent to the project area. One will be placed near the existing United States Geological Survey (USGS) weather station at the summit of Mt. Wai'ale'ale, and another will be placed on La'au Ridge for the greatest range and coverage. The radio repeaters will be housed in weather protective cases, additional instrumentation may be added to repeater structure. *(See Diagram-1)*

**Communications Diagram  
Radio Repeaters and Solar Panels**



**Radio Repeaters and Solar Panels**

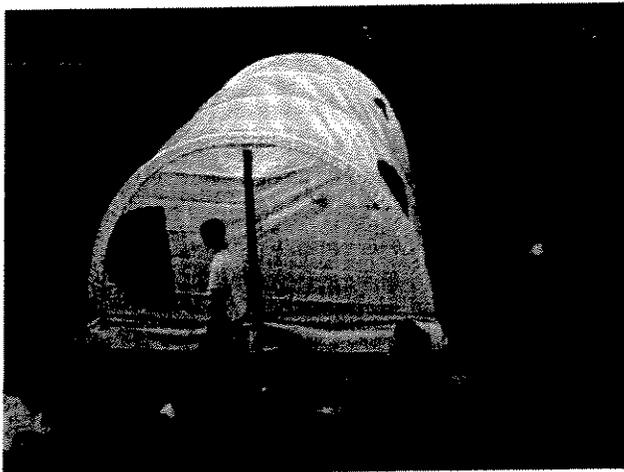
*Diagram-1*

To provide weather protection and safety for workers during natural resource management activities, 3 weatherports will be assembled. The weatherports will consist of a pre-fabricated weather shelter that is assembled on a pre-fabricated raised platform. The approximate size of the shelter will be 10 ft wide by 20 ft long and 8 ft high. In order to prevent the breeding of mosquitoes, a hole 3 to 4 ft deep will be dug and human waste, enclosed in a compostable bag, will be covered in either agricultural lime or bacillus thuringiensis pellets before being filled in with dirt at the end of each field trip. (See *Example Weatherport Diagram-2*)

### **Weatherport Diagram**



**Weatherport Platform**



**Weatherport Tent**

*Diagram-2*

**B. How the proposed land use is consistent with the purpose of the conservation district and the property's subzone:**

The proposed project area falls under the Hawaii Administrative Rules (HAR) Conservation District Protective (P) subzone. This HAR §13-5-11 designation is used "to protect valuable resources in designated areas such as restricted watershed, marine, plant, and wildlife sanctuaries, significant historical, archaeological, geological, and volcanological features and sites, and other designated unique areas." Subzone P, as stated in the law, encompasses the protection of watersheds, water sources, and water supplies.

The Alaka'i Protective Fence Project is a conservation project conceived and planned to protect and preserve the portion of the Alaka'i which receives the greatest amount of rainfall, and is home to a rich diversity of unique Hawaiian plants and animals that make up this watershed. Currently, 202 native plant taxa have been documented or observed within the estimated 2,000 ac of the proposed protective fence, which include 66 single island endemic taxa (Wood, 2007).

The forest in this area supports a diverse assemblage of native forest birds and ground-nesting seabirds. Some of these birds are federally listed as endangered species or candidates for listing as endangered species. Common forest bird species include Kaua'i 'Amakihi (*Hemignathus kauaiensis*), 'Anianiau (*Magumma parva*), 'Apapane (*Himatione sanguinea*), 'I'iwi (*Vestiaria coccinea*), and 'Elepaio (*Chasiempis sandwichensis*). The Puaiohi (*Myadestes palmeri*) is suspected to be in the area as mentioned by Pauline Roberts in a personal email listed in the Draft Environmental Assessment exhibits. The following species have not been detected on recent surveys: Kaua'i Ō'ō, 'Ō'ū, Kama'o, Kaua'i Akialoa and Kaua'i Nukupu'u. Additional surveys are needed to confirm their status. Sea birds include the endangered Hawaiian Petrel (*Pterodroma sandwichensis*) and the threatened Newell Shearwater (*Puffinus newelli*).

Research, within the Hawaiian Islands, has demonstrated that feral pigs, which damage native vegetation and expose soil to erosion, pose a significant threat to the native biodiversity and watershed integrity of Hawaiian forests. Decades of pig control in Hawai'i verify that the only successful method of completely protecting an area from feral pigs is to exclude the animals with wire mesh fence. Once pigs are removed, native vegetation has the ability to recover (Jacobi, 1976). A study looked into the effectiveness of the hunting methods from 1993 – 1998 in natural areas of Molokai. It was shown that in remote or difficult to access areas, community and volunteer hunters were not able to effectively control the populations (Molokai Hunting Test Working Group, 1998). In montane wet forests, it has been shown that there is a direct

correlation between the increase of alien plants and pig-induced soil disturbance (*Aplet et al, 1991*).

Fences have proven that native vegetation is able to recover with time, after the removal of feral pigs from the area. An enclosure was erected in a montane rain forest on the Big Island and monitored for 5 years. The result was that the protected area had a dramatic increase in the native plant understory while there was no noted reestablishment of these plants where pig activity continued outside the enclosure (*Katahira, 1980*). A 13 year old pig enclosure in Hawaii Volcanoes National Park was monitored to assess the number of plant species inside and outside the fence. Within the fence the native species were able to increase whereas outside the fence the number and density of alien species became better established (*Higashino and Stone, 1982*).

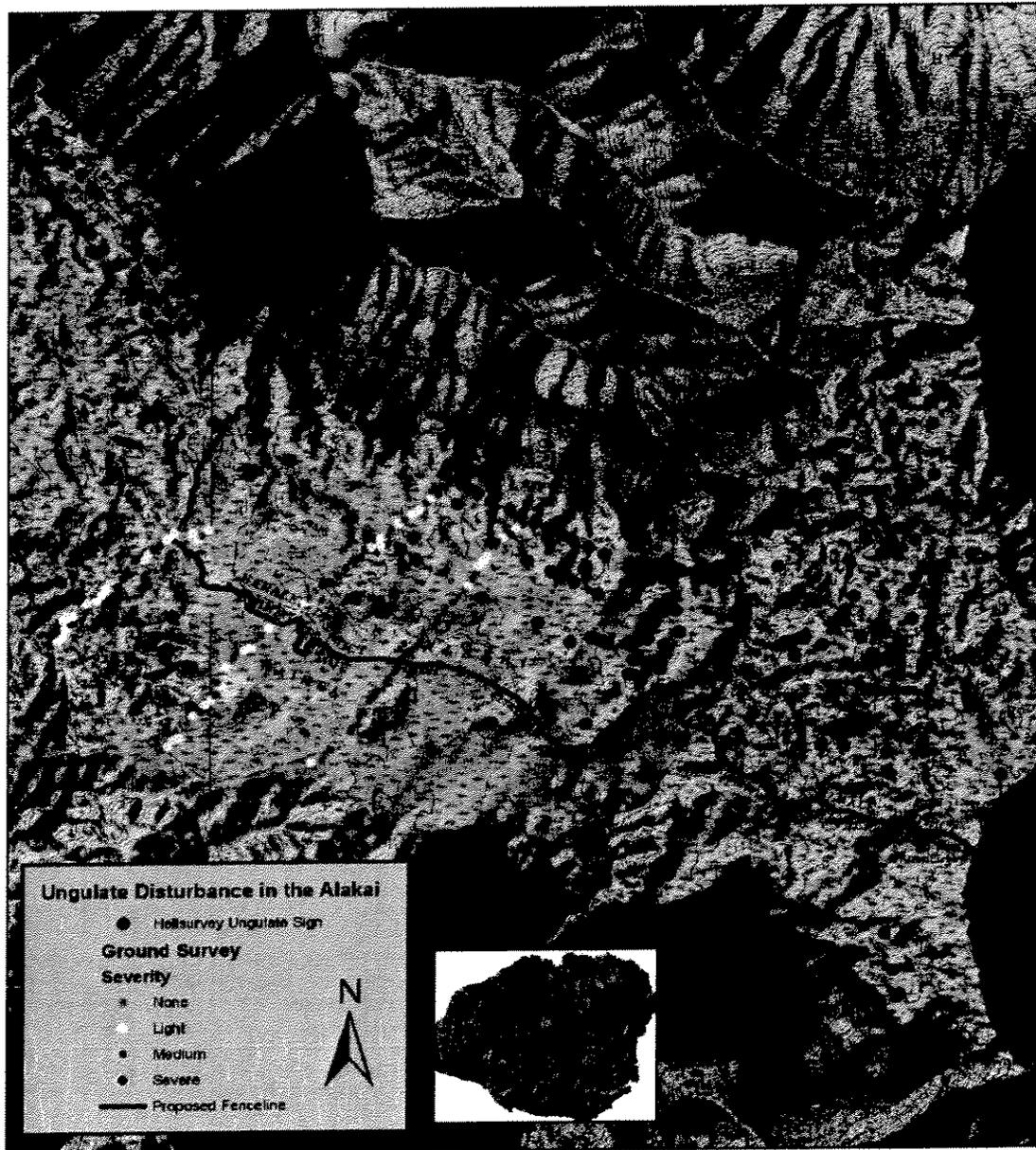
It has been noted that pigs spread root-rot fungi which has contributed to the destruction of native trees and through their feeding, they have also added to the loss of native plant species. The feeding habits of pigs create muddy areas in which they roll around, thus contributing to the propagation and spread of disease carrying mosquitoes (*Baker, 1979*). Other authorities note that an analysis of the stomach content of killed pigs showed that the majority (70-95%) of identifiable food was pieces of the Hawaiian tree fern Hapu'u (*Cibotium glaucum*) (*Cooray and Mueller-Dombois, 1981*). Pigs can make trenches over a foot deep and 10 to 15 feet long destroying the ground cover and forest understory causing erosion. In this study the pigs were tested and found to carry parasites (fleas, lice, hookworms, tapeworms and trichinae [which is a source of trichinosis in humans]) as well as various diseases such as typhus, leptospirosis and brucellosis which are transmittable to humans (*Warner, 1959 – 1969*). A study on the stomach content analysis of Hawaiian pigs, showed that these pigs carried the following diseases which can easily infect man and dogs; leptospirosis, tuberculosis and possibly typhoid (*Giffin, 1978*).

