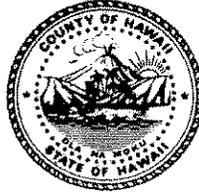


Harry Kim
Mayor



MAY - 8 2007

William Takaba
Director

Nancy E. Crawford
Deputy Director

County of Hawaii

Finance Department

25 Aupuni Street, Room 118 • Hilo, Hawaii 96720
(808) 961-8234 • Fax (808) 961-8248

April 10, 2007

Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Dear Ms. Salmonson:

Subject: Final Environmental Assessment for Hawai'i County Purchase
of Rice Property at Waipi'o Lookout, TMK (3) 4-8-04:0-6,
Hamakua, Island of Hawai'i

The Department of Finance, County of Hawai'i, has reviewed the comments received during the 30-day comment period on the draft environmental assessment that ended on March 27, 2007. Our agency has determined that the project will not have significant environmental effects and has issued a Finding of No Significant Impact (FONSI). Please publish notice of availability for this project in the next available *Environmental Notice*. We have enclosed the following:

- Four copies of the Draft EA
- A completed OEQC Environmental Notice Publication Form
- A distribution list for the Draft EA
- A hardcopy of the project summary (identical to Draft EA summary, which was previously e-mailed to your office)
- A sample "Dear Participant" letter

Please contact Harry Yada at (808) 961-8009 if you have any questions.

Sincerely,

William Takaba
Director of Finance

HY:gs

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OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Genevieve Salmonson, Director
Page 2
April 10, 2007

Attach: Four (4) copies of Final EA
OEQC Transmittal Material

cc: Ron Terry, Ph.D, Project Environmental Consultant (w/o attach)

2007-05-08 - HI - FEA -

MAY - 8 2007

Rice Property at Waipio Lookout

**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout**

Final Environmental Assessment

TMK (3rd) 4-8-04:06

Kukuihaele, Hamakua District, Hawai'i Island, State of Hawai'i

April 2007

Prepared for:
Hawai'i County
Department of Finance
891 Ululani Street
Hilo, Hawai'i 96720

FINAL ENVIRONMENTAL ASSESSMENT

**Hawai'i County Purchase of
Rice Property at Waipi'o Lookout**

TMK: (3rd) 4-8-04:06
Kukuihaele, Hamakua District, Island of Hawai'i, State of Hawai'i

**PROPOSING/
APPROVING AGENCY:**

County of Hawai'i
Department of Finance
891 Ululani Street
Hilo, Hawai'i 96720

CONSULTANT:

Geometrician Associates LLC
P.O. Box 396
Hilo HI 96721

CLASS OF ACTION:

Use of County Funds

This document is prepared pursuant to:
The Hawai'i Environmental Protection Act,
Chapter 343, Hawai'i Revised Statutes (HRS), and
Title 11, Chapter 200, Hawai'i Department of Health Administrative Rules (HAR).

TABLE OF CONTENTS

SUMMARY	ii
PART 1: PROJECT DESCRIPTION, PURPOSE AND NEED AND E.A. PROCESS	1
1.1 Project Description, Location, and Purpose and Need	1
1.2 Summary of Regulatory Requirements	3
1.3 Public Involvement and Agency Coordination	4
1.4 Cost and Schedule	4
PART 2: ALTERNATIVES.....	5
2.1 No Action Alternative	5
2.2 Alternative Locations and Strategies	5
PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION.....	6
3.1 Physical Environment	6
3.1.1 Geology, Soils and Geologic Hazard	6
3.1.2 Drainage, Water Features and Water Quality	7
3.1.3 Flora, Fauna, and Ecosystems	7
3.1.4 Air Quality, Noise and Scenic Resources	8
3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions	9
3.2 Socioeconomic and Cultural	10
3.2.1 Socioeconomic Characteristics	10
3.2.2 Cultural Setting	12
3.2.3 Archaeology and Historic Sites.....	14
3.3 Infrastructure	14
3.3.1 Utilities	14
3.3.2 Roadways.....	15
3.4 Secondary and Cumulative Impacts.....	15
3.5 Required Permits and Approvals.....	15
3.6 Consistency with Government Plans and Policies	16
3.6.1 Hawai'i State Plan.....	16
3.6.2 Hawai'i County General Plan and Zoning	16
3.6.3 Hawai'i State Land Use Law	19
PART 4: DETERMINATION.....	19
PART 5: FINDINGS AND REASONS	20
REFERENCES	22
LIST OF TABLES	
TABLE 1 Project Area Scenic Resources Noted in General Plan	9
TABLE 2 Selected Socioeconomic Characteristics.....	11
LIST OF FIGURES	
FIGURE 1 Rice Property Location Map	2
FIGURE 2 Rice Property TMK Map	3
FIGURE 5 Census Tract 219	11
APPENDIX 1a Comments in Response to Pre-Consultation	
APPENDIX 1b Comments to Draft EA and Responses	
APPENDIX 2 Archaeological Report/Cultural Impact Assessment	
APPENDIX 3 Detected Rice Property Plant Species	
APPENDIX 4 Phase I Environmental Site Assessment	
APPENDIX 5 Photo Figures	
FIGURE A View of Eucalyptus Tree Along North Property Boundary	
FIGURE B Waipi'o Valley View from Rice Property	
FIGURE C Waipi'o Valley Lookout from Rice Property	

**SUMMARY OF THE PROPOSED ACTION,
ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

The Hawai'i County Department of Finance proposes to acquire the Rice Property at the Waipi'o Valley Lookout for future public and community use. An existing structure on the property may be rehabilitated for future use or demolished. This Environmental Assessment (EA) concerns only purchase of the property and possible demolition of the structure; the County plans an additional EA once development plans are finalized in order to address specific impacts such as traffic, parking and utilities.

The Public Access, Open Space, and Natural Resources Preservation Commission was charged with developing and submitting to the Hawai'i County Mayor's Office a prioritized list of lands worthy of purchase by the County and preservation. The commission rated the 1.804-acre Rice Property as the second highest priority for acquisition among all properties considered. Community groups have been active in proposing and seeking funding for programs to protect Waipio Valley. The County of Hawai'i considers it prudent to purchase the Rice Property because it (1) is located at the gateway to Waipi'o Valley; (2) could enhance the existing County Waipi'o Lookout Facilities by providing safety, cultural, and historic information to visitors and residents; (3) could provide additional parking to the lookout area and improve circulation in the Lookout area; (4) might serve as a future ranger station and center for future community programs; and (5) is currently for sale. As few similarly situated and endowed properties are available, failure to acquire the Rice Property would limit the ability of the County to improve public safety and safeguard the resources of Waipi'o Valley.

Because the project involves solely purchase of the Rice Property and no improvements or construction, there would be no construction-phase impacts.

PART 1: PROJECT DESCRIPTION, PURPOSE AND NEED AND ENVIRONMENTAL ASSESSMENT PROCESS

1.1 Project Description, Location and Purpose and Need

The County of Hawai'i proposes to acquire a private property in Kukuihaele for future public and community use (Figures 1-2). TMK 4-8-04:06 (the "Rice Property") is a 1.804-acre property owned by the Rose C. Rice Trust. The property has an unoccupied single-family residence and is currently unused for any purpose. It is located near the southern rim of Waipi'o Valley directly across Waipi'o Road from a County park at the Waipi'o Lookout.

This Environmental Assessment concerns only purchase of the property and possible demolition of the structure. If the County acquires the property, it will develop with community input a plan for its use, and after development of the plan a subsequent Environmental Assessment will address impacts related to plan implementation, including traffic, parking, utilities and other impacts.

The Public Access, Open Space, and Natural Resources Preservation Commission was charged with developing and submitting to the Hawai'i County Mayor's Office prioritized list of lands worthy of purchase by the County and for the following purposes:

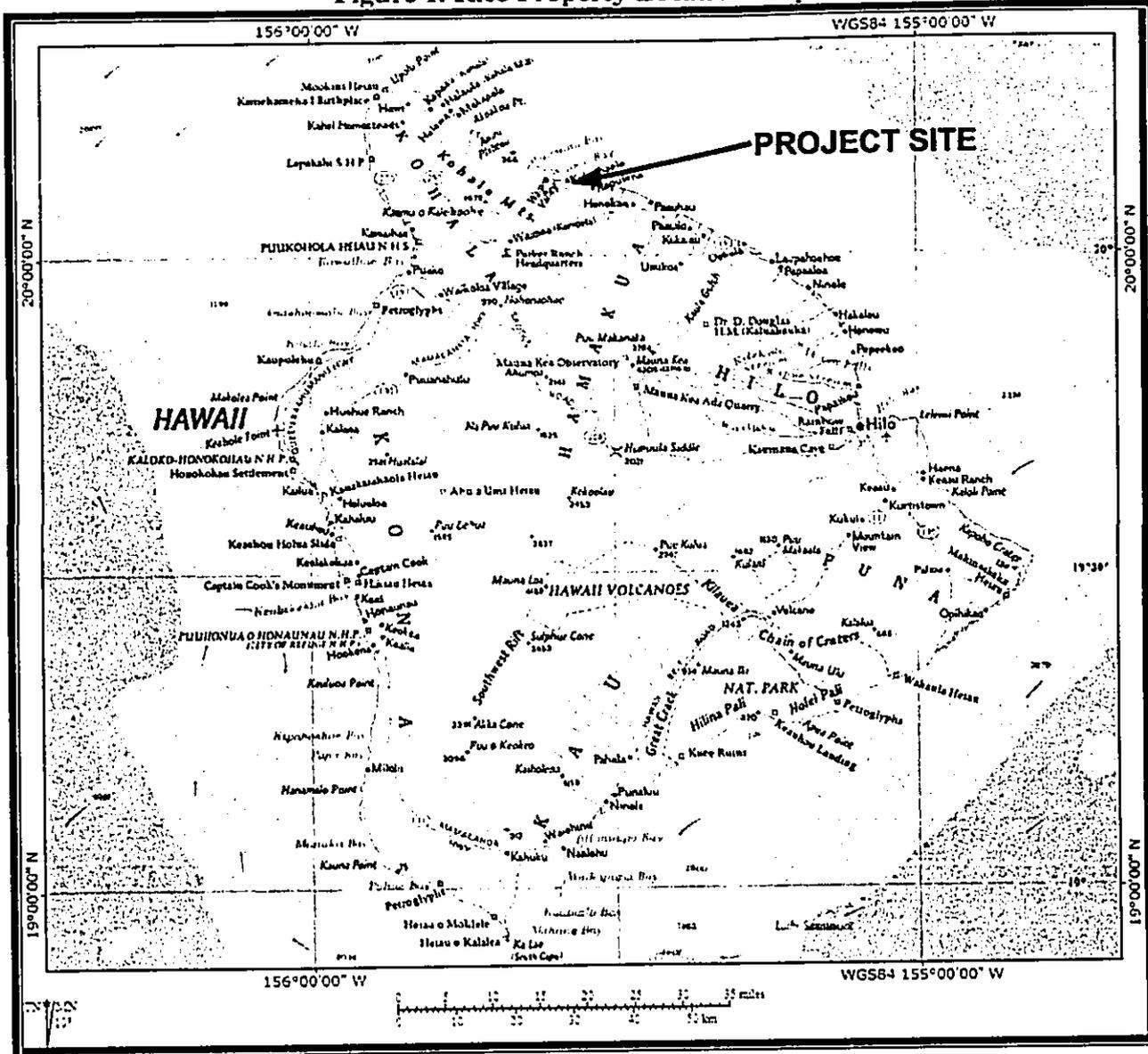
1. Public outdoor recreation and education, including access to beaches and mountains;
2. Preservation of historic or culturally important land areas and sites;
3. Preservation of natural resources, including buffer zones;
4. Preservation of forests, beaches, coastal areas, natural beauty and agricultural lands; and
5. Protection of watershed lands to preserve water quality and water supply.

The commission rated the 1.804-acre Rice Property as the second highest priority for acquisition among all sites considered. Properties submitted for consideration were assessed according to the following criteria:

1. The level of community support, including reported urgency, based on the community input process;
2. Feasibility of acquisition of subject parcels by the Public Access, Open Space, & Natural Resources Preservation Fund and/or other means; and
3. Feasibility of acquisition of subject parcels given context with respect to boundaries, title, maintenance options, and steps towards acquisition.

Several private organizations have been advocating for a ranger program and parking/circulation improvements for the Lookout area, and the County of Hawai'i has coordinated with the group Friends of the Future on a grant from the Hawai'i Tourism Authority for a ranger program. The ranger would refer illegal and or unsafe activities to law enforcement agencies and advise those

Figure 1. Rice Property Location Map



approaching the valley with the intent to enter of the appropriate behavior and the legal requirements for vehicles, road protocols and conditions. The County intends to explore utilizing the property as a possible site to support such programs.

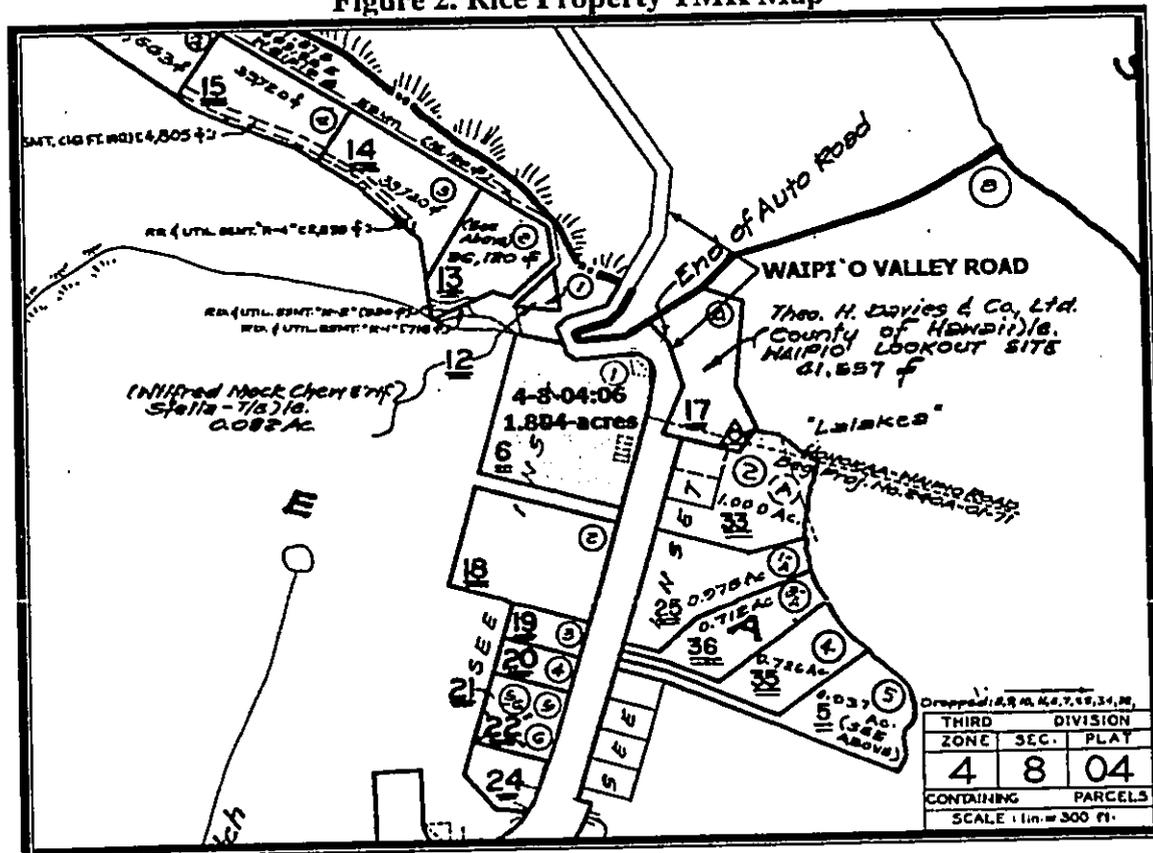
The County of Hawai'i considers it prudent to purchase the Rice Property because it (1) is located at the gateway to Waipi'o Valley; (2) could enhance the existing County Waipi'o Lookout Facilities by providing safety, cultural, and historic information to visitors and residents; (3) could provide additional parking to the lookout area and improve circulation in the Lookout area; (4) might serve as a future ranger station and site for additional community programs; and (5) is currently for sale. Depending upon further investigation of the existing

structure on the property, it may be retained and rehabilitated or it may be demolished as part of the proposed action.

1.2 Summary of Regulatory Requirements

This Environmental Assessment (EA) process is being conducted in accordance with Chapter 343 of the Hawai'i Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawai'i Administrative Rules (HAR), is the basis for the environmental impact assessment process in the State of Hawai'i. According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria. Part 4 of this document states the anticipated finding that no significant impacts are expected to occur; Part 5 lists each criterion and presents the preliminary findings for each made by the Hawai'i County Department of Finance, the proposing agency. If, after considering comments to the Draft EA, the proposing agency concludes that, as anticipated, no significant impacts would be expected to occur, then the agency will issue a Finding of No Significant Impact (FONSI), and the action will be permitted to occur. If the agency concludes that significant impacts are expected to occur as a result of the proposed action, then an Environmental Impact Statement (EIS) will be prepared.

Figure 2. Rice Property TMK Map



1.3 Public Involvement and Agency Coordination

The following agencies and organizations were consulted by letter during development of the Environmental Assessment.

State:

Department of Health, Environmental Health Administration
Department of Land and Natural Resources, Director
Department of Land and Natural Resources, Historic Preservation Division
Department of Transportation, Highways Division
Office of Hawaiian Affairs

County:

County Council
Department of Parks and Recreation
Department of Public Works Fire Department
Department of Water Supply
Planning Department
Police Department

Private:

Friends of the Future/Waipii'o Community Circle Association
Waipi'o Valley Community Association
Honoka'a Business Association
Kanu 'o ka 'Aina NCPCS
Kukuihaele Community Association
Sierra Club
Neighboring Property Owners

Written responses to early consultation letters are contained in Appendix 1a; Appendix 1b contains written comments on the Draft EA and the responses to these comments.

1.4 Cost and Schedule

The value of the property is currently estimated at about \$900,000. The purchase price will be refined through property appraisal and negotiation, and purchase will be subject to the availability of funds within the Public Access, Open Space, and Natural Resources Preservation Fund and/or other funds that may be appropriated by the County. The County plans to purchase the property in early 2007, develop a plan for its use sometime during 2007, prepare a subsequent Environmental Assessment later during the year, and implement the plan as soon as possible thereafter.

PART 2: ALTERNATIVES

2.1 No Action Alternative

Under the No Action Alternative, the County of Hawai'i would not purchase the Rice Property, which would probably be bought by a private buyer. As few similarly situated and endowed properties are available, failure to acquire the Rice Property would limit the County's ability to improve public safety and safeguard the resources of Waipi'o Valley. The County of Hawai'i therefore considers the No Action Alternative undesirable.

2.2 Alternative Locations or Strategies

At any given time, there are usually several properties for sale in the Kukuihaele area, including vacant lots that might be adapted for some of the proposed uses. However, the location of the Rice Property is unique and unmatched by that of any other nearby property. Most properties in the area contain occupied, single-family dwellings, and their utility for public use is poor. None of the properties have the particular and critical advantages of the Rice Property in terms of location, size and views. Therefore, no alternative sites have been identified or advanced in this Environmental Assessment.

Some of the goals for safely managing public use and enjoyment of the gateway to Waipi'o Valley could be accomplished without purchase of additional property. A ranger station could be set up at the existing Waipi'o Valley Lookout, although because of space considerations other uses such as picnicking would be displaced. Restrictions on parking at the lookout could be imposed, if a parking lot/shuttle system could be developed within about a mile of the lookout. Any such arrangements would be inconvenient to users and difficult to enforce, and thus likely ineffective. After careful consideration of alternative strategies, the County does not currently envision any plans that would be worthy of consideration in an Environmental Assessment as an alternative to the proposed purchase.

PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Basic Geographic Setting

The parcel proposed for purchase is referred to throughout this EA as the *Rice Property*. The term *project area* is used to describe the general environs of Waipi'o Valley, Kukuihaele and the Hamakua District.

The Rice Property is located at approximately 910 feet in elevation near the Waipi'o Valley Lookout along Waipi'o Road, in the ahupua'a of Lalakea and the community of Kukuihaele of the Hamakua District (see Figs. 1-2). The site is a short distance from the shoreline *pali* (cliff), on the eastern rim of Waipi'o Valley, a dramatic "cathedral" valley. The vegetation of the project area has been previously disturbed by sugarcane farming, residential and other uses, and the Rice Property is covered with ornamental plants and secondary, weedy trees and shrubs. The average maximum daily temperature is approximately 78 degrees F, with an average minimum of 65 degrees, and annual rainfall averages about 40 inches (U.H. Hilo-Geography 1998:57). Adjacent land is primarily residential, with scattered agricultural uses and undeveloped lots.

3.1 Physical Environment

3.1.1 Geology, Soils and Geologic Hazards

Environmental Setting

Geologically, the Rice Property is located on highly weathered terrain of the Kohala Volcano, astride the steeply sloping side of Waipi'o Valley and near the shoreline *pali*. The surface consists of weathered basalt soils of Pleistocene epoch (approximately 60,000 years old) lava flows from Mauna Kea (Wolfe and Morris 1996). The Rice Property soil is classified by the National Resources Conservation Service (formerly Soil Conservation Service) as Kukaiau silty clay loam, a red soil of 20 to 30 inches thickness above highly weathered basalt. Erosion hazard is moderate for this soil, which was formerly used for sugarcane cultivation (U.S. Soil Conservation Service 1973).

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. Volcanic hazard as assessed by the United States Geological Survey in this area is 8 on a scale of ascending risk 9 to 1 (Heliker 1990:23). This relatively low risk rating is based on the long time since the area has been affected by vulcanism from either Mauna Kea or Kohala volcano. Volcanic hazard zone 8 areas have had only a few percent of their land area covered by lava or ash flows in the last 10,000 years.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Probability Rating (*Uniform Building Code, 1997 Edition, Figure 16-2*). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built, as the 6.7-

magnitude (Richter) quake of October 15, 2006, demonstrated. The portion of the Rice Property bounded by a small gulch and Waipi'o Valley Road has very steep slopes. Apart from these slopes, which may be active, the Rice Property does not appear to be subject to subsidence, landslides or other forms of mass wasting.

Impacts and Mitigation Measures

The valley side of the Rice Property may have active or unstable slopes that should be evaluated by a professional engineer if uses are proposed for this area. Apart from these concerns confined to a portion of the Rice Property, geologic conditions impose no constraints on the proposed action, and the purchase is not imprudent to undertake.

3.1.2 Drainage, Water Features and Water Quality

Existing Environment

The project area has one surface water body, a small stream located along a portion of the northern (i.e., valley side) boundary of the property. No known areas of local (non-stream related) flooding are present. The Flood Insurance Rate Maps (FIRM) 1551660200C (9/16/1988) show that the Rice Property is in Flood Zone X, outside of the 100-year or 500-year floodplain.

Impacts and Mitigation Measure

Because the action involves no construction or modification of the site, there would be no adverse impacts to drainage, water quality, or water features. A future Environmental Assessment would address impacts, if any, of development.

3.1.3 Flora, Fauna and Ecosystems

Existing Environment

The natural vegetation of this part of Hamakua was most likely lowland rain forest dominated by hala (*Pandanus tectorius*) and 'ohi'a (*Metrosideros polymorpha*) (Gagne and Cuddihy 1990). These original communities, however, have been destroyed or heavily degraded by cattle grazing, sugarcane agriculture and clearing for farms and residences, and the vegetation of the project area is now either managed vegetation (i.e., farms, pasture or landscaped grounds) or adventive "communities" of various alien weeds.

A walk-through biological survey of the Rice Property was performed on October 21, 2006, and Appendix 3 is a list of the plant species that were detected. These include a large number of cultivated and ornamental species, many of which have either been planted on the Rice Property or have "escaped" from residential parcels on the periphery of the site. No listed, candidate or proposed endangered plant species (USFWS 2007) were found, or would be expected to be

found, on the Rice Property. In terms of conservation value, no botanical resources requiring special protection are present.

Hawaiian Hawks (*Buteo solitarius*) and Hawaiian hoary bats (*Lasiurus cinereus semotus*), both of which are listed endangered species, are often seen in the general area. The native trees favored by Hawaiian Hawks for nesting are not present in the alien vegetation on the Rice Property and immediately surrounding areas. Habitat requirements for bats are not yet well known, but they appear to feed and roost in a number of different types of native and alien vegetation.

Impacts and Mitigation Measures

Because of the nature of the project, and the lack of native ecosystems and threatened or endangered plant species, no adverse impacts to botanical resources would occur as a result of the action.

Neither County purchase of the property nor its eventual use for programs related to Waipi'o Valley would likely pose any impact to Hawaiian hawks or Hawaiian hoary bats.

3.1.4 Air Quality, Noise, and Scenic Resources

Environmental Setting, Impacts and Mitigation Measures

Air quality in the project area, which is far removed from urban land uses, is good, and there are no apparent air pollution problems.

Noise on the Rice Property is low and derived mainly from motor vehicles using Waipi'o Valley Road and the Waipi'o Valley Lookout parking area, with occasional noise from residential and road maintenance activities.

Several locations in the project area, including the Waipi'o Valley Lookout, are noted as sites of particular natural beauty by the Hawai'i County General Plan, and are shown in Table 1. The General Plan also notes, in Chapter 7, Natural Beauty,

“The Hamakua district is tropically lush along the lower elevations. The coast is marked by densely vegetated gulches and valleys highlighted by silvery green Kukui trees. The most famous of these is Waipi'o Valley. This valley is the most accessible in the series of windward valleys. The natural and scenic beauty of Waipi'o with its waterfalls and tropical rainforests has attracted people for many years.”

Table 1. Project Area Scenic Resources Noted in General Plan

Site	Tax Map Key	Ahupua'a or Region
Waipi'o Valley Lookout	4-8-04:17	Lalakea
Windward Valley System: - Muliwai to Awini; - Waimanu Valley Area; - Waipi'o Valley Area	4-9-01 to 15	Waipi'o, Muliwai-Awini, Waimanu
Hi'ilawe Falls	4-9-09	Waipi'o

Portions of the Rice property, across the street from the Waipi'o Valley Lookout, have dramatic views of Waipi'o Valley, a portion of the windward Kohala Coast beyond, and the ocean (App. 5, Figures A & B). The purchase of the property would provide a setting for enhanced viewpoints and better management of the lookout, reducing the impact of parking, traffic and inappropriate uses on this scenic area. Under the No Action Alternative, public management would not be possible, and the value of the site as a scenic resource might not be preserved.

As the project involves no construction, air quality or noise levels would not be affected.

3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions

Environmental Setting, Impacts and Mitigation Measures

In order to ascertain the potential for environmental issues to exist on or near the property, including the past releases of hazardous materials, a Phase I Environmental Site Assessment (ESA) was performed by DR Associates, which is contained in full in Appendix. 4. Site reconnaissance, historical review, interviews, and record review resulted in the following conclusions:

- With the exception of small oil spots on the concrete floor, stains in the floor of the stand-alone garage and debris on the property, this assessment found no evidence of a release of hazardous materials and/or petroleum products on the subject property. All clues indicate that staining on the soil floor of the stand-alone garage was moisture running down the hillside into the garage, but this is not confirmed.
- No evidence of use or release of hazardous materials and/or petroleum products on adjacent parcels was found from site reconnaissance, interviews or public records. The earliest historical maps available show the subject property has been used for residential purposes since at least 1957. County records show that the house was built in 1948, and no there is no information that indicates any prior development.
- Hamakua Sugar Company and its predecessors may have farmed sugarcane on the property, but no records of sugarcane use were located. The soils on the site may have a relatively high level of naturally occurring arsenic, as do many of the volcanic soils in Hawai'i. In addition, the property's use for sugarcane cultivation may indicate that other arsenic-containing compounds were used. Arsenic is sometimes present in former sugar cane soils at levels that can require action if the land is proposed for certain uses. No

systematic testing for arsenic was conducted, but the fact that cultivation likely ceased around or before mid-century on this property, which does not appear to have housed a mill, equipment yard or other industrial facility, lowers the chances that arsenic would be present. Based on these factors, there does not appear to be sufficient justification for systematic testing. In most areas of the State, mere use as a cane field would not indicate the presence or likely presence of hazardous materials; however, due to recent discoveries of high levels of arsenic around Kea'au, the County may choose to do a screening sample for arsenic before preparing work orders for site work that may expose contractors to on-site soil. The objective of an arsenic screening would be to reduce the probability of contractor change orders as a result of elevated arsenic content.

