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

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AQUATIC RESOURCES
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

REF:OCCL:TM

CDUA HA-3224

MAY 11 2005

MEMORANDUM

TO: Genevieve Salmonson, Director
Office of Environmental Quality Control

FROM: Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

SUBJECT: Final Environmental Assessment (FEA)/ Finding of No Significant Impact (FONSI) for Conservation District Use Application (CDUA) HA-3224

The Office of Conservation and Coastal Lands (OCCL) has reviewed the Shropshire Conservation Plan Final Environmental Assessment (FEA). The Draft Environmental Assessment for CDUA HA-3224 was published in OEQC's March 23, 2005 Environmental Notice.

The FEA is being submitted to OEQC. We have determined that this project will not have significant environmental effects, and have therefore issued a FONSI. Please publish this notice in OEQC's upcoming May 23, 2005 Environmental Notice.

We have enclosed four copies of the FEA for the project. The OEQC Bulletin Publication Form is attached. Comments on the draft EA were sought from relevant agencies and the public, and were included in the FEA.

Please contact Tiger Mills of our Office of Conservation and Coastal Lands staff at 587-0382 if you have any questions on this matter.

Attachments

RECEIVED
MAY 11 11:06
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

FINAL ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT

TMK (3rd) 2-7-04:025
Papa'ikou, South Hilo District, Island of Hawai'i, State of Hawaii

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

2005 MAY 10 A 10:54

RECEIVED
OFFICE OF CONSERVATION
AND COASTAL LANDS

APPLICANT:

Steven Shrophsire
P.O. Box 1146
Hilo HI 96720

**ACCEPTING
AUTHORITY:**

Hawai'i State Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

CONSULTANT:

Ron Terry Ph.D.
HC 2 Box 9575
Keaau, Hawai'i 96749

CLASS OF ACTION:

Action in Conservation District
Action in Shoreline Setback Area

DEPT. OF ENVIRONMENTAL
QUALITY CONTROL

05 MAY 11 P 1:06

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Action in Conservation District
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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).

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SUMMARY OF PROJECT, ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Project Summary

The proposed project would implement components of an approved soil conservation plan that has been prepared in cooperation with the U.S. Natural Resources Conservation Service (NRCS): (1) Remove noxious alien trees, especially ironwood, near the seacliff's edge, and replant the area with natives and Polynesian-introduced species; (2) Grub noxious weeds and grasses with a tractor; (3) Install drainage ditches and grass waterways, per grading and engineering plan; (4) Plant cover crops and riparian barrier; (5) Install windbreaks; (5) Implement landscaping plan. Implementation of the elements of the plan would be monitored by the NRCS. The Conservation Plan is specifically designed to reduce sedimentation. Without implementation of the plan, it is estimated that this property would lose 16.73 tons of soil/acre/year. The soil loss tolerance for this type of land is about 5 tons per year, meaning that without remediation, the agricultural sustainability of the land is in jeopardy. With the programs proposed in the Conservation Plan – berms, riparian buffers, cover crops, etc. – the soil loss should be reduced to about 1.06 tons acre, a significant improvement. As the subject area (along with the Agricultural District land directly mauka) has historically been farmed in sugar cane, the farming activities are essentially a continuation of existing uses. As designed by the U.S. Natural Resources Conservation Service, they will result in better farming conditions, less soil erosion, and better drainage, and will not materially change the appearance of the area. In general, no sensitive biological, hydrological, archaeological, cultural or other important resources are present and no adverse long-term impacts are expected to result from the project. Visual impacts will be generally beneficial. In order to prevent adverse impacts, mitigation measures related to properly handling fuel and machinery and dealing with inadvertent finds of historic sites are proposed.

PART 1: PROJECT DESCRIPTION

1.1 Project Description and Location

The proposed project would implement various components of an approved soil conservation plan that has been prepared by the applicant, Steven H. Shropshire, in cooperation with the U.S. Natural Resources Conservation Service (NRCS) under the EQUIP (Environmental Quality Incentives) program.

The Conservation Plan is being implemented throughout the 107.2457-acre property that until a recent subdivision has been identified as TMK 2-7-04:25 (new TMK numbers have not yet been assigned). The project area is depicted in Figure 1 (USGS map), Figure 2 (TMK map) and Figure 3 (project site photos). This property has been subdivided into four separate parcels (TMKs not yet assigned) to make the lots more regularly shaped and more practical to utilize. Three out of four of the lots are owned by the Shropshire Group, LLC, and the fourth is owned by Minh Voss. Steve Shropshire is the Managing Member of the Shropshire Group, LLC, and is the applicant for this Environmental Assessment (EA).