Pigs are considered to be a bigger threat to watersheds than cattle or goats because of the disruption of the soil which leads to erosion (*McEldowney, 1930*).  
(See photo pg12 and Ungulate Disturbance in the East Alaka'i Map pg 13)



Unglulate Disturbance on one side of the fence.

# Ungulate Disturbance in the East Alakai



0 0.375 0.75 1.5 Kilometers

Map Produced by S. Newton 1/3/07  
The Nature Conservancy  
Map Projection: NAD 1983 UTM Zone 4N

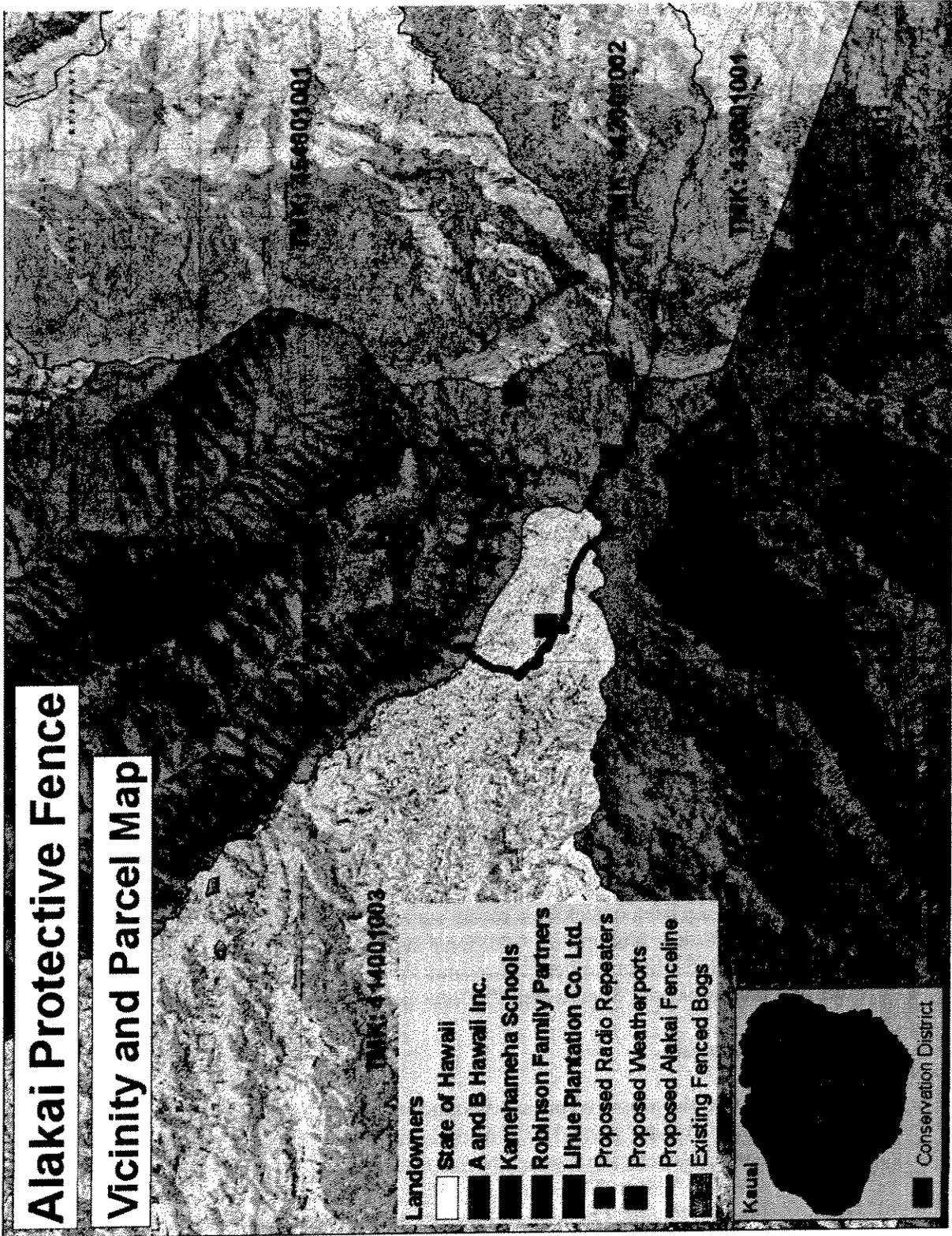
The Nature Conservancy  
Protecting nature. Preserving life.

There are presently four areas that are fenced within the project area that total 67.58 acres (13.83 ac on State of Hawai'i owned land and 53.75 ac on A&B managed land).

### **C. Location and Map**

The project area will be located in the east Alaka'i Plateau up to the Wai'ale'ale summit. It totals approximately 2,000 ac and includes approximately 595 ac of state land in the Alaka'i Wilderness Preserve (TMK 4-1-4-001-003) and approximately 1,405 ac of private land owned by McBryde Sugar Co. (TMK 4-5-8-001-001). It borders private lands of the Gay and Robinson parcel (TMK 4-1-7-001-001) and other State of Hawai'i parcels (TMK 4-4-2-001-002 and TMK 4-3-9-001-001). Its elevation ranges from 4,400 to 5,148 ft. (*See Alaka'i Protective Fence Vicinity and Parcel Map pg 15*) The elevation ranges from 4,400 ft to 5,148 ft at the rain gauge at Mt. Wai'ale'ale.

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## II. Existing Conditions in the Project Area

The project area consists of a diverse Montane Wet Forest ecosystem. It is characterized by canopied wet forests and shrublands, intermittent bogs, small drainages, streamlets, streams, and the surrounding wet cliffs.

The small headwater streamlets of the Alaka'i meander and flow on to join larger boulder-strewn drainages. These drainages continue to flow and fall deeper into the eastern windward slopes, descending down to the navigable Wailua and Hanalei Rivers; or falling to the north and creating the great rivers of Wainiha and Lumaha'i. The Alaka'i Plateau also drains to the watersheds of western Kaua'i. The rivers Olokele, Kahana, Mokuone, Mokihana, Nāwaimaka, Wai'alaie, Koai'e, and Poomau, all have their origins within the Alaka'i. These rivers eventually conjoin to form the great Makaweli and Waimea Rivers of west Kaua'i. The Alaka'i, being the heart of the island, is the greatest and most influential watershed on Kaua'i, shedding waters throughout the northern, eastern, southern, and western valleys of the island.

The Montane Wet Forest of this area is characterized by an open canopy with gentle to moderately contoured wet slopes dominated by a mixed assemblage of native sedges, grasses, herbs, shrubs and ferns interspersed. Generally, lichens and mosses are prevalent where feral pig disturbance is minimal. The low stature (ca. < 1 m) of these open areas are interspersed with small islands of taller shrubs and trees (ca. 1–5 m) or dissected with headwater streams of riparian vegetation with bordering *Metrosideros* and *Cheirodendron* forest (See *Critical & Rare Resources Map, pg 17*). There are also a number of Hawaiian bogs within these forested areas.

The forest in this area supports a diverse assemblage of native forest birds and ground-nesting seabirds. Some of these birds are federally listed as endangered species or candidates for listing as endangered species. Common forest bird species include Kaua'i 'Amakihi (*Hemignathus kauaiensis*), 'Anianiau (*Magnuma parva*), 'Apapane (*Himatione sanguinea*), 'I'iwi (*Vestiaria coccinea*), and 'Elepaio (*Chasiempis sandwichensis*). The Puaiohi (*Myadestes palmeri*) is suspected to be in the area. (See *Exhibit E: Pauline Roberts Personal Communication*) The following species have not been detected on recent surveys: Kaua'i Ō'ō, 'Ō'ū, Kama'o, Kaua'i Akialoa and Kaua'i Nukupu'u. Additional surveys are needed to confirm their status. Sea birds include the endangered Hawaiian Petrel (*Pterodroma sandwichensis*) and the threatened Newell Shearwater (*Puffinus newelli*).