- The building was constructed during a time when hazardous materials such as asbestos, lead-based paint and Canec were commonly used. Although there was no formal building material survey done for this assessment, Canec is present and other hazardous building materials may also be present in the structure. A licensed building inspector should be contracted prior to renovation or demolition of the structure.
- Because the property occupies a prominent position near the head of the Waipi'o Valley Road, it has a long history of people passing nearby and possibly dumping waste that either would not be needed or could not be transported into the valley. Abandoned vehicles are present on the property, some of which have been engulfed in the vegetation or buried in the yard. These are seen as more of a potential development cost than a threat to public health and the environment. As items such as these are encountered upon clearing various portions of the property, assessment of the environmental implications of these finds should be undertaken.

This assessment finds no evidence of environmental conditions that would limit the use, activities, value or utility of the property. This conclusion is subject to the limitations discussed above.

3.2 Socioeconomic and Cultural

3.2.1 Socioeconomic Characteristics

The project would most directly affect and benefit the communities of Kukuihaele and Waipi'o Valley, with wider benefit to all users of Waipi'o Valley, visitors and residents alike. Table 2 provides information on the socioeconomic characteristics of the project area (Census Tract 219), along with those of Hawai'i County as a whole for comparison, from the United States 2000 census. Figure 3 shows the geographic extent of Census Tract 219, which includes Kukuihaele, Waipi'o Valley, and Honoka'a.

Impacts

The action would require the expenditure of \$900,000 for acquisition of the Rice Property. The project would benefit public health and welfare in the project area by allowing public ownership of the Rice Property for public and community benefit.

3.2.2 Cultural Setting

Existing Environment Impacts and Mitigation Measures

A cultural and archaeological study of the subject area was conducted by Rechtman Consulting, Inc. It is attached as Appendix 2 and summarized in this and the next section.

The purpose of the study was to document the presence of any historic or traditional cultural properties that might exist within the project area, assess their significance, determine if any impacts would occur, and formulate mitigation, if appropriate. The study used historic maps and documents, archaeological summaries of the area, and field investigation. This information provided a context for the search for potential historic or traditional cultural properties. Also of interest was a cultural-historical study of Waipi'o Valley by the Bernice B. Bishop Museum (Lebo et al 1999), which provides detailed information on the cultural importance of the valley. In the summary presented below, scholarly references have been largely omitted, and the interested reader is referred to Appendix 2 and Lebo et al 1999 for details.

Waipi'o is associated with several of the most prominent of the Hawaiian ali'i. It is also noted as a bountiful source of food, especially *kalo* (taro), which figures importantly as not only the staple of sustenance in Hawai'i but also as a rich cultural symbol. At least 2,600 people occupied the valley. This home of royalty in the time of 'Umi was also the location of one of the two principal *pu'uhonua* (places of refuge) on the island of Hawai'i. There are at least seven heiau, including Paka'alana, the site of the *pu'uhonua*. The housing cluster at Napo'opo'o, situated where Hi'ilawe Valley joins Waipi'o Valley, and Hi'ilawe and Nanaue Falls, are other frequently mentioned places. Important and storied fishponds and royal bathing ponds are also present.

Dozens of traditional tales of supernatural and historical beings involve Waipi'o. Notable are Lono, Kane, Kuka'ilimoku, Kanaloa, Maui, Wakea, Milu, Puapualenalea, Nanaue (or Nenewe), Mo'ikeha, 'Olopana, Kiha, Liloa, and 'Umi. According to the Bishop Museum report:

"Lono chose as his wife, Kaikilaniali'iopuna, who lived in a breadfruit grove near Hi'ilawe Falls. The gods Kane and Kanaloa, along with lesser gods, are said to have resided at Alakahi in Waipi'o. Maui is supposed to have gained possession of Ipumakania La'amaomao, the 'gourd of constant winds,' from Kalei'olu, a kahuna in Waipi'o Valley. Maui eventually dies in Waipi'o when he tries to steal bananas from some of the gods residing there. In old age, Wakea went to live in Waipi'o Valley, where he eventually died and then established a kingdom in the land of the dead. He was succeeded as ali'i of Waipi'o by Milu. The ali'i Milu becomes the ruler of the land of the dead when he disobeys Kane and is sent to the underworld. There are several versions of the story of the theft of the shell trumpet, Kiha-pu, in Waipi'o Valley by the man-dog, Puapualenalena. The ali'i are unable to obtain a solid night of sleep because the spirits or gods blow the Kiha-pu all night. Puapualenalena, who is an excellent thief, is asked by an ali'i, variously reported to be Kiha or Laloa or Hakau, to steal the Kiha-pu, which he successfully accomplishes. As the offspring of a mortal (Kalei) and a shark-god

(Kamohoali'i), Nanaue lives near a waterfall on the west side of Waipi'o Valley. Mysterious disappearance of men from the valley are eventually traced to Nanaue, who has a shark's mouth on his back and has developed a taste for human flesh. He escapes to Hana."

Of historical importance is the fact that, Liloa, who unified the island of Hawai'i, lived in Waipi'o Valley. His son 'Umi, a great farmer and fisherman who deposed his reportedly cruel brother, was an extremely important ali'i associated with events and structures throughout the island. A lo'i (taro patch) in Waipi'o bears his name.

Ethnohistorical traditions indicate that Waipi'o was associated with at least nine successive Pili line rulers of Hawai'i Island, from Kaha'imoele'a to Umi (from roughly AD 1460 to 1620). Prior to the establishment of these Pili rulers, Waipi'o was the residential base for powerful local rulers dating back to at least the AD 1200s. The royal residential area is described as being situated toward the mouth of the valley inland of the sand dunes. In this area were also located several *heiau*, a bathing pond, and two large fishponds. Three of these *heiau* are famed *luakini heiau*, and all appear to have remained in use until the abolition of the *kapu* system. Paka'alana Heiau was one of the most important national *heiau*. The Paka'alana compound, which also seemed to have served as a pu'uhonua, contained the royal mausoleum known as Hale o Līloa, which was destroyed in 1830. The sennit-encased remains (*kā'ai*) of Līloa and his grandson are said to have been removed prior to destruction of the mausoleum and taken to the Bishop Museum. Honua'ula Heiau is said to have been constructed by 'Umi and the place where he offered the sacrifice of his brother Hākau, who was killed by 'Umi in the overthrow that led to 'Umi's succession as ruler. Moa'ula Heiau was repaired and reconsecrated by Kalaniopu'u sometime around 1780. It was dedicated to the war god Kūkā'ilimoku, and in that ceremony Kalaniopu'u proclaimed his son Kiwala'o heir to the throne and placed his nephew Kamehameha in charge of the deity. This act is cited as setting the stage for the schism between cousins that eventually led to Kamehameha's rise to power.

Pukui et al. (1976:114) refer to the cliff on the Hāmākua side of Waipi'o Valley as Koa'e-kea, and relate that "Kāne and various gods lived at the top of this cliff at a place called Hōkū-welowelo (comet); their conch sounded every night, to the annoyance of Chief Hākau, who ordered the thieving dog, Puapualenalena, to steal it."

Prior to and during the *Māhele* it appears that Lālākea, which contains the Rice Property, was an *ili kupono* of Waipi'o. It was not until the legal proceedings of the Boundary Commission that Lālākea appears to have been given independent *ahupua'a* status. It was retained as crown land. The area of Lālākea occupied by the Rice Property, outside Waipi'o Valley proper, is not associated with any of the traditional cultural properties known from the valley.

As part of the current study, an effort was made to obtain information from knowledgeable informants about any potential traditional cultural properties and associated practices that might be present or have taken place in Lalakea ahupua'a. Elliot Markell, Margaret Loo and Kelly Loo were consulted. Ms. Loo provided the information that the property was cultivated with

sugarcane before the Rice family moved the house to the land in the late 1970s or early 1980s. The house came from what was called Stable Camp at Kukuihaele. None of the informants provided information relative to the existence of traditional cultural properties, or ongoing traditional and customary practices such as gathering, in the immediate vicinity of the Rice Property. Mr. Loo expressed that he was in favor of the proposed County acquisition of the Rice property and the development of a ranger station, especially if it meant educating the tourists and providing additional parking for the lookout area.

As no resources or practices of a potential traditional cultural nature (i.e., landform, vegetation, etc.) appear to be present on or near the Rice Property, and there is no evidence of any traditional gathering uses or other cultural practices, the proposed construction and maintenance would not appear to impact any culturally valued resources or cultural practices.

In a wider sense, as the purchase would be the first step in developing a base for a program to protect the natural and cultural resources of Waipi'o Valley, as well as for educational and cultural activities, substantial beneficial cultural impact is expected.

3.2.3 Archaeology and Historic Properties

Existing Environment, Impacts and Mitigation Measures

A cultural and archaeological study of the subject area was conducted by Rechtman Consulting, Inc., (see Appendix 2). The archaeological assessment identified no archaeological sites or other historic properties on the Rice Property. The existing structure dates from the 1960s or 1970s and has no historic or architectural value. The archaeological assessment has been submitted to the State Historic Preservation Division (SHPD), which is expected to concur with the findings of the archaeologist that the project would have no adverse effect on historic properties. The Final EA will document correspondence with SHPD.

In the unlikely event that archaeological resources or human remains are encountered during future development activities within the current study area, work in the immediate area of the discovery should be halted and DLNR-SHPD contacted as outlined in Hawai'i Administrative Rules 13§13-275-12.

3.3 Infrastructure

3.3.1 Utilities

Existing Facilities and Services and Impacts

Electrical power to the site is supplied by Hawai'i Electric Light Company (HELCO), a privately owned utility company regulated by the State Public Utilities Commission, via their island-wide distribution network. Telephone service is available from Hawaiian Telcom. The single-family residence has a cesspool. An existing 4-inch waterline provides water service from the Hawai'i

County Department of Water Supply (DWS) to lots on Waipi'o Road. According to DWS (see letter of November 17, 2006, in Appendix 1), the existing booster pump does not have sufficient capacity to provide additional water at this time. Water may become available if the booster pump is upgraded or replaced to provide additional water. No estimates of the cost of an upgrade or replacement are currently available.

Although the action would not have any substantial impact on existing utilities, as no improvements or modifications to the site are planned at this time, if future plans involve water use, improvements to the County water system may be required. After development of a plan for use of the property, a subsequent Environmental Assessment will address utility impacts related to plan implementation.

3.3.2 Roadways

Existing Facilities, Impacts and Mitigation Measures

The site is presently accessed by Waipi'o Valley road, a two-lane County road. Because the Rice property is presently unused and the proposed purchase would not involve use or improvement of the site, the action would have no impact on traffic; traffic impacts related to development of the site and possible mitigation would be discussed in an additional Environmental Assessment.

3.4 Secondary and Cumulative Impacts

The project will not involve any secondary or cumulative impacts, such as population changes or effects on public facilities.

Cumulative impacts result when implementation of several projects that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. The project, being limited to acquisition of the property, has no direct impacts. So, there would be no impacts that could act cumulatively with those of other actions. At the current time, according to files at the Planning Department, there do not appear to be any roadway, utility or development projects being undertaken in the Waipi'o Valley or Kukuihaele areas that would combine in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.

3.5 Required Permits and Approvals

The following permits and approvals would be required:

- County Council Approval for Purchase of Property

3.6 Consistency with Government Plans and Policies

3.6.1 Hawai'i State Plan

Adopted in 1978 and last revised in 1991 (Hawai'i Revised Statutes, Chapter 226, as amended), the Plan establishes a set of themes, goals, objectives and policies that are meant to guide the State's long-run growth and development activities. The three themes that express the basic purpose of the *Hawai'i State Plan* are individual and family self-sufficiency, social and economic mobility and community or social well-being. The proposed project would promote these goals by providing an appropriate site for additional recreational and educational opportunities for the project area, thereby enhancing quality-of-life and community and social well-being.

3.6.2 Hawai'i County General Plan and Zoning

The *General Plan* for the County of Hawai'i is a policy document expressing the broad goals and policies for the long-range development of the Island of Hawai'i. The plan was adopted by ordinance in 1989 and revised in 2005 (Hawai'i County Department of Planning). The *General Plan* itself is organized into thirteen elements, with policies, objectives, standards, and principles for each. There are also discussions of the specific applicability of each element to the nine judicial districts comprising the County of Hawai'i. Most relevant to the proposed project are the following Goal and Policies, and Courses of Action of particular chapters of the General Plan:

HISTORIC SITES

6.2 GOALS

- (a) Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawai'i.
- (b) Appropriate access to significant historic sites, buildings, and objects of public interest should be made available.

6.3 POLICIES

- (d) Public access to significant historic sites and objects shall be acquired, where appropriate.
- (h) Aid in the development of a program of public education concerning historic sites.

6.4 STANDARDS

- (a) The evaluation of the importance of specific historic sites is necessary for future action. The following standards establish a framework for evaluating sites:
 - (b) Importance in the life or activities of a major historic person.
 - (d) Associated with a major historic event (cultural, economic, military, social, or political).
 - (f) Associated with a past or continuing institution that has contributed substantially to the life of the community.
- (k) Sites of traditional and cultural significance.

Discussion: Waipi'o Valley is a significant historic site according to the criteria above. The project would provide a first, strategic step in the creation of a program of public education

relating to Waipi'o Valley and may also protect the Valley through definition of appropriate access. Therefore the action satisfies relevant goals, policies, and courses of action for historic sites in Hawai'i County.

NATURAL BEAUTY

7.2 GOALS

- (a) Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.
- (b) Protect scenic vistas and view planes from becoming obstructed.
- (c) Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

7.3 POLICIES

- (a) Increase public pedestrian access opportunities to scenic places and vistas.
- (d) Access easement to public or private lands that have natural or scenic value shall be provided or acquired for the public.
- (i) Do not allow incompatible construction in areas of natural beauty.

7.4 STANDARDS

The following standards provide guidelines for designating sites and vistas of extraordinary natural beauty that shall be protected.

- (a) Distinctive and identifiable landforms distinguished as landmarks, e.g. Mauna Kea, Waipi'o Valley.

Discussion: County acquisition of the Rice Property would prevent its development in a manner that is inconsistent with the natural beauty of the area, would provide an opportunity for present and future generations to have access to this resource, and would allow future development of the site to be done in such a way as to protect the natural beauty of Waipi'o Valley. Therefore the action is consistent with relevant goals, policies, and courses of action of the Natural Beauty section of the Hawai'i County General Plan.

NATURAL RESOURCES

8.2 GOALS

- (a) Protect and conserve the natural resources from undue exploitation, encroachment and damage.
- (b) Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.
- (c) Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.
- (e) Protect and effectively manage Hawaii's open space, watersheds, shoreline, and natural areas.

8.3 POLICIES

- (b) Encourage a program of collection and dissemination of basic data concerning natural resources.

- (h) Encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.
- (i) Encourage an overall conservation ethic in the use of Hawaii's resources by protecting, preserving, and conserving the critical and significant natural resources of the County of Hawaii.
- (u) Ensure that activities authorized or funded by the County do not damage important natural resources.

Discussion: Although specific plans for the Rice Property will be the subject of a forthcoming Environmental Assessment that would occur after development of a plan for the property, the plans will likely include an educational facility for the purpose, in part, of protecting the important natural and cultural resource of Waipi'o Valley, consistent with the goals, standards and policies of the Natural Resources chapter of the Hawai'i County General Plan.

RECREATION

12.2 GOALS

- (a) Provide a wide variety of recreational opportunities for the residents and visitors of the County.
- (b) Maintain the natural beauty of recreation areas.
- (c) Provide a diversity of environments for active and passive pursuits.

12.3 POLICIES

- (a) Strive to equitably allocate facility-based parks among the districts relative to population, with public input to determine the locations and types of facilities.
- (c) Recreational facilities shall reflect the natural, historic, and cultural character of the area.
- (d) The use of land adjoining recreation areas shall be compatible with community values, physical resources, and recreation potential.
- (g) Facilities for compatible multiple uses shall be provided.
- (h) Provide facilities and a broad recreational program for all age groups, with special considerations for the handicapped, the elderly, and young children.
- (i) Coordinate recreational programs and facilities with governmental and private agencies and organizations. Innovative ideas for improving recreational facilities and opportunities shall be considered.
- (j) Develop local citizen leadership and participation in recreation planning, maintenance, and programming.
- (s) Consider alternative sources of funding for recreational facilities.

12.4 STANDARDS

- (f) Parks for General Use:
 - Centered around a major natural asset, such as a sandy beach, a prime forest, or a volcanic feature and includes historic sites whenever feasible.
 - Designed to accommodate users from throughout the County.

12.5.4.2 Courses of Action

- (b) Encourage the recreational development of Waipi'o and Waimanu Valleys as natural and wilderness areas. Encourage the State to provide small recreation sites on the edge of Waipio Valley.

Discussion: The Rice Property may be developed as a park centered around a significant natural resource. Development of the property may help maintain the natural beauty of the area. Therefore, the proposed action satisfies relevant goals, policies, and courses of action of the Hawai'i County General Plan related to recreational facilities in Hawai'i County and Hamakua.

The *Hawai'i County General Plan Land Use Pattern Allocation Guide (LUPAG)*. The LUPAG map component of the *General Plan* is a graphic representation of the Plan's goals, policies, and standards as well as of the physical relationship between land uses. It also establishes the basic urban and non-urban form for areas within the planned public and cultural facilities, public utilities and safety features, and transportation corridors. The Rice Property is classified as Important Agricultural Land in the LUPAG. While the General Plan's policy for this classification is intended to preserve important agricultural lands, the Rice Property has not been cultivated for some time, if ever, and the proposed acquisition would not result in loss of cultivated land.

Hawai'i County Zoning. The Rice Property and all adjacent parcels are zoned A-40a, agricultural. The action, involving only acquisition of the Rice Property, would by nature be consistent with this zoning. A discussion of zoning conformance with planned use of the site, which would be determined as part of a plan for the property, would be the subject of an additional Environmental Assessment. Community use structures may be permitted within this zoning designation with a Special Permit and Plan Approval by the Planning Department. approval. The property is not situated within the County's Special Management Area (SMA).

3.6.3 Hawai'i State Land Use Law

All land in the State of Hawai'i is classified into one of four land use categories – Urban, Rural, Agricultural, or Conservation – by the State Land Use Commission, pursuant to Chapter 205, HRS. The property is in the State Land Use Agricultural District. The purchase of the property for eventual use as a park and education center is consistent with intended uses for this Land Use District.

PART 4: DETERMINATION

The Hawai'i County Department of Finance, after considering the information in the Draft EA and the comment letters in response to it, has determined that the proposed project will not significantly alter the environment. Therefore, an Environmental Impact Statement is not warranted and the Department of Finance has issued a Finding of No Significant Impact (FONSI).

PART 5: FINDINGS AND REASONS

Chapter 11-200-12, Hawai'i Administrative Rules, outlines those factors agencies must consider when determining whether an Action has significant effects:

1. *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* No valuable natural or cultural resources would be committed or lost by the project, which only involves County acquisition of a property for public use. The action will provide the possibility for preservation of a scenic resources and will assist in protecting Waipi'o Valley, an important natural and cultural resource.
2. *The proposed project will not curtail the range of beneficial uses of the environment.* The proposed project expands and in no way curtails beneficial uses of the environment.
3. *The proposed project will not conflict with the State's long-term environmental policies.* The State's long-term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. The project is minor, environmentally beneficial, and fulfills aspects of these policies calling for an improved social environment. It is thus consistent with all elements of the State's long-term environmental policies.
4. *The proposed project will not substantially affect the economic or social welfare of the community or State.* The project will benefit the social welfare of the community and State by allowing for use of the property for public benefit.
5. *The proposed project does not substantially affect public health in any detrimental way.* The proposed project will allow potential benefit to public health.
6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* No secondary effects are expected to result from the proposed action, which only involves acquisition of a property intended for public use and would not induce in-migration or affect public facilities.
7. *The proposed project will not involve a substantial degradation of environmental quality.* The project is minor and environmentally benign, and would thus not contribute to environmental degradation. The action will allow future use of the Rice Property to improve environmental quality.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* The Rice Property supports overwhelmingly alien vegetation. Impacts to rare, threatened or endangered species of flora or fauna will not occur.
9. *The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.* The project is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* Due to the character of the project no adverse effects on these resources would occur.
11. *The project does not affect nor would it likely to be damaged as a result of being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area,*

geologically hazardous land, estuary, fresh water, or coastal area. Although the project is located in an area with volcanic and seismic risk, the entire Island of Hawai'i shares this risk, and the project is not imprudent to undertake.

12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* The project area is noted for its natural beauty in the Hawai'i County General Plan. However, the project will not adversely impact these view planes, and future use of the Rice Property may assist in their preservation.
13. *The project will not require substantial energy consumption.* The project involves no construction. No adverse effects to energy consumption would be expected.

For the reasons above, the action would not have any significant effect in the context of Chapter 343, Hawai'i Revised Statutes and section 11-200-12 of the State Administrative Rules.

REFERENCES

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**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout**

Environmental Assessment

APPENDIX 1A

COMMENTS IN RESPONSE TO PRE-CONSULTATION



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I

345 KEKŌANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8657

November 17, 2006

Mr. Ron Terry
Geometrician Associates, LLC
P.O. Box 396
Hilo, HI 96721

**PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION
PROPERTY NEAR WAIPIO LOOKOUT
TAX MAP KEY 4-8-004:006**

This is in response to your Pre-Environmental Assessment Consultation letter of October 11, 2006.

Please be informed there is an existing 4-inch waterline within Honokaa-Waipio Road that ends near the eastern corner of the subject parcel, on the makai side of the road.

Water availability in the area allows for one unit of water, or one 5/8-inch meter, at a maximum of 600 gallons per day, per existing lot of record. However, the existing booster pump serving the Waipio Lookout area does not have sufficient capacity to provide additional water at this time. Water may become available for the subject parcel if the existing booster pump is upgraded or replaced to provide additional water. Plans for the booster pump upgrade/replacement must be submitted to the Department for review and approval prior to granting service to the subject parcel.

Should the proposed use of the subject parcel require water service, the Department would request estimated maximum daily water usage calculations, prepared by a professional engineer licensed in the State of Hawai'i, for review and approval. If the calculations show that the estimated water demand will be greater than 600 gallons per day, the Department will not be able to provide water service.

If a meter is installed, a reduced pressure type backflow prevention assembly must be installed within five feet of the meter on private property. The installation of the backflow prevention assembly must be inspected and approved by the Department before commencement of water service.

Should there be any questions, please contact Mr. Finn McCall of our Water Resources and Planning Branch at 961-8070, extension 255.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

FM:sco

... Water brings progress...

The Department of Water Supply is an Equal Opportunity provider and employer. To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington DC 20250-9410. Or call (202) 720-5964 (voice and TDD)

Harry Kim
Mayor



Lawrence K. Mahuna
Police Chief

Harry S. Kubojiri
Deputy Police Chief

County of Hawaii

POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-8869

November 3, 2006

Mr. Ron Terry, Ph.D.
Principal
Geometrician Associates, LLC.
P. O. Box 396
Hilo, Hawaii 96720

Dear Dr. Terry:

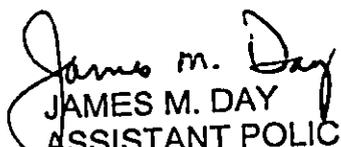
SUBJECT: ENVIRONMENTAL ASSESSMENT FOR PROPOSED COUNTY
PURCHASE OF PROPERTY NEAR WAIP'I'O LOOKOUT, HAMAKUA,
ISLAND OF HAWAI'I; TMK: 4-8-04: 06

Staff, upon visiting the proposed purchase site, is of the opinion that the purchase of the property would significantly benefit the parking and traffic problems currently in existence in the area. Therefore, we have no negative comments or concerns.

Thank you for the opportunity to comment.

Please provide us with a copy of the Draft EA upon its completion.

Sincerely,


JAMES M. DAY
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

EWR:lli

Harry Kim
Mayor



Darryl J. Oliveira
Fire Chief

Desmond K. Wery
Deputy Fire Chief

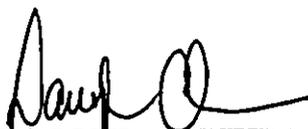
County of Hawai'i
FIRE DEPARTMENT
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720
(808) 961-8297 • Fax (808) 961-8296

October 16, 2006

Mr. Ron Terry
Geometrician Associates
P.O. Box 396
Hilo, Hawaii 96721

SUBJECT: ENVIRONMENTAL ASSESSMENT
Purchase of Property near Waipio Lookout, Hamakua, Hawaii
TAX MAP KEY: 4-8-04:06

We have no comments to offer at this time in reference to the above-mentioned Environmental Assessment.


DARRYL OLIVEIRA
Fire Chief

PBE:lpc



Harry Kim
Mayor



Christopher J. Yuen
Director

Brad Kurokawa, ASLA
LEED® AP
Deputy Director

County of Hawaii
PLANNING DEPARTMENT

101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043
(808) 961-8288 • FAX (808) 961-8742

November 22, 2006

Mr. Ron Terry
Geometrician Associates, LLC
HC 2, Box 9575
Keaau, Hawaii 96749

Dear Mr. Terry:

**SUBJECT: Environmental Assessment for Proposed County Purchase of Property Near
Waipi'o Lookout, Hamakua, Island of Hawai'i
Tax Map Key: 4-8-004:006**

We are in receipt of your letter, dated October 11, 2006, requesting comments from the Planning Department regarding your preparation of a Draft Environmental Assessment for the referenced proposal by the County of Hawaii to purchase the subject property for use as a headquarters for programs to safeguard the unique resources of Waipi'o Valley. Uses under consideration by the County include a ranger station, public parking, and a site for distributing safety, cultural and historical information for visitors and residents.

The subject 1.804-acre parcel is zoned Agricultural (A-40a) by the County of Hawaii and is situated in the State Land Use Agricultural district. The property is not in the Special Management Area. According the General Plan's Land Use Pattern Allocation Guide Map, the property is designated as important agricultural land.

The anticipated uses proposed for the subject property are described in §25-5-72(c)(13), Hawaii County Code (HCC), as public uses and structures, other than those necessary for agricultural practices, as provided under section 25-4-11, HCC, which require that a Special Permit is obtained if the building site is in the State Land Use Agricultural district. In addition, §25-4-11, HCC, requires Plan Approval by the Planning Director prior to commencing such use.

Mr. Ron Terry
Geometrician Associates, LLC
Page 2
November 22, 2006

Should you have questions, please feel welcome to contact Larry Brown or Esther Imamura of my staff at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN
Planning Director

LMB:cd
\\Coh31\planning\public\wpwin60\Larry\EA-EIS Comments\Geometrician 4-8-4-46 Waipio Lookout.doc

LINDA LINGLE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HAWAII DISTRICT
50 MAKAALA STREET
HILO, HAWAII 96720
TELEPHONE: (808) 933-8868 • FAX: (808) 933-8869
November 21, 2006

RODNEY K. HARAGA
DIRECTOR

Deputy Directors
FRANCIS PAUL KEENO
BARRY FUKUNAGA
BRENNON T. MORIOKA
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:
HWY-H 06-2.0973

Mr. Ron Terry
Principal
Geometrician Associates, LLC
HC 2 Box 9575
Kea'au, Hawai'i 96749

Dear Mr. Terry:

SUBJECT: Draft Environmental Assessment Preparation Notice for Proposed County
Purchase of Property Near Waipi'o Lookout
T.M.K. 3rd Div. 4-8-004:006
Project No. 240A-01-71
Route 240, Honokaa-Waipio Road
Lalakea, Hamakua, Island of Hawai'i, Hawai'i

This section of the highway is under the jurisdiction of the County of Hawaii. The Department of Transportation, Highways Division remains an interested agency as the roadway connects to our highway system.