The components of the Conservation Plan that are covered in this Environmental Assessment (EA) are those that would occur in the Conservation District and Shoreline Setback Area, which will be termed the "subject area". Appendix 3 provides the full text of the plan, and its components can be summarized as follows:

- Noxious alien plants near the seacliff's edge will be cut and cleared, and the area will be replanted with natives and Polynesian-introduced species. Trees cut will include 60-80 ironwood (*Casuarina equisetifolia*), about twelve African tulips (*Spathodea campanulata*) and three Chinese banyans (*Ficus microcarpa*). Trees will be cut with chain saws and then pulled back onto the flats above the cliff for disposal, which may include additional cutting, shredding and mulching. Goal© or Remedy © herbicide will be carefully applied to the stumps and the trees will gradually die. Roots will remain in the ground and left to decompose naturally. Native and Polynesian-introduced species will be planted on the cliff tops to stabilize, restore and beautify the area (see Figure 5, landscape plan). Native species will include hala (*Pandanus odoratissimus*), 'ohi'a (*Metrosideros polymorpha*), naupaka (*Scaevola taccada*), loulou (*Pritchardia* spp.), nanea (*Vigna marina*), akia (*Wikstroemia* spp.) and pohinahina (*Vitex rotundifolia*), and Polynesian-introduced species will include kamani (*Calophyllum inophyllum*), coconut (*Cocos nucifera*), and several others. Much of this tree removal will take place in the area immediately behind the seacliff, in the Shoreline Setback Area, which is defined as 40 feet mauka of the top of the cliff.
- Grubbing of noxious weeds and grasses with tractor.
- Installation of drainage ditches and grass waterways, per grading and engineering plan developed by NRCS.
- Planting cover crops and riparian barriers, per NRCS specifications.

- Installation of windbreaks, per NRCS plan, consisting of approved plant list as supplied by NRCS.
- Development and implementation of professional landscaping plan (see Figure 4).
- Monitoring by the U.S. Natural Resources Conservation Service to ensure compliance with project specifications.

The Conservation Plan is specifically designed to reduce sedimentation. According to NRCS, without implementation of the plan, it is estimated that this property will lose 16.73 tons of soil/acre/year. The soil loss tolerance for this type of land is about 5 tons per year, meaning that without remediation, the agricultural sustainability of the land is in jeopardy. With the programs proposed in the Conservation Plan – berms, riparian buffers, cover crops, etc. – the soil loss should be reduced to about 1.06 tons acre, a significant improvement.

As the subject area (along with the Agricultural District land directly mauka) has historically been farmed in sugar cane, the farming activities are essentially a continuation of existing uses. As designed by the U.S. Natural Resources Conservation Service, they will result in better farming conditions, less soil erosion, and better drainage, and will not materially change the appearance of the area in an adverse way.

The most visible component of the Conservation Plan is the first, which involves cutting and/or removal of invasive alien ironwood and other alien trees and landscaping with indigenous and Polynesian-introduced species. Removing trees from any area, even if they are to be replaced by other vegetation, is always bound to generate concern. Trees are rightfully seen as vital parts of the ecosystem, as key elements of scenery, and as components of the historical and cultural landscape. It is important to examine the particular cases of ironwood trees on the coast in Hawai'i.

Ecology of Ironwood

Ironwood trees are a common element along the coasts of the South Hilo, North Hilo, Hamakua, North Kohala and Puna Districts.

According to the *Manual of the Flowering Plants of Hawai'i* (Wagner, Herbst and Sohmer 1990:52), ironwood was probably introduced to Hawai'i by P. Isenberg in plantings at Kilohana Crater on Kaua'i. By 1895 it was being collected on O'ahu. It was planted throughout the territory as a windbreak. Ironwood on the island of Hawai'i is often associated with forester A.J. Mackenzie, an enthusiastic proponent of the trees, after whom a State Park on the Puna coast with a near monoculture of ironwood is named.

Ironwoods, along with all types of trees, have certain positive attributes. They are viewed by some as generally scenic and picturesque, and by others as attractive in certain locations. The soft carpet of needles and the whistling sound of the needle-like leaves in the wind are often cited as pleasant. They sometimes provide shade for fishermen on the

edge of the cliffs. Perhaps most importantly, although they are quite alien to the Hawaiian Islands, they have become a familiar part of the landscape.

These positive attributes need to be weighed against the significantly adverse effects ironwood has on native ecosystems, agricultural land, scenic vistas and cliff erosion.

The University of Hawaii's Botany Department has an online forum that promotes public awareness and exchange of information about the spread of alien plant species (http://www.botany.hawaii.edu/faculty/cw_smith/cas_equ.htm). According to the website:

"This rapidly growing tree can reach heights of 40 m or more. It forms monotypic stands under which little else grows. The lack of undergrowth beneath trees suggests the release of an allelopathic agent, although Neal (1965) suggested that they exhaust the nutrients in the soil. The seeds are wind-dispersed. The lack of undergrowth prevents very hot fires from burning in the vicinity of these trees. When fires do sweep through stands, trees regenerate rapidly from basal shoots. The species has not been evaluated for biological control because it is still considered a beneficial tree for windbreaks, erosion control, and nitrogen fixation."

A National Park Service website (<http://www.nps.gov/plants/alien/fact/caeql.htm>) discusses ironwood's (also called Australian pine) invasive character in a number of locations throughout the U.S. and the threat it poses to native ecosystems in National Parks:

“ECOLOGICAL THREAT: Australian pine is fast-growing (5-10 feet per year), produces dense shade and a thick blanket of leaves and hard, pointed fruits, that completely covers the ground beneath it. Dense thickets of Australian pine displace native dune and beach vegetation, including mangroves and many other resident, beach-adapted species. Because its roots are capable of producing nitrogen through microbial associations, Australian pine can colonize nutrient-poor soils. Once established, it radically alters the light, temperature, and soil chemistry regimes of beach habitats, as it outcompetes and displaces native plant species and destroys habitat for native insects and other wildlife. Chemicals in the leaves of Australian pine may inhibit the growth of other plants underneath it.