### A. Ownership

Within the proposed protective-fence area approximately 1,405 acres is McBryde Sugar Co. land owned by A & B Hawai'i, Inc. The watershed is the water source for continuous electrical generation at their hydroelectric power plant downstream in Wainiha Valley. The remaining 595 acres is owned by the State of Hawai'i and is managed by the Division of Forestry and Wildlife (DOFAW) as a wilderness preserve and a public hunting area.



## B. Resources (biological, geological, archeological)

### 1. Biological Resources

The state-owned portion of the project area is designated as a wilderness preserve. DOFAW's Draft Management Guidelines (DMG) classify this area as "V-1: Highest Quality Native Ecosystems" containing greater than 90% native vegetation.

The project will take place within the eastern Alaka'i Plateau and is directed at protecting this unique ecosystem and the rare and endangered species within it. The forest is comprised of mostly montane closed to open *Metrosideros* ('Ōhi'a) and *Cheirodendron* ('Ōlapa) wet forest mixed with a rich diversity of understory trees, shrubs and ferns, many of which are restricted to only Kaua'i. Currently, 202 native plant taxa have been documented or observed within the 1,405 ac Alaka'i portion of the Preserve, which includes 66 single island endemic plant taxa (Wood, 2007).

Major habitat modifying weeds, such as strawberry guava (*Psidium cattleianum*), clidemia (*Clidemia hirta*) and kahili ginger (*Hedychium gardnerianum*) have not been detected in the proposed fenced area, while Australian tree fern (*Sphaeropteris cooperi*) and a few low-priority weeds have been detected in low to moderate numbers in TNC aerial surveys. Rare and endangered plants can be found in and around the area; *Table-1* and *Table-2* contain details on these species (*See Table-1 and Table-2 pg 19 & 20*).

The site, in the eastern end of the Alaka'i Plateau, is habitat for some 13 historically documented species of Kaua'i endemic forest birds, 5 of which are either presumed extinct or in immediate danger of extinction. Also utilizing the eastern Alaka'i Plateau are native owls, seabirds, and waterfowl. *Table-2* provides some details about the 16 native bird species either presently or formerly found within the Alaka'i wilderness preserve within or proximal to the site of proposed protective fencing.

No comprehensive surveys within the area describing invertebrates or fungi could be located for this document; however, anecdotal evidence strongly suggests that the area is host to abundant communities of native insects, tree snails, and fungi.

**Table-1: Rare Plants Documented Within The Project Area & Vicinity.**

Scientific Name	Common Name	Federal Status	Island Wide Pop. Estimate	Survey Info
<i>Acaena exigua</i>	liliwai	E	unknown	
<i>Alsinidendron lychnoides</i> (*)	kuawawaenuhu	E	n/a	
<i>Astelia waialeale</i>	pa'iniu	PE	n/a	
<b><i>Cheirodendron dominii</i></b>	<b>lapalapa</b>	E	<b>&gt;2500</b>	
<i>Dubautia waialealeae</i>	na'ena'e	PE	500 - 700	
<i>Eurya sandwicensis</i>	anini	SOC	n/a	
<i>Geranium kauaiense</i>		C	3	
<i>Lagenifera helenae</i> (**)		PE	300	2000, Wood
<i>Lysimachia daphnoides</i>	Lehua makanoe	PE	200 - 300	1995, Perlman
<i>Lysimachia venosa</i>		PE	Unknown	
<i>Melicope cruciata</i>	cross-bearing pelea	SOC	20 - 30	2000, Wood
<i>Melicope puberula</i>	Alani	PE	900	2000, Wood
<i>Melicope waialealae</i>	Alaniawai		n/a	
<i>Myrsine petiolata</i>			unknown	
<i>Phyllostegia helleri</i>		C	Previously considered extinct. About 100.	Rediscovered 2004, Wood
<b><i>Platanthera holochila</i></b>		E	<b>&gt;40</b>	
<i>Sanicula kauaiensis</i>	Kaua'i Sanicle	SOC	One 1911 collection. Very rare or extinct	

(\*) *Alsinidendron lychnoides* synonymous for *Schiedea lychnoides*.

(\*\*) *Lagenifera helenae* synonymous for *Keysseria helenae*.

**Bold** font indicates federally listed endangered species.

PE = Proposed Endangered listed Oct 2008

C = Candidate for Listing

SOC = Species of Concern

**Table-2: Native Flying Vertebrates Found Within The Alaka'i Protective Fence Vicinity.**

Scientific Name	Common Name	Federal Status	Island-wide Pop. Est. (Survey Date)
<i>Lasiurus cinereus semotus</i>	'Ōpe'ape'a (Hawaiian Hoary Bat)	E	?
<i>Loxops caeruleirostris</i>	'Akeke'e (Kaua'i 'Akepa)	PE	30,000 (2000)
<i>Magumma parva</i>	'Anianiau		35,000 (2000)
<i>Himatione sanguinea</i>	'Apapane		64,972 ± 2,014 (2000)
<i>Vestiaria coccinea</i>	'I'iwi		5,400 ± 500 (1976-1981)
<i>Psittirostra psittacea</i>	'Ō'ū	E	0 (2000)
<i>Oreomystis bairdi</i>	'Akikiki (Kauai Creeper)	PE	2,448 ± 1,200 (2000)
<i>Myadestes myadestinus</i>	<b>Kama'o (Large Kaua'i Thrush)</b>	E	0 (2000)
<i>Hemignathus kauaiensis</i>	Kaua'i 'Amakihi		>40,000 (2000)
<i>Chasiempis sandwichensis sclateri</i>	Kaua'i 'Elepaio		25,000 (2000)
<i>Moho braccatus</i>	<b>Kaua'i 'Ō'ō ('Ō'ō 'ā'ā)</b>	E	0 (1989-2000)
<i>Hemignathus procerus</i>	<b>Kaua'i Akialoa</b>	E	0 (1989-2000)
<i>Hemignathus lucidus hanapepe</i>	<b>Kaua'i nukupu'u</b>	E	<b>Unknown</b> (1989-2000)
<i>Myadestes palmeri</i>	<b>Puaiohi (Small Kaua'i Thrush)</b>	E	<b>300 - 500</b>
<i>Anas wyvilliana</i>	<b>Koloa (Hawaiian Duck)</b>	E	<b>2000</b>
<i>Pterodroma sandwichensis</i>	Hawaiian Petrel ('Ua'u)	E	NA
<i>Puffinus newelli</i>	Newell Shearwater ('A'o)	T	N/A
<i>Asio flammeus sandwichensis</i>	Hawaiian Owl (Pueo)		N/A

Sources Include: Kauai Forest Bird Survey, CWCS (Mitchell, et al, 2005) and Revised Recovery Plan for Hawaii (USFWS 2006)

**Bold font indicates federally listed endangered species.**

PE = Proposed Endangered listed Oct 2008

T = Threatened

C = Candidate for Listing

SOC = Species of Concern

## 2. Geological Resources

Although no geological studies have been conducted directly at the site, studies *have* been conducted in the Kilohana Areas in the western Alaka‘i Plateau. In one of those studies, a 3.2 m sediment core from the area collected with a piston-sampler showed accumulated peat deposits to a depth of 84 cm dating to  $5000 \pm 50$  BP. Those peat deposits were said to be extremely pollen-rich and the underlying sediment stratum reflect changes in climate, hydrological variation, and/or possible geomorphologic events over time dating back to  $15,100 \pm 80$  BP (Burney, 2002). The Kilohana Areas appear to consist of the same soils present throughout the Alaka‘i Plateau: Alaka‘i Mucky Peat, 0 to 30 percent slope (Foote, *et al.* 1972). Such soils comprise the entire western half of the project area as well.

## 3. Archeological Resources

The area is very remote; however a small stone heiau exists near the Wai‘ale‘ale summit. The heiau, called Ka‘awakō, was dedicated to the Hawaiian god Kane, and is the highest of a series of five heiaus built by ancient Hawaiians along the Wailua river system. This heiau is within the area to be fenced, but far enough from the fenceline to avoid direct negative impacts from the fence construction.

An archeological assessment was performed in March, 2008 by Cultural Surveys Hawai‘i, Inc:

“The Alaka‘i, Kaua‘i’s watershed core, is an ecologically rich area containing over 95% native Hawaiian-dominated forests and a variety of native biodiversity. The Alaka‘i serves as a primary source of the island’s freshwater – the high elevation forests filtering rainwater into subterranean aquifers and dispensing surface waters into Kauai’s seven main rivers. The presence of habitat-modifying weeds and feral ungulates such as pigs and goats threaten the health and integrity of this vital watershed forest habitat.

The entire length of the proposed fence line was traversed from the Wainiha Pali in the northwest to the summit bog fence and the Wailua Pali in the southeast. No archaeological sites were observed.