Please send copies of the Environmental Assessment to our Department for review and comment.

Our Department will then further distribute the copies to the appropriate divisions and branches at which time we will review and provide comments. After all comments are received and coordinated, a response from the director will be sent to the County Department approving agency.

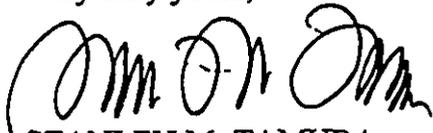
Please note that at this time we will not be able to provide comments without pre-empting the departmental response.

Ron Terry
November 21, 2006
Page 2

HWY-H 06-2.0973

If you have any questions please call Mr. Clinton Yamada at 933-1951.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Stanley M. Tamura', written in a cursive style.

STANLEY M. TAMURA
Hawai'i District Engineer

PHONE (808) 594-1888

FAX (808) 594-1865



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

HRD06/2771

November 7, 2006

Ron Terry
Geometrician Associates
HC 2 Box 9575
Keaau, HI 96749

RE: Pre-Draft Environmental Assessment Consultation for the Proposed County Acquisition of Property Near Waipi'o Lookout, Hawai'i Island, TMK 4-8-04: 06.

Dear Mr. Terry,

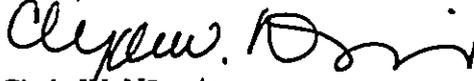
The Office of Hawaiian Affairs (OHA) is in receipt of your October 11, 2006 submission and offers the following comments:

Our staff has no comment specific to the above-listed pre-Draft Environmental Assessment consultation, but looks forward to reviewing the document when completed. The applicant may contact Ruby McDonald of OHA's Kailua-Kona office for future consultation if needed. Thank you for your continued correspondence.

OHA asks that, in accordance with Section 6E-46.6, Hawaii Revised Statutes and Chapter 13-300, Hawaii Administrative Rules, if the project moves forward, and if any significant cultural deposits or human skeletal remains are encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) shall be contacted.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or jessey@oha.org.

Aloha,


Clyde W. Namu'o
Administrator

C: Ruby McDonald
OHA Community Affairs Coordinator (Kailua-Kona)
75-5706 Hanama Pl., Suite 107
Kailua-Kona, HI 96740

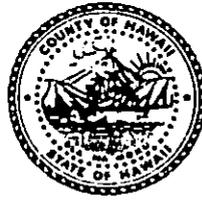
**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout**

Environmental Assessment

APPENDIX 1B

COMMENTS TO DRAFT E.A. AND RESPONSES

Harry Kim
Mayor



Christopher J. Yuen
Director

Brad Kurokawa, ASLA
LEED® AP
Deputy Director

County of Hawaii
PLANNING DEPARTMENT
101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043
(808) 961-8288 • FAX (808) 961-8742

February 23, 2007

Mr. Ron Terry
Geometrician Associates, LLC
HC 2, Box 9575
Keaau, Hawaii 96749

Dear Mr. Terry:

**SUBJECT: Draft Environmental Assessment for Proposed County Purchase of Property
Near Waipi'o Lookout, Hamakua, Island of Hawai'i
Tax Map Key: 4-8-004:006**

This is to acknowledge receipt of the subject DEA, which we have reviewed. We have no comments in addition to those provided in our letter dated November 22, 2006.

Should you have questions, please feel welcome to contact Larry Brown or Esther Imamura of my staff at 961-8288.

Sincerely,

A handwritten signature in cursive script that reads "Chris Yuen".

CHRISTOPHER J. YUEN
Planning Director

LMB:cd

\\Coh31\planning\public\wpwin60\Larry\EA-EIS Comments\Geometrician 4-8-4-46 Waipio Lookout DEA.doc

geometrician
ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721
rterry@hawaii.rr.com

April 4, 2007

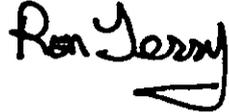
Christopher J. Yuen, Director
Hawai'i County Planning Dept.
101 Aupuni Street, Suite 3
Hilo HI 96720

Dear Mr. Yuen:

**Subject: Draft Environmental Assessment for Hawai'i County Purchase
of Rice Property at Waipi'o Lookout, TMK 4-8-04:06,
Hamakua, Island of Hawai'i**

Thank you for your comment letter on the Draft EA of February 23, 2007, in which you stated that you had no additional comments to provide. We appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090; for questions about the project, please contact Nancy Crawford, Deputy Director of the Hawai'i County Finance Department, at 961-8324.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Nancy Crawford

LINDA LINGLE
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON
DIRECTOR

235 S BERETANIA ST. SUITE 702
HONOLULU, HAWAII 96813

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Telephone (808) 586-4185
Facsimile (808) 586-4186
Email: oeqc@doh.hawaii.gov

March 7, 2007

William Takaba
Department of Finance
25 Aupuni Street #118
Hilo, Hawaii 96720

Attn: Nancy Crawford

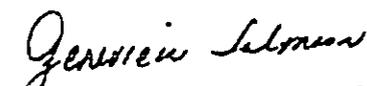
Subject: Draft environmental assessment (EA),
Purchase of Rice Property at Waipio Lookout

Dear Mr. Takaba:

Waipio Valley: If the Parks Division of DLNR has jurisdiction over Waipio Valley consult with this agency about the proposed project.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,


GENEVIEVE SALMONSON
Director

c: Ron Terry

geometrician
ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721
rterry@hawaii.rr.com

April 2, 2007

Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu HI 96813

Dear Ms Salmonson:

**Subject: Draft Environmental Assessment for Hawai'i County Purchase
of Rice Property at Waipi'o Lookout, TMK 4-8-04:06,
Hamakua, Island of Hawai'i**

Thank you for your comment letter on the Draft EA of March 7, 2007, in which you requested that we contact State Parks Division if this agency had jurisdiction over Waipi'o Valley. Although State Parks does not have jurisdiction over land in or near Waipi'o Valley, we had already coordinated with State Parks through the copies of the EA which we sent to DLNR, which a Land Division administrator circulated to various agencies. State Parks provided us with a no-comment letter.

We appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090; for questions about the project, please contact Nancy Crawford, Deputy Director of the Hawai'i County Finance Department, at 961-8324.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Nancy Crawford

Harry Kim
Mayor



Patricia G. Engelhard
Director

Pamela N. Mizuno
Deputy Director

County of Hawai'i
DEPARTMENT OF PARKS AND RECREATION
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720
(808) 961-8311 • Fax (808) 961-8411

March 5, 2007

Mr. Ron Terry
Geometrician Associates
P. O. Box 396
Hilo, HI 96721

Project: **Draft Environmental Assessment (DEA)**
For Hawai'i County Purchase of Rice Property at Waip'o Lookout
TMK: (3rd) 4-8-04:06

We have reviewed the Draft Environmental Assessment for the above-referenced project and have no comments to offer.

Thank you for including the Department of Parks and Recreation as part of the review process.

Sincerely,


Patricia G. Engelhard
Director

cc: OEQC
Hawaii County Department of Finance (Attention: Nancy Crawford)

My Documents\Park Projects\Geometrician Associates-Waipio Lookout - 3-5-07.doc

geometrician
ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721
rterry@hawaii.rr.com

April 2, 2007

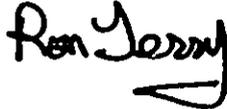
Patricia Engelhard, Director
Hawai'i County Department of Parks and Recreation
101 Pauahi Street, Suite 6
Hilo HI 96720

Dear Ms. Engelhard:

**Subject: Draft Environmental Assessment for Hawai'i County Purchase
of Rice Property at Waipi'o Lookout, TMK 4-8-04:06,
Hamakua, Island of Hawai'i**

Thank you for your comment letter on the Draft EA of March 5, 2007, in which you stated that your Department had no comments to offer but appreciated being included in the review process. We appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090; for questions about the project, please contact Nancy Crawford, Deputy Director of the Hawai'i County Finance Department, at 961-8324.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Nancy Crawford

Harry Kim
Mayor



Lawrence K. Mahuna
Police Chief

Harry S. Kubojiri
Deputy Police Chief

County of Hawaii
POLICE DEPARTMENT
349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-8869

March 6, 2007

Mr. Ron Terry, Ph.D.
Principal
Geometrician Associates, LLC
P. O. Box 396
Hilo, Hawaii 96720

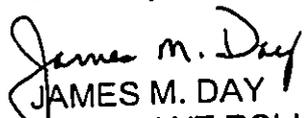
Dear Dr. Terry:

**Subject: Environmental Assessment for Proposed County Purchase of
Property Near Waipi'o Lookout, Hamakua, Island of Hawaii
Tax Map Key: (3rd)4-8-04:06**

Staff, upon visiting the proposed purchase site, is of the opinion that the purchase of the property would significantly benefit the parking and traffic problems currently in existence in the area. Therefore, we have no negative comments or concerns.

Thank you for the opportunity to comment.

Sincerely,


JAMES M. DAY
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

EWR:lli

cc: Director, Office of Environmental Quality Control
Ms. Nancy Crawford, Hawaii County Department of Finance

geometrician
ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721
rterry@hawaii.rr.com

April 2, 2007

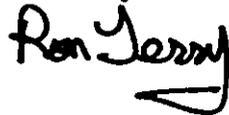
James M. Day, Assistant Police Chief
Area I Operations
Hawai'i County Police Department
349 Kapiolani Street
Hilo HI 96720

Dear Mr. Day:

**Subject: Draft Environmental Assessment for Hawai'i County Purchase
of Rice Property at Waipi'o Lookout, TMK 4-8-04:06,
Hamakua, Island of Hawai'i**

Thank you for your comment letter on the Draft EA of March 6, 2007, in which you stated that the purchase could significantly benefit the parking and traffic problems currently in existence in the area. We appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090; for questions about the project, please contact Nancy Crawford, Deputy Director of the Hawai'i County Finance Department, at 961-8324.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Nancy Crawford

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR

OFFICE OF LAND RESOURCES
PLANNING AND DEVELOPMENT
BUREAU OF LAND USE
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND FOREST LAND
CONSERVATION AND FOREST RESTORATION
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND AND WATER RESOURCE COMMISSION
LAND
STATE PARKS

March 23, 2007

Geometrician Associates
Box 396
Hilo, Hawaii 96721
Attention: Mr. Ron Terry

Office of Environmental Quality Control
235 South Beretania Street Suite 702
Honolulu, Hawaii 96813

Gentlemen:

Subject: Draft Environmental Assessment for Purchase of Rice Property at Waipio
Lookout, Kukuihaele, Hawaii, Tax Map Key: (3) 4-8-4:6

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Division of State Parks and our Land Division – Hawaii District, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji".

Russell Y. Tsuji
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII



RECEIVED
2007 FEB 27 10:01 AM
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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STATE PARKS DIV

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February 23, 2007

DEPT OF LAND &
NATURAL RESOURCES

MEMORANDUM

TO: DLNR Agencies:
_ Div. of Aquatic Resources
_ Div. of Boating & Ocean Recreation
_ Engineering Division
_ Div. of Forestry & Wildlife
x Div. of State Parks
_ Div. of Water Resource Management
_ Office of Conservation & Coastal Lands
x Land Division – Hawaii District/Gavin/Barbara Lee

FROM: Russell Y. Tsuji
SUBJECT: Draft Environmental Assessment for Purchase of Rice Property at Waipio Lookout
LOCATION: Kukuihaele, Hawaii, TMK: (3) 4-8-4:6
APPLICANT: Geometrician Associates on behalf of County of Hawaii, Department of Finance

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 25, 2007.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

- () We have no objections.
- () We have no comments.
- () Comments are attached.

Signed: [Signature]
Date: 3/9/07

49828

PETER T. YOUNG
CHAIRPERSON
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR

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

- ADMINISTRATOR
- ASST ADMIN
- DEV BR
- PLAN BR
- RES MGT BR
- CLERICAL
- ADMIN ASST
- INTERP BR

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ROBERT K. MASUDA
DEPUTY DIRECTOR

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

2007 MAR 23 A 10:26
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

February 23, 2007

MEMORANDUM

TO: DLNR Agencies:
 Div. of Aquatic Resources
 Div. of Boating & Ocean Recreation
 Engineering Division
 Div. of Forestry & Wildlife
 Div. of State Parks
 Div. of Water Resource Management
 Office of Conservation & Coastal Lands
 Land Division - Hawaii District/Gavin/Barbara Lee

FROM: Russell Y. Tsuji
SUBJECT: Draft Environmental Assessment for Purchase of Rice Property at Waipio Lookout
LOCATION: Kukuihaele, Hawaii, TMK: (3) 4-8-4:6
APPLICANT: Geometrician Associates on behalf of County of Hawaii, Department of Finance

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 25, 2007.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:
Date: 3/21/07

geometrician
ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721
rterry@hawaii.rr.com

April 2, 2007

Russell Y. Tsuji, Administrator
Land Division
Hawai'i State DLNR
P.O. Box 621
Honolulu HI 96809

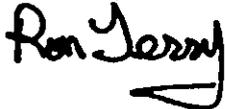
Dear Mr. Tsuji:

**Subject: Draft Environmental Assessment for Hawai'i County Purchase
of Rice Property at Waipi'o Lookout, TMK 4-8-04:06,
Hamakua, Island of Hawai'i**

Thank you very much for distributing the Draft EA among various DLNR agencies and coordinating the comments. We acknowledge the "no-comment" letter from the Division of State Parks and the statement of "no-objection" from your division.

We appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090; for questions about the project, please contact Nancy Crawford, Deputy Director of the Hawai'i County Finance Department, at 961-8324.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Nancy Crawford

**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout**

Environmental Assessment

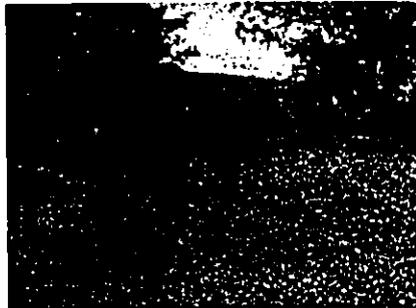
APPENDIX 2

**ARCHAEOLOGICAL INVENTORY REPORT/CULTURAL
IMPACT ASSESSMENT**

RC-0442

An Archaeological and Cultural Assessment
Survey of the Rice Property
(TMK: 3-4-8-04:006)

Lālākea Ahupua'a
Hāmākua District
Island of Hawai'i



PREPARED BY:

Robert B. Rechtman, Ph.D.

PREPARED FOR:

Ron Terry, Ph.D.
Geometrician Associates LLC
P.O. Box 396
Hilo, HI 96720

January 2007

RECHTMAN CONSULTING, LLC

HC 1 Box 4149 Kea'au, Hawai'i 96749-9710
phone: (808) 966-7636 fax: (808) 443-0065
e-mail: bob@rechtmanconsulting.com
ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

An Archaeological and Cultural Assessment Survey
of the Rice Property
(TMK: 3-4-8-04:006)

Lālākea Ahupua'a
Hāmākua District
Island of Hawai'i



EXECUTIVE SUMMARY

At the request of Ron Terry, Ph.D., of Geometrician Associates, LLC, on behalf of his client the County of Hawai'i, Rechtman Consulting, LLC conducted an archaeological and cultural assessment survey of a nearly 2 acre property (TMK: 3-4-8-04:006) in Lālākea Ahupua'a, Hāmākua, Hawai'i. The entire project area was surveyed on-foot and the boundaries were clearly identifiable. A residential structure exists on the parcel that was moved there from Kukuihaele in the late 1970s or early 1980s. No historic properties were identified as a result of the fieldwork. Also, systematic survey of the project area produced no evidence that the area had been or was currently being accessed for the exercise of traditional and customary practices. Likewise, consultation produced no information relative to the existence of traditional cultural properties or any information indicating current use of the area for traditional and customary practices.

Given the negative findings of the current study, it is concluded that the transfer of ownership of the property to the County of Hawai'i and its potential subsequent development will not impact any known historic properties nor infringe upon any traditional and customary practices. It is therefore recommended that no further historic preservation work is needed.

CONTENTS

INTRODUCTION	1
BACKGROUND	1
Project Area Description.....	1
CULTURE-HISTORICAL CONTEXT.....	6
CONSULTATION.....	8
PRIOR ARCHAEOLOGICAL STUDIES.....	9
CURRENT SURVEY EXPECTATIONS	9
ARCHAEOLOGICAL FIELDWORK	9
CONCLUSION AND RECOMMENDATIONS.....	9
REFERENCES CITED.....	10

FIGURES

1. Project area location.....	2
2. Portion of Tax Map Key: 3-4-8-04 showing current study parcel (006).....	3
3. <i>Makai</i> portion of study parcel with Waipi'o Valley in the background, view to northwest.	5
4. Existing residence, view to northwest.....	5
5. Existing residence and carport/workshop, view to east.	6
6. Waterworn stone at base of the front stairway that leads to the existing residence.	6

TABLES

1. <i>Kuleana</i> claims made in Lālākea.	8
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INTRODUCTION

At the request of Ron Terry, Ph.D. of Geometrician Associates, LLC, on behalf of his client the County of Hawai'i, Rechtman Consulting, LLC conducted an archaeological and cultural assessment survey of a 78,599 square foot parcel (TMK: 3-4-8-04:006) in Lālākea Ahupua'a, Hāmākua District, Island of Hawai'i. (Figures 1 and 2). The property is currently owned by the Rice family and the county is considering purchasing the parcel and establishing a "Ranger Station" to enhance the interpretation and protection of Waipi'o Valley. This survey was undertaken in accordance with Hawai'i Administrative Rules 13§13-284, and was performed in compliance with the Rules Governing Minimal Standards for Archaeological Inventory Surveys and Reports as contained in Hawai'i Administrative Rules 13§13-276. According to 13§13-284-5 when no archaeological resources are discovered during an archaeological survey the production of an Archaeological Assessment report is appropriate. Compliance with the above standards is sufficient for meeting the historic preservation review process requirements of both the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) and the County of Hawai'i Planning Department.

This report contains background information outlining the project area's physical and cultural contexts, a presentation of previous archaeological work in the area and current survey expectations based on that previous work, along with an explanation of the project methods and results.

BACKGROUND

To generate expectations regarding the nature of the historic properties that might exist on the study parcel, and to provide an appropriate background to assess any resources that are encountered, the specific as well as general physical and cultural contexts are presented along with prior studies relevant to the project area.

Project Area Description

The current study area consists of a single Tax Map parcel (see Figure 2) situated on the northeastern plateau ridge bordering Waipi'o Valley proper at an elevation of roughly 900 feet above sea level. It is bounded to the north by the Waipi'o Valley Road and on all other sides by undeveloped Kamehameha Schools land. The current terrain and landscape are that of a typical residential property with a house and garage structure, a driveway, stone wall landscaping features, and ornament plants and a lawn area (Figure 3-6). The elder Mr. Rice, now deceased, was a collector of art and artifacts from throughout the Pacific, and it is possible that some of the landscape items could be considered cultural artifacts, albeit with unknown provenience and without context. There is a large stand of bamboo in the south-central portion of the parcel. The project area is located at an interface region of geology with Pololu and Hawi Series volcanic substrates. The older Pololu Volcanic represent 700 to 250 thousand year old flow events, while the younger Hawi Volcanics are 230 to 120 year old lava flows (Wolfe and Morris 1996). The soil in the project area is classified as Kukaiiau silty clay loam (KwD), with a surface layer of very dark grayish-brown silty clay loam about 10 inches thick. The subsoil is dark-brown silty clay loam about 40 inches thick. It is underlain by basalt. The surface layer is extremely acidic, and the subsoil is medium to slightly acidic (USDA-NRCS web site).



Figure 1. Project area location.



Figure 3. *Makai* portion of study parcel with Waipi'o Valley in the background, view to northwest.

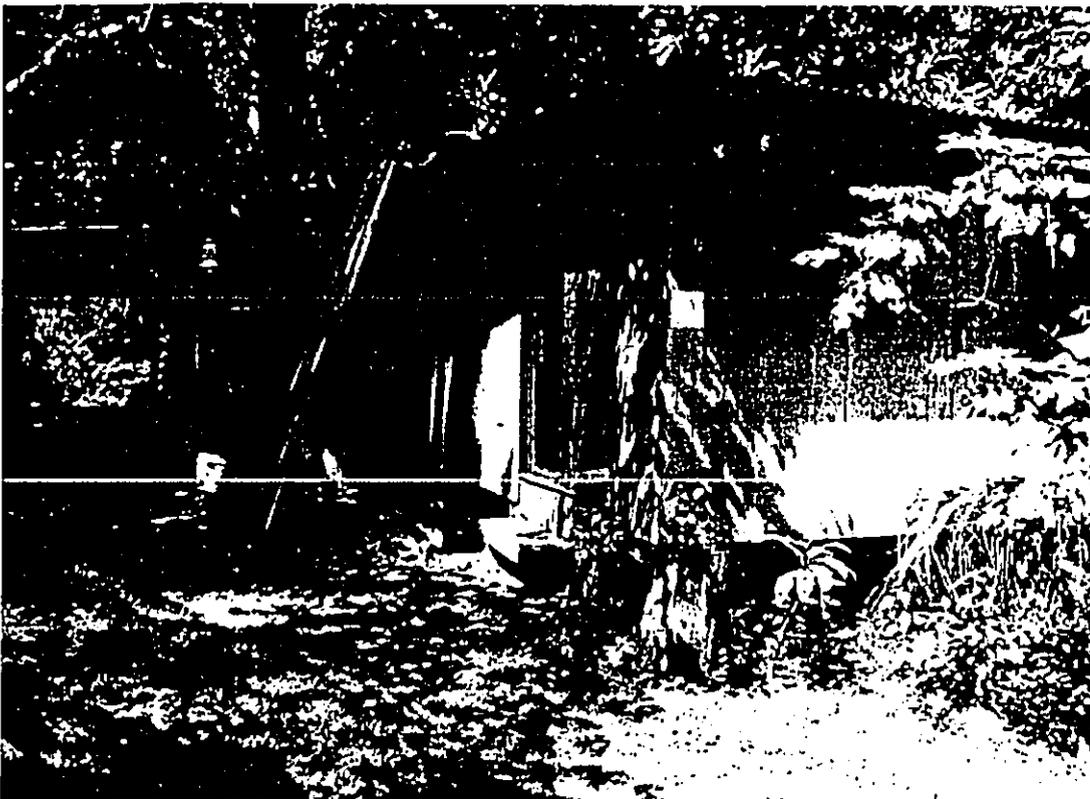


Figure 4. Existing residence, view to northwest.



Figure 5. Existing residence and carport/workshop, view to east.

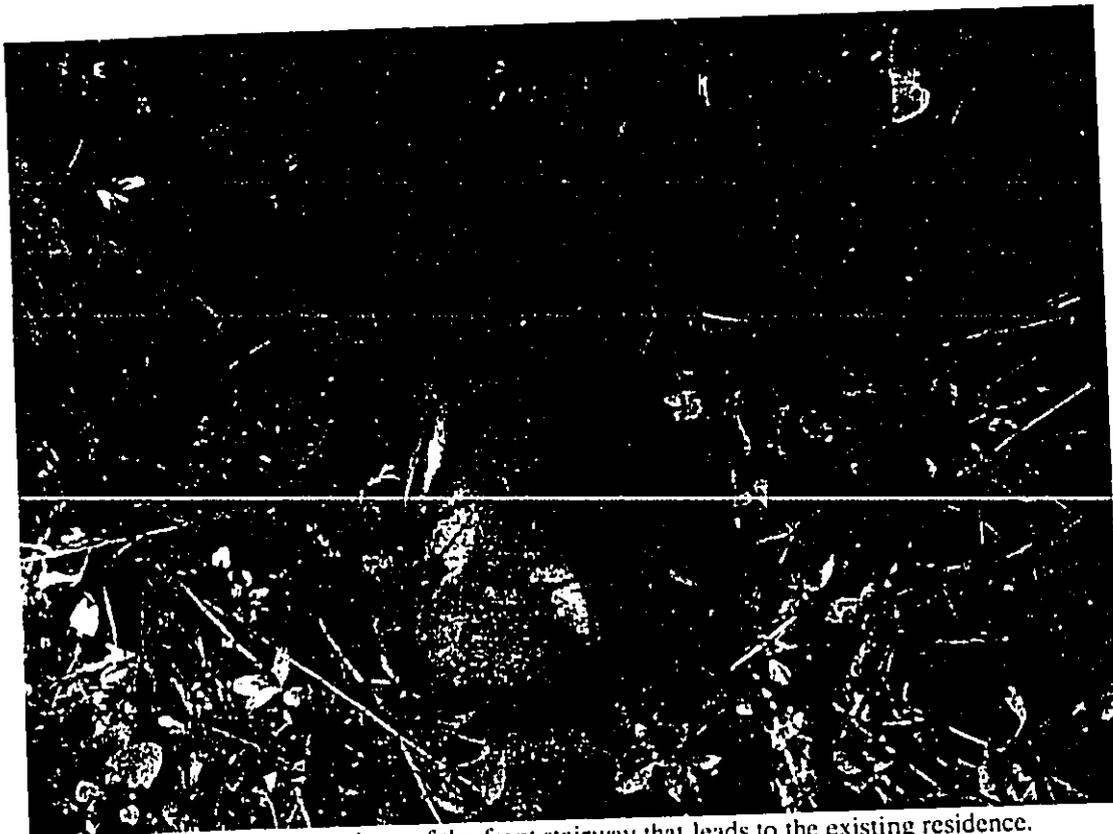


Figure 6. Waterworn stone at base of the front stairway that leads to the existing residence.

CULTURE-HISTORICAL CONTEXT

This section of the report presents a brief cultural history of the project area, primarily gathered from archival documentary research that has been summarized and presented in Cordy (1994) and Lebo et al. (1999). Prior to and during the *Māhele* it appears as though Lālākea was an *ili kupono* of Waipi'o. It was not until the legal proceedings of the Boundary Commission that Lālākea appears to have been given independent *ahupua'a* status. Thus, while the current study area is not situated within Waipi'o Valley proper, its contextual background is clearly tied to the greater Waipi'o Ahupua'a, which in and of itself could be considered a *wahi pana* (a sacred or storied place). As Handy et al. related, "[t]here is no locality on Hawaii in connection with which there was more lore and history told than Waipi'o." (1991:534). *Lālākea* is literally translated as Whitetip shark (*Pterolamiops longimanus*) and according to Pukui et al. (1976) the land unit derives its name from this animal.

Ethnohistorical traditions (Fornander 1880) indicate that Waipi'o was associated with at least nine successive Pili line rulers of Hawai'i Island, from Kaha'imoele'a to Umi (from roughly AD 1460 to 1620). Prior to the establishment of these Pili rulers, Waipi'o was the residential base for powerful local rulers dating back to at least the AD 1200s (Cartwright 1933). The royal residential area is described as being situated toward the mouth of the valley inland of the sand dunes (Kamakau 1961). In this area were also located several *heiau*, a bathing pond, and two large fishponds. Three of these *heiau* are famed *luakini heiau*, and all appear to have remained in use until the abolition of the *kapu* system. Paka'alana Heiau was one of the most important national *heiau*. The Paka'alana compound, which also seemed to have served as a *pu'uhonua* (Ellis 1963), contained the royal mausoleum known as Hale o Līloa, which was destroyed in 1830. The sennit-encased remains (*kā'ai*) of Līloa and his grandson are said to have been removed prior to destruction of the mausoleum and taken to the Bishop Museum (Barrère 1975; Buck 1957). Honua'ula Heiau is said to have been constructed by 'Umi (Stokes 1919) and the place where he offered the sacrifice of his brother Hākau, who was killed by 'Umi in the overthrow that led to 'Umi's succession as ruler. Moa'ula Heiau was repaired and reconsecrated by Kalaniopu'u sometime around 1780. It was dedicated to the war god Kūkā'ilimoku, and in that ceremony Kalaniopu'u proclaimed his son Kiwala'o heir to the throne and placed his nephew Kamehameha in charge of the deity. This act is cited as setting the stage for the schism between cousins that eventually led to Kamehameha's rise to power (Kamakau 1961; Kuykendall 1957).