The ground below Australian pine trees becomes ecologically sterile and lacking in food value for native wildlife. Unlike native shrubbery, the thick, shallow roots of Australian pine make it much more susceptible to blow-over during high wind events, leading to increased beach and dune erosion and interference with the nesting activities of sea turtles.

CURRENT MANAGEMENT APPROACHES: No biological controls are currently available for management of Australian pine. For new or small infestations, manual removal of Australian pine seedlings and saplings is recommended. For heavier infestations, application of a systemic type herbicide to bark, cut stumps, or foliage is likely to be the most effective management tool. Prescribed fire has also been used for large infestations in fire-tolerant communities. Raking and removal of leaf litter, cones and seeds should be done whenever possible. Impacts to native plants should be minimized during any control activities. Whenever possible, efforts should be taken to prevent the introduction or encroachment of Australian pine. For example, recently disturbed beach habitat may be planted with native vegetation to prevent Australian pine from invading.

SUGGESTED ALTERNATIVE PLANTS: Locally native plants that are adapted to the harsh conditions of the coastal environment should be used for landscape planting and beach restoration projects.”

Along the Hamakua Coast, ironwood’s shade and soil effects crowd out and kill native species such as hala (*Pandanus odoratissimus*), `ohi`a (*Metrosideros polymorpha*) and naupaka (*Scaevola sericea*). Figure 3-c illustrates a sparse stand of naupaka on the subject property, showing reduced vigor as a result shading by ironwoods, and Figure 3-d shows hala juveniles sprouting in an area of full sun. Ironwood tends to be more shallow-rooted and less stable than many other trees, and often falls over in high winds, exacerbating cliff erosion. Figure 3-e shows a cliff containing with both native vegetation and ironwood-dominated faces, where the latter appears to experience faster rates of erosion.

Steve Shropshire, the property owner and project proponent, solicited the opinion of local experts on invasive species in 2002. Duane Nelson, then-Forest Health Coordinator for the U.S. Forest Service’s Institute of Pacific Island Forestry and head of the Big Island Invasive Species Committee, responded to him in a memo of October 23, 2002 (see App. 3):

“Ironwood is invasive as evidenced by its dramatic spread in the north Hamakua District and relatively high scores in a risk assessment run by Curt Daehler of University of Hawaii.”

In the interest of improving his property’s views and removing an alien species that threatens native vegetation and cliff stability, Mr. Shropshire is seeking as part of his NRCS-approved Conservation Plan to remove the ironwood trees and replace them with primarily native and Polynesian-introduced species. As discussed above, the removal would also include a few individuals of other alien species, especially African tulip and Chinese banyan, which are also significantly invasive.

1.2 Summary of Environmental Assessment Process

This Environmental Assessment (EA) process was 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 process in the State of Hawai'i. *An EA is necessary because the site is within the State Land Use Conservation District and DLNR does not consider the project an exempt activity, and also because the tree removal would occur in the Shoreline Setback Area, and the activities may trigger the need for a Shoreline Setback Variance, depending upon the determination of the Planning Director.*

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. If a study concludes that no significant impacts would occur from implementation of the proposed action, a Finding of No Significant Impact (FONSI) will be prepared and an action will be permitted to occur. If a study finds that significant impacts are expected to occur as a result of a proposed action, then an Environmental Impact Statement (EIS) is prepared in order to allow wider investigation of impacts and public involvement.

Section 2 considers alternatives to the proposed project, and Section 3 discusses the existing environment and impacts associated with this project. Section 4 issues the determination (anticipated determination in the Draft EA), and Section 5 lists the criteria and the findings made by the applicant in consultation with the State of Hawai'i Department of Land and Natural Resources for this project.

1.3 Public Involvement and Agency Coordination

The following agencies, organizations and individuals have been consulted during the Environmental Assessment Process:

County:

Planning Department
Councilman Fred Holschuh

Department of Public Works

State:

Department of Land and Natural Resources
Representative Dwight Takamine

Private:

Sierra Club
Rural South Hilo Community Association
Gerdine Markus (former president, Hilo Outdoor Circle)

Copies of communications received during preconsultation are contained in Appendix 1A. A total of six letters were received in response to the Draft EA. These letters and the responses to them are contained in Appendix 1b. Various places in the EA have been modified to reflect input received in the letters; additional or modified text is denoted by double underlines, as in this paragraph.

PART 2: ALTERNATIVES

2.1 Proposed Project

The proposed project is described in Section 1.1 above and illustrated in Figures 1-3.

2.2 No Action

Under the No Action Alternative, the Conservation plan would not be implemented in the Conservation District portion of the property. The private and public benefits of alien species removal, viewplane improvement, crop production, soil conservation and tillage improvement would not be realized over the full property. On the other hand, for those who value the ironwood trees for whatever reasons, they would remain in place, and probably become more numerous. This EA considers the No Action Alternative as the baseline by which to compare environmental effects from the project. No other alternatives for the treatment of this area of the property are desired by Mr. Shropshire or addressed in this EA.

PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 Basic Geographic Setting

The subject area is part of TMK 2-7-04:25. This parcel contains 107.2457 acres in total and is currently being subdivided into four lots (Figs. 1-3). As discussed in Section 1.1, the subject area is the portion of this property that is within the Conservation District, which is defined by the State Land Use Commission as the area within 300 feet of the mauka edge of the seacliffs fronting the property. The Conservation District portion of the property has not been precisely surveyed, but it appears to constitute approximately one third of the property. Elevation varies from about 60 to 160 feet above mean sea level, and the subject area slopes moderately upwards away from the cliffs. It was formerly farmed in sugar cane is currently covered mostly by grass.

3.2 Physical Environment

3.2.1 Drainage, Flooding and Hazards

Environmental Setting

The subject area is designated in Zone "X", defined as areas outside the 500-year flood plain, on the Federal Emergency Management Agency's National Flood Insurance Program's Flood Insurance Rate Maps (FIRM).

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. The project site is located in Lava Flow Hazard Zone Volcanic hazard as assessed by the United States Geological Survey is "8" on a scale of ascending risk 9 to 1 (Heliker 1990:23). The low hazard risk is based on the fact that only a few percent of surrounding areas have been covered by lava in the past 10,000 years.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Probability Rating (Uniform Building Code, Appendix Chapter 25, Section 2518). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built.

Field evaluation and discussions with geologist Jack Lockwood confirm the information cited in the sources above that ironwood in this area contributes to mass wasting by root action on bare cliff faces, by shallow root clusters that tend to fail in high winds and cause the trees to topple over, and by its negative effect on other vegetation that could help retain soil. As discussed above, ironwood trees will be cut with chain saws and then pulled back onto the shelf above the cliff for disposal, which may include additional cutting, shredding and mulching. Herbicide will be applied to the stumps and the trees will gradually die. Roots will remain in the ground and left to decompose naturally.

Removing ironwoods and replacing them with native vegetation such as hala, `ohi`a and naupaka will likely help in promoting long-term stability. However, the act of removing ironwood trees may tend to cause short-term instability, which may include minor rockfalls and slumps into the shoreline area below. As this shoreline area is not walkable and is generally not utilized for any purpose other than occasional opihi picking (see Section 3.4.1), there should be little risk of injury to persons. It bears emphasis that ironwoods already produce unstable cliff conditions and contribute to regular rockfalls and slumps in this area.

Impacts and Mitigation Measures

Geologic conditions impose no substantial constraints on the project. In general, the Conservation Plan is designed to reduce soil erosion and provide a more stable land surface. Tree removal will be followed by planting with vegetation that is better suited to resist mass wasting and soil erosion. The area will be monitored for instability and appropriate actions will be taken if excessive erosion or mass wasting occurs. Because of its tendency to exclude other vegetation and its extensive shallow root network, ironwood is a major factor in accelerating cliff erosion. Ultimately, the overall stability of the cliff area should be improved as a result of removing this invasive alien and planting with natives better suited to stabilize the surface.

3.2.2 Terrestrial and Aquatic Biology

Terrestrial Species and Habitat

The subject property (including both the Agricultural and Conservation portions) is currently vegetated with a variety of truck crops, fallow papaya, guinea grass (*Panicum maximum*), ironwood, and variety of weeds. NRCS personnel inspected the parcel as part of the EQUIP program process and determined that, based on their inspection and information, there would be no effect on threatened or endangered species. Furthermore, NRCS consulted the U.S. Fish and Wildlife Service (USFWS) for their concurrence on this determination, by letter of October 10, 2002 (see Appendix 3). In a letter of October 24, 2002, Field Supervisor for the Pacific Islands office of USFWS concurred that no endangered or threatened plant or animal species are known to occur in the area and that no listed endangered or threatened plant or animal species or critical habitat is likely to be affected by the project (see Appendix 3). The list of native species encountered under or near the trees planned for removal, and also in the cliffs below (which will not be affected by the activity), include hala (*Pandanus odoratissimus*), naupaka (*Scaevola taccada*), the fern *Sphenomeris chinensis*, *Bacopa monnieri*, and hapu`u (*Cibotium glaucum*). No threatened or endangered species appear to be present. It bears reiteration that the ironwood tree removal component of the project will replace a declared invasive aliens species with native vegetation, which represents an improvement in habitat.

Aquatic Species and Habitat

No wetlands or special aquatic sites (e.g., anchialine ponds) are present in the subject area. Ka'apoko Stream, as well as another stream unnamed on USGS maps, traverses the property. The project components have been designed to avoid streams and to reduce sedimentation impacts to them (see Section 3.2.1).

The project is located adjacent to the coast. Many activities on the Hamakua Coast – whether farming, home construction, or forestry – may produce excessive sedimentation, which reduces water clarity, adds nutrients and can degrade nearshore habitat. However, the natural context is one of high stream sediment load, to which the marine ecosystems are somewhat adapted, as well as the extreme high energy of the nearshore environment, which rapidly disperses sediment. In general, minor activities produce impacts that are localized, temporary, and not substantial. Major activities, however, can result in acute or chronic pollution problems.