The proposed fence line lies in the exceedingly inaccessible east end of the Alaka‘i Plateau. No maintained trails run anywhere nearby. While the Kilohana Overlook end of the maintained Alaka‘i Swamp trail is only about 5 miles “as the crow flies” northwest of the northwest end of the proposed fence line this would be close to a day’s journey of very rugged

endeavor for most people. The isolation suggests that the level of use of the entire east end of the Alaka'i Plateau has always been exceedingly limited. Indeed it seems probable that in traditional Hawaiian times the vicinity was only frequented by the most hardy bird hunters and by people going to and from the Ka'awakō Shrine. Informant testimony and the earliest historic accounts of visits to the shrine suggest these trips were typically via the steep ascent from the Wailua side which may not have brought pilgrims into the project area at all. The annual summit rainfall, estimated at 11,000 mm (433 inches), would not have encouraged many to linger for long.

A notable feature of the Alaka'i Plateau is the general absence of rocks for construction material. Perhaps 99% of the proposed fence line route is stone free with no raw material for construction that would endure.

Site density is anticipated to be very, very low away from the Alaka'i Plateau rim." (*Hammatt and Shideler, 2008*)

*Archaeological Assessment for the Alaka'i Protective Fence Project, Kaua'i, March 2008, pg 27*

The site surveyor recommends that no further archaeological study is necessary and that the development of the proposed fence line will have no direct effect on historic resources.

***Note: Should Native Hawaiian traditional, cultural, or burial sites be identified during the ground disturbance, all work will immediately cease and the appropriate agencies are notified pursuant to applicable law.***

### **C. Presence of Threatened or Endangered Species**

Many *threatened, endangered* and even *critically endangered* plant and animal species have been documented either within the proposed fence area or in close proximity. The project area also contains montane bog habitat, which is listed as rare by the Hawai'i Biodiversity and Mapping Program.

The forest and cliffs in and around this area support a diverse assemblage of native forest birds and 2 species of ground-nesting seabirds. No colonies of ground nesting seabirds have been located along the fence alignment. Some of these birds are federally listed as endangered species or candidates for listing as endangered species.

Land in the western half of the project area is designated critical habitat (CH) for *Platanthera holochila* and *Exocarpos luteolus* while lands in the northern portion contain designated CH for *Cyrtandra cyanoides*. CH for *Cyrtandra limahulienses*, *Pteralyxia kauaiensis*, and *Plantago princeps* borders the

eastern edge of the project area (USFWS, 2004, See Table-3). This implies that these endangered species are or were found in the project area or that the area provides suitable habitat which is essential for species recovery. Included on Table-1 are 4 federally listed endangered species of flora, 6 *proposed* endangered, 2 *candidates* for the endangered species list, and 3 more flora listed as *species of concern*. With the exception of *E. luteolus*, *C. cyanoides*, and *C. Limahuliensis*, all listed species of flora have been recorded in close proximity or within the project area. (See *Critical & Rare Resources map pg 17*) Most surveys occur along established bird-transect lines. The eastern portion of the Alaka‘i might be considered relatively un-surveyed by botanists and ornithologists as compared to other more accessible regions.

**Table- 3 Critical Habitat within the Alaka‘i Protective Fence Project Area**

Scientific Name	Common Name
<i>Plantago princeps</i>	Laukahi kuahiwi
<i>Pteralyxia kauaiensis</i>	Kaulu
<i>Exocarpus luteolis</i>	Heae, au
<i>Platanthera holochila</i>	Fringed orchid
<i>Cyrtandra cyanoides</i>	
<i>Cyrtandra limahuliensis</i>	

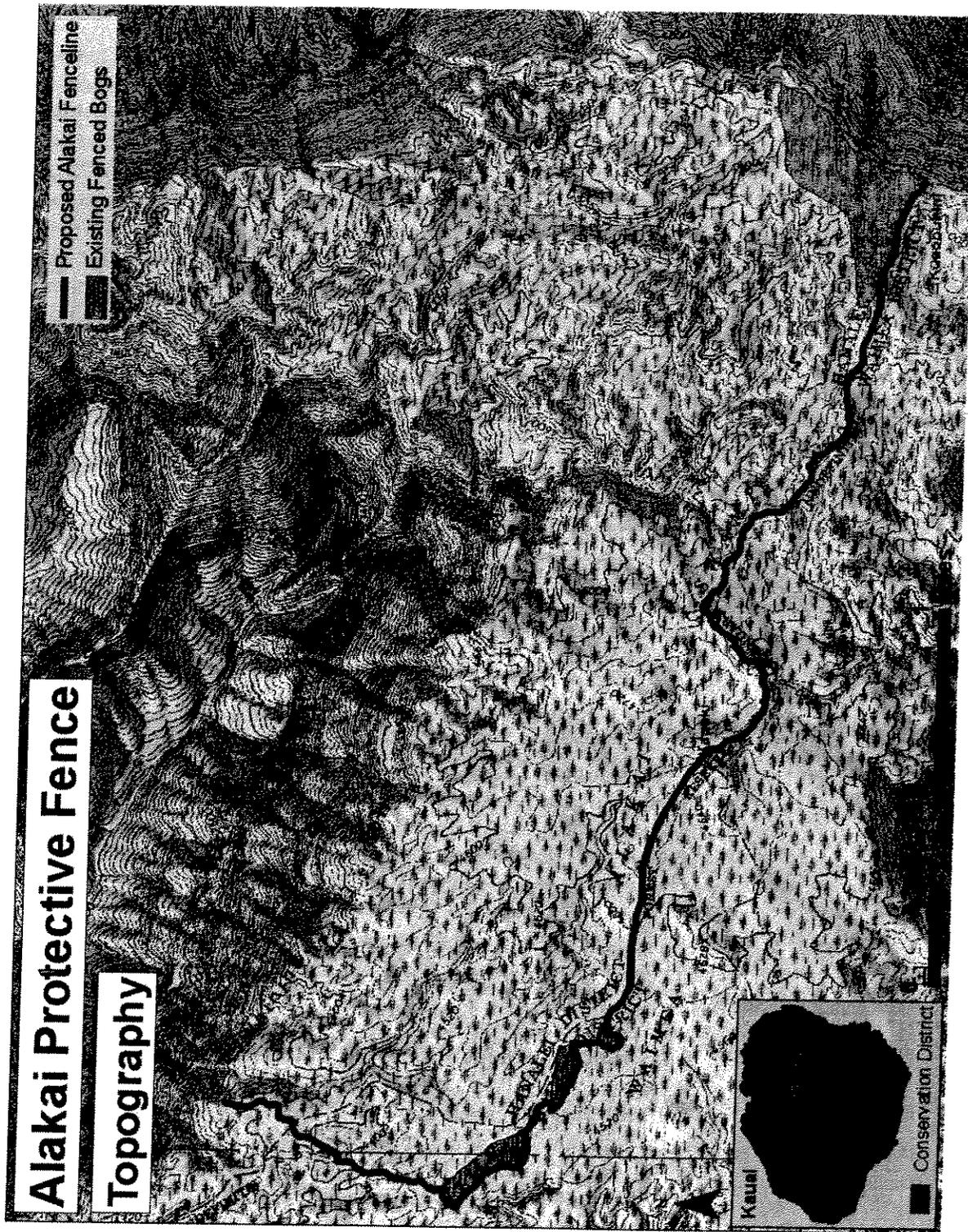
Source: U.S. Fish and Wildlife Service. 2004. *Endangered and Threatened Wildlife and Plants; Final Designation or Non-designation of Critical Habitat for 95 Plant Species from the Islands of Kaua‘i and Niihau, HI.*

Kōloa duck habitat exists within the area’s streams. On October 23, 2006, TNC ground crews found signs of Kōloa Duck habitation at a stream crossing. A colony of Hawaiian Petrel (*Pterodroma sandwichensis*) was documented in 1990 to be in close proximity to the proposed protective fence alignment. At that site, 12 separate individuals (*P. sandwichensis*) were heard over the course of two days (Hawai‘i Biodiversity Mapping Program, 2007). See Table-2 for species specific information on native birds; federally listed endangered species are in bold.

No federally listed endangered invertebrates are known to exist in the area, although no comprehensive surveys have been done for those organisms.

**D. Constraints (flood plain, tsunami, volcanic, topography)**

The only major constraints are related to access. The proposed project area is extremely remote. There are no marked trails in existence and the topography surrounding the area restricts foot access to the Mohihi-Waialae trail which runs through the central Alaka‘i. Helicopters are the other option; however, because the summit is typically covered in clouds, it can be difficult to access by helicopter. The likelihood of cloud cover increases closer to the summit. Stream crossings are subject to flooding, particularly Kawaikoi, Waiakoali, Mohihi, and Koaie Streams (See *Proposed Alaka‘i Protective Fence Topography Map pg 24*).