One additional *heiau* is worth mentioning here, as it appears to have been located in Lālākea above Waipi'o Valley in the general vicinity of the current study area (Stokes and Dye 1991). Hōkūwelowelo Heiau is described as follows:

Heiau of Hōkūwelowelo, land of Lālākea, Waipi'o, Hāmākua. Lālākea benchmark is at the north edge of the structure. The heiau is a small pen near the edge of the sea cliff, overlooking the mouth of Waipi'o valley. Its elevation is 900 feet. It is about 150 feet from the road and the same distance from the edges of the sea cliff and Waipi'o valley cliff.

This heiau is said to have been "built by the gods" and was the place where the famous Kihapu was guarded until it was stolen by the thief-dog, Puapualenalena from Puakō. The tradition of this affair is widely known. (Stokes and Dye 1991:162)

Pukui et al. (1976:114) refer to the cliff on the Hāmākua side of Waipi'o Valley as Koa'e-kea, and relate that "Kāne and various gods lived at the top of this cliff at a place called Hōkū-welowelo (comet); their conch sounded every night, to the annoyance of Chief Hākau, who ordered the thieving dog, Puapualenalena, to steal it."

The earliest historical mention of the Waipi'o area can be found in the journals of Captain James Cook (Beaglehole 1967), when on December 7, 1778 Cook's vessels were a half-mile offshore and they exchanged goods for food with residents of Waipi'o and Waimanu Valleys.

At this place are two Vallies where we saw many houses, the most easterly of the two is called Oi-e-pe-o [Waipi'o], and the other Oi-manoo [Waimanu] . . . (Beaglehole 1967[3]:1153)

It was not until 45 years later in 1823, that missionaries first ventured into the Valley (Ellis 1963) and documented a sizeable population concentrated in four named clusters of houses (Napo'opo'o, Keone, Na'alapa, and Koauka) with all of the intervening areas "well cultivated." At that time a total of 265 houses were counted in the valley proper. Following the establishment of the missionary station in Waimea in 1832, the Waipi'o area was visited on a regular basis (a few times a year) until 1848. In 1847, Hiram Bingham described Waipi'o's extensive gardens of taro, sweet potato, banana, sugarcane, and *wauke*; and estimated the population to be between 1,200 and 1,500 inhabitants (Handy et al 1991). The Waimea Station reports of 1833 indicate a population for Waipi'o of 1,200, which would provide an estimated population at the time of contact of over 2,600 (Cordy 1994). Waipi'o was perhaps the preeminent location of pondfield (*lo'i*) taro (*kalo*) cultivation on Hawai'i Island. The taro *lo'i* that dominated the landscape continue to be used into the present day. Not only was *Kalo* an important subsistence crop, it holds a place in Hawaiian cosmology and continues to be a potent cultural symbol for Hawaiians today.

Significant religious, socioeconomic, and demographic changes took place between 1790 and the 1840s, all of which promoted the establishment of a Euro-American style of land ownership, and the *Māhele 'Āina* was the vehicle for determining ownership of the native land. During this period (1848-1899), the *Māhele* defined the land interests of the King (Kamehameha III), the high-ranking chiefs, and the low-ranking chiefs, the *konohiki*. The chiefs and *konohiki* were required to present their claims to the Land Commission to receive awards for lands provided to them by Kamehameha III. They were also required to provide commutations to the government in order to receive royal patents on their awards. The lands were identified by name only, with the understanding that the ancient boundaries would prevail until the land could be surveyed. This process expedited the work of the Land Commission and speeded the transfers (Chinen 1961).

During this process all lands were placed in one of three categories: Crown Lands (for the occupant of the throne), Government Lands, and Konohiki Lands. All three types of land were subject to the rights of the native tenants. Commoners could make claims for land, and if substantiated, they would receive awards referred to as *kuleana*, from the Land Commission. During this period, other land grants were also made to individuals directly from the Kingdom. In 1862, the Commission of Boundaries (Boundary Commission) was established in the Kingdom of Hawai'i to legally set the boundaries of all the *ahupua'a* that had been awarded as a part of the *Māhele*. Subsequently, in 1874, the Commissioners of Boundaries was authorized to certify the boundaries for lands brought before them. The primary informants for the boundary descriptions were old native residents of the lands, many of which had also been claimants for *kuleana* during the *Māhele*. The information was collected primarily between 1873 and 1885. The testimonies were generally given in Hawaiian and simultaneously transcribed in English. Information contained in the Land Commission and Boundary Commission testimony can provide insights into both land use and tenure.

As stated earlier, it appears as though Lālākea (within which the current study area is located) was an *ili kupo* of Waipi'o. However, it was retained as an independent unit of crown land, distinct from Waipi'o during the *Māhele*. Waipi'o was awarded as an *ali'i* award to Queen Kalama (the king's wife). A search of the *Māhele* records indicates that there were six claims made and awarded for *kuleana* within Lālākea (Table 1). All of these claims were for house lots or agricultural plot in the valley portion of Lālākea, there were no claims made within or proximate to the current study area (Appendix A).

Table 1. *Kuleana* claims made in Lālākea.

<i>Claim Number</i>	<i>Applicant Name</i>
7860	Kawahineainiu; Palau
7871	Kaelemakule; Samesona
8472	Keawe
8487	Kaunaunahi
9930	Lono
11102	Kahiamoe

The Boundary Commission testimony for Lālākea and adjoining Waipi'o (Appendix B) is informative with respect to the locations of place names, important landmarks, and land use activities. However, there are no specific references to the land that makes up the current study area.

CONSULTATION

To gain further insight into past land use and potential cultural significance relative to the current project area, and in an effort to identify any past or present traditional cultural places and activities associated with the project area, the following individuals and institutions were consulted: Margaret Loo, Kelly Loo, Ku'ulei Badua, Elliot Markell, Friends of the Future (Waipi'o Community Circle), and the Office of Hawaiian Affairs.

None of the consulted parties identified any traditional cultural places or associated activities relative to the study property. Ku'ulei Badua, president of the Kukuihaele Community Association, explained that she spent much of her life away from the area and suggested that Kelly Loo and his sister-in-law Margaret Loo would be good sources of information. Ku'ulei Badua was very supportive of the proposed acquisition of the Rice property and the development of a "ranger" program.

Born in 1933, Margaret (Rodrigues) Loo has lived and worked in the area her entire life. As a child she walked the area trails *mauka* to *makai* and frequently visited her godmother, who was the last to live in the Puerto Rican Camp in the *mauka* portion of the plantation. As a young adult she worked for the plantation in the macadamia nut orchards in upper Lālākea. Margaret Loo explained that the house that is currently on the Rice property was moved there sometime during the last 40 years, and that before that the land was in sugarcane cultivation. The plantation house was originally located in what was called Stable Camp at Kukuihaele.

Kelly Loo, born in 1932, currently lives on the parcel next to the study parcel. He was born and raised in Waipi'o Valley, and lived there until 1959. He is of Hawaiian ancestry with a little Chinese on his father's side. He worked for 40 years for the Hawaiian Irrigation Company. According to Mr. Loo, from the 1940s to the 1960s horses were kept on a portion of the current study parcel and the rest was cultivated in cane as part of the plantation fields. Mr. Loo currently works for a company that gives tours of the Valley and on his off time works the taro *lo'i* that he still maintains. He was unaware of any traditional cultural activities occurring on the current study parcel. Mr. Loo expressed that he was in favor of the proposed county acquisition of the Rice property and the development of a ranger station, especially if it meant educating the tourists and providing additional parking for the lookout area.

Additionally, Elliot Markell was contacted. Mr. Markell, age 73, currently lives in the Volcano area, but has maintained a home in Waipi'o Valley for the past 50 years. He was acquainted with the Rice family and on occasion visited the elder (now deceased) Mr. Rice at his home on the current study property. Both Mr. Markell and Mr. Rice were married to women of Hawaiian ancestry. Elliot Markell explained that Mr. Rice was a collector of ethnographic and historic artifacts (Mr. Rice had a collectables store in Honoka'a town) and that he had items decorating the house and yard (presently there is an early twentieth century horse drawn buggy in the enclosed garage on the property). Mr. Markell expressed some minor reservations concerning the effectiveness of a ranger program and the geological stability of the Rice property; however, he agreed that if effective and stable, the program and the property are a good idea.

PRIOR ARCHAEOLOGICAL STUDIES

There have been only a few formal archaeological studies conducted in the vicinity of the current project area. Most of these have occurred within Waipi'o Valley proper (Barrera 1977; Cleghorn and Roger-Jourdane 1983; Cordy 1988; Hudson 1932; Loo and Bonk 1970; Stokes 1919), and Cordy (1994) contains a summary and synthesis of these prior studies. There were two studies conducted in more *mauka* portions of Lālākea Ahupua'a that resulting in the discovery of a few sites related to Historic Period ranching and large-scale irrigation (Corbin 2006; Walker et al. 1991); and there was one study, Head and Goodfellow (1993) that was conducted for the Hamakua Sugar Company lands that surround the current project area.

Head and Goodfellow (1993) conducted a combination helicopter reconnaissance and limited surface pedestrian survey, and excavated four test units. Forty-four sites containing 124 features were recorded. They identified Precontact habitation and agriculture sites as well as Historic Period plantation related sites. Their 3,770 acre project area bordered the current study parcel and included portions of Lālākea, Kukuihaele, Kanahonua, Waiko'eko'e, Kea'a, and Kalakala'ula *ahupua'a*. None of the sites that they recorded were located in Lālākea Ahupua'a.

CURRENT SURVEY EXPECTATIONS

Based on the location and the specific history of the project area, the results of the background research (including oral interviews), and a review of archaeological work previously conducted in the general vicinity, the archaeological expectations for the current study are limited. While it is remotely possible that Precontact sites may have been present within the current project area, the extensive land use throughout the late nineteenth and twentieth centuries has significantly altered the landscape. Modern residential use of the project area with associated movement and construction of residential features appears to date from only as early as the late 1970s.

ARCHAEOLOGICAL FIELDWORK

On October 31, 2006, Christopher S. Hand, B.A. and Robert B. Rechtman, Ph.D. carried out the archaeological fieldwork for the current project. The entire project area was surveyed on-foot, and the extant residential structures were inspected. The boundaries of the project area were clearly identifiable. No archaeological resources were identified as a result of the fieldwork, and no evidence was observed that the area had been or was currently being accessed for the exercise of traditional and customary practices.

CONCLUSION AND RECOMMENDATIONS

Given the negative findings of the current study, it is concluded that the transfer of ownership of the current study parcel to the County of Hawai'i and its potential subsequent development will not impact any known historic properties nor infringe upon any traditional and customary practices. It is therefore recommended that no further historic preservation work is needed.

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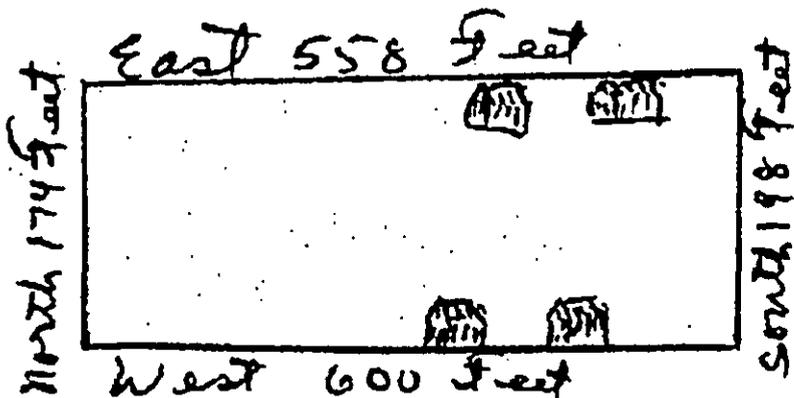
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APPENDIX A -*Kuleana* Land Commission Awards

No. 7860, Kawahineainiu and Palau
N.R. 306-307v8

Hear ye, the ones who administer land and house lot claims: Here is our claim for land - the places made by our hands. There are 23 taro lo'i which we have made. The size is 684 feet on the north and south sides, and 156 feet on the east and west sides. That is the size of the places which we made.

The house lot claim is 558 feet on the east side, 600 feet on the west side, 174 feet on the north side and 198 feet on the south side. Here is its diagram and the house standing on it. Two of us have this lot, and our names are below. It is for you to act on this.



KAWAHINEAINIU and
PALAU

KAWAHINEAINIU and PALAU
Waipio, Hamakua, January 31, 1848

N.T. 201-202v4

No. 7860, Kawahineainui to Palau, Hamakua, October 17, 1848

Kalua /konohiki/, sworn and stated, I have known there are in the ili land at Wailele of Waipio, Hawaii, ahupuaa only house site rights; there is no lot /interest/. They have houses only on the banks; the claim is for the konohiki. The inner court is for the konohiki, although they /Kawahineainui/ have plants in this court.

2. Section II - Ili land at Wailele.
Mauka, for the konohiki land [land for the konohiki]
Kohala and Makai by koele patch
Hilo by konohiki land.
23 partially cultivated patches.
They both own those patches.

3. Section III:
The boundaries all around are for the konohiki. This is dry land with 3 fields which have been cultivated.
It is old land acquired in 1836; no one has objected to the present day.

Kapaka, sworn and stated, I have known exactly as Kalua has related here.

[Award 7860; R.P. 7370; Lalakea Waipio Hamakua; 3 ap.; 4.22 Acs; Wailele Waipio Hamakua; 1 ap.; 2.75 Acs]

No. 7871, S. Kaelemakule
N.R. 311v8

Greetings to the Land Commissioners: I hereby petition you for my house lot and land claim. The lot claim is a square, 240 feet on each side.

The land claim is for my entire mo'o, with all the lo'is together. It is a square, 480 feet on a side. At Kunaka are 3 lo'i, at Lalakea are 1 lo'i, 2 mala of wauke and a section of stream. In another place I have a pauku of land with 15 lo'i. These are in Waipio, Division 4, Island of Hawaii.

SAMESONA KAELEMAKULE
Waipio, Hamakua, Hawaii, February 1, 1848

N.T. 174-175v4
No. 7871, Kaelemakule, Hamakua, October 14, 1848

Kaluli, sworn and stated, I have seen in the ili of Waipio ahupuaa in Hawaii

1. Section I - ili land in Waipio.
The boundaries are all for the konohiki. It has been enclosed and there are two houses for him.

2. Section II - ili land at Papalinawao
Mauka by my land
Kohala by a stream
Makai, for the konohiki land
Hilo by a pali.
60 patches have been cultivated.

3. Section III - ili land at Lalakea.
Mauka by Kaamoku's land
Kohala by Kaiwi's land
Makai by Kamalo's land
Hilo by Kamalo's land.
1 cultivated patch, no house.

4. Section IV - ili land at Kunaka.
Mauka by Luai's land
Kohala by Papalahana ili land
Makai by konohiki land
Hilo by Hana's land.
3 cultivated patches, no house.

Opihi gave him his houselot, Section II is from me and is an old land. The parcel at Lalakea is from Kaamoku and the section at Kunaka is from Kamai. These were received at the same time.

Opihi, sworn and stated, I have known exactly in the same way as Kaluli has related here.

[Award 7871; R.P. 4904; Napoopoo Waipio Hamauka; 3 ap.; 6.13 Acs]

No. 8472, Keawe
N.R. 342v8

Greetings to the Land Commissioners: I hereby state my land claim at Lalakea, in Waipio, Hamakua, Hawaii. There are 48 lo'i, 2 dry kula. At Pueo are 2 lo'i, in the land of Kahulanui. There are also some paepae ia. /fish platforms?/

KEAWE

Waipio, Hawaii, February 5, 1848
Written by S.P. Makaku

N.T. 210v4

No. 8472, Keawe, Hamakua, October 18, 1848

Kaaua, sworn and stated, I have seen in the ili land of Lalakea of Waipio Ahupuaa in Hawaii,

[No. 1]

Mauka by Kaamuki ili land

Kohala by Puaanui's land

Makai by Kanakawaiwaiole's land

Hilo by koele patch.

34 patches, 2 pastures partially cultivated, no house.

2. Section II - Ili land of Pueo.

Mauka and all around by konohiki land

2 partially patches, no house.

Kahulanui had given the interest in 1845; no one had objected.

Kahuhu, sworn and stated, I have seen exactly as Kaaua has related here.

[Award 8472; R.P. 6078, Waipio Hamakua; 1 ap.; 8.166 Acs]

**No. 8487, Kaunaunahi
N.R. 346v8**

Greetings to the Land Commissioners: I hereby state my land claim. The mo`o is at Manuahi. There are 18 taro lo`i, 8 fallow lo`i, and 2 dry kula. There is also a lot claim, 77 fathoms long by 15 fathoms wide. 4 lo`i at Keauhe are in the land of Puaanui.

**KAUNAUNAH
Waipio, February 5, 1848**

**N.T. 210-211v4
No. 8487, Kaunaunahi, Hamakua, October 18, 1848**

Keawe, sworn and stated, I have seen in the ili land of Lalakea, ahupuaa of Waipio,

1. Section I:
Mauka by konohiki land
Kohala by koele patch
Makai also by koele patch
Hilo by konohiki patch.
23 patches and 2 pastures partially cultivated.
1 house.

2. Section II - Ili land at Kauhe.
Mauka and Kohala by konohiki land
Makai by Puaanui's land
Hilo by konohiki land.
4 cultivated patches.

Interest from Puaanui in 1845; no objections.

Kahuhu sworn; has known exactly as Keawe had related.

[Award 8487; R.P. 7687, Lalakea Waipio Hamakua; 1 ap.; 3.14 Acs]

No. 9930, Lono
N.R. 355v8

Greetings to the Land Commissioners: I hereby tell you, the Land Commissioners, of Lalakea, in Waipio, Hamakua, Hawaii. I have had the land 18 years. There are 20 taro lo'i, also some kulas and 14 paepae* in the pond of Lalakea. I have a lot claim whose circumference is 110 fathoms.

LONO

/*Possibly a fish weir./

N.T. 213v4

No. 9930, Lono, Hamakua, October 18, 1848

Kaaua sworn; had seen /this land/ in the ili land of Lalakea, Waipio ahupuaa

Mauka by Kaunahi land

Kohala by Puaanui land

Makai by Kaamoku's land

Hilo by konohiki land

34 patches, 2 pastures, cultivated.

Interest from Kahaanapilo during the time of Kamehameha I; no one had objected.

Keawe, sworn, he had known exactly as Kaaua had related here.

[Award 9930; Lalakea Waipio Hamakua; 1 ap. 4 1/8 Acs]

No. 11102, Kahiamoe
N.R. 491v8

Greetings to the Land Commission: I hereby state my claim for land at Lalakea in the land of Keamo. There are 40 lo'i, 1 sweet potato kula, 4 mala of unrigged taro and 1 house lot. O Land Commissioners, I apologize for my ignorance and negligence in not claiming previously.

KAHIAMOE

Waipio, Hamakua, October 2, 1848

F.T. 70v5

No. 11102, Kahiamoe

Nalepoloa, sworn deposed, knew the claim of Kahiamoe to consist of 3 lots.

1. On the ili Lalakea, Ahupuaa Waipio, 40 water kalo patches, 1 field potatoes, Gift of Hanapilo, A.D. 1845.

Bounded on all sides by waste land of konohiki.

2. On Ili Polahala, Ahupuaa Waipio, 4 fields cultivated. Gift of Hanapilo, A.D. 1845.

Bounded:

North by lot of Palaa'i

South, East & West by land of konohiki.

3. An house lot on Ili Lalakea, Ahupuaa Waipio, not enclosed, one house, his own. Gift of Hanapilo, A.D. 1845. I know of no counter claim.

Bounded:

North by sand hills

East by fish pond

South & West by land of konohiki.

Kahalelauapi, sworn deposed, knows the evidence of Nalepoloa to be true.

[Award 11102; R.P. 4886; Lalakea Waipio Hamakua; 1 ap.; 4 Acs]

APPENDIX B –Boundary Commission Testimony

Lalakea Ili, Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, Hawaii, Volume A, No. 1, pps 226-227

Honolulu, July 14, 1873

R.A. Lyman, Esquire, Commissioner of Boundaries for the Island of Hawaii, Hilo.

Dear Sir:

I have respectfully request that you will define and settle the boundaries of the following named lands on the Island of Hawaii and belonging to His Majesty, the King.

Waikoekoe (an ahupuaa) in Hamakua, bounded mauka by Puukapu, a crown land, West by Waipio belonging to Honorable C. Kanaina and by Kuikuihaele belonging to the Government; East by Keaa belonging to the Government, makai by the sea.

Lalakea, an Ili Kupono in Hamakua bounded on the west by Waipio belonging to Honorable C. Kanaina and by Waimea belonging to the crown; East by Kuikuihaele belonging to the Government & by Waikoekoe belonging to His Majesty and makai by the sea.

Lanihaunui in Kona, bounded North by Keohuolu belonging to Keohokalole, South by Lanihauike belonging to the Government, and makai by the sea.

[page 227]

Kawanui - ike in Kona, bounded North by Kawanui belonging to the Government; South by Lehaulanui belonging to His Majesty; Mauka by Mr. Johnson's land and makai by the sea.

Lehaultanui, Kona, bounded North by Kawanui ike belonging to His Majesty; south by Lehoalaiki belonging to the Government; Mauka by Mr. Johnson's land and Makai by the sea.

Honuaino 1, Kona, bounded North by Lehoalaiki belonging to the Government; South by Honuaino belonging to Amara; Mauka by Mr. Johnson's land and makai by the sea.

All the above have been surveyed and the maps and notes of survey accompany this application.

In some instances it may be that the surveys do not include all that belongs to His Majesty (see Lanihaunui tho' I do not know that nay thing has been left out []).

Mr. S.C. Wiltse will, if he can do so, make any surveys that may be required and attend to the matter of settling the boundaries, procuring testimony &c. before the Commissioner, He will also represent me on settlement of boundaries of my lands and make surveys for me, and if he can be present when the boundaries of Madam Akahi's lands are settled, he will present her also and protect her interests.

It is possible that I have not named all of the lands bounding those above mentioned, or have given the names of the lands or owners quite correctly.

Respectfully yours,

Charles R. Bishop, Acting for His Majesty, the King and for himself

**Lalakea Ili, Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission,
Hawaii, Volume A, pps 238-240**

Honolulu, July 7, 1873
R.A. Lyman, Esquire, Hilo
Dear Sir

Mr. F.H. Harris is authorized by the commissioners of Crown lands to make application to you as
Commissioner of Boundaries to have the boundaries of all Crown lands on the Island of Hawaii defined.
He has a list of the lands with him.

I have also authorized Mr. F.H. Harris to make application to you for the settlement of boundaries of all
lands belonging to Estate of His late Majesty and Her Excellency, R. Keelikolani.

I expect to be in Kona by the trip of the "Kilauea" which leaves here on the 28th instant. Can't you make it
convenient to come round as the steamer goes to Hilo on that trip.

I wish also to apply for the settlement of the boundaries of Honohina.
I remain, Yours respectfully
Jno. O. Dominis

Honorable R.A. Lyman, Boundary Commissioner for Island of Hawaii, Hawaiian Islands
The undersigned would herewith make application for the settlement of the boundaries of the following
named Ahupuaa or lands belonging to the Crown, viz.;

Waiakea in the District of Hilo bounded by Keaau, Olaa, Kapapala, Humuula, Piihonua

Piihonua in the District of Hilo, bounded by Punahoa, Waiakea, Humuula and Pueo, Paukaa & Alae and
other lands names not known

Ponahawai in the District of Hilo bounded by Punahoa, Kukuau & other small lands.

Hakalauike in the District of Hilo, adjoining lands unknown

Humuula in the District of Hilo bounded by Kapapala, various lands in Kona and Kohala and Hamakua,
and Hakalau, Makahanaloa, Papaikou, Paukaa, Piihonua and Waiaka in the District of Hilo

Lalakea in the District of Hamakua, adjoining lands unknown

Kalopa in the District of Hamakua, adjoining lands unknown

Honokaia in the District of Hamakua, adjoining lands unknown

Kaohia in the District of Hamakua, adjoining lands unknown

Waimanu in the District of Hamakua, adjoining lands unknown

Pohakumauluulu, Ili of Waipio in the District of Hamakua, adjoining lands unknown

Muliwai, Ili of Waipio in the District of Hamakua

Pololu in the District of Kohala adjoining lands unknown

Aamakao in the District of Kohala adjoining lands unknown

Iole in the District of Kohala adjoining lands unknown

Kaaukuku in the District of Kohala adjoining lands unknown

Waimea in the District of Kohala adjoining lands unknown

Puukapu in the District of Kohala adjoining lands unknown

Kawaihae in the District of Kohala adjoining lands unknown

Puuwaawaa In the District of Kona bounded by Puuanahulu, Government, Kaupulehu Estate Kamehameha
V.

Haleohia in the District of Kona bounded by Government lands & Kaupulehu, Estate Kamehameha V.

Honomalino in the District of Kona bounded by Omokaa & Okoi, Government & by Kahuku, G.W. C.
Jones & Co.

Puaa in the District of Kona adjoining lands unknown

Onouli in the District of Kona adjoining lands unknown
Manoloa, District of Hilo
Hiaananaloli II in the District of Kona bounded by Hiaananaloli, Government & Hiaanaloli, R. Keliikolani.

Waiohinu in the District of Kau, bounded by Keau, Government, Kahilipalinui and Kahuku, G.W.C. Jones & Co.

Kapapala in the District of Kau bounded by Kahuku, G.W.C. Jones, Keauhou, Estate Kamehameha V, Waiakea, Hilo & other lands unknown

Olaa in the District of Puna, bounded by Keaau, Wm. C. Lunalilo, His Majesty, Waiakea & Kapapala

Apua in the District of Puna. Bounded by various lands in Puna
Waiakolea, ili of Kalapana, District of Puna adjoining lands unknown
Kaimu in the District of Puna adjoining lands unknown
Kehena in the District of Puna adjoining lands unknown

Your Honor will therefore please appoint a day for the hearing the evidence in the foregoing named lands and having decided upon the same to grant a certificate to that effect to the undersigned
(Signed) Jno. O. Dominis, Crown Land Agent,
by F.H. Harris, attorney at law,

Hilo Hawaii, August 16th A.D. 1873

Lalakea Ili, Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, Hawaii, Volume B, pps 117-118

The Ahupuaa of Lalakea, District of Hamakua, Island of Hawaii, 3d Judicial Circuit

On this, the 19th day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii, 3d Judicial Circuit met at the Court House in Waipio, Hamakua, on the application of C.R. Bishop, acting for His Majesty, the King, for the settlement of the boundaries of Lalakea, situated in the District of Hamakua, Island of Hawaii.

Notice of hearing, for the settlement of the boundaries of Lands in Hamakua and Kohala, at Waimea Court House, South Kohala on [left blank]. Served by publication in the Hawaiian Gazette of [left blank] and Kuokoa of [left blank] 1873, and adjourned to Waipio on the 17 instant, and continued till the 19th.

Due notice personally served on owners or Agents of adjoining lands as far as known.

Present: G.W.D. Halemanu for applicant, N. Keau for Government.

For Petition see Folio 226, Book A.