As discussed above, the Conservation Plan has been specifically designed to reduce sediment loads and benefit stream and nearshore habitats. As discussed in Section 3.2.1. above, ironwood tends to accelerate mass wasting and soil erosion. Removing ironwood and replacing it with native species should promote long-term stability of the cliffs and reduce sedimentation associated with cliff mass wasting and soil erosion around the trunks and root masses of ironwood.

3.2.3 Air Quality and Noise

Environmental Setting

Air pollution in the Papa'ikou area is minimal, and is mainly derived from volcanic emissions of sulfur dioxide, which convert into particulate sulfate and produce a volcanic haze (vog) that occasionally affects the district when trade winds are not blowing. Areas undergoing construction or crop harvest can experience blowing dust, especially during high winds.

Noise in the subject area is moderate and is derived principally from motor vehicles on Highway 19, which is directly adjacent. Nearby farms, commercial and community facilities and residences also contribute to noise levels.

Impacts and Mitigation Measures

The shoreline area where trees would be removed is a minimum of several hundred yards from any existing homes. The project would not affect air quality or noise levels, except for very minor and brief effects from chain saws and other machinery during tree removal. Due to the minor nature of the effects and the distance from sensitive receptors, no mitigation measures should be necessary.

3.2.4 Scenic Resources

Environmental Setting

The subject area lies between Highway 19 and the coast. The current view from the both the highway and the homes directly mauka of it involves a foreground of former sugar cane fields – some fallow, some in other crops – with a background of ironwood trees, over, through and around which the sea is visible in places (Figs. 3a-b).

The *Hawai`i County General Plan* contains Goals, Policies and Standards intended to preserve areas of natural beauty and scenic vistas from encroachment. The Plan does not refer to any views near the subject area.

As the subject area lies within the Special Management Area (SMA), the SMA policies concerning scenic impact, which are found in Chapter 205A, Hawai`i Revised Statutes, require examination. It is the expressed intent of this law to protect, preserve, and where desirable, restore or improve the quality of scenic and open space resources. The guidelines contained in Rule 9 of the Hawai`i County Planning Commission Rules (which govern County-regulated development in the Special Management Area or SMA) seek to minimize development that would substantially interfere with or detract from the line of site toward the sea from the State Highway nearest the coast or from other scenic areas identified in the *General Plan*.

Impacts and Mitigation Measures

The proposed activity would change the scenic character of the area by removing many of the ironwoods from the shoreline cliffs and replacing them with various native and Polynesian-introduced species. Part of the intent of the action is to improve views of the ocean for lot-owners. Viewers mauka of the lots, including motorists on Highway 19, would also have less obstructed views of the ocean. Most viewers would agree that ironwoods are not uniquely attractive and that they block scenic views of the sea's surface, of shoreline features, waves, whales, etc., and that removing them is in general a benefit. Landscaping involving native and Polynesian-introduced species will provide a more varied and interesting scenic presence. If there are those who enjoy an unbroken vista of ironwoods, their nearly ubiquitous presence along the Hamakua coast should offer some comfort. Scenic values are often highly subjective, and it is therefore not possible to categorically state that this alteration would be wholly welcome; however, it is not unreasonable to state that the project will improve scenic views. It should be noted again that the project was included in the list of activities that was granted Special Management Area Minor Permit 124 on November 7, 2002, which considered scenic impacts among other coastal zone management objectives. A copy of the letter granting the permit is included as Appendix 5.

3.2.5 Hazardous Substances, Toxic Waste and Hazardous Conditions

Based on onsite inspection, it appears that the site contains no hazardous or toxic substances and exhibits no other hazardous conditions that pertain to the proposed action. In order to ensure that tree-removal and replanting damage is avoided or minimized, the following measure will be implemented:

Mitigation Measure: Petroleum products, wastes, debris, and landscaping substances (herbicides, pesticides, and fertilizers) will be prevented from blowing, falling, flowing, washing or leaching into the ocean. All herbicide use will be in accordance with label instructions, and overapplication, overspray, and inappropriate use will not be allowed to occur.

3.3 Socioeconomic and Cultural

3.3.1 Land Ownership and Land Use, Designations and Controls

Existing Environment

Three out of four of the lots that have resulted from the subdivision of TMK 2-7-04:025 are owned by the Shropshire Group, LLC, and the fourth is owned by Minh Voss. The property is bordered by the sea on the east, by State Highway 19 on the west (mauka), and by a County wastewater plant and various private parcels on the south.

The State Land Use District is Conservation (for the 300-foot strip of the property under consideration in this EA), and the County zoning is Agricultural, 20-acre minimum lot size (A-20a). The Land Use Pattern Allocation Guide Maps identify the area as Open. The site is within the Special Management Area. An existing Special Management Area permit (No. 124) is in effect for the proposed NRCS Conservation Plan and nursery operation. According to County Planning Department, no further review under the SMA guidelines is required for implementation of the Conservation Plan, which is the action considered in this EA.