## **E. Existing Land Uses**

The state-owned portion of the project area is designated as a wilderness preserve. Hiking, hunting, camping, photography, and trout fishing activities occur within the overall Alaka'i Wilderness Preserve, but are seldom conducted within this portion due to its extreme remoteness. (*See Vicinity & Parcel Map pg 15*)

Because of the high quality and fragile nature of the native ecosystems located within the project area, the area has been designated as "A-4: Game Control (supervised)" by DOFAW's Draft Management Guidelines (DMG). The area is not utilized for timber production or for any other forestry products. DOFAW's DMG prohibits the harvest/collection of forest products within the area unless there is "compelling public benefit". HAR §13-3-2 places the following restrictions on the Alaka'i wilderness preserve area, "the following restrictions shall also apply...the introduction of lantana (*Lantana camara*), black wattle (*Acacia decurrens*), firetree (*Myrica faya*), blackberry (*rubus penctrans*), or any plants or animals deemed objectionable by the board is prohibited..."

Current hunting regulations (governing the state land portion) allow hunters to take 1 pig per licensed hunter per day, year round on Saturdays, Sundays, and state holidays with rifles, handguns, bow & arrows, or dogs and knives. Seasonal goat hunting occurs during eight consecutive weekends from mid-July through mid-September, on Saturdays and Sundays, with rifles, muzzleloaders, and bow and arrows; a bag limit of one goat per rifle/muzzleloader tag issued. Hunters must sign-in at a checking station prior to the hunt and sign-out at the end of the day. Hunters with a valid camping permit can access the Alaka'i Wilderness Preserve via the Mokihana Ridge Game Management Area by means of the Waimea Valley Checking Station on Fridays only after 3:00 p.m. in preparation for Saturday's hunt.

Natural water collection and storage is the most important resource attribute within the project area. The project area, being a part of the greater summit area, defines the upper most boundaries for many of Kaua'i's major watersheds. Which, in turn, supply the island with abundant water resources. The McBryde Sugar, Co. portion of the project area provides water for a hydroelectric power plant in Wainiha Valley.

## **F. Existing Conservation District Use Permits**

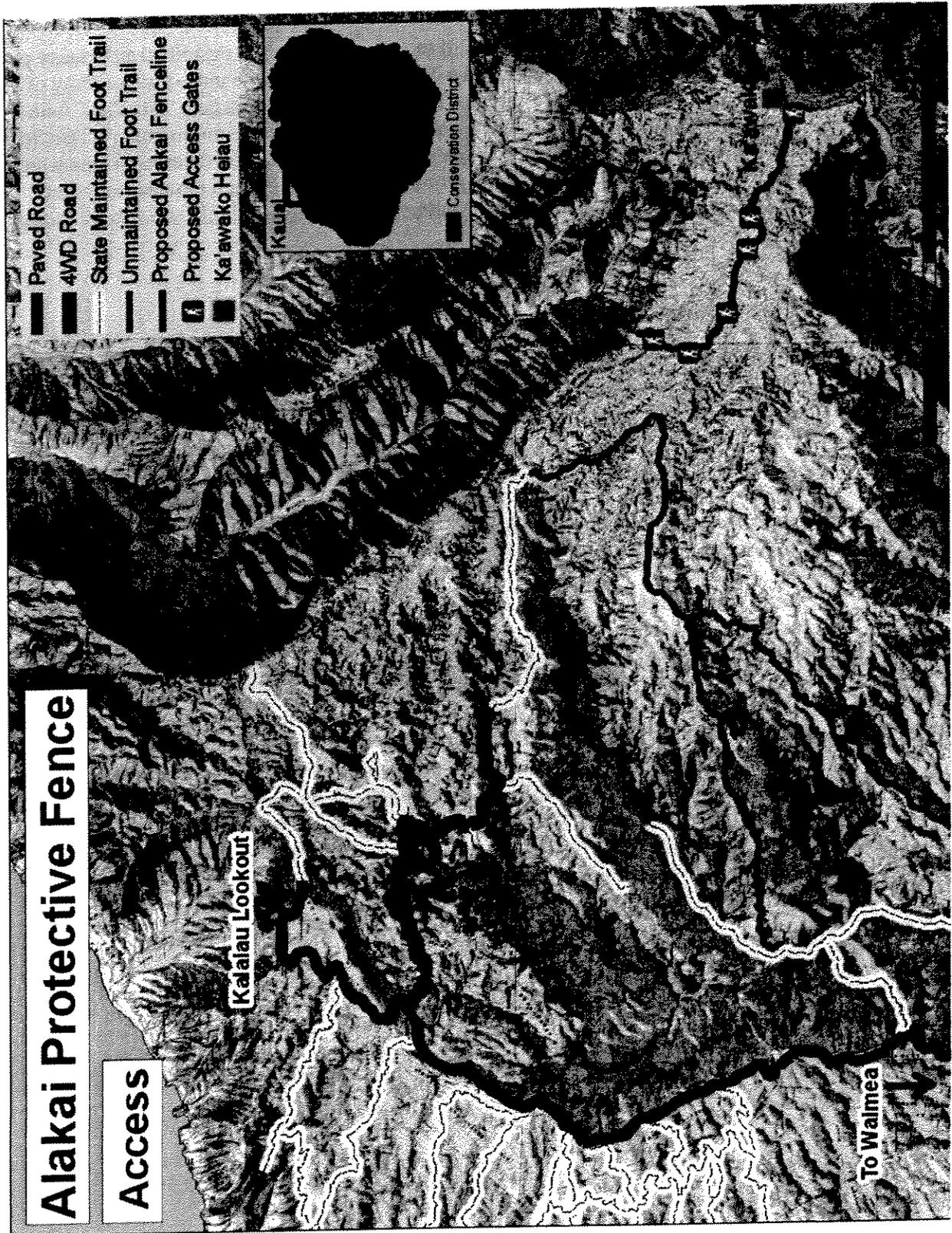
There are no known conservation District Use Permits in the immediate project area; the Conservation District Protective Subzones –TMK 4-1-4-001-003 (State of Hawai'i) and 4-5-8-001-001 (McBryde Sugar, Co).

## **G. Access**

Helicopters are the primary means of access, but strong winds and cloud cover over the Alaka'i Plateau are major impediments to the predictability and consistency of

this mode of travel. The closest road is the 4X4 dirt road leading to the Camp-10 picnic area nearly seven and a half miles to the northwest of the summit. No Na Ala Hele trails or any other official trails reach the area. The Waialae Trail (un-maintained foot trail) comes to within a little under a mile of the fence alignment, with no discernable access route to the project area. *(See Proposed Alaka'i Protective Fence Topography Map pg 24 and Proposed Alaka'i Protective Fence Access Map pg 27)*

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## H. Soils

Nearly the entire western half of the area contains soil described as “mucky peat” with 0 to 30 percent slope. The eastern half contains a more diverse array of soils, with those closer to the summit described as poorly drained “silty clay” with 8 to 30 percent slopes. The rugged terrain to the north of the summit area is classified in 2 major descriptions: “mucky silty clay loam” with 30 to 70 percent slope which then merges with the more rugged terrain described as “rough mountainous land” characterized by steep valley walls, narrow ridges, and thin soil 1 to 10 inches deep (Foote, *et al.* 1972).

## III. Proposed land uses on parcel

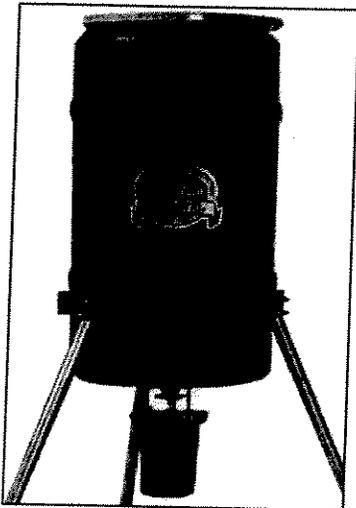
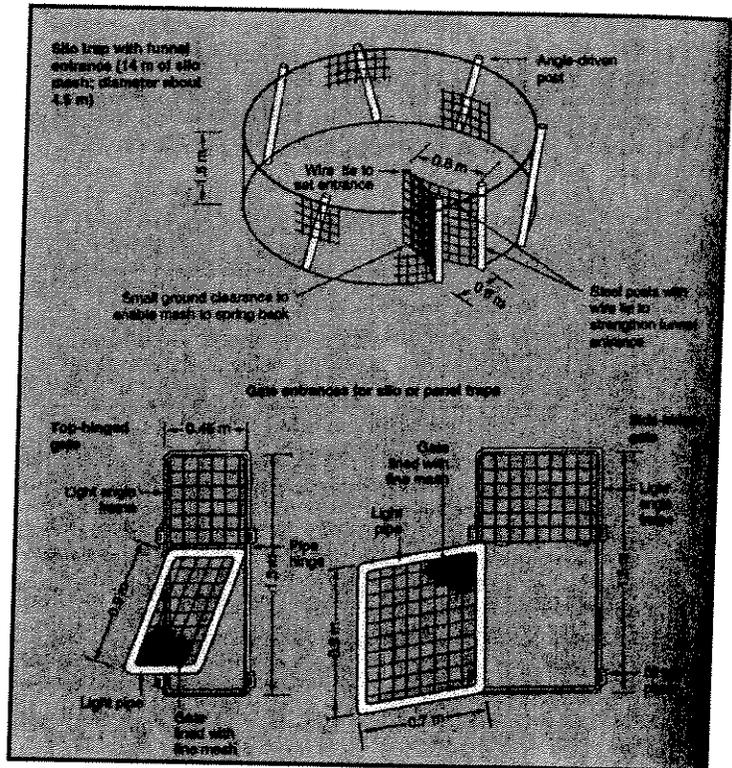
The project will involve the clearing of vegetation, several inches above ground level, from up to a 10 ft wide corridor along the proposed fence alignment using small power and hand operated machinery (i.e., handsaw, pick ax, weed eater, chainsaw). A 48 in high fence will be constructed using hog wire fence fabric supported by galvanized pipes and fence posts. As necessary, the outside of the fence will be skirted along the base with a hog wire apron (consisting of 48 inch wide hog wire staked to the ground). (*See Examples of Fence Construction & Fence Design Details pg 6 & 7*)

After construction, the project will consist of natural resource management activities such as feral pig and goat removal, invasive weed control, fence maintenance, and monitoring to track the recovery of the plant community.