Testimony

N. Keau, sworn, (same witness as on Waipio), Waipio bounds Lalakea on the Kohala side, Waimea mauka and Kukuihaele on the Hilo side. Kuakini took possession of Kemama and it has been held as a part of Lalakea ever since. This was done shortly after the death of Kamehameha I. The sea bounds Lalakea makai, but in olden times the fishing rights extended only to the edge of the breakers.

Kukuihaele has been sold and Patented to different parties. I am Government Land Agent here, and have been for several years past, and I have not heard of any remnant of Kukuihaele being sold that has not been Patented.

Cross-examined

For testimony of boundary adjoining Waikoekoe see folio 77, 78 & 79. Case continued until further notice to interested parties.

R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit.

See next page

Copy of a letter from A.F. Judd, Attorney in fact for His Royal Highness, Chas. Kanaina, in which he denies having any claim on the portions of Lalakea to wit, the Ilis of Mahikiwaena, Kumupapala and Polakikee.

Attorney General's Office, Honolulu, November 24th 1873
Honorable R.A. Lyman, Commissioner of Boundaries for Hawaii

Dear Sir:

Your letter of November 19th 1873, in regard to the boundaries of Waipio is before me, I have seen Mr. Green, Mr. Cleghorn & Mr. Bishop (His Majesty's Agent) and I do not claim for His Royal Highness, Chas. Kanaina, the portions of Lalakea, to wit :the Ilis of Mahikiwaena, Kumupapala and Polakikee believing that the survey of Sleeper 1859 is correct as regards that boundary of Waipio. I return the survey. I have asked Mr. McCully to act for Estate of Robertson in regard to boundaries of Maulua in regard to Umauma. I am no longer Administrator of Nakuapa's estate & Mrs. C.R. Bishop is the Agent for the deceased heir Kapepa. If Mr. McCully cannot attend to it, he will request E.G. Hitchcock to act for me in "Maulua.

Yours very truly

A.F. Judd

Decision

The boundaries of Lalakea, District of Hamakua are decided to be as given in Royal Patents of Kukuihaele Certificate of Boundaries of Waikoekoe, No. 33, Folio 10. Liber I, certificate of Boundaries of Waimea in Kohala, No. 4, Folio 16, Book A, and in Notes of survey filed for Lalakea and Waipio and on the makai side by the sea. For description see Folio 13, 14 & 15, Liber I, Certificate No. 34 of Lalakea.

R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit
Hilo, Hawaii, May 15th 1874.

Costs in full paid May 27, 1874. \$24.75 to date for costs including certificate &c. see Folio 15, Liber I.

Lalakea Ili, Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, Hawaii, Volume 1, No. 3, pps 13-15

For testimony see Folio 117 Book B

Land Boundary Commission, Hawaii, 3d Judicial Circuit
No. 34

Certificate of the boundaries of Lalakea, District of Hamakua, Island of Hawaii 3rd Judicial Circuit

Upon the application of C.R. Bishop, and by virtue of the authority vested in me by law, as sole Commissioner of Land boundaries for the Island of Hawaii, 3d Judicial Circuit, I hereby decide and certify the boundaries of the Ili Aina Lalakea, situated in the District of Hamakua, Island of Hawaii, to be as hereinafter set forth.

Given under my hand at Hilo, Hawaii, this eleventh day of May, A.D. 1874,
R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit.

Boundaries of Lalakea, an ili kupo of Waipio

From a point on the east bank of Waipio pali, known as Kilohana, run as follows by average magnetic meridian of 1853:

- 1 South 36° 50' East 6000 feet along boundary of Waimea (or Puukapu) to a large ohia tree marked W at place called Kaakolea, the West corner of Waikoekoe, on the old Mahiki Road;
2. North 54° 30' East 470 feet along the old Mahiki road which divides this land from Waikoekoe to place called Puumoeawa;
3. North 35° 30' East 1605 feet along the same;
4. North 32° 30' East 1136 feet;
5. North 19° 15' East 790 feet;
6. North 29° 00' East 434 feet;
7. North 24° 00' East 995 feet;
8. North 10° 30' East 424 feet;
9. Due North 450 feet along to place called Kaulana`a;
10. North 33° 00' East 435 feet;
11. North 8° 15' East 350 feet;
12. North 22° 30' East 410 feet;
13. North 0° 15' East 1045 feet;
14. North 23° 30' East 530 feet;
15. North 44° 30' East 567 feet;
16. North 17° 00' East 1500 feet still along old Mahiki road to place called Holoina;
17. North 9° 30' East 3500 feet leaving the Mahiki road but still along the boundary of Waikoekoe to head of land Kukuihaele;
18. North 3° 00' East 240 feet along the boundary of Kukuihaele, the same being the line of Royal Patent No. 924 to J. Woods;
19. North 17° 30' East 172 feet along the same;
20. North 8° 45' East 117 feet;
21. North 14° 00' East 303 feet;
22. North 8° 00' East 150 feet;
23. North 14° 00' East 222 feet;
24. North 2° 45' East 112 feet;
25. North 7° 30' West 218 feet;
26. North 26° 45' West 180 feet;
27. North 45° 15' West 180 feet;
28. North 42° 15' West 190 feet;
29. North 28° 00' West 580 feet;
30. North 12° 00' West 120 feet;
31. North 31° 00' East 130 feet;
32. North 27° 00' East 262 feet;

33. North 10° 00' East 210 feet;
34. North 2° 00' West 177 feet to a point called in J. Wood's patent, Kowilikopaa, the above lines being all on an old foot path;
35. North 57° 30' East 219 feet still along J. Wood's patent and to corner of Opunui's land;
36. North 9° 30' East 287 feet along Royal Patent No. 923 to Opunui;
37. North 9° 30' East 570 feet along Royal Patent No. 934 to Makaku in Kukuihaele;
38. North 11° 10' West 1160 feet;
39. North 3° 00' East 470 feet;
40. North 22° 00' East 670 feet;
41. North 18° 00' East 364 feet along Royal Patent No. 933 to Kaluhli in Kukuihaele;
42. North 11° 15' East 1070 feet;
43. North 7° 15' East 1595 feet;
44. North 20° 45' East 860 feet;
45. North 23° 15' East 710 feet to Government Road;
46. North 13° 00' East 528 feet along kuleana of Paele, Land Commission Award No. 4416B;
47. North 5° 30' West 462 feet along kuleana of Keai in Kukuihaele, Land Commission Award No. 4116 to the edge of the sea coast pali; thence down to the sea coast, and along the sea coast to the boundary of Waipio; Thence up the boundary between this land and Waipio as agreed upon by the owners of Lalakea and Waipio as follows:

Beginning at the point on the sea shore which forms the dividing line between Waipio and Lalakea, about five chains eastward of Waipio river, and running thence, along the boundary of Waipio
 South 15° West 14.00 chains to the stone wall that enclosed the Lalakea fish pond; thence along the wall
 South 5½° West 0.75 chains;
 South 45½° West 2.61 chains;
 South 40 ¾° West 7.04 chains;
 South 26 ¾° West 5.98 chains;
 South 10½° West 6.44 chains;
 North 68½° East 2.65 chains; thence up and along the upper edge of the pali
 South 35½° East 57.00 chains;
 South 11½° West 63.00 chains;
 South 49° West 23.00 chains;
 North 36½° East 37.00 chains;
 North 15° East 48.00 chains to the foot of the sharp spur which projects into the wall mauka of the water fall; thence in the valley
 South 22½° East 2.67 chains;
 North 70° West 4.91 chains;
 South 52½° West 2.86 chains;
 South 20½° West 4.36 chains;
 South 44 ¾° West 6.84 chains;
 South 30 ¾° West 82.35 chains; Thence up the pali
 South 48½° East 41.50 chains; Thence along the brow of the pali to the point of commencement.
 R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit.

Costs 1 day hearing 10.-; traveling expenses 5.-; recording of 7 folio testimony 4.25; Certificate & stamp 3.-;
 Description Certificate 11 folio; advertisement this & Waikoekoe 6.-
 22.25, 5.50, 6.-; 33.75 paid May 27, 1874

(12 folio copying)

[No. 34, Lalakea Ili, Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, no amount; 1874]

**Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, Hawaii, Volume A,
No. 1, pps 230-231**

Waipio, District of Hamakua
Kalahuipuaa, District of Kohala, Ili of Waimea
Anaehoomalu, District of Kohala, Ili of Waimea
Kapalaalaea, District of North Kona
Kalamakumu, District of South Kona, Ili of Napoopoo

Honolulu, August 1st 1873

To the Honorable Rufus A. Lyman, Commissioner of boundaries for the Island of Hawaii, Hawaiian
Islands

The Undersigned respectfully represents that he is the owner of the following named lands situated on the
Island of Hawaii, Hawaiian islands aforesaid, belonging to the Estate of the late Queen Dowager Kalama,
deceased and awarded to her by Land Commission Award No. 4452, from Whom the Undersigned
applicant inherited the same, to wit:

1. the Ahupuaa "Waipio, in the District of Hamakua (Apana 5 of said award)
2. Kalahuipuaa, an Ili of Waimea, in the District of Kohala (Apana 3 of said award)
3. Anaehoomalu, an Ili of Waimea in the District of Kohala (Apana 4 of said Award)
4. The Ahupuaa of Kapalaalaea, in the District of North Kona (Apana 2 of said award) and
5. Kalamakumu, an Ili of Napoopoo in the District of South Kona. This land having been patented to the
undersigned applicant by Royal Patent 4497 and Land Commission Award 8559.

That the same have not been awarded by the Land Commission, patent is only conveyed by deed from the
King by boundaries described in such awards, patent or deed; and therefore he respectfully requests that the
boundaries of said lands may be settled by your Honorable Commission, and to that end, make this
application to have the same decided and certified by you as Commissioner of Boundaries as aforesaid.

Pursuant to the requirements of the Statute, the Undersigned applicant represents, that the following are the
names of the adjoining lands and the names of the owners of the same as far as known to the Undersigned
applicant; to wit.

Of the land of Waipio [by] the land of Waikoeke owned by His Majesty [and] Waimanu, owned by
applicant
[page 231]

Of the Ili of Kalahuipuaa [by] the land of Puako, owned by His Majesty

The land of Anaehoomulu owned by applicant

Of the land of Anaehoomalu [by] the land of Kalahuipuaa, owned by applicant, [by] the land of Napuu, a
Crown land

Of the Ahupuaa of Kapalaalaea [by] the land of Laaloa, [by] the land of Kahaluu, owned by R. Keelikolani

A full description of the boundaries of some of the above lands as claimed is set forth in the annexed
surveys with this application and part of this, his application,
Very Respectfully, Charles Kanaina, by A.F. Judd, his Attorney in fact.

Notes of the Survey of Anaehoomalu, An Ili in Waimea, Hawaii
Beginning at the seashore point of junction with Kalahuipuaa, and running thence along the line of
Kalahuipuaa
South 72 1/3° East 34.06 chains; thence along the Alanui Aupuni
South 16° West 83.52 chains

South 24° West 49.00 chains
South 25° west 34.00 chains; thence along the line of Kapalaoa
North 73° West 30.00 chains to the sea, and thence along the shore
North 35° East 13.00 chains
North 32° West 56.00 chains
North 39 1/4° East 59.40 chains
North 37 1/4° East 59.60 to the point of commencement
Comprising an area of 846 acres more or less
J. Howard Sleeper, Surveyor
December 3rd 1858

Note: Notes of survey of Kalaihuipuaa on file

Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, Hawaii, Volume B, pps 111-116

The Ahupuaa of Waipio, District of Hamakua, island of Hawaii, 3d Judicial Circuit

On this, the 19th day of November A.D. 1873 the Commission of Boundaries for the Island of Hawaii, 3d Judicial Circuit met at the Court House in Waipio, Hamakua, on the application of A.F. Judd, Agent for Honorable C. Kanaina, for the settlement of the boundaries of Waipio situated in the District of Hamakua, Island of Hawaii.

Notice of the hearing for the settlement of boundaries of lands in Hamakua and Kohala at Waimea Court House, South Kohala on the [left blank]

Served by publication in the Hawaiian Gazette of [left blank] and Kuokoa of [left blank], 1873 and adjourned to Waipio on the 17th instant and continued on the 18th and 19th.
Due notice personally served on agents of adjoining lands, as far as known.

Present: G.W.D. Halemanu for applicant and adjoining lands J.R. Mills for lessees of Waipio.

For Petition see Folio 230, Book A

Note: For the boundaries of Waipio adjoining Muliwai see boundaries and Decision of Muliwai. Folio 83 [Volume B]

Testimony

N. Keau, sworn, (same witness as in Waikoekoe) I have lived here for over fifty years, and the boundaries of Waipio are well known to me. Lalakea, an ili of Waipio bounds it on the Hilo side. I have had charge of Lalakea and have leased it for over ten years, and when I leased it I went and saw the boundary between it and Waipio. The mouth of the river is the boundary at shore between Waipio and Lalakea; thence up the wall between Lalakea and the stream and thence up the stream to makai of G.W.D. Halemanu's house; there turn and run up the pali, called Pueohuhunui. [page 112]

~~Note~~

The old boundary that runs up the pali is mauka of Halemanu's house, the boundary surveyed is makai. The place at the foot of the pali is called Waimihi.

~~Note~~

Keau points out the ridge as running up above A.S. Cleghorn's store.

Thence along the brow of the pali till you come to a place called Poolakiki, there is a rock there on the pali called Hakalaoa, an old stone god. The boundary has left the top of the pali and come along on the side to this place; thence to the foot of Hiilawe falls; thence along the foot of the pali to an auwai; thence up the auwai to a stream of water (the patch called Haha is on Lalakea) thence up the stream to Kukauloa, a patch where I used to plant food; there the boundary of Lalakea turns into the pali again along the loi, and along the base of the pali to the land of Ohia; thence to the middle of the pali to a place called Apailolo, a road which used to run out to the head of the valley. This is the mauka corner of the land (This is established by Certificate of Boundaries of Waimea, as the corner called Kilohana of Waipio and Lalakea). Kilohana is a resting place at the mauka end of the pali.

Cross-examined

I do not know the mauka boundaries of Waipio or what lands cut if off on the mauka end.

Paaaoa, kane, sworn, I was born in Waipio Hamakua at the time of Peleleu. I have always lived here and know the boundaries.

Kamehameha I told me the boundaries.

Kamehameha I did not tell me the boundaries.

Keala, my makuakane, told them to me. He had charge of Lalakea and I sometimes went there with him. My mother, Pelele, was a kamaaina of Waipio and she told my father who was from Molokai; the boundaries between Waipio and Waimea. Lalakea bounds Waipio on the Hilo side. Commencing at the shore close to a heiau called Akahakakapauloa, on the Hilo side of the stream; thence the boundary runs to a wall in cloasing [sic enclosing] a fish pond on Lalakea; [page 113] thence along the kuauna to Halemanu's cook house; thence to the Court House and up an awaawa to the top of the pali; thence to the awaawa of Kaluahine, on Lalakea. The top of the pali is called Pueohulunui; thence mauka along the side of the pali to the road called Puaahuku (contradictory evidence); thence along this road to the brow of the pali that bounds Kemama and Lalakea; thence along the pali to Hiilawe falls, to Puaahuku road; thence along the brow of the pali to Opailolo [Apailolo?], a road that used to lead to Waimea that runs down the head of the valley. I do not know of any place called Kilohana. The head of this road, at the top of the pali is where Waimea joins Waipio; Thence along Waimea along the head of the pali, the awaawa belonging to Waipio and the land above to Waimea. The ridges between the awaawa, in the valley and Waipio, but the land above the big pali is Waimea; thence along the brow of the pali to Ulu. From here I have been told that Waipio runs up to Waihoolana, and joins Honokane. Waimanu does not reach above Kealai. I do not know whether it ends there or not. I do not know what land bounds Waipio from Kealai to Waihoolana; have never been beyond Ulu. From Kealai to sea shore Muliwai bounds Waipio.

(Note: See Evidence Certificate of Boundaries of Muliwai) Folio 332 of this book. [Volume B] Bounded makai by the sea. Ancient fishing rights extending out to sea and in olden times they used to extend along to Nalua gulch. I saw the line of boundary between Waipio and Lalakea surveyed from the shore to the Court House, but I did not go any further with them.

Pehe, kane and others now dead were with the surveyor.

Cross-examined

One of the places called Manuhi, in the valley is on Lalakea; the pali all belongs to Waipio but the cultivating ground, Mamihi iki makai on Lalakea mauka; this place commences at Kaihuakapuaa, the loi of that name is on Waipio, and the loi of the same name further mauka is on Lalakea; the boundary being the bank between, which runs out into the stream; thence mauka up the stream to the bank of the loi on Manuhi mauka; [page 114] here the boundary turns towards the pali; taking in all the kalo patches and old potato ground. I can go and point out the boundaries all around that place. The mauka boundary of the strip of Lalakea in the valley is between two lots of land in the valley belonging to Lalakea. There were formerly strips of land in Lalakea belonging to Waipio, but when Kaniu had the land she gave Lalakea to Kuakini and he took possession of those tracts of land as a part of Lalakea. I think this was during Kamehameha III time and they have been held as part of Lalakea ever since. The strips were called Polakiku and Kumupapala, and Mahikiwaena was a part of Kumupapala. Kuakini too possession of the pali above the cultivating ground.

Note. N. Keau asks to be allowed to make a statement; granted.

During the reign of Liholiho the land of Lalakea belonged to Kamamalu, and she gave it to her mother, Kaniu wahine, and Kaniu gave it to Kuakini, and the boundaries that I testified to are as Kuakini fixed them at that time, and I have not heard of their being changed since. The last witness has testified to the boundaries as they were formerly. Kuakini changed the boundaries of a great many lands at that time.

Waiokalehua, kane, sworn, (same witness as in Muliwai) Nahuina, kane, my makua told me the boundaries of Waipio, as I testify too [sic] today and I afterwards went with the surveyor of Waipio and Lalakea. Makuakua, kane (now dead) was the kamaaina of Waipio and Puanui (now dead) was the kamaaina of Lalakea. Kauhine and others who are now dead, went with us and the land was surveyed as the kamaaina pointed out the boundaries.

Commencing at the shore between Lalakea and Waipio at a heiau called Kahalekapaulua, about five chains from the Hilo side of the river, thence they surveyed across [page 115] the sand beach, to the bank of the fish pond; thence along the wall of the fish pond and the kuauna of the river to Halemanu's cook house; thence towards the pali passing on the mauka side of where the Court House now stands, to the base

of the pali; thence up a hollow in the pali to Kilohana, an old kauhale; here a portion of Lalakea ends and the strip of land called Kemama bounds Waipio; thence to the awaawa of Kaluahine which is shallow there. We went to a place called Kaluapuhe, and from there sighted to the different points in the valley, and to the top of Puahuku pali. The surveyor then took the compass, to Kaihupuaa at the foot of the pali, and surveyed out into the valley to the stream to a place called Keawehale, thence straight mauka along the banks of the kalo patches (true boundary) taking in the whole of Manuhi makai thence to the Hamakua side of the pali and along the base to Apailolo, a road running up the pali. This is as far as I went with the surveyor. I have been told by them that went with him that he surveyed all around the valley, sighting to different points on the pali. It was very pleasant weather and we could see the points on top of the pali very distinctly from the point at the head of the pali called Kilohana; the boundary runs along the brow of the pali to Hiilawe, the pali being on Waipio, thence along the brow of the pali to Puahuku road. My parents told me that the pali above the cultivating ground at Lalakea in Waipio valley belongs to Waipio. I do not know where Kuakini claimed.

They told me that the brow of the pali was the boundary line running mauka to Waiakulina, a gulch that in olden times was the mauka corner of Lalakea, there is a strip of Waipio between there and Puukapu. Kolohana is a resting place at the top of Apailolo, and not far from Waiakulina. From Kilohana Waipio runs to Ulu, bounded by Waimea. Waipio had land on the top of the pali ~~from~~ between Kilohana and Ulu. Waipio and Waimea join and bound each other to Waihoolana. I have never been to Waihoolana but am told that Waipio, Waimanu and Honokane [page 116] join there. Thence Waipio and Waimanu bound each other to Kealai. The boundary runs along the brow of the pali from Ulu to Kealai which is the mauka corner of Muliwai; thence makai to sea shore along Muliwai. For Boundaries see Certificate Evidence of Boundaries of Muliwai. Folios 83 & 84 of this book [Volume B].

Bounded makai by the sea. Ancient fishing rights extending out to sea.

The Waipio people used to go after olona on the ridge that projects into the head of the valley.

Cross-examined

I have heard from my mother that Kawaihae bounds Waipio at the Waihoolana.

Case continued until further notice to all interested parties.

R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit

Note: the case was continued to see whether owners of Waipio wished to claim the Ili of Waipio, that were included in the survey of Lalakea, to wit: Mahikiwaena, Kumupala, and Polakikee.

A.F. Judd, Attorney in fact for His Honorable Chas. Kanaina filed his acceptance of the boundary between Waipio and Lalakea as given in notes of survey of Lalakea and Waipio, filed by owners of Waipio and Lalakea; See Folio 118 of this book [volume B]

R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit

Decision

The Boundaries of Waipio are decided to be as given in Certificate of Boundaries for Lalakea, No. 34 for boundary from shore between this land & Lalakea to point on East bank of Waipio called Kilohana for description by survey see Folio 15. Liber I or No. 3; Thence along brow of pali to place called Ulu bounded by Waimea to junction ~~thence to swamp called Waihoolana~~ Waimanu; thence on a kai along land of Waimanu to lace called Kealai, place where old road to Waimanu from Waipio ran over the ridge; thence boundary runs down pali along land of Muliwai to bottom of Pali; thence makai along base of pali, as pointed out by Kamakahiki & Waiokalehua, see Folios 83 & 84 of this book [volume B] to point in valley where boundary turns out to Imikalani, along Kalua's kuleana & Waiomaof[?] pond, leaving Muliwai pond & two kiopua on Muliwai; & thence from old pond Mokapu on Waipio boundary runs towards Kohala to Keholokuauna[?] mauka side of Government road, up the pali; thence to sea shore, bounded makai by sea.

New survey to be filed previous to Certificate of Boundaries being issued.

Hilo, May 11, 1874.

R.A. Lyman, Commissioner of Boundaries, 3d Judicial Circuit

Copy of Decision sent to all interested parties.

Costs:
Hearing 20.-; [?5 trips] from Hilo [10-?]; 25 folio testimony 6.25, advertising 2.- 38.25 paid by applicant.
Witness paid by parties settling there.

**Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, Volume 1, No. 3,
pps 332-341**

Certificate of Boundaries of the Land of Waipio, District of Hamakua, Island of Hawaii
L.C. Award No. [left blank]

Commission of Boundaries, 3d Judicial Circuit, R.A. Lyman, Esquire, Commissioner

In the Matter of the Boundaries of the Land of Waipio, District of Hamakua, Island of Hawaii.

Judgment

An application to decide and certify the boundaries of the Land of Waipio, District of Hamakua, Island of Hawaii, having been filed with me on the [blank] day of August 1873 by A.F. Judd, Agent for Honorable C. Kanaina, owner of the land of Waipio, in accordance with the provisions of an act to facilitate the settlement of Boundaries, &c, approved on the 22d day of June, A.D. 1868; now therefore having duly received and heard all the testimony offered in reference to the said boundaries and having endeavored otherwise to obtain all information possible to enable me to arrive at a just decision, which will more fully appear by reference to the records of this matter by me kept in Book No. 2 B., page 116, and it appearing to my satisfaction that the true lawful and equitable boundaries are as follows, viz.:

Beginning at the east corner of a stone enclosure known as Waiokalehua's, 290 feet east of Wailoa river bank and about 830 feet from the sea, the same being the East angle of L.C.A. 7860 (Kawahineainiu Lot 1) on the boundary of Lalakea, from [page 333] whence "Waipio trig. station" bears 108° 5' azimuth. From true South, and top of the main or lower Hiilawe falls 10° 8' azimuth From true South and running:

- South 49° 10' West 396 feet along kuauna of Lalakea fish pond to the makaha at south angle of Kawahineainiu's kuleana;
2. South 48° 30' West true 292 feet along kuauna of Lalakea fish pond.
3. South 33° 10' West true 395 feet along kuauna of Lalakea fish pond;
4. South 18° 20' West true 429 feet along kuauna of Lalakea fish pond;
5. North 75° 50' East true 175 feet along Lalakea to a marked stone 9 feet southeast of the southeast corner of the Court House; Thence
6. South 38° 30' East true 1584 feet along Lalakea up spur of pali by old road, known as Pueohulunui, to a marked stone near head of said road whence the top of the main or lower falls of Hiilawe bears 20° 47' azimuth. From true South and "Waipio trig station" bears 127° 42' azimuth from true South.
7. South 19° 35' East true 1132 feet along Lalakea, the boundary being the edge of the main Waipio pali;
8. South 6° 45' East true 1116 feet along ditto [Lalakea];
9. South 5° 15' East true 1110 feet along ditto [Lalakea];
10. South 15° 10' West true 708 feet along ditto [Lalakea];
11. South 8° 20' West true 722 feet along Lalakea to a point on the east edge of Hooleleke Gulch;
12. South 79° 40' West true 219 feet across the mouth of the same;
13. South 53° 58' West true 1248 feet;
14. South 66° 30' West true 898 feet to the smaller falls east of Hiilawe;
15. South 68° 30' West true 171 feet;
16. North 56° 45' West true 267 feet to the Hiilawe falls;
17. North 63° 45' West true 455 feet;
18. North 33° 40' West true 1062 feet;
19. North 62° 30' West true 112 feet to the "Oioina" at the top of the ridge by the old path which descends the spur of the Puaahuku pali; [page 334]
20. North 9° 45' West true 3114 feet still along Lalakea down the ridge to a point at its base which marks the east corner of L.C.A. 11102 (Kahiamoe);
21. North 62° 35' West true 301 feet along ditto (L.C.A. 11102)
22. South 73° 40' West true 169 feet along ditto [L.C.A. 11102] to a water course; Thence along water course;
23. South 33° 40' West true 315 feet still along L.C.A. 11102;
24. South 43° 00' West true 174 feet along Lalakea;