Much of the proposed tree removal would occur within the Shoreline Setback Area, which is a zone 40 feet wide adjacent to the top of the cliff, which, in the absence of a certified shoreline determining otherwise, may be assumed to be the legal shoreline in this area. In accordance with Rule 11 of the Planning Department, this EA and other material have been submitted to the Planning Director in order to determine if the project is a minor activity that does not adversely affect the shoreline in the context of the rules, and is thus exempt from the need for a Shoreline Setback Variance. If necessary, Mr. Shropshire will apply for a Shoreline Setback Variance to conduct the activity.

3.3.2 Socioeconomic Characteristics

Existing Environment: Social Characteristics and Recreation

The project site is in the town of Papa`ikou, in the South Hilo District of the island of Hawai`i. Papa`ikou grew during the days when sugar was king on the Hamakua Coast and became an important cane-growing area and mill-town. Today, according to the 2000 U.S. Census of Population (<http://factfinder.census.gov>), there are 1,414 residents whose ethnic makeup – 45.8 percent Asian, 27.5 percent two or more races, and only 15.3 percent white – strongly reflects the plantation heritage. The median age is 40.4, higher than the island average of 38.6, reflecting the migration of young people in search of jobs after the shutdown of the sugar plantations. Only 72.3 percent of adults graduated from high school, as compared to 84.6 percent for the County. Only 46.2 percent of persons 16 years or over are currently in the labor force, in contrast to 61.7 percent for the County. Median household income is somewhat lower (\$37,031 versus \$39,805) in Papa`ikou than in the County as a whole, although poverty rates are roughly the same (around 15 percent).

The portion of South Hilo northwest of Honoli`i Stream, together with North Hilo and Hamakua, is popularly known as the Hamakua Coast. After decades of declining population caused by the shrinking and eventual disappearance of the sugar industry, this area is experiencing moderate growth, as land suitable for farming, ranching and single-family homes becomes subdivided and put upon the market. Land with coastal frontage is commanding premium prices as real estate in West Hawaii has become increasingly expensive.

The transformation of familiar land use patterns, along with the specter of land speculation and newcomers, has stirred concern among many old-time residents that the special character of the Hamakua Coast may be in jeopardy. There are also concerns about access to coastal fishing sites and mauka hunting areas along the Hamakua Coast. Local fishermen fish from cliffs or use coastal trails to access fishing sites on coastal shelves.

Impacts and Mitigation Measures

No adverse socioeconomic impacts are expected to result from the project. No displacement of existing uses or substantial increases in population or changes in demographics would result directly or indirectly from this action. No impacts on recreational uses are expected (the reader is referred to Section 3.4.1 for detailed discussion of recreational resources and impacts).

3.3.3 Cultural Setting

The cultural value of the project site was assessed as part of this EA. The purpose of this investigation was to determine whether the property supported any traditional gathering uses, was vital for access to traditional cultural sites, or had other important symbolic associations for native Hawaiians and other cultural groups. Sources for the information included examination of historic maps, archaeological surveys, and informal interviews with community members, including long-time residents of Papa`ikou who were identified during community meetings as knowledgeable in area resources and practices. Particularly important was an interview with Mrs. Ada Kalani, who is a resident of Papa`ikou. She has resided in this area since her birth in about 1950 and her house is adjacent to the Aloha Green Plants property. Mr. Mario Cabalar was also interviewed, having lived in the area for 15 years and worked for C. Brewer Co. for 21 years.

The traditional ahupua`a names for the property include Papa`ikou, Ka`apoko and Paiha`aloha. Traditional uses of the area likely included residences and dryland agriculture in the rich soils. One Land Commission Award (number 4977 to Keheanakahi) is located in the inland portion of the property, outside the subject area for this EA. Several other grants are also present.

In the plantation era the land was cultivated for sugar, and the surrounding area in and near the town of Papa`ikou was used for industrial (sugar milling and plantation equipment repair), residential and other purposes. Immigrants from all over the world came to Hawai`i and attempted to recreate many of their traditions and institutions, and slowly became acclimated to the culture of Hawai`i, which was itself in flux. Many buildings, cemeteries, churches and other locations have special and unique cultural value as expressions of the plantation era. The old sugar mill is located just to the south of the property. Although residential camps are present to the north and south, none appear to have been present in the property, and there are no records or remains of plantation cemeteries that would have cultural value related to the plantation era and the traditions of the workers.

Mrs. Kalani noted that the traditional use of this area in the mid-20th century onward was centered on marine resources - including gathering of opihi and sea urchins, and net and shoreline fishing. The locale of these activities in the area depends on accessibility to the shoreline because of the high sea cliffs in the area. There are several points in the area where access is allowed by the topography. The mill (south of the project area), being the easiest point of access, attracted the most activity. Mokihana Bay, also known as Haka Shore (within the project area), was utilized for swimming, fishing, and gathering. Mrs. Kalani recalls swimming at this spot frequently with friends during the 1950s and 1960s. Another access point, to the north of the present-day sewage treatment plant, was utilized for fishing and gathering. Mrs. Kalani continued to visit this site, often with her husband, until recently. In past years access to the shoreline here was facilitated by carved steps that at some point were destroyed by erosion. This shoreline area is still

accessible by rope ladders. Mrs. Kalani has recently observed people using this access point to fish. Mr. Cabalar corroborated these statements to the extent of his experience, and added that he has observed individuals gathering bananas from several groves on the property, which are probably located mauka of the subject area.