Baiting and trapping using silo traps will be strategically deployed throughout the fenced preserve. The traps are circular and about 4.5 meters in diameter with approximately 1.5 meter high walls constructed of welded mesh. The door into the trap is a push through design. An internal mesh skirt attached at the base of the trap will prevent pigs from tunneling out of the trap. The open top and natural ground floor employed in this design will minimize stress on the animals. (*See Pig Control map pg 29 & Silo Trap and Feeder diagrams pg 30*)



## Silo Trap and Feeder



Automated bait stations will be installed inside each of the traps, either suspended from a tree above the trap or mounted on a tripod inside. The feeders will be baited with a two week's supply of cracked corn, macadamia nuts or other baits as needed.

For the first 3 to 5 weeks of the project the traps will be kept open, in order to allow the resident pigs to grow accustomed to entering the traps and feeding. The traps will then be set and checked the following day to remove the captured pigs.

Due to the remote locations involved in the project, the traps will be positioned and baited by helicopter. Trap placement will take advantage of existing openings in the forest canopy and shrub layer. We do not anticipate altering vegetation for either helicopter access or trap placement. Wherever possible, areas previously disturbed by pigs will be used for trap placement. In previous uses this trap design has caused only minimal ground disturbance. At project end all trapping and baiting materials will be removed. *(See Silo Trap and Feeder diagrams pg 30)*

To improve worker safety and communications during natural resource management activities, 2 solar powered radio repeaters and other monitoring instruments will be strategically placed within or adjacent to the project area. One will be placed near the existing United States Geological Survey (USGS) weather station at the summit of Mt. Wai'ale'ale and another will be placed on La'au Ridge. The radio repeaters will be housed in weather protective cases, additional instrumentation may be added to repeater structure. *(See Project Location map pg 4 & Communications Diagram pg 8)*

To provide weather protection and safety for workers during natural resource management activities, 3 weatherports will be assembled. The weatherports will consist of a pre-fabricated weather shelter that is assembled on a pre-fabricated raised platform. The approximate size of the shelter will be 10 ft wide by 20 ft long and 8 ft high. *(See Project Location map pg 4 & Weatherport Diagram pg 9)*

#### **A. Description of proposed land use**

The protective fence shall be approximately 7,208 meters (4.48 miles or 23,650 ft) in length and shall be constructed of 48 in high beznal coated hog wire fence mesh. The fence mesh will be supported by galvanized coated pipes and fence posts placed no more than 10 ft apart the entire length of the fence line. Shorter galvanized coated pins will be used as anchors within the 10 ft span. The fence will have an apron of hog wire laid horizontally along the ground outside the fence to prevent pigs from digging underneath. The fence alignment will be cleared by hand to a width of no more than 10 ft.

The two radio repeaters shall be housed within weather protective cases of the approximate size of 2 100 quart coolers, they will be powered by 3 to 4 solar panels of approximately 9 square feet ea. They will be assembled on site.

The three weatherports measure approximately 20 feet in length by 10 feet in width by 8 feet in height. They are to be prefabricated and assembled on site. Outhouse facilities will consist of a "Bio-Toilet" which consists of an elevated seat with a single use biodegradable bag attached. An earthen disposal hole approximately 16 inches in diameter and 2 to 4 ft deep will receive human waste, enclosed in the bio-degradable bag, which will be covered with lime and partially covered with approximately 10 inches of soil and bacillus thuringiensis pellets.

Baiting and trapping using between 5 to 15 silo traps will be strategically deployed throughout the fenced preserve. The traps are circular and about 4.5 meters in diameter with approximately 1.5 meter high walls constructed of welded mesh. The door into the trap is a push through design. An internal mesh skirt attached at the base of the trap will prevent pigs from tunneling out of the trap. The open top and natural ground floor employed in this design will minimize stress on the animals (*See Pig Control Map pg 29*).

#### **B. Site Plan**

*(See Proposed Alaka'i Protective Fence Project Location Map pg 4 and Vicinity and Parcel Map pg 15)*

#### **C. Justification that it is an identified land use for the subzone**

The Alaka'i Protective Fence Project is a conservation project conceived and planned to protect and preserve the portion of the Alaka'i which receives the greatest amount of rainfall, and is home to a rich diversity of unique Hawaiian plants and animals that make up this watershed. Currently, 202 native plant taxa have been documented or observed within the estimated 2,000 ac of the proposed protective fence, which include 66 single island endemic taxa (*Wood, 2007*).

The proposed project area falls under the Hawaii Administrative Rules (HAR) Conservation District Protective (P) subzone. This HAR §13-5-11 designation is used "to protect valuable resources in designated areas such as restricted watershed, marine, plant, and wildlife sanctuaries, significant historical, archaeological, geological, and volcanological features and sites, and other designated unique areas." Subzone P, as stated in the law, encompasses the protection of watersheds, water sources, and water supplies.

#### **D. Relationship to existing and other proposed land uses**

There is no known relationship of the project and the project area and the adjacent area to any existing and/or other proposed land uses.

#### **E. Expected Timing**

The anticipated start date for this project is the first quarter of FY 10 (July – Sept 2009) and once initiated, all phases of the project will be completed within 12 months. Within this time period, radio repeater installation shall take approximately 2 months and weatherport assembly shall take approximately 3 months to complete.

#### **F. Monitoring Strategies**

##### **I. Vegetation and Soil Disturbance**

The fence has been aligned and the placement of weatherports and radio repeaters has been selected to avoid harm to rare or endangered species and to reduce the amount of native vegetation to be cleared. The weatherport and radio repeater designs have very small footprints, therefore keeping ground disturbance to a minimum.

Short term soil disturbance may be unavoidable along the fence alignment, particularly during vegetation clearing, although clearing will not occur down to the soil level. Clearing at no wider than 10 ft would impact less than 10 acres of the total 2,000 acres of the project area. After clearing, the fence material will be dropped by helicopter approximately every 300 ft along the corridor, and the fence mesh unrolled to lay flat on the ground. Workers will walk on the mesh as they install the fence, and then walk on the outside apron portion of the fence after it is erected. This will greatly reduce soil disturbance caused by the activity of fence construction. Water bars will be installed in areas with steep slopes. These bars will divert water from flowing directly down the fence line thus reducing erosion.

##### **II. Weed Introductions**

There will be a temporary increased potential for accidental introduction of non-native plants along the fence corridor due to the possibility of seed transport on shoes, clothes, packs, and/or fencing material and equipment from off site.

Throughout the project implementation and subsequent access for management purposes, strict protocols will be used to clean and inspect all gear and supplies (fencing material, radio repeaters, weatherports, camp materials, and personnel gear, etc.) to prevent the introduction of alien species (seeds, plants, animals, and insects). These protocols will be included in contracts with any contractors. Fence monitoring and controlling incidental weed introductions will be performed at quarterly intervals after construction is completed. Funding has been allocated for these actions. At the completion of construction and installation, all rubbish and waste will be removed from work sites and the environment will be kept clean.

### **III. Cultural Access**

The project area is extremely remote. The construction of the protective fence will not impact access to the area for cultural purposes. Within the surveyed fence alignment, several access gates will be located to accommodate access to the enclosed area. These gates will be located to promote a more direct route to the project area and the cultural site, Lake Wa'iale'ale and Ka'awakō Shrine at Wai'ale'ale. Portions are regulated by the State of Hawai'i as a Conservation District land area and Wilderness Preserve. Most of the fenced area belongs to a private land owner, and is regulated by their right of entry protocols.

### **IV. Fence Maintenance and Feral Ungulate Disturbance**

The fence, radio repeaters, and weatherports will be inspected and maintained. The maintenance will be a part of the natural resource management actions carried out within the project area on a quarterly schedule.

Existing bird transects will continue to be used to monitor feral pig sign and disturbance. Additional transects will be added and monitored. Natural resource management actions, accepted methods for reducing feral pigs, which will include baited traps, will be employed to significantly reduce the numbers of feral pigs and feral goats within the project area.