25. South 50° 30' West true 259 feet along L.C.A. 8472 Keawe;
26. South 18° 50' West true 174 feet along ditto [L.C.A. 8472]; Thence leaving water course;
27. North 67° 00' West true 83 feet along kuaauna by L.C.A. 10781 (Puaanui) to the east bank of the Kumaka river;
28. South 49° 40' West true 242 feet along L.C.A. 10781;
29. South 23° 35' West true 209 feet along L.C.A. 10781;
30. South 65° 45' East true 109 feet along L.C.A. 10781;
31. South 19° 5' West true 798 feet along L.C.A. 10781;
32. South 66° 30' East true 100 feet along L.C.A. 10781;
33. North 20° 45' East true 642 feet along L.C.A. 10781 along water course;
34. South 71° 00' East true 128 feet along Lalakea;
35. South 59° 20' East true 325 feet along L.C.A. 8487 (Kaunauwahi) to its south corner; Thence along side of pali by Lalakea;
36. South 31° 50' West true 976 feet;
37. South 6° 00' West true 238 feet to south corner of L.C.A 7056 (Kahulanui) Lot 1;
38. South 30° 10' West true 1402 feet to the east corner of the Ili of Pueo, Grant No. 664 (Kaaukai); Thence leaving the pali
39. North 55° 45' West true 74 feet along Pueo;
40. North 32° 20' West true 119 feet along Pueo to east corner of L.C.A. 7956 (Kahulanui) Lot 2;
41. North 48° 30' West true 278 feet along Pueo;
42. North 58° 30' West true 106 feet along Pueo;
43. North 79° 20' West true 62 feet along Pueo;
44. North 50° 30' West true 159 feet along Pueo;
45. South 38° 10' West true 324 feet along Pueo; [page 335]
46. North 55° 30' West true 33 feet along the Ili of Kaohia (Crown);
47. South 33° 15' West true 123 feet along the Ili of Kaohia;
48. North 54° 30' West true 192 feet along the Ili of Kaohia;
49. South 27° 50' West true 1054 feet along the Ili of Kaohia to its west corner on the west side of a water course;
50. South 60° 10' East true 272 feet along Kaohia to the east corner of L.C.A. 10962 (Konohiki) at a point on the brow of a small pali 9 feet east of a pig pen;
51. North 61° 10' East true 302 feet along Kaohia to a well known marked rock called "Ohaku Ohia;"
52. South 23° 25' East true 244 feet along Ohia; thence along the side of the pali by Lalakea;
53. South 28° 10' West true 363 feet to the east corner of L.C.A. 10962 (Konohiki);
54. South 30° 40' west true 505 feet;
55. South 68° 30' west true 227 feet;
56. South 74° 45' West true 446 feet to the south corner of L.C.A. 8481 (Kowilikopaa); Thence up the pali to the top;
57. South 42° 45' East true 2380 feet; Thence along the summit edge of pali still along Lalakea;
58. South 30° 15' West true 430 feet;
59. South 14° 00' West true 1073 feet;
60. South 20° 20' East true 235 feet;
61. South 26° 5' West true 3140 feet;
62. South 29° 20' West true 3091 feet;
63. South 56° 30' West true 363 feet to a well known marked point called "Kolohana," on the boundary of Waimea, at the head of the old Opaelolo road not far above the rock of Pupualenalena;
64. Thence along the brow of the pali around the entire head of Waipio valley and its several branches called Waima; Koiawe; Alakahi and Kawainui; along the ahupuaas of Waimea and Waimanu (Awini, Honopue and Laupahoehoe probably also abutting on this pali) to [page 336] a point at Kealoi or the lowest part of the saddle of the ridge between Waipio and Waimanu valleys at the head of the latter;
65. Thence down pali along land of Muliwai to bottom of pali;
66. Thence along bottom of pali by Muliwai to a point 360 feet true north of the junction of the Koiawe and Kawainui rivers and North 50° 0' West true 6210 feet from station 64 at Kilohana; Thence
67. North 82° 0' East true 792 feet along base of pali by Muliwai;
68. North 51° 0' East true 300 feet along base of pali by Muliwai;
69. North 67° 40' East true 1130 feet along base of pali by Muliwai;

70. South 13° 55' East true 86 feet across Kawainui river by Pohakumauluulu;
71. North 86° 50' East true 810 feet along edge of the river by Pohakumauluulu;
72. North 7° 0' East true 173 feet across both branches of river by Pohakumauluulu;
73. South 69° 0' East true 793 feet along base of pali by Muliwai;
74. South 77° 30' East true 563 feet along base of pali by Muliwai to angle in the valley 500 feet northwest of junction of Kawainui and Waima rivers and North 7° 10' west true 4490 feet from station 64 at Kilohana;
75. North 21° 0' East true 1223 feet along side of pali by Muliwai; Thence along the Ili of Pohakumauluulu (Crown);
76. South 63° 40' East true 767 feet to a mark on large rock at end of stone wall by edge of small pali;
77. South 61° 10' East true 178 feet to edge of Kawainui river; Thence along the northwest bank of Kawainui river to a point which bears
78. South 41° 15' west true 1474 feet from last station.
79. South 4° 25' West true 74 feet across river to a point 70 feet east of junction of Waima and Kawainui rivers; thence along the southeast bank of the Kawainui river to a point which bears
80. North 42° 25' East true 1550 feet from last station and South 61° 10' East true 78 feet from station 77;
81. South 61° 10' East true 317 feet;
82. North 44° 0' East true 490 feet along base of pali on east side of valley; [page 337]
83. North 4° 40' East true 457 feet along base of pali on east side of valley;
84. North 68° 45' West true 382 feet crossing Kawainui river to an old kahuahale;
85. North 75° 20' West true 711 feet;
86. North 67 248 50' West true 358 feet still along Pohakumauluulu to its north corner which bears North 16° 45' East true 675 feet from station 76; Thence along the side of the pali by Muliwai;
87. North 11° 25' East true 1834 feet to southwest corner of L.C.A. 8539 (Kupele) Lot 1;
88. North 21° 20' East true 397 feet to northwest corner of same;
89. North 23° 15' East true 963 feet to southwest corner of L.C.A. 10781 Puaanui;
90. North 7° 20' East true 660 feet;
91. South 67° 35' East true 100 feet to west angle of L.C.A. 10286 Manuakui, Lot 1; Thence along the base of the pali by Muliwai;
92. North 37° 15' East true 903 feet;
93. North 30° 10' East true 1789 feet to a point near base Kumupapala falls at the west corner of L.C.A. 7860 (Kawahineainiu), Lot 1;
94. North 39° 30' East true 507 feet to north corner of L.C.A. 7860;
95. North 7° 15' West true 898 feet;
96. North 14° 40' West true 239 feet to north corner of L.C.A. 8471 (Kaheana) Lot 1; just south of a small waterfall;
97. North 42° 45' East true 361 feet;
98. North 54° 30' East true 309 feet;
99. North 41° 55' East true 258 feet;
100. North 53° 50' West true 120 feet;
101. North 28° 00' West true 148 feet to the west corner of L.C.A. 10395 (Nakoko) at a point on the south edge of basin at foot of Neneuwe falls;
102. North 37° 40' East true 49 feet to a point on east edge of basin;
103. North 3° 20' East true 132 feet crossing Neneuwe stream to a point on steep face of a sharp ridge; [page 338]
104. North 87° 0' West true 223 feet up the ridge; Thence along the side of the pali still by Muliwai;
105. North 14° 50' West true 507 feet to west corner of L.C.A. 9827 (Kipapanui);
106. North 16° 0' East true 79 feet;
107. North 15° 30' West true 311 feet to west corner of L.C.A. 8401 (Keliinohopali);
108. North 37° 15' East true 124 feet;
109. North 56° 00' East true 225 feet;
110. North 39° 35' East true 211 feet to north corner of L.C.A. 10066 (Maka) Lot 1;
111. South 49° 50' East true 377 feet to west corner of L.C.A. 8202 (Hamohamo);
112. North 50° 10' East true 48 feet;
113. South 51° 15' East true 87 feet;
114. North 63° 15' East true 207 feet;

115. North 8° 35' East true 122 feet; Thence leaving the boundary of Muliwai and running around the Ili of Koloakiu, L.C.A. 8815B (Kaonaeha);
116. South 64° 20' east true 160 feet down the pali to the west bank of the water course by the road;
117. South 8° 50' West true 33 feet;
118. South 73° 10' East true 89 feet;
119. South 18° 45' West true 57 feet;
120. South 64° 25' East true 779 feet;
121. North 34° 0' East true 982 feet to the south corner of L.C.A. 10960 (Wahakole), Lot 1 on the east bank of the Makoko river;
122. North 21° 5' East true 105 feet to a point in the middle of the river;
123. North 54° 50' West true 1000 feet to the corner of a stone wall by the road at the base of the pali near the north corner of the Loi koele;
124. North 49° 10' West true 360 feet up the pali to a marked rock by puhala tree at north corner of L.C.A. 10960 (Wahakole) Lot 1; thence leaving the boundary of Koloakiu and running along the side of the pali by Muliwai;
125. North 55° 25' East true 178 feet to west corner of L.C.A. 8474 (Kealoha); [page 339]
126. North 40° 00' East true 294 feet to north corner of L.C.A. 8479 (Koi);
127. North 78° 50' East true 451 feet to west corner of L.C.A. 10565B (Ohule), Lot 1;
128. North 39° 35' East true 426 feet;
129. North 1° 25' east true 480 feet;
130. South 72° 30' east true 108 feet;
131. North 30° 20' East true 210 feet;
132. North 54° 40' West true 130 feet;
133. North 35° 15' East true 66 feet;
134. North 51° 20' West true 63 feet to west corner of L.C.A. 7856 (Kamakahiki), Lot 2;
135. North 46° 0' East true 380 feet to north corner of L.C.A. 7856 (Kamakahiki), Lot 1;
136. South 61° 10' East true 248 feet down the pali; Thence along base of pali still by Muliwai;
137. North 38° 30' East true 180 feet;
138. South 71° 45' East true 73 feet crossing the road to a point 17 feet east of stone wall;
139. North 25° 45' East true 303 feet to the north corner of L.C.A. 7863 (Kalua), Lot 3;
140. North 13° 00' East true 172 feet to a point on east face of stone wall;
141. North 14° 40' East true 25 feet to south corner of L.C.A. 7863 (Kalua), Lot 2;
142. North 75° 15' West true 28 feet crossing the road to a point on side hill 21 feet mauka of "Leimakani's cave;"
143. North 10° 40' East true 99 feet;
144. North 33° 0' West true 25 feet;
145. North 58° 30' West true 258 feet;
146. North 29° 40' East true 290 feet; Thence leaving the base of pali but still following the boundary of Muliwai;
147. South 67° 40' East true 98 feet to corner of stone wall on East side of road at North corner of L.C.A. 7863 (Kalua), Lot 2;
148. South 77° 15' East true 129 feet;
149. South 1° 50' East true 208 feet along edge marsh;
150. South 33° 0' West true 174 feet along edge marsh;
151. South 14° 40' West true 100 feet to station 142;
152. South 14° 40' West true 25 feet to station 141; Thence starting again [page 340] from station 141 and running out into the marsh still along Muliwai;
153. South 69° 20' East true 198 feet along kuauna to angle in ditto [kuauna];
154. North 45° 45' East true 88 feet along kuauna to makaha of old fish pond;
155. South 64° 50' East true 793 feet through marsh to west corner of L.C.A. 10918 (Uma), Lot 3, on east bank of water course;
156. North 39° 10' East true 987 feet to north corner of L.C.A. 7860 (Wahineainiu); Lot 2 on east bank of water course;
157. North 28° 50' East true 491 feet along edge of the Muliwai marsh to the angle in the kuauna at its east corner;
158. North 59° 0' West true 1344 feet along kuauna to a point 30 feet east of the road on the west side of

the marsh;

159. South 6° 0' West true 55 feet;
 160. South 47° 35' west true 225 feet to the south corner of L.C.A. 7863 (Kalua); Lot 1, which is North 31° 25' East true 841 feet from Station 148;
 161. North 49° 20' West true 146 feet crossing the road to a point on the side of the Muliwai pali;
 162. North 39° 30' East true 736 feet along side of pali to the north angle of L.C.A. 7863;
 163. South 37° 45' East true 132 feet down the pali;
 164. North 6° 35' West true 114 feet to a marked point on the rock at base of pali where it forms a sharp angle near sea shore;
 165. Thence the ahupuaa of Waipio owns the shore fishing on all accessible rocks on the coast as far to the northwest as the gulch Nalua about two miles. Starting again from a point which bears North 64° 20' East true, 100 feet from station 165 and running along sea shore;
 166. South 29° 0' true 350 feet;
 167. South 66° 55' East true 2624 feet to a point in the middle of river at its mouth; [page 341]
 168. South 78° 40' East true 330 feet to a point on the sea shore on the division line between this land and Lalakea; Thence
 169. South 26° 10' west true 866 feet along Lalakea to initial point, containing an area of about 5800 acres.
 Surveyed by J.S. Emerson, Government Surveyor

I hereby certify the above description to be in accordance with the past decisions of the boundary Commission of the Island of Hawaii.
 (Signed) C.J. Lyons

May 17th 1881

It is therefore adjudged and I do hereby decide and certify that the boundaries of the said land are, and hereafter shall be as hereinbefore set forth.
 F.S. Lyman, Commissioner of Boundaries

Estate C. Kanaina, Dr.
 Costs - certificate \$2.00
 41 folio description 20.50
 \$22.50 paid by W.C. Parke

Interior Department
 Certified copy Certificate
 43 folio description @ .25 \$10.75
 Certificate of Dr. 2.00
 \$12.75 paid

[No. 135, Waipio Ahupuaa, District of Hamakua, Island of Hawaii, Boundary Commission, 5800 Acres; 1881, see No. 173 Keahialaka, p. 166 where he lists Waipio as No. 135]

**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout**

Environmental Assessment

APPENDIX 3

DETECTED RICE PROPERTY PLANT SPECIES

Scientific Name	Family	Common Name	Life Form	Status *
<i>Adiantum capillus-veneris</i>	Pteridaceae	Maidenhair	Fern	I
<i>Adiantum hispidulum</i>	Pteridaceae	Rough Maidenhair Fern	Fern	A
<i>Adiantum raddianum</i>	Pteridaceae	Adiantum	Fern	A
<i>Aechmea</i> sp.	Bromeliaceae	Bromelia	Herb	A
<i>Ageratina riparia</i>	Asteraceae	Hamakua Pamakani	Herb	A
<i>Ageratum conyzoides</i>	Asteraceae	Ageratum	Herb	A
<i>Alpinia</i> sp.	Zingiberaceae	Alpinia	Herb	A
<i>Amaranthus spinosus</i>	Amaranthaceae	Spiny Amaranth	Herb	A
<i>Araucaria columnaris</i>	Araucariaceae	Cook Pine	Tree	A
<i>Bambusa</i> sp.	Poaceae	Bamboo	Tree	A
<i>Barleria</i> sp.	Acnathaceae	Barleria	Herb	A
<i>Begonia</i> sp.	Begoniaceae	Begonia	Herb	A
<i>Bidens</i> sp.	Asteraceae	Beggartick	Herb	A
<i>Blechnum appendiculatum</i>	Blechnaceae	Blechnum	Fern	A
<i>Bougainvillea</i> sp.	Nyctaginaceae	Bougainvillea	Shrub	A
<i>Brachiaria mutica</i>	Poaceae	California Grass	Herb	A
<i>Broussonetia papyrifera</i>	Moraceae	Paper Mulberry	Shrub	A
<i>Buddleia asiatica</i>	Buddleiaceae	Buddleia	Shrub	A
<i>Caladium</i> sp.	Araceae	Caladium	Herb	A
<i>Calliandra</i> sp.	Fabaceae	Calliandra	Shrub	A
<i>Canna</i> sp.	Cannaceae	Canna	Herb	A
<i>Carica papaya</i>	Caricaceae	Papaya	Shrub	A
<i>Caryota</i> sp.	Arecaceae	Fishtail Palm	Tree	A
<i>Casuarina</i> sp.	Casuarinaceae	Ironwood	Tree	A
<i>Catharanthus roseus</i>	Apocynaceae	Madagascar Periwinkle	Herb	A
<i>Centella asiatica</i>	Apiaceae	Asiatic Pennywort	Herb	A
<i>Chamaecrista nictitans</i>	Fabaceae	Partridge Pea	Herb	A
<i>Chamaesyce hirta</i>	Euphorbiaceae	Garden Spurge	Herb	A
<i>Chamaesyce prostrata</i>	Euphorbiaceae	Prostrate Spurge	Herb	A
<i>Christella dentata</i>	Thelypteridaceae	Downy Wood Fern	Fern	A
<i>Christella</i> sp.	Thelypteridaceae	Christella	Fern	A
<i>Chrysophyllum</i> sp.	Sapotaceae	Satinleaf	Tree	A
<i>Cibotium glaucum</i>	Dicksoniaceae	Hapu'u Pulu	Fern	I
<i>Cibotium menziesii</i>	Dicksoniaceae	Hapu'u i'i	Fern	I
<i>Clidemia hirta</i>	Melastomataceae	Koster's Curse	Herb	A

Table 1, cont'd				
Scientific Name	Family	Common Name	Life Form	Status*
<i>Cocos nucifera</i>	Arecaceae	Niu	Tree	A
<i>Codiaeum variegatum</i>	Euphorbiaceae	Croton	Shrub	A
<i>Colocasia esculenta</i>	Araceae	Kalo	Herb	A
<i>Commelina diffusa</i>	Commelinaceae	Honohono	Herb	A
<i>Conyza sp.</i>	Asteraceae	Horseweed	Herb	A
<i>Cordyline cul.</i>	Agavaceae	Red Ki	Shrub	A
<i>Cordyline fruticosa</i>	Agavaceae	Ki	Shrub	A
<i>Crinum sp.</i>	Amaryllidaceae	Amaryllis	Herb	A
<i>Cynodon dactylon</i>	Poaceae	Bermuda Grass	Herb	A
<i>Cyperus af. compressus</i>	Cyperaceae	Cyperus	Herb	A
<i>Cyperus halpan</i>	Cyperaceae	Sedge	Herb	A
<i>Cyperus sp.</i>	Cyperaceae	Cyperus	Herb	A
<i>Desmodium sandwicense</i>	Fabaceae	Spanish Clover	Herb	A
<i>Desmodium triflorum</i>	Fabaceae	Desmodium	Herb	A
<i>Dichorisandra thyrsoflora</i>	Commelinaceae	Blue Ginger	Shrub	A
<i>Dieffenbachia sp.</i>	Araceae	Dumb Cane	Herb	A
<i>Digitaria setigera</i>	Poaceae	Itchy Crabgrass	Herb	I
<i>Digitaria sp.</i>	Poaceae	Crabgrass	Herb	A
<i>Dracaena cul.</i>	Agavaceae	Massangeana	Shrub	A
<i>Dracaena cul.</i>	Agavaceae	Dracaena	Shrub	A
<i>Dracaena marginata</i>	Agavaceae	Money Tree	Shrub	A
<i>Drymaria cordata</i>	Caryophyllaceae	Drymaria	Herb	A
<i>Dypsis lutescens</i>	Arecaceae	Golden Cane Palm	Tree	A
<i>Eleusine indica</i>	Poaceae	Wiregrass	Herb	A
<i>Emilia sonchifolia</i>	Asteraceae	Flora's Paintbrush	Herb	A
<i>Eragrostis af. pectinacea</i>	Poaceae	Lovegrass	Herb	A
<i>Erechtites hieracifolia</i>	Asteraceae	Fireweed	Herb	A
<i>Erythrina crista-galli</i>	Fabaceae	Coral Tree	Tree	A
<i>Erythrina sp.</i>	Fabaceae	Erythrina	Tree	A
<i>Eucalyptus robusta</i>	Myrtaceae	Swamp Mahogany	Tree	A
<i>Eucalyptus sp.</i>	Myrtaceae	Eucalyptus	Tree	A
<i>Eucalyptus sp.</i>	Myrtaceae	Eucalyptus	Tree	A
<i>Ficus microcarpa</i>	Moraceae	Chinese Banyan	Tree	A
<i>Ficus sp.</i>	Moraceae	Banyan	Tree	A
<i>Fraxinus uhdei</i>	Oleaceae	Tropical Ash	Tree	A

Table 1, cont'd				
Scientific Name	Family	Common Name	Life Form	Status*
Galinsoga sp.	Asteraceae	Galinsoga	Herb	A
Gardenia sp.	Rubiaceae	Gardenia	Shrub	A
Hedychium sp.	Zingiberaceae	Ginger	Herb	A
Heliconia sp.	Heliconiaceae	Heliconia	Herb	A
Hibiscus cul.	Malvaceae	Hibiscus	Shrub	A
Hibiscus cul.	Malvaceae	Hibiscus	Shrub	A
Hibiscus cul.	Malvaceae	Hibiscus	Shrub	A
Impatiens walleriana	Balsaminaceae	Touch-me-not	Herb	A
Indigofera suffruticosa	Fabaceae	Indigo	Herb	A
Justicia betonica	Acanthaceae	White Shrimp Plant	Herb	A
Kyllinga brevifolia	Cyperaceae	Kyllinga	Herb	A
Lepisorus thunbergianus	Polypodiaceae	Pleopeltis	Fern	I
Lycopersicon sp.	Solanaceae	Tomato	Herb	A
Macadamia sp.	Proteaceae	Macadamia	Shrub	A
Mangifera indica	Anacardiaceae	Mango	Tree	A
Mariscus javanicus	Cyperaceae	Ahuawa	Herb	I
Melaleuca quinquenervia	Myrtaceae	Paperbark	Tree	A
Melinis minutiflora	Poaceae	Molasses Grass	Herb	A
Metrosideros polymorpha	Myrtaceae	Ohia	Tree	I
Monstera deliciosa	Araceae	Monstera	Shrub	A
Musa sp.	Musaceae	Banana	Shrub	A
Nephrolepis cordifolia	Nephrolepidaceae	Sword Fern	Fern	I
Nephrolepis exaltata	Nephrolepidaceae	Sword Fern	Fern	I
Nephrolepis multiflora	Nephrolepidaceae	Sword Fern	Fern	A
Oplismenus sp.	Poaceae	Basket Grass	Herb	A
Oxalis corniculata	Oxalidaceae	Yellow Wood Sorrel	Herb	A
Pandanus tectorius	Pandanaceae	Hala	Tree	I
Panicum maximum	Poaceae	Guinea Grass	Herb	A
Paspalum conjugatum	Poaceae	Hilo Grass	Herb	A
Pennisetum clandestinum	Poaceae	Kikuyu Grass	Herb	A
Pentas sp.	Rubiaceae	Pentas	Shrub	A
Persea americana	Lauraceae	Avocado	Tree	A
Philodendron sp.	Araceae	Philodendron	Vine	A
Philodendron sp.	Araceae	Philodendron	Vine	A
Phlebodium aureum	Polypodiaceae	Golden Polypody	Fern	A
Phyllanthus debillis	Euphorbiaceae	Niruri	Herb	A
Pityrogramma calomelanos	Pteridaceae	Silver Fern	Fern	A
Pluchea symphytifolia	Asteraceae	Sourbush	Shrub	A
Plumeria sp.	Apocynaceae	Plumeria	Shrub	A
Polygala paniculata	Polygalaceae	Milkwort	Herb	A

Table 1, cont'd				
Scientific Name	Family	Common Name	Life Form	Status*
Pseuderanthemum sp.	Acanthaceae	Pseuderanthemum	Shrub	A

<i>Psidium cattleianum</i>	Myrtaceae	Waiawi	Tree	A
<i>Psidium guajava</i>	Myrtaceae	Guava	Tree	A
<i>Psilotum nudum</i>	Psilotaceae	Moa	Fern	I
<i>Pycnus polystachyos</i>	Cyperaceae	Sedge	Herb	I
<i>Ricinus communis</i>	Euphorbiaceae	Castor Bean	Shrub	A
<i>Roystonea sp.</i>	Arecaceae	Royal Palm	Tree	A
<i>Rubus rosifolius</i>	Rosaceae	Thimbleberry	Shrub	A
<i>Sacciolepis indica</i>	Poaceae	Glenwood Grass	Herb	A
<i>Sambucus mexicana</i>	Caprifoliaceae	Mexican Elder	Shrub	A
<i>Schefflera actinophylla</i>	Araliaceae	Octopus Tree	Tree	A
<i>Schinus terebinthifolius</i>	Anacardiaceae	Christmas Berry	Shrub	A
<i>Setaria palmifolia</i>	Poaceae	Palmgrass	Herb	A
<i>Sida rhombifolia</i>	Malvaceae	Sida	Herb	I
<i>Solanum americanum</i>	Solanaceae	Popolo	Herb	I
<i>Solenostemon scutellarioides</i>	Lamiaceae	Coleus	Shrub	A
<i>Sonchus oleraceus</i>	Asteraceae	Pualele	Herb	A
<i>Spathodea campanulata</i>	Bignoniaceae	African Tulip	Tree	A
<i>Spermacoce assurgens</i>	Rubiaceae	Buttonweed	Herb	A
<i>Sporobolus africanus</i>	Poaceae	Smutgrass	Herb	A
<i>Strelitzia reginae</i>	Strelitziaceae	Bird of Paradise	Herb	A
<i>Syngonium sp.</i>	Araceae	Syngonium	Vine	A
<i>Toona ciliata</i>	Meliaceae	Australian Red Cedar	Tree	A
<i>Veitchia sp.</i>	Arecaceae	Palm	Tree	A
<i>Verbena litoralis</i>	Verbenaceae	Vervain	Herb	A
<i>Wedelia trilobata</i>	Asteraceae	Wedelia	Herb	A
<i>Xanthosoma sp.</i>	Araceae	Ape	Herb	A
<i>Youngia japonica</i>	Asteraceae	Oriental Hawksbeard	Herb	A

A = alien, E = endemic, I = indigenous, End = Federal and State listed Endangered Species

Limitations

No botanical survey of a large area can claim to have detected every species present. Some species are cryptic in juvenile or even mature stages of their life cycle. Dry conditions can render almost undetectable plants that extended rainfall may later invigorate and make obvious. Thick brush can obscure even large, healthy specimens. The findings of this survey must therefore be interpreted with proper caution; in particular, there is no warranty as to the absence of any particular species.

**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout**

Environmental Assessment

APPENDIX 4

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**(Note: Main report included only; Appendices available for
review at Hawaii County Finance Department)**

Phase I Environmental Site Assessment Report

Prepared for

**William Takaba, Director
Department of Finance
County of Hawaii**

Prepared by

**DR Associates
PO Box 1018
Hale'iwa, HI 96712**

November, 2006

Phase I Environmental Site Assessment Report

(TMK) (3) 4-8-004:006

Waipio Valley Lookout, Hawaii



November, 2006

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 PURPOSE	1
1.2 SCOPE OF WORK	1
1.3 SITE DESCRIPTION	3
1.3.1 Location.....	3
1.3.2 Site and Vicinity Characteristics.....	3
1.3.3 Physical Description	3
1.3.4 Physiography.....	3
1.3.5 Site Geology	4
2. INTERVIEWS	5
3. HISTORICAL SOURCES OF INFORMATION	6
3.1 SITE HISTORY	6
3.2 HISTORIC MAPS	6
3.3 INTERNET SEARCH	6
3.3 HISTORICAL MAPS	6
3.4 CITY DIRECTORIES.....	6
4. ENVIRONMENTAL LEINS	7
5. FEDERAL STATE AND LOCAL RECORDS	8
5.1 FEDERAL AND STATE RECORDS	8
5.1.1 Hazardous Material and Petroleum Releases.....	8
5.1.2 Underground Storage Tanks.....	8
5.2 LOCAL RECORDS.....	9
5.2.1 Title and Lease Records.	9
6. VISUAL INSPECTION	10
6.1 SITE RECONNAISSANCE.....	10
6.2 ADJACENT PARCELS.....	11
6.3 BUILDING MATERIALS SURVEY	11
7. SPECIALIZED KNOWLEDGE	12
8. RELATIONSHIP BETWEEN PURCHASE PRICE AND VALUE	13
9. COMMONLY KNOWN INFORMATION	14
10. LIKELY PRESENCE OF CONTAMINATION AND THE ABILITY TO DETECT THE CONTAMINATION BY APPROPRIATE INVESTIGATION	15
10.1 DATA GAPS	15
10.2 CONCLUSIONS AND RECOMMENDATIONS	15
11. REFERENCES	17
12. LIMITATIONS AND EXCLUSIONS	18

13. QUALIFICATIONS 19

Figures

1. Subject Property Location on 1957 USGS Map
2. Subject Property Location on 1982 USGS Map
3. Subject Property Location on 1995 USGS Map
4. Property boundaries from County map
5. Satellite photograph of property location

Site Photographs

Appendix 1: EDR Radius Map

Appendix 2: EDR Sanborn Map Search

Appendix 3: EDR City Directory Search

Appendix 4: EDR Environmental Lien Search

1. INTRODUCTION

1.1 PURPOSE

DR Associates (DR) was retained by Geometrician Associates, of Hilo, Hawaii, on behalf of the County of Hawaii (the County) to perform a Phase I Environmental Site Assessment (ESA) of an approximately 1.8-acre parcel in North East, Hawaii; tax map key (TMK) (3) 4-8-004:006 (the property). DR understands that the property is owned by the Rice Family Trust, who intends to sell it to the County. The purpose of this assessment is to provide a professional opinion as to the presence of environmental issues that may impact the use or utility of the property by new owners of this property.