Numerous traditions are associated with cultural and natural features in Hamakua. However, based on consultation with knowledgeable informants, no significant sites were identified in the area. Two locations on the project site have been utilized by community residents for recreation, fishing and banana gathering. A designated public access to Mokihana Bay is present, ensuring continued public access. The project will have no long-term effects on access to these locations. Short-term access may be limited due to safety concerns. The project may have long-term positive impacts on access to these locations due to the decrease in long-term erosion rates.

In summary, the project does not appear to have the potential to have any adverse effects on traditional sites or practices.

3.3.4 Archaeology and Historic Sites

No sites are listed on the National and State Register of Historic Places in this area. An archaeological study of the entire 107-acre property was conducted by PHRI, and is included as Appendix 4. The survey concluded that although the area may have been occupied and/or utilized by native Hawaiians for residential occupation and/or dryland agricultural activities prior to historic plantation activities, over a century of sugarcane cultivation and more recent grubbing activities have likely completely obliterated any traces. No archaeological evidence of any kind was found. The State Historic Preservation Division concurred with the results of this survey in a letter of September 12, 2003 (see Appendix 4).

Despite the apparent lack of resources, as a precaution against inadvertent archaeological or burial finds, the following additional mitigation measure will be implemented:

Mitigation Measure: If any previously unidentified sites, or remains such as artifacts, shell, bone or charcoal deposits, human burials, rock or coral alignments, pavings, or walls are encountered during any of the proposed activities, work will stop immediately and SHPD will be consulted to determine the appropriate mitigation. Care will be taken during ground preparation to ensure that, in the unlikely event that human burials are present, they are recognized and dealt with appropriately.

3.4 Public Facilities and Utilities

3.4.1 Recreational Facilities and Resources

Existing Environment, Impacts and Mitigation Measures

No public or private parks are present on or directly adjacent to the subject area. Designated public accesses to Mokihana Bay (a steep trail with a rope ladder near the bottom) and the bay makai of Papaikou Mill are present in/near the subject property. Both areas are used by fishermen and bodyboarders. No other designated trails appear to present in the subject area, but residents report that fishermen occasionally access fishing sites along the top of the pali and on the shoreline shelf by hiking along the top of the pali and descending in some of the few safe spots. Other than the bays mentioned above, access to/along with the waterline is extremely hazardous, as this area is simply narrow wedge of wave-washed boulders backed by loose cliffs that continuously spall boulders (see photo figures for illustration). Nevertheless, although not directly observed during field visits for this EA, it is likely that opihi pickers visit the area when the sea is relatively calm.

Implementation of the Conservation Plan in the subject area would not affect access to fishing sites. As discussed in Section 3.2.1, removing ironwoods and other alien trees and replacing them with native vegetation such as hala, `ohi`a and naupaka will likely help in promoting long-term stability of the cliffs. However, the act of removing ironwoods may tend to cause short-term instability, which may include minor rockfalls and slumps into the shoreline area below. Given the low level of use in these areas, and the inherent high level of existing hazard from rockfalls, this risk may be considered acceptable.

3.4.2 Other Public Facilities and Utilities

Environmental Setting, Impacts and Mitigation Measures,

The proposed implementation of the Conservation Plan would not involve or adversely affect roadways, electrical or telephone utilities, wastewater treatment facilities, water supply, or any other public facilities or services.

3.5 Secondary and Cumulative Impacts

The small scale of the proposed project will not produce any secondary 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.

In many categories of effect, including impacts to native species, historic sites, public facilities and services, the project will have either no adverse effects or beneficial effects, meaning that there would be no adverse effects to accumulate with those of other projects, and thus no risk of cumulative impact to these resources.

However, it is important to note that as a result of land tenure and use changes associated with the disappearance of sugar, there are many projects on areas near the cliffs of the Hamakua Coast that are altering vegetation. Some areas formerly in farmland are being converted to residential uses, while others are supporting new crops. Some areas formerly considered "waste" by the plantations are now in demand as house sites. At least one other project on the coast between Pepe'ekeo and Paauilo also involves ironwood removal along the cliffs. An ongoing project of the State Department of Agriculture has been the clearing of an even more noxious alien, *Miconia calvescens*, from areas it has infested, which is centered on the Onomea area, very near the project area (Mr. Shropshire also periodically removes *Miconia* from gulches on his property). All these project have at least some potential to affect scenic characteristics, soil erosion and mass wasting.

As discussed in several places above, the visual impacts of the project are to a large degree subjective, but most (not all) would agree that vistas of ocean and coastline are preferable to unbroken lines of ironwood. Accordingly, even though there are at least some projects that will also remove ironwoods and other noxious aliens from coastal areas, the cumulative impacts may be regarded as also beneficial.