### **V. Invasive Weeds**

Monitoring of invasive weeds will occur along the fence line during routine maintenance inspections to assess plant regeneration. Invasive weeds such as *Kāhili ginger (Hedychium gardnerianum)*, *Strawberry guava (Psidium cattleianum)* and *Australian tree fern (Sphaeropteris cooperi)* will be a top

priority for management in the project area. Weed removal will be carried out using approved mechanical and chemical methods shown to be highly effective in other areas.

#### **G. Environmental Assessment**

The Draft Environmental Assessment has been completed and submitted to the Office of Environmental Quality Control and set for a 30 day public comment period beginning October 23, 2008. The draft can be viewed at the Hawaii Association of Watershed Partnerships website, <http://hawp.org>.

#### **H. Steps to ensure that historic preservation concerns are met**

The State of Hawai'i Department of Land and Natural Resources, State Historic Preservation Division was contacted in the prescoping phase of the Draft Environmental Assessment. A letter was received from them, dated April 18<sup>th</sup>, 2008, which gave the determination that "no historic properties will be affected". The Archaeological Assessment along with this letter gives assurance that no historical sites will pose concerns during the project.

**Note: Should any iwi or Native Hawaiian cultural or traditional deposits be found during fence construction, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.**

### **VI. Reporting schedule**

**A. Time duration of management plan is ten (10) years.**

**B. Annual reporting schedule**

Annual, on the anniversary of the fence completion date.

**C. Annual reporting requirements**

- i.** Status of compliance of permit conditions;
- ii.** Status of the implementation of land uses pursuant to the approved management plan schedule;
- iii.** Identify any issues or problems regarding implementing actions identified in the management plan;
- iv.** Progress or measurements of actions identified in the management plan (number of fence repairs, invasives noted, number of threatened and endangered species identified);

- v. Photos depicting management actions or area (e.g. improvements, problems, etc.).

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**Oral Testimony for CDUA Application:  
East Kauai Protective Fence Project**

**In Support:**

Winnie Ushigomi, Kauai Department of Water, member Kauai Watershed Alliance  
Imai Aiu, Deputy Director, Kauai County Planning Dept.  
Kalani Fronda, Kamehameha Schools, member Kauai Watershed Alliance  
Jerry Ornellas, East Kauai Water Users Cooperative  
Roy Oyama, Kauai County Farm Bureau  
Michael DeMotta, National Tropical Botanical Garden and Kauai Native Plant Society  
Tom Shigemoto, A&B properties  
Sarah Bowen, West Kauai Soil and Water Conservation District  
Kaite Castle, Kokee Conservation Resource Program  
Jackie Kozack, Garden Is. Resource Conservation & Development, Board of Directors  
Nick Holmes, Bird biologist  
Carl Berg, Ecologist, Hanalei Watershed  
Michelle Clark, US Fish and Wildlife Service biologist  
Stephan Smith, Private forestry management consultant  
Stuart Wellington, Taro farmer east side, fence contractor  
David Whatmore, Kauai Farmer  
David Bernie, National Tropical Botanical Garden  
Pauline Roberts, Private citizen, Bird biologist  
Nicolai Barca, Private citizen, Kilauea, TNC employee  
Chris Mottley, Private citizen

**Concerns-** Effect on possible pig migration routes, high cost, those in favor benefit economically

Billy DeCosta, Pig hunter

**Concerns-** Fences cutting off access, questions about effectiveness

Jeff Chandler, Cultural practitioner

# Written Testimony for CDUA Application: East Kauai Protective Fence Project

Received by February 19, 2009

Name	Title	Representing	In Favor	Opposed
Furfaro, Jay	Councilmember	Kauai County Council	x	
Wann, Presly		Haena/Kalalau Family	x	
Konocho, Ezra	State Representative (Retired)		x	
Rivera, Jeff	KWA	Kauai Ranch	x	
Yuen, Nathan			x	
Bowen, Sarah		Garden Island RC and D	x	
Jacinto, Wayne			x	
Kekua, Kehaulani	Kumu Hula	Halau Palaihiwa O Kaipuwai	x	
Maly, Kepa	Cultural Historian/Resource Specialist	Kumu Pono Associates	x	
Kona, Joseph	Hunter/supporter of ag.	Native Hawaiian hunter	x	
Gunderson, Karen	Project Manager	Kauai Invasive Species Council	x	
Kachi, Aletha	Kupuna/ Hawaiian Cultural Consultant	West Kauai Technology and Visitor Center	x	
Sheehan, Patricia			x	
Sproat-Beck, Stacy	Executive Director	Waipa Foundation	x	
Ushigome, Wayne	Acting Manager/Chief Engineer	Dept. of Water, County of Kauai	x	
Leonard, Patrick	Field Supervisor	US Fish and Wildlife Service	x	
Yukimura, JoAnn	Private Citizen/Former Official	Kauai County Council	x	
Shigemoto, Tom	Vice President	A&B Properties, Inc.	x	
Dill, Larry	Property Administrator	Princeville at Hanalei	x	
Wichman, Chipper	Director and CEO	National Tropical Botanical Garden	x	
Burney, David	Director of Conservation	National Tropical Botanical Garden	x	
Lorence, David	Director of Science	National Tropical Botanical Garden	x	
Smith, Stephen	Principal	Hawaii Forestry Management Consultants	x	
LaBedz, Gordon	Kauai Chapter Chair	Surfrider Foundation	x	
Regush, Rayne		Sierra Club, Kauai Chapter	Concerns	x
Belisle, Glenn				
Hubbard, Mark			x	
Sheen, Margaret			x	
McAluaga, Marsha			x	
Layer, Robert			x	
Nishek, Robert			x	

<u>Name</u>	<u>Title</u>	<u>Representing</u>	<u>In Favor</u>	<u>Opposed</u>
Teshima, Nancy			X	
Laidlaw, Bill			X	
Laidlaw, Lucia			X	
Gabel, Vera			X	
Goldsmith, Glenn			X	
Goldsmith, Jane			X	
Norton, Helen			X	
Norton, Walter			X	
Gabel, Melvin			X	
Judd, David			X	
Paulson, C.O.			X	
Paulson, S.E.			X	
Bergum, Florence			X	
McGerity, Robert			X	
Contival, Joan			X	
Swyers, Connie			X	
Burney, Lida Pigott			X	
Yamada, Edwin			X	
Bockman, Carol			X	
Bockman, Ted			X	
Huntsberger, Karen			X	
Reyes, Maureen			X	
Koplan, Merle			X	
Dawson, Billie			X	
Johnson, Loren			X	
Gerber, Richard			X	
Mayer, Kathy			X	
Brosnahan, Neil			X	
Gibbs, Lock			X	
Ranney, Eleanor			X	
Thornsbery, Bonita			X	
Grunewald, John			X	