The property lies on the Mountain side of the Waipio Valley Access Road at the northern extent of the County-maintained road. The property has been in the Rice Family estate since 1975 and contains an older now-abandoned structure.

This ESA was performed to assess current recognized environmental conditions at the property and propose recommendations for additional investigation, if warranted. "Recognized environmental conditions" means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property (American Society for Testing and Materials [ASTM], 1997).

Hazardous substances are those substances defined under Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act. They are listed under Title 40 of the Code of Federal Regulations (CFR) Part 302. They include hazardous substances and toxic pollutants regulated under the Clean Water Act, hazardous wastes regulated under the Resource Conservation and Recovery Act (RCRA), and hazardous air pollutants regulated under the Clean Air Act. Petroleum products include crude oil, gasoline, kerosene, diesel oil, jet fuel, fuel oil, lubricating oil, natural gas, liquefied natural gas, and synthetic gas usable for fuel.

This assessment was conducted in general accordance with ASTM Standards, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM 1597-05 and All Appropriate Inquiry (AAI) standards that were promulgated on November 1, 2006. As part of a pre-acquisition due diligence of the property, the client requested that DR review available information relevant to the current environmental condition of the property.

1.2 SCOPE OF WORK

The scope of work consisted of the ten major components described below:

1. Prepare this report describing the results of an inquiry by a qualified environmental professional. The report contains observations and conclusions relating to the apparent recognized environmental conditions, and documents the results of tasks 2 – 10 listed below as well as data gaps that may impact the conclusions or our ability to render conclusions concerning the environmental condition of the property. This report contains our professional opinion as to whether visual and historical evidence

- indicates the presence of hazardous material in the soil or groundwater on the Property and defines limitations regarding this opinion,
2. Conduct interviews with past and present owners, operators, and occupants of the facility for the purpose of gathering information regarding the potential for contamination at the facility,
 3. Review historical sources of information, such as chain of title documents, aerial photographs, building department records, and land use records, to determine previous uses and occupancies of the real property since the property was first developed,
 4. Search for recorded environmental cleanup liens against the facility that are filed under Federal, State, or local law,
 5. Review Federal, State, and local government records, waste disposal records, underground storage tank records, and hazardous waste handling, generation, treatment, disposal, and spill records, concerning contamination at or near the facility,
 6. Visual inspections of the facility and of accessible portions of adjoining properties,
 7. Seek specialized knowledge or experience on the part of the landowner or user,
 8. Examine the relationship of the purchase price to the value of the property, if the property was not contaminated,
 9. Attempt to discover commonly known or reasonably ascertainable information about the property, and
 10. Assess the degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation.

The types of information to be collected about the subject property included:

- Current and past property uses and occupancies;
- Current and past uses of hazardous substances;
- Waste management and disposal activities that could have caused releases or threatened releases of hazardous substances;
- Current and past corrective actions and response activities undertaken to address past and on-going releases of hazardous substances;
- Engineering controls;
- Institutional controls; and
- Properties adjoining or located nearby the subject property that have environmental conditions that could have resulted in conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to the subject property.

1.3 SITE DESCRIPTION

1.3.1 Location

The subject property is located west (mauka) of the Waipio Valley Access Road, immediately across from the Waipio Valley Scenic Lookout (Figure 1,2,3). The site location is near the most northerly accessible point on the east side of the Big Island. The approximate latitude /longitude is:

Latitude (north) 20° 07' 03"

Longitude(west) 155° 35' 04"

The parcel is designated by tax map key number, TMK# (3) 4-8-004:006 by the State of Hawaii. It is approximately 1000 feet from the Pacific Ocean, at an elevation of 900 feet above mean sea level.

1.3.2 Site and Vicinity Characteristics

The area surrounding the subject property is rural residential. The closest village is Kukuihaele approximately 1/2 mile to the east. Waipio Valley is one of the most popular tourist spots on the Island for locals and visitors alike. Its scenic vistas, lush tropical forests and black sand beaches make this area quite unique. The subject property is across the road from the lookout point over the valley and it is near the last portion of road that is accessible to all vehicles. Residential properties are adjacent to the north and east. The nearest commercial developments are small art and grocery shops in Kukuihaele.

1.3.3 Physical Description

The property is rectangular in shape and encompasses 1.804 acres (Figure 4). The Property is in the State agricultural district, and is zoned ag-40. The property elevation is between 900 and 975 feet above sea level and 5 to 50 feet above the roadway easement. It is covered by lawns, bamboo, landscaping plants and an older dwelling that is now abandoned. A gulch and seasonal creek runs through the southwestern portion of the property. The Waipio access road forms one of the west boundaries.

The property is bounded on the south and west by County owned land. The east Boundary adjoins another residential property and the north boundary is along the Waipio Access road. Across the access Road to the north is the Waipio lookout property. The County parcel layout map for the subject and surrounding parcels is included as Figure 4.

1.3.4 Physiography

The Hawaiian Islands lie at the northern margin of the tropics (21 degrees north latitude), but have a subtropical climate due to cool trade winds. Winds are normally at the higher end of the range for Hawaii. The average daily temperature in Hawaii varies between 64° F and 80° F in winter and between 75° F and 88° F in summer. Rainfall for the state averages approximately 40 inches per year. Annual rainfall at the subject property is between close to 100 inches per year (Atlas of Hawaii, 1983).

1.3.5 Site Geology

The subject property has soils characterized as (KwD) Kukaiau silty clay loam. The following soil description is from the Soil Survey of the Island of Hawaii (US Soil Conservation Service, 1972).

The Kukaiau series consists of well-drained silty clay loams that formed in volcanic ash. These soils are gently sloping to steep. They are on uplands at an elevation ranging from 500 to 1,500 feet and receive from 70 to 100 inches of rainfall annually. Their mean annual soil temperature is between 67° and 69° F. The natural vegetation consists of hilograss, kaimi clover, guava, and ohia. This soil is low on the windward side of Mauna Kea. It is dissected by many, deep, narrow gulches.

In a representative profile the surface layer is very dark grayish-brown silty clay loam about 10 inches thick. The subsoil is dark-brown silty clay loam about 40 inches thick. It is underlain by basalt. The surface layer is extremely acid, and the subsoil is medium to slightly acid. This soil dehydrates irreversibly into aggregates the size of fine sand.

KwD soil is in the Kukuihaele area. In addition to having steeper slopes than Kukaiau silty clay loam, 6 to 12 percent slopes, this soil has a red surface layer, is more acid, and is only 20 to 30 inches deep to weathered basalt. The erosion hazard is moderate.

Groundwater flow and direction are unknown at the site but suspected to follow the land gradient from south to north. Groundwater elevation is unknown but is probably encountered perched at various levels above sea level. The basal groundwater level is probably 5 to 10 feet above mean sea level.

2. INTERVIEWS

Mr. Bill Rice: Mr. Rice is the property owner. DR met Mr. Rice at the property on the day of the site inspection and interviewed him by telephone on November 28, 2006. Mr. Rice recalled that he had owned the property since 1975, and had purchased it from a Mr. Thomas. At the time of the purchase the existing house was present and they did minor renovations. Mr. Rice believes that the house was built on the site and that the date of 1948 contained in County records appeared to be accurate. He was not aware of any fires, accidents, spills or other incidents that may have affected the environmental quality of the property. He was not aware of any conditions that may limit the activity or use of the property. DR asked if the purchase price represented a fair value or did the price reflect any contamination issues. Mr. Rice stated that the purchase price did not reflect any contamination issues, but that the price was reduced in consideration of the public service that would be provided by using it for access and support for the Valley tourism. It was his opinion that the fence line was near or on the actual property line and that cars were parked on the roadway easement not the subject property.

Mr. Marcus Broyles: Mr. Markus Broyles was contacted at the site during the site inspection on October 29, 2006. Mr. Broyles has lived across the street from the subject property for 5 years, and was not aware of any fires, accidents, spills or other activities that may impact the environmental quality of the subject property. He stated that an elderly couple occupied the house up until 6 or 8 years ago and that both had passed away recently. Mr. Broyles was very interested in the County's development plans and was willing to explain the issues of congestion, parking and undesirable uses of the Waipio Valley. Mr. Broyles shared his own ideas for development with DR. The development plan for the area calls for improved access, parking, and one-way circulation around the site involving connection of Highway 240 and the Waipio Access Road. He also indicated that there was a former storm drain that drained the access road immediately in front of the subject property. Because the drain emptied into the Andrews residential property, it had been purposely closed by the resident, resulting in stormwater accumulation along the roadway. Mr. Broyles also indicated that the culvert crossing Kaluahine stream was inadequate at times resulting in water overtopping the Waipio Access Road.

County Planner: DR contacted the County Planning Department to request specialized knowledge, zoning restrictions or other permits associated with the property. On November 27, 2006 the County agent contacted provided land use classifications and observed that a special permit request to build a store on the property was applied for and denied in 1998.

Mr. Kelly Loo: Mr. Loo and family live next door to the subject property, and have owned the property since the 1970s. Mr. Loo is familiar with the subject property from before this time because his uncle, John Thomas originally acquired the subject property from the sugar company. Mr. Loo reported that the subject property and his own were cane fields up through the early 1960s and that a portion of the subject property was used as a Plantation corral for horses that would make the trip into Waipio Valley. John Thomas acquired the property through some type of land exchange with Hamakua Sugar. He cleared the land and moved the existing house onto the site within a short period after buying the property. Mr. Thomas lived in the house himself until he sold the property to the Rice Family. Mr. Loo was uncertain of the year.

3. HISTORICAL SOURCES OF INFORMATION

3.1 SITE HISTORY

Current information on the parcel history is derived from interviews, and historical maps. According to information gathered in interviews, the original development of the property was for use in growing sugar cane. This may have been as early as the late nineteenth century. In the early 1960s the property was acquired by John Thomas and converted to residential. It was sold to the Rice Family Trust in or around 1975 and continued in residential use until around 2000 when the tenants passed away. It has been vacant except for maintenance and storage purposes since that time.

3.2 FIRE INSURANCE MAPS

A search was conducted for Sanborn Fire Insurance Company maps to acquire historical information about the parcel and its surroundings. No Sanborn Maps were available for the subject property or vicinity (Appendix 2).

3.3 INTERNET SEARCH

An internet search on key words Hawaii Rice Family Trust, the tax map number and Waipio Valley lookout returned relevant information including:

Hawaii County Council Resolution 427-06 Authorizing the Mayor to enter negotiation to purchase the Subject property and designating the land as a high priority for its potential contributions toward public access, open space needs and natural resources preservation.

3.3 HISTORICAL MAPS

Three historical topographic maps were located (Figures 1, 2, and 3). The USGS 7.5 minute Quad map from 1957 shows a structure in the approximate location of the existing dwelling. By this time the rice and taro fields in the valley bottom around the turn of the century and through the 1920s have apparently been abandoned. The map references one fishpond on the valley floor. Kukiahaele is shown as it appears today and there are two other structures shown along the Waipio Access Road at widely spaced intervals.

The 1982 quad map shows a row of dwellings along the access road as they appear today. The Waipio scenic overlook is identified on the map and the existing dwelling is shown.

The 1995 Quad map does not show the existing dwelling, but does show the location of the historical taro lohi and or rice fields along the valley floor.

3.4 CITY DIRECTORIES

A search of old telephone and city directories was subcontracted to EDR. EDR found no listings for the subject property or surrounding parcels in their database (Appendix 3).

4. ENVIRONMENTAL LIENS

A search for Environmental liens against the land title was subcontracted to EDR, Inc. No environmental liens were discovered (Appendix 4).

5. FEDERAL STATE AND LOCAL RECORDS

A review was completed of publicly available federal, state, and local records to assess the potential presence of hazardous contamination. Federal and state environmental databases were searched to identify operations on the subject property and vicinity properties regulated by the Environmental Protection Agency (EPA) and/or the Hawaii State Department of Health (DOH).

5.1 FEDERAL AND STATE RECORDS

DR contracted with EDR, an independent information service, to conduct a review of County, State and Federal databases. The complete EDR report is presented as Appendix C. The EDR database search included the following listings: National Priorities List (NPL) sites; Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) sites; Corrective Action Report (CORRATS); Facility Index System (FINDS); Resource Conservation Recovery Information System (RCRIS) sites; Toxic Release Inventory System (TRI); State Land Fills/Solid Waste Disposal Sites; Underground Storage Tank (UST) sites; and Leaking Underground Storage Tank (LUST) sites (Appendix 1).

5.1.1 Hazardous Material and Petroleum Releases

There have been no available reports of hazardous materials releases at the subject property, either to the State's Hazard Evaluation and Emergency Response Office (under the Hawaii Environmental Response Law) or to the National Response Center under CERCLA. Observations made during the site reconnaissance did not reveal evidence of a release of petroleum products or other industrial materials. Two unmapped sites were reported by EDR. These two unmapped sites are:

- A motor vehicle storage facility located at PO Box 807 Kamalahoa Hwy
- The Unocal Honokaa Bulk Storage Plant located on Mamane Street

Neither of these sites is apparently within close proximity to the subject property.

5.1.2 Underground Storage Tanks

DR reviewed underground storage tank records maintained by the Hawaii Department of Health (DOH), Solid and Hazardous Waste Branch, to determine the existence of underground storage tanks located in the area. Of potential concern are properties at equal or at higher elevation as the project site. The State of Hawaii's underground storage tank database was also reviewed to determine whether a UST has been registered at property site.

New Hawaii underground storage tank regulations, promulgated in January 2000, require that owners of leaking UST systems notify affected members of the public of impacts from the leaking UST. These regulations will provide property owners with a mechanism to be notified if fuel releases from nearby tanks impact the subject property.

There were no registered underground storage tanks within 1 mile of the subject property.

5.2 LOCAL RECORDS

Real Estate and title records were reviewed to determine ownership and possible uses.

5.2.1 Title and Lease Records.

The County of Hawaii Real property records were examined for ownership records. According to the County of Hawaii public real property tax office records, the property covers 78,582 square feet and is owned by The Rose C. Rice Family Trust. The County of Hawaii currently classifies the land as Ag-40, and assesses the market value of the land at \$141,300, and \$26,900 for the building. The house is listed as 1272 square feet, constructed in 1948. There are three records of sales, which were recorded on 12/31/97, 4/14/98, and 5/29/98. According to EDR's title search (Appendix 3), the property was purchased from Robert and Betty Hendrickson at the end of 1997.

The property:

- Is in the State Agriculture District,
- Is in Flood Zone X (outside the 100 year floodplain),
- Is not in a special design district,
- Is outside the Special Management Area,
- Has no records of buildings permits for the subject property, and
- Has no permit records with the County of Hawaii

An interview with personnel at the County Planning Department indicated that a special permit request for a gift shop was denied in 1998.

6. VISUAL INSPECTION

6.1 SITE RECONNAISSANCE

Project Manager David Robichaux performed a site reconnaissance of the subject property on October 29, 2006. Mr. Robichaux arrived at approximately 11:00 AM and walked the site until 1:00pm. During the initial site walk, Mr. Robichaux met Mr. Marcus Broyles, and Mr. Bill Rice the property owner. A summary of information transferred by Mr. Broyles and Mr. Rice appears in Section 3.

The subject property is bounded on the northeast by the Waipio Access Road. The county-maintained portion of the access road ends at the northwest corner of the property. The road becomes a paved jeep trail and bends around to form the west boundary of the property until it crosses the stream. The property extends to the other side of the stream gulch on the west and southwest portions. The southern property boundary adjoins a large parcel of undeveloped public land. Access to this public land apparently runs in a flag-type lot along the east side of the subject property. Another residential property lies immediately across the easement on the east side.

The property has an older residence that is now abandoned and in relatively poor condition. According to interviewees that resident is now deceased. The house consists of two bedrooms a kitchen, living room, storage rooms, a front porch and a lean-to type garage. A portable generator was stored in the attached garage. The structure was locked and not entered. Observations through the windows indicate that at least some of the flooring is vinyl tile. One storage room was open via a door and broken window. This was probably used as a shop. Minor oil staining was observed on the concrete floor of this room. There were no indications of a significant release. A separate garage structure is located to the east of the house. The garage is partially cut into the hill side and was quite damp at the time it was observed. The opening of the garage was covered by planks that had been erected to hide the contents. The soil floor had areas of moisture that appeared to be stained soil but did not have the odor or other indications of petroleum staining. Mr. Robichaux could not determine the cause of staining, but that it may be due to moisture. The garage contained a covered, trailer-mounted generator and an antique stagecoach.

The grounds were overgrown in places that may conceal debris or evidence of contamination. The yard behind the house contains an old rusting propane tank, tires, lumber and other domestic waste. No hazardous materials were noted in this debris. Additional debris was observed under the house. This could not be safely observed. A path running up the west side of the property from the access road contained the remnants of a military jeep of similar vehicle that had been abandoned.

The front (north) portion of the property is fenced. Outside the fence are parking stalls for approximately 20 cars. The exact property boundary along the road easement cannot be determined from observation. Some portion of the parking area may be within the subject property. The front of the property is mowed and landscaped. The rear has been overgrown by a large yellow species of bamboo. The bamboo is too thick to allow observation within its reaches. Also there are portions that are quite steep and cannot be accessed by foot. Although most of these locations could be observed from the access road as it goes through the gulch, its topography prevented access to all portions of the site.

With exception of small amounts of debris and damp spots within the stand-alone garage, no evidence of environmental damage was observed on the subject property; although the existing vegetation hindered complete inspection of the property.

Photographs 1 – 6 show the parcel and its surrounding area,

6.2 ADJACENT PARCELS

DR personnel conducted a windshield and walking survey of the surrounding properties to obtain information on potential environmental liabilities from adjacent or nearby property. Visibility of the adjacent properties was limited to the observations that could be made from public right-of ways and other areas that were accessible to the public.

The 5 residential properties to the east of the subject properties were well maintained and separated from the subject property by fencing and vegetative buffers. No evidence of environmental impairment was noted upon observation of these properties from the access road. Approximately 8 residences are located on the seaward side of the access road. These are relatively new and well-maintained properties, Construction is ongoing on several houses, indicating that the area is relatively popular and growing.

The Waipio Scenic Overlook is a maintained county park immediately seaward from the subject property. During the Sunday afternoon period of time that Mr. Robichaux was touring the subject property at least 100 people came through the park, parked their cars in front of the subject property or proceeded down the road into the valley. The scenic overlook had more than 20 persons in attendance at all times. Traffic seemed to be busy at this location.

A large portion of the area to the south and west is undeveloped. No commercial establishments were observed in proximity to the subject property. A bed and breakfast establishment is located approximately 100 yards to the southwest of the subject property. It was not observed due to the private access road.

6.3 BUILDING MATERIALS SURVEY

A building materials survey was not conducted or included in our scope of services. The house and garage located on the subject property appeared to be built during the period when lead-based paint, asbestos containing building materials and PCB-containing fluorescent ballasts were commonly used. The vinyl flooring observed through the windows may be an asbestos containing material, and details listed on the County tax website indicate that the ceiling is made of Canec, which is an arsenic-containing material. Hazardous building materials should be identified and removed by a licensed contractor prior to demolition of the structures. Because this will be a county-owned building, if it is to be renovated for use, these materials should be removed prior to renovation.

7. SPECIALIZED KNOWLEDGE

DR requested information on any specialized knowledge from the trustee Mr. Rice, and from others interviewed for the purpose of this report. Several points were uncovered that may qualify as specialized knowledge.

A special permit request was submitted to the County to build a store or shop at the site, but the County denied that request. It is likely that future requests from a private owner would meet the same fate (County Planner).

At least one storm drain along the Waipio Valley Access Road was occluded because it drained into a lot purchased by the Anderson Family, and the drain dumped roadway runoff directly uphill of the house that was constructed. The roadway currently ponds quite heavily during rainstorms. Likewise the culvert along Kuahine Stream on the northwest side of the property is frequently overtopped during storms resulting in dangerous conditions along the Waipio Access Road (Markus Broyles).

8. RELATIONSHIP BETWEEN PURCHASE PRICE AND VALUE

The purchase price has not been disclosed to DR Associates. Neither is DR an authority on residential land values in Hawaii County. Therefore we cannot assess whether the price paid for the property reflects any discount for potential environmental issues. In discussing the sale with the current property owners, they did not know of any environmental issue that would affect the value or use of the property.

9. COMMONLY KNOWN INFORMATION

Commonly known information was gathered through discussions with neighbors and other area residents. We learned that tourists regularly attempt to get down to the valley floor in rental vehicles and are frequently towed out by off road patrons of the valley. Tow companies in the area charge over \$1000 to remove rental cars from the valley. Because the road is so narrow anyone who is stuck along the road interferes with other traffic.

Hamakua Sugar Company and its predecessors farmed most arable land in this area for much of the 20th century. We did not uncover any historical documents to identify sugar cultivation on the subject property, but a neighbor with good knowledge of the subject property reported that it was cultivated for sugar. It is commonly known that the area was part of a sugarcane field at some time in the past.

10. LIKELY PRESENCE OF CONTAMINATION AND THE ABILITY TO DETECT THE CONTAMINATION BY APPROPRIATE INVESTIGATION.

10.1 DATA GAPS

Several data gaps were encountered during the course of this environmental investigation:

- There were no historical maps, city directories, or other historical information on the property other than what could be gained from the USGS maps.
- The last tenant of the property is deceased and unavailable for interview.
- The previous owners of the property could not be located and were unavailable for interview.
- Several portions of the property could not be adequately observed due to vegetation or topography.
- Our lien search indicated that the property was purchased from Mr. Robert Hendrickson in 1997; however, all interview information indicates that it was bought from John Thomas in 1975. A person named Robert Hendrickson from Kapaau was phoned but did not return calls.

Despite these data gaps the information available during this assessment is adequate to form a reasonable opinion on the environmental condition of the property. DR does not recommend further sampling or other subsurface investigation of the subject property unless new information becomes available.

10.2 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations presented below are based on the site reconnaissance, historical review, interviews, and record review conducted in accordance with the scope of services.

- With the exception of small oil spots on the concrete floor, stains in the floor of the stand-alone garage and debris on the property, this assessment found no evidence of a release of hazardous materials and/or petroleum products on the subject property. All clues indicate that staining on the soil floor of the stand-alone garage was moisture running down the hillside into the garage, but this is not confirmed.
- No evidence of use or release of hazardous materials and/or petroleum products on adjacent parcels was found from site reconnaissance, interviews or public records.
- The earliest historical maps available show the subject property has been used for residential purposes (since 1957). County records show that the house was built in 1948. DR found no information to indicate that it contained any prior development. Hamakua Sugar Company and its predecessors may have farmed sugar on the property, but no records of sugarcane use were located.

- The soils on the site may have a relatively high level of naturally occurring arsenic, as do many of the volcanic soils in Hawaii.
- The building was constructed during a time when hazardous materials such as asbestos, lead-based paint and Canec were commonly used. Although there was no formal building material survey done for this assessment, we found information indicating that Canec is present and suspect that other hazardous building materials are present in the structure. A licensed building inspector should be contracted prior to renovation or demolition of the structure.
- The proposed use of the subject property is for park land or open space and possibly parking or a ranger station development. Because the parcel occupies a prominent position near the head of the Valley access road it has a long history of people passing through it and probably dumping waste that either would not be needed or cannot make it into the valley. There is at least one abandoned vehicles on the property and there may be more that have been engulfed in the vegetation or buried in the yard. These are seen as more of a potential development cost than a threat to public health and the environment. If items such as these are discovered upon clearing the property, assessment of the environmental implications of these finds should be undertaken.
- This assessment finds no evidence of environmental conditions that would limit the use, activities, value or utility of the property. This conclusion is subject to the limitations discussed above.

11. REFERENCES

American Society for Testing and Materials (ASTM). Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Standard E 1527-97.

Atlas of Hawaii Second Ed. (1983). Department of Geography, University of Hawaii, University of Hawaii Press 240p.

Environmental Data Resources, Inc. (EDR). 2005 Radius Map with GeoCheck.

US Department of Agriculture Soil Conservation Service (1972) Soil survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. USDA in cooperation with the University of Hawaii Agricultural Experiment Station

12. LIMITATIONS AND EXCLUSIONS

We have performed our services for this project in accordance with our Agreement, and in general compliance with ASTM Practice E 1527-05 for ESA investigations; no guarantees are either expressed or implied.

The record search was limited to information available from public sources; this information changes continually and is frequently incomplete. Unless we have actual knowledge to the contrary, information obtained from interviews or provided to us by Environmental Data Resources, Inc. (EDR) has been assumed to be correct and complete. We do not assume any liability for misrepresentation of information or for items not visible, accessible, or present on the site at the time of the site visit.

Because of the uncertainty in identifying and characterizing conditions beneath the surface of the ground, no environmental investigation can show or prove the absence of hazardous substances at the site. In addition, because a full survey of building materials was not included in the current scope of work, DR formulated recommendations based on observation. Likewise, because environmental regulatory programs are constantly evolving and changing, statements about the acceptability of the site for human health and the environment are relative only to the regulatory program in place today. Future programs could change the way these conditions are viewed, and could require additional action to remediate hazardous conditions at the site.

Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. Opinions and judgments expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. This report is intended for the exclusive use of The County of Hawaii for specific application to the subject property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made. Any reliance on this report by third parties shall be at such party's sole risk.

It should be noted that DR relied on verbal information provided by the individuals indicated herein. We can only relay this information and cannot be responsible for its accuracy or completeness.