In terms of soil erosion and mass wasting, it should be emphasized that the project is a U.S. Natural Resources Conservation Service Conservation Plan, which incorporates a number of measures to limit erosion and conserve soil. Tree removal may involve a brief period of accelerated erosion and mass wasting, although this will be minimized by leaving roots intact, allowing them to reshoot as other vegetation becomes established, and then applying herbicide to the stumps. The net effect on both soil erosion and mass wasting after implementation of the Conservation Plan and establishment of healthy native vegetation in the cliff areas will be positive. The cumulative effect, again, will be beneficial.

3.6 Required Permits and Approvals

County of Hawai'i:

Special Management Area Permit (obtained)
Shoreline Setback Exemption or Variance

State of Hawai'i

Conservation District Use Permit

3.7 Consistency With Government Plans and Policies

3.7.1 Hawai'i County General Plan

The *General Plan* for the County of Hawai'i is the 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. The *General Plan* 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. The only aspects of the General Plan that are particularly relevant to the proposed project have to do with Environmental Quality, Agricultural Land, Natural Beauty and Natural Resources and Shorelines. Below are excerpts from these pertinent sections followed by a discussion of conformance. In recognition that the *General Plan* is currently in the final stages of a periodic update and is likely to be adopted soon, the following references include language from the revisions. Additions to the 1989 language are in bold and underlined, and deletions are bracketed.

ENVIRONMENTAL QUALITY GOALS

Define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.

Maintain and, if feasible, improve the existing environmental quality of the island.

ENVIRONMENTAL QUALITY POLICIES

[The County of Hawaii shall take] **Take** positive action to further maintain the quality of the environment [for residents both in the present and in the future].

ENVIRONMENTAL QUALITY STANDARDS

Pollution shall be prevented, abated, and controlled at levels [which] **that** will protect and preserve the public health and well being, through the enforcement of appropriate Federal, State and County standards.

[Environmental] **Incorporate** environmental quality controls [are to be incorporated] either as standards in appropriate ordinances or as conditions of approval.

Discussion: The proposed project would not adversely affect on the environment and would not diminish the valuable natural resources of the region. The Conservation Plan would enhance soil conservation and remove an alien species and reestablish native vegetation near a coastal cliff, providing an environmental benefit.

AGRICULTURAL LAND GOALS

Identify, protect and maintain important agriculture lands on the island of Hawaii.

Preserve the agricultural character of the island.

Zoning shall protect and maintain important agricultural lands from urban encroachment. New approaches to preserve important agricultural land shall be implemented by the County.

Discussion: The land has been historically used for agriculture, and the proposed project, as sponsored and approved by the U.S. Natural Resources Conservation Service, would maintain and enhance its agricultural value..

NATURAL BEAUTY GOALS

Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.

Protect scenic vistas and view planes from becoming obstructed.

Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

NATURAL BEAUTY POLICIES

Increase public pedestrian access opportunities to scenic places and vistas.

Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.

Do not allow incompatible construction in areas of natural beauty.

Discussion: The proposed activity would change the scenic character of the area by removing most of the ironwoods from the shoreline cliffs and replacing them with various native, Polynesian-introduced, and selected other species. Most would agree that ironwoods are not uniquely attractive and that they block scenic views of the sea's surface, of shoreline features, waves, whales, etc., and that removing them is in general a benefit.

NATURAL RESOURCES AND SHORELINES GOALS

Protect and conserve the natural resources of the County of Hawaii from undue exploitation, encroachment and damage.

Provide opportunities for the public to fulfill recreational, economic, and educational needs without despoiling or endangering natural resources.

Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.

Ensure that alterations to existing land forms and vegetation, except crops, and construction of structures cause minimum adverse effect to water resources, and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.

NATURAL RESOURCES AND SHORELINES POLICIES

The County of Hawai'i should require users of natural resources to conduct their activities in a manner that avoids or minimizes adverse effects on the environment.

Encourage the use of native plants for screening and landscaping.

Discussion: Most aspects of the proposed Conservation Plan avoid any impact to shoreline resources. The ironwood tree removal and replanting with native, Polynesian and other species will be conducted so as to minimize adverse short-term impacts to cliff stability, and ultimately to enhance the stability of the cliff environment.

3.7.2 SMA Guidelines

The proposed land use complies with provisions and guidelines contained in Chapter 205A, Hawaii Revised Statutes (HRS), entitled *Coastal Zone Management*. The proposed use would be consistent with Chapter 205A because it would not affect public access to recreational areas, historic resources, scenic and open space resources, coastal ecosystems, economic uses, or coastal hazards. The project was included in the list of activities that was granted Special Management Area Minor Permit 124 on November 7, 2002. A copy of the letter granting the permit is included as Appendix 5.

3.7.3. Shoreline Setback Rules

A 40-foot wide area mauka of the top of pali is considered the Shoreline Setback Area for the property. Rule 11 (Shoreline Setback) of the Hawai'i County Planning Department Rules Of Practice And Procedure governs uses with the Shoreline Setback Area. Pursuant to Rule 11-6(b), all structures and activities that do not qualify under section 11-7(a) through (c) are prohibited in the shoreline setback area, unless the applicant obtains a Shoreline Setback Variance or the Planning Director determines that it is a "minor activity "that does not adversely affect the shoreline" in the context of the rules and is thus exempt. This Environmental Assessment will accompany a letter to the Planning

Director requesting determination that