East Alakai Protective Fence  
Agencies Parties Prerecording Distribution List

First Name	Last Name	Organization Address	Address	City	State	Zip	Relationship	Status
Imai	Alu	Planning Dept Kauai County	4444 Rice St	Lihue	HI	96766	County Agency	R
Bill "Kalipo"	Aaring	Kauai County Council	4396 Rice St, Suite 206	Lihue	HI	96766	Elected Official	R
Rosselle	Bailey		465 Lilihua Place	Wauku	HI	96793	Local Resident	R
Bryan	Baptiste	County of Kauai	4444 Rice St.	Lihue	HI	96766	Elected Official	R
Gary	Blanch	Kauai Public Land Trust	P.O. Box 1434	Kilauea	HI	96754	Local Business	R
David	Burney	National Tropical Botanical Garden	3330 Papalina Rd	Kalaheo	HI	96741	Recommended	R
Katie	Cassel	Hui O Laka (KRCP)	P.O. Box 100	Kalaheo	HI	96752	Local Business	R
Margaret	Clark	Kauai Native Plant Society	P.O. Box 11	Lawai	HI	96765	Local Agency	R
Michele	Clark		5238 Halelio Rd.	Kapa	HI	96746	Local Resident	R
Paul	Conroy	DLNR - Division of Forestry & Wildlife	P.O. Box 621	Honolulu	HI	96809	State Agency	R
Ian	Costa	County of Kauai Planning Dept	4444 Rice St, Suite 473	Lihue	HI	96766	County Agency	R
Eileen	Coulombe		3764 Kikee Road	Kalaheo	HI	96741	Local Resident	M
Mike	Dakolta		P.O. Box 723	Hanapepe	HI	96716	Local Resident	R
Larry	Dill	Panceville Corp.	P.O. Box 223040	Princeville	HI	96722	Local Agency	R
Kaipo	Duncan	Department of Hawaiian Home Lands	P.O. Box 1879	Honolulu	HI	96805	State Agency	R
Holly	Dye	Namahanua	200 Chambers St Apt 5N	New York	NY	10007	Local Resident	R
Marsha	Enderson	Kokee Natural History Museum	P.O. Box 100	Kekaha	HI	96752	Local Business	R
Linda	Faye-Collins	Kauai Island Utilities Cooperative	4463 Pahe St, Suite 1	Lihue	HI	96766	Local Business	R
Kalani	Florida	Kamehameha Schools	567 South King Street Suite 200	Honolulu	HI	96813	Educational Institution	R
Max	Graham		4334 Rice Street	Lihue	HI	96766	Local Resident	R
Howard	Greene	Gay & Robinson, Inc.	P.O. Box 156	Kaunakani	HI	96747	Local Land Owner	R
Karen	Gundersen	Kauai Invasive Species Committee	P.O. Box 1998	Lihue	HI	96766	Local Agency	R
Wayne	Harata St.		2358 Kamalii St.	Kilauea	HI	96754	Local Resident	R
Laurie	Ho		415 S. Beretania St. Rm #207	Lihue	HI	96766	Local Resident	R
Gary	Hooser	State Senate	2420 Kanio	Honolulu	HI	96813	Elected Official	R
Mark	Hubbard	Kauai Island Burial Council	P.O. Box 278	Lihue	HI	96766	Local Agency	R
Ted	Inouye	East Kauai Soil & Water Conservation	4803 Puuwaia Rd.	Hanamaulu	HI	96715	Local Agency	R
Wayne	Jacinto		3100 Kuhio Hwy, Ste C4	Kalaheo	HI	96741	Local Resident	R
Kanani	Kagawa	Community Resource Coordinator	P.O. Box 652	Lihue	HI	96766	Local Resident	R
Janet	Kakalekono		3060 Eiwa St Room 306	Hanapepe	HI	96714	Local Resident	R
Thomas	Kanoho	DLNR - Division of Forestry & Wildlife	2755 Kapa	Lihue	HI	96766	Local Resident	M
Era	Kanoho		P.O. Box 1000	Waimea	HI	96796	Local Business	R
Aetha	Kaohi	West Kauai Visitor Center	P.O. Box 530	Kalaheo	HI	96741	Local Agency	R
Wayne	Kalayama	Kauai Coffee & Agri Business Dev Board	P.O. Box 413	Koloa	HI	96756	Local Resident	R
Chris	Kau		P.O. Box 3870	Lihue	HI	96766	Local Resident	R
Sabra	Kauka	Garden Isle RC & D	4941 Kuhio Hwy	Kapa	HI	96746	Local Business	R
Kehaulani	Kekua	Kauai Heritage Center	P.O. Box 1998	Lihue	HI	96766	Local Resident	R
Joseph	Kona		3060 Eiwa Street	Lihue	HI	96766	State Agency	R
Ayun	Kyomo	DLNR - Division of Forestry & Wildlife	P.O. Box 621	Honolulu	HI	96809	State Agency	M
Sara	Lemmo	DLNR - Office of Conservation & Coastal Land	3060 Eiwa St. #203	Lihue	HI	96766	State Agency	M
Roland	Licona	Department of Hawaiian Home Lands	P.O. Box 2078	Kapa	HI	96746	Local Agency	M
Paul	Massey	Kauai Native Plant Society						R

Key  
M = Mandatory  
R = Recommended  
O = Optional

East Alakai Protective Fence  
Agencies Parties Prescoping Distribution List

First Name	Last Name	Organization Address	Address	City	State	Zip	Relationship	Status
Christen	Mitchell	DLNR - Forestry & Wildlife	1151 Punchbowl St. Room 325	Honolulu	HI	96813	State Agency	M
Auli	Mitchell	Cultural Surveys Hawaii Inc.	P.O. Box 1114	Kailua	HI	96734	Local Business	M
Hermiona	Mortia	State House of Representatives	415 S. Beretania St.	Honolulu	HI	96813	Elected Official	R
Leland	Nishek	Kaui Landscaping, Inc.	3-1550 Kaunuaui Hwy.	Lihue	HI	96766	Local Business	R
Christine	Ogura	DLNR - Forestry & Wildlife	1151 Punchbowl St. Room 325	Honolulu	HI	96813	Accepting Authority	M
Thomas	Oi	DLNR - Land Division	3060 Ewa Street	Lihue	HI	96766	State Agency	M
Jerry	Ornelas	East Kauai Water Users Cooperative	P.O. Box 800	Kapaa	HI	96746	Local Agency	R
Roy	Oyama	Kauai Farm Bureau	P.O. Box 3895	Lihue	HI	96766	Local Agency	R
Benton	Pang	US Fish & Wildlife	300 Ala Moana Blvd. Rm 3-122	Honolulu	HI	96850	Federal Agency	M
John	Plews		3066 Waiham Road	Honolulu	HI	96813	Local Resident	R
David	Pratt		2741 Nookakula Circle	Lihue	HI	96766	Local Resident	R
Lex	Riggle	Natural Resource Conservation Service	4334 Rice Street Suite 103	Lihue	HI	96766	Federal Agency	O
Jeff	Rivera	Kaui Ranch LLC	P.O. Box 510163	Kealia	HI	96751	Local Resident	R
Roland	Sagum	State House of Representatives	415 S. Beretania St. Rm. #426	Honolulu	HI	96813	Elected Official	R
Patsy	Sheehan	c/o Hanalei Land Company	P.O. Box 81	Hanalei	HI	96714	Local Business	R
Tom	Shigemoto	A & B Properties Inc.	P.O. Box 430	Koala	HI	96756	Land Manager	R
Allan	Smith	Grove Farm Land Corp.	3-1850 Kaunuaui Hwy.	Lihue	HI	96766	Local Land Owner	R
Gary	Smith	Open Space Committee	P.O. Box 750	Lawai	HI	96765	Local Agency	R
Steve	Smith		P.O. Box 351	Lawai	HI	96765	Local Resident	R
Wayne	Souza	DLNR - State Parks Division	3060 Ewa St. Room 306	Lihue	HI	96766	State Agency	R
Linda	Sproat	c/o The Waipa Foundation	P.O. Box 1189	Hanalei	HI	96714	Local Agency	R
Stacey	Sproat-Beck	Waipa Foundation	P.O. Box 1189	Hanalei	HI	96714	Local Agency	R
Molly	Summers	Kaui Community College	3-1901 Kaunuaui Hwy.	Lihue	HI	96766	Educational Institution	R
Neil	Tagawa	Grove Farm Land Corp.	3-1850 Kaunuaui Hwy.	Lihue	HI	96766	Local Land Owner	R
Natalia	Tangalin	National Tropical Botanical Garden	3530 Papalina Rd.	Kaunao	HI	96741	Local Agency	R
Peter	Tausend	Pioneer Hi-Fred Research	P.O. Box 609	Waimea	HI	96796	Local Agency	R
Jan	Tenbruggencale	Honolulu Advertiser - Kauai Bureau	P.O. Box 524	Honolulu	HI	96802	Local News Media	R
Laura	Thielen	DLNR Historic Preservation Division	601 Kamokila Blvd Room 555	Honolulu	HI	967070	State Agency	R
Jeyan	Thrunnam	DLNR - Office of Environmental Quality Control	P.O. Box 3378	Honolulu	HI	96801	State Agency	M
Rick	Tsuchiya	Kaui Historic Preservation Review Commission	4444 Rice St.	Lihue	HI	96766	Local Agency	R
Wynne	Ushibome	Department of Water	P.O. Box 1706	Lihue	HI	96766	Local Business	R
Kawika	Veits	Kaui Native Plant Society	P.O. Box 907	Kapaa	HI	96746	Local Agency	R
Presley	Wann		161 Lihau St	Kapaa	HI	96746	Local Resident	R
Chipper	Wichman	National Tropical Botanical Garden	3530 Papalina Rd.	Kaunao	HI	96714	Local Agency	R
Gayford	Wilcox		111 Royal Circle	Honolulu	HI	96816	Local Resident	R
Ken	Wood		P.O. Box 745	Eleale	HI	96705	Local Resident	R
Jesse	Yorck	Office of Hawaiian Affairs	711 Kapoian Boulevard, Suite 1250	Honolulu	HI	96813	State Agency	R
		Department of Health	3040 Umi Street	Lihue	HI	96766	State Agency	R
		Hanapepe Public Library	P.O. Box B	Hanapepe	HI	96716	State Library	O
		Kapaa Public Library	1464 Kuhio Hwy	Kapaa	HI	96746	State Library	O
		Koala Public Library	P.O. Box 9	Koala	HI	96756	State Library - Nearest	O
		Lihue Public Library	4344 Hardy St.	Lihue	HI	96766	State Library	M
		McBryde Sugar Company, LTD	P.O. Box 8	Eleale	HI	96705	Land Owner	R
		Office of Hawaiian Affairs	3-3100 Kuhio Hwy, C4	Lihue	HI	96766	Local Agency	R
		Princeville Library	4343 Emmalani Dr.	Princeville	HI	96722	State Library	O
		Waimea Public Library	P.O. Box 397	Waimea	HI	96796	State Library	O

Key  
M = Mandatory  
R = Recommended  
O = Optional

Exhibit