Any questions regarding our work and this report, the presentation of the information, and the interpretation of the data are welcome and should be referred to the Project Manager

13. QUALIFICATIONS

DAVID ROBICHAUX, Principal DR Associates

Education:	M.S. Agricultural Engineering University of Hawaii, 1987	
	M.S. Marine and Estuarine Environmental Sciences University of Maryland, 1983	
	B.A. Biological Sciences with Minor in Chemistry University of Texas, Austin, 1976	
Professional Expertise:	Solid Waste Planning and Design Environmental Engineering and Planning Environmental Assessment/ Regulatory Compliance	
Employment History:	Principal, DR Associates	2003 - Present
	Environmental Management Planning and Design Environmental Impact Assessment Solid Waste Management Planning	
	Operations Manager	2000 - 2002
	Dawson Group Inc. Project Management Solid and Hazardous Waste Management Environmental Impact Assessment	
	Senior Environmental Engineer	1997 - 2000
	Belt Collins Hawaii, Ltd., Honolulu, Hawaii Project Management, Regulatory Compliance Solid and Hazardous Waste Management Infrastructure and Emergency Planning	
	Project Engineer	1992 - 1997
	Harding Lawson Associates, Honolulu, Hawaii Environmental Site Assessments Remedial Action Remedial Design	
	Vice-President	1986 - 1992
	Pacific Environmental and Aquaculture Consultants Environmental Baseline Surveys Aquaculture Training and Consulting	
	Research Assistant/Research Associate	1983 - 1992
	University of Hawaii at Manoa, Honolulu, Hawaii Water and Wastewater Design	
	Research Team Leader	1978 - 1983
	Smithsonian Institution Marine Systems Laboratory Coral Reef biology, Mapping, Environmental Impact Assessments	

Professional Experience

Environmental Management and Planning

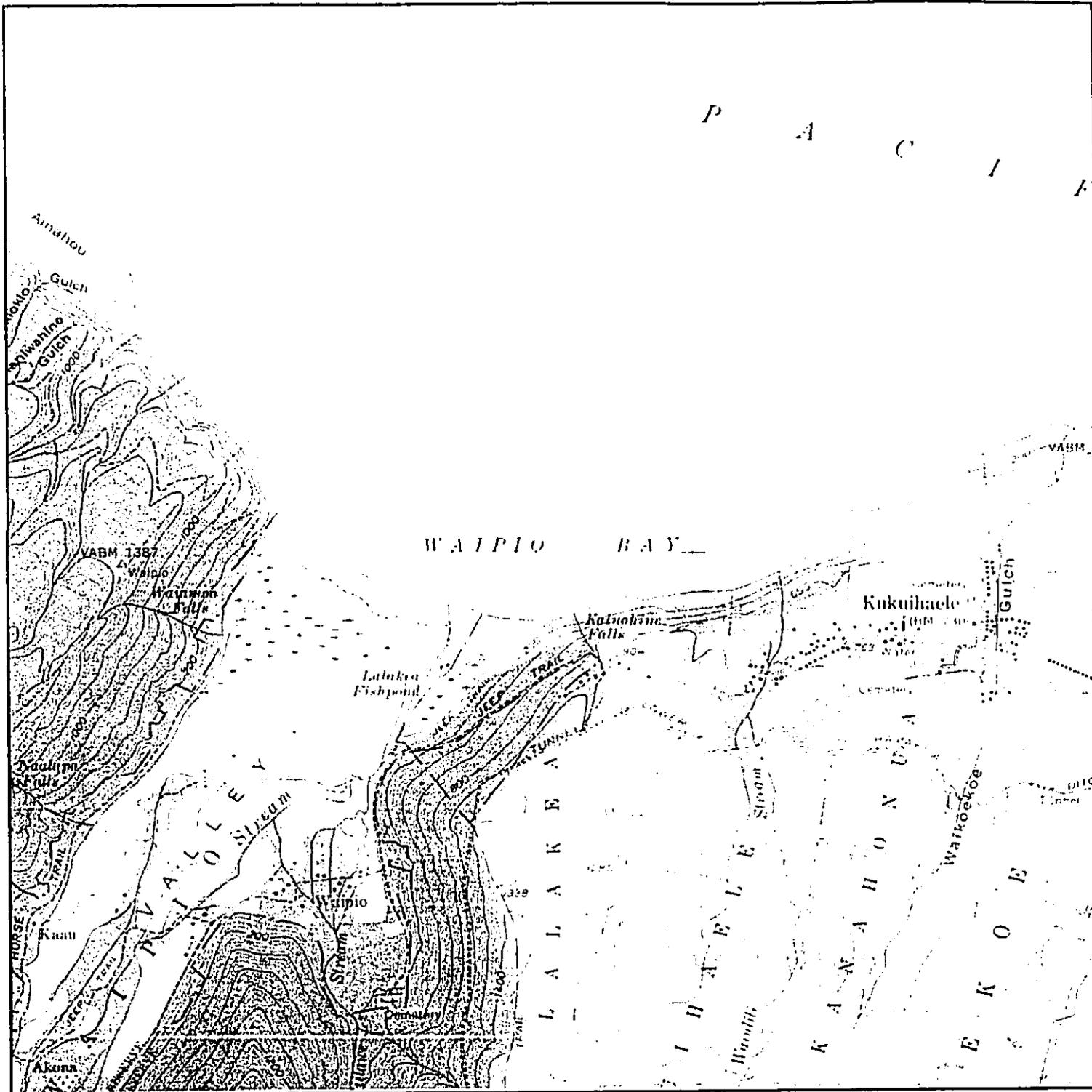
Project Permitting, Tradewinds Forrest Products, Hamakua, Hawaii
Project Manager, NPDES Stormwater permitting, SOS Metals
Project Manager, County of Hawaii Miloli'i Transfer Station EA
Project Manager, County of Hawaii Design/Permitting of West Hawaii Recycling Facility
Project Manager, County of Hawaii Transfer Station Enhancement Plan
Project Manager, Infrastructure Assessment DHHL Commercial Properties, Hawaii
Project Manager, County of Hawaii EIS East Hawaii Regional Sort Station
Project Manager, US Army Phase 6B Whole Barracks Renewal EA
Project Manager, State of Hawaii Integrated Solid Waste Management Plan
Local Team Leader, Hawaii Disaster Debris Management Plan, State Civil Defense
Project Manager, Environmental Baseline Survey (EBS), HIARNG, Barbers Point
Project Manager, EBS and EA Oahu Veterans Center
Project Manager, EBS for USS MISSOURI
Project Manager, Site Characterization and Remedial Actions Hickam AFB, Oahu
Project Manager, Soil Vapor Survey Waikakalaua Gulch Oahu
Project Engineer, Kauai Disaster Debris Management Plan
Project Manager, Bulky Waste Landfill, NAF Midway Atoll. Site selection and design
Project Manager, Site Assessment, Closure of Hurricane Debris Receiving Sites, Kauai
Project Manager, AA Composting Operations Planning
Project Team Member, Hurricane Iniki Disaster Debris Diversion Plan
Project Manger, Operations and Emergency Management Plan for Kekaha Landfill
Project Planner, Kauai Resource Exchange Center
Project Manager, Biofuel incineration of Hurricane Debris, Kauai
Project Manager, NPDES Permitting, 5 locations in State of Hawaii
Project Manager, SPSS Plan GASCO, Pier 33, and Kaneohe Marine Corps locations
Project Manager, RCRA Certification of Drip Pad, Honolulu Wood Treating
Project Manager, Phase I ESA 50,000 acres of timberland, Oji Paper Company
Project Manager, Phase I ESA 5000 acre Coffee plantation
Project Manager, State Of Hawaii Phase I ESA, Hamakua Ditch acquisition
Project Manager, over 75 Phase I ESAs for Real Estate transactions
Project Engineer, Environmental Compliance Services for 70 A&B Properties, Maui
Project Engineer, Environmental Compliance Audit on Motor Pools, Schofield Barracks
Project Engineer, CERCLA PA/SI, 50 locations at Schofield Barracks NPL site
Project Engineer, CERCLA RI/FS, Schofield Barracks NPL Site
Project Engineer, CERCLA RI/FS, Mount Kaala, HANG, Hawaii
Project Manager, UST closures and soil replacement, various sites in Hawaii and Guam
Project Engineer, Bilge and oily waste collection and processing system, Pearl Harbor
Project Manager, Clean-closure of RCRA storage facility, Volcanoes National Park
Project Manager, Remedial Action/Assessment for PCB release, Kaneohe Bay, Oahu

Design and Construction Management

Project Manager, County of Hawaii Design/Permitting of West Hawaii Recycling Facility
Project Manager, Closure of Temporary Hurricane Debris Site, Kilauea Kauai
Project Manager, Design of Bulky Waste Landfill Midway Naval Air Facility
Project Engineer, Over 25 Underground Storage Tank removal and remediation sites
Project Designer, Design and Construction Management Kekaha Landfill, Kauai

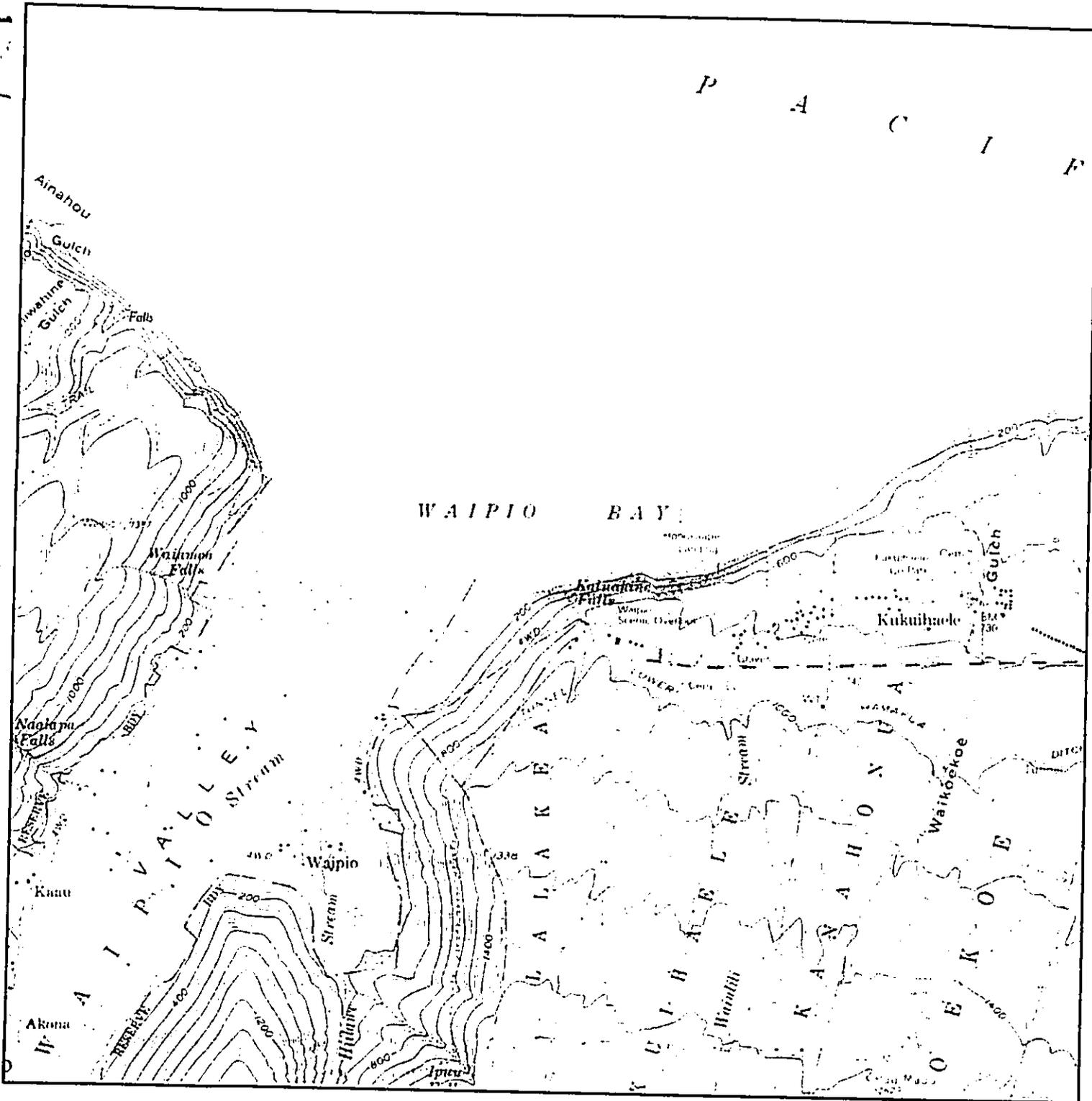
Figures

Historical Topographic Map



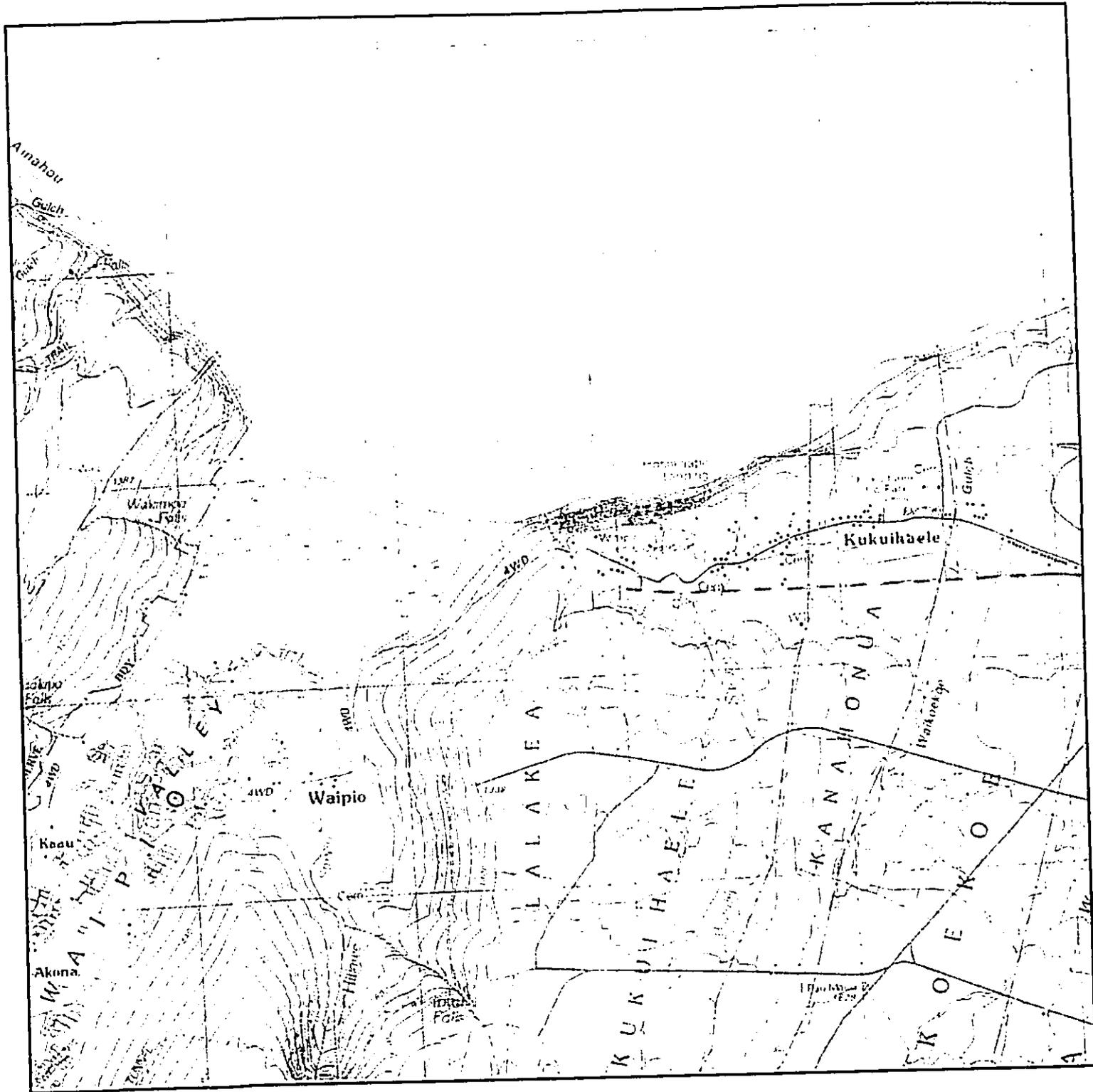
N 	TARGET QUAD NAME: Kukuiahaele, HI MAP YEAR: 1957	SITE NAME: Waipio Lookout ADDRESS: Waipio Valley Road Waipio, HI 96727 LAT/LONG: 20.1175 / 155.5839	CLIENT: David Robichaux CONTACT: David Robichaux INQUIRY#: 1769244.4 RESEARCH DATE: 10/06/2006
	SERIES: 7.5 SCALE: 1:24,000		

Historical Topographic Map



N 	TARGET QUAD NAME: Kukuiahaele, HI MAP YEAR: 1982	SITE NAME: Waipio Lookout ADDRESS: Waipio Valley Road Waipio, HI 96727 LAT/LONG: 20.1175 / 155.5839	CLIENT: David Robichaux CONTACT: David Robichaux INQUIRY#: 1769244.4 RESEARCH DATE: 10/06/2006
	SERIES: 7.5 SCALE: 1:24,000		

Historical Topographic Map



N 	TARGET QUAD NAME: Kukuiahaele, HI MAP YEAR: 1995	SITE NAME: Waipio Lookout ADDRESS: Waipio Valley Road Waipio, HI 96727 LAT/LONG: 20.1175 / 155.5839	CLIENT: David Robichaux CONTACT: David Robichaux INQUIRY#: 1769244.4 RESEARCH DATE: 10/06/2006
	SERIES: 7.5 SCALE: 1:24,000		

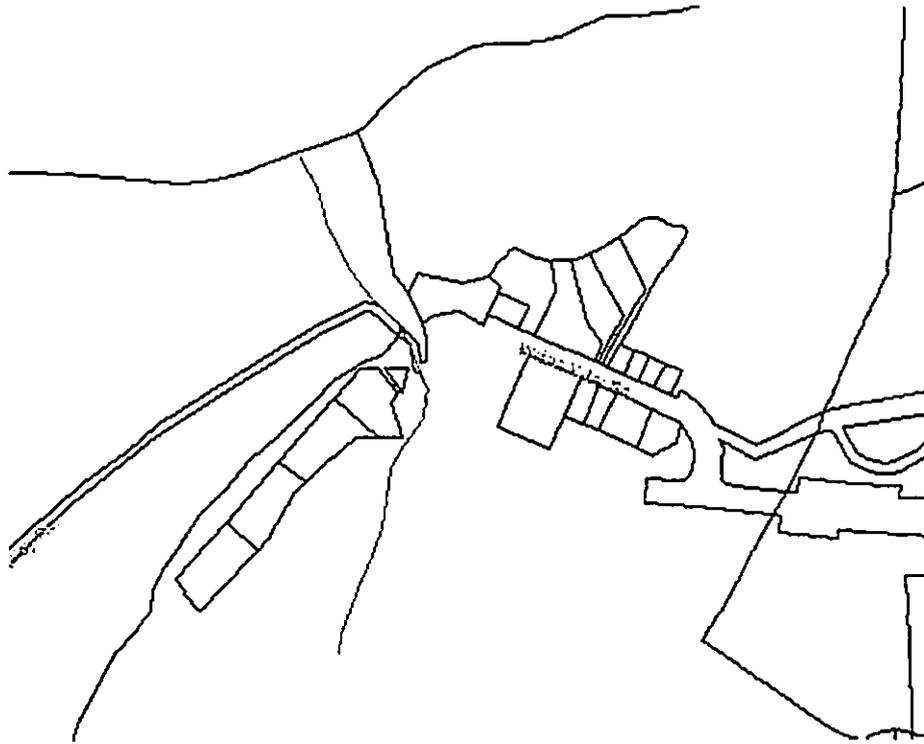


Figure 4: Subject Property parcel layout from the County of Hawaii Tax Office Website

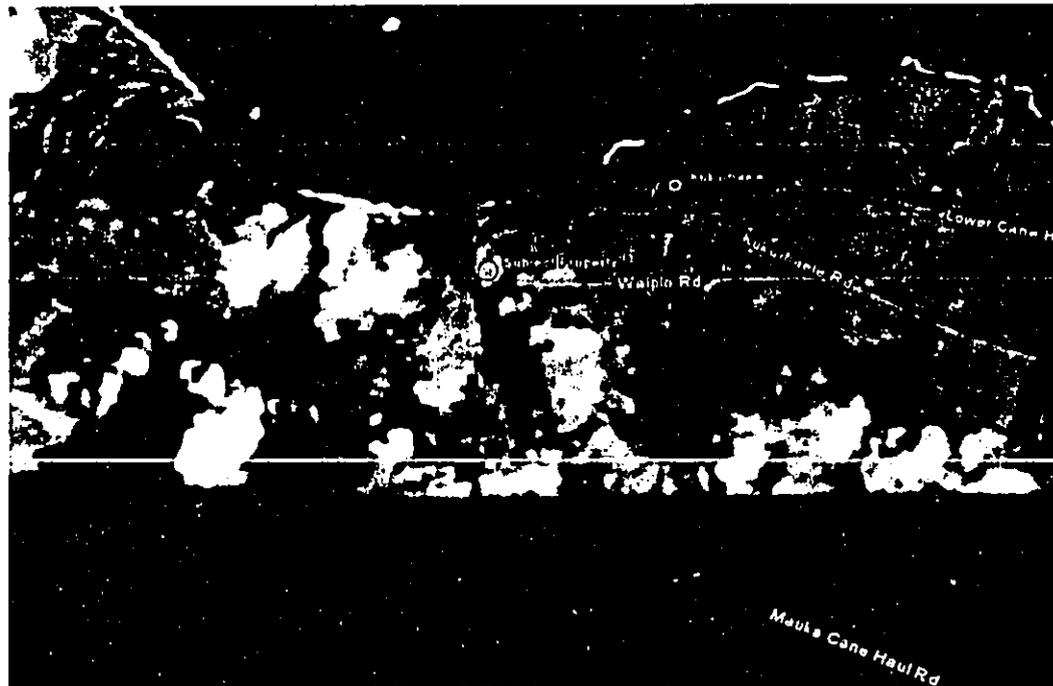


Figure 5: Satellite photograph of the project location from 20,000 ft. Courtesy Google 2005

Site Photographs



Plate 1: View looking east along the Waipio Valley Access Road along the north boundary of the property. Parking space was difficult to find on the day of the site visit.



Plate 2: Looking south along the Waipio access Road. The northwest boundary of the property follows the road on its northwest side but crosses the stream on the southwest.

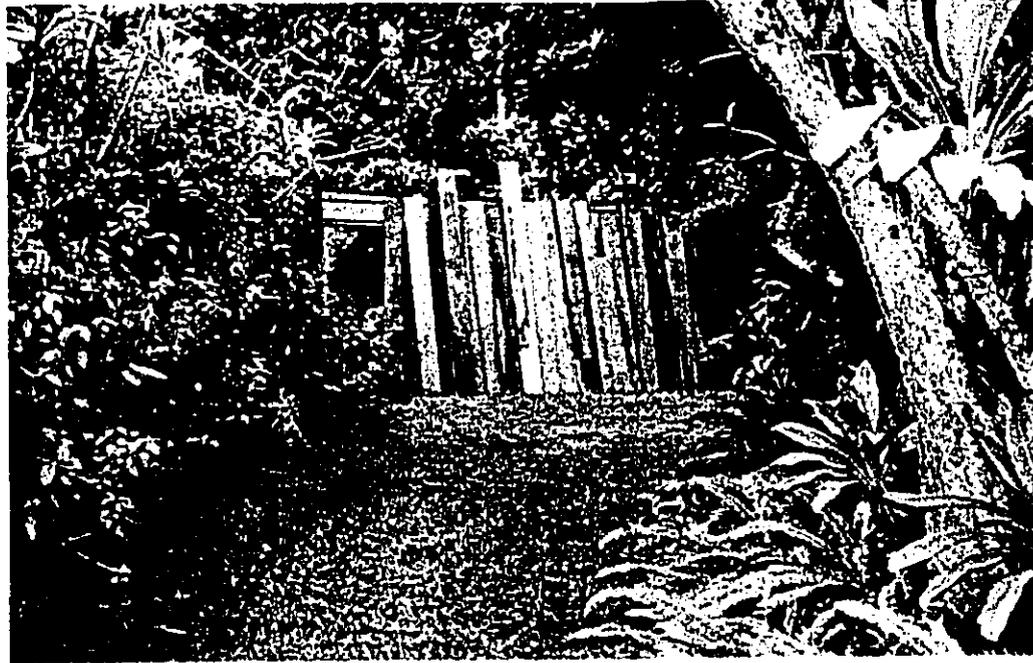


Plate 3: Stand-alone garage containing a stage coach and trailer mounted generator (to be removed by owner).



Plate 4: Generator located on the southwest corner of the main house.

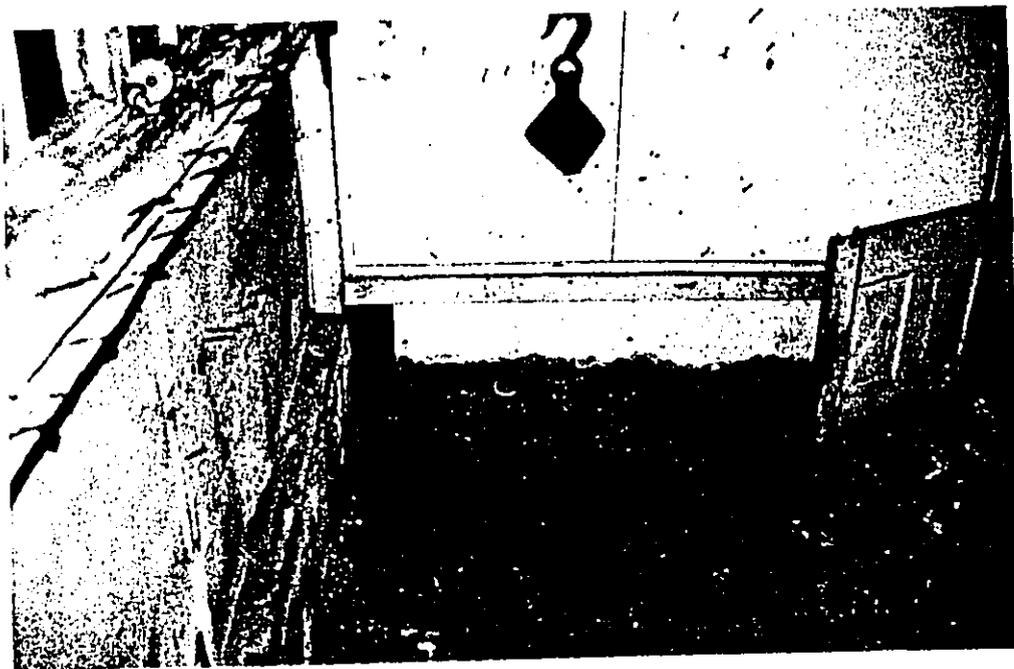


Plate5: Oil Stains on the shop floor inside the main house. Note curbing which would prevent a release to the environment.



Plate 6: Main house and attached garage looking northeast.

**Hawai'i County Purchase of Rice Property
at Waipi'o Lookout
Environmental Assessment**

**APPENDIX 5
PHOTO FIGURES**



FIGURE A View of Eucalyptus Tree Along North Property Boundary

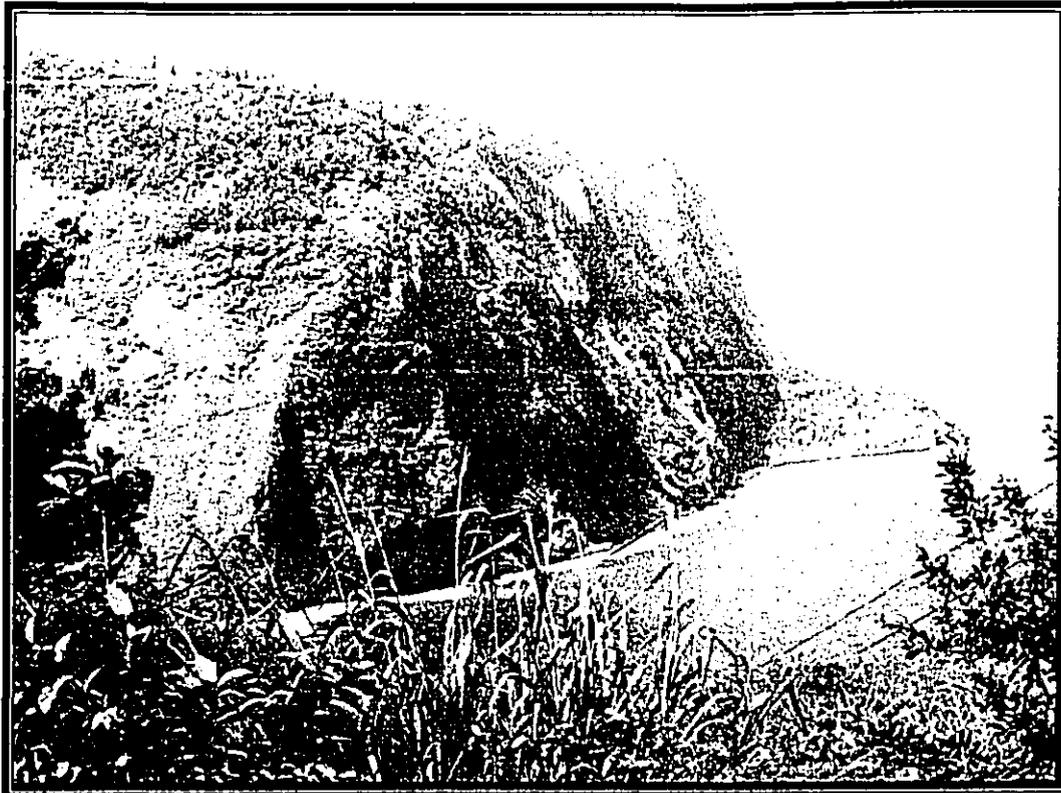


FIGURE B Waipi'o Valley View from Rice Property



FIGURE C Waipi'o Valley Lookout from Rice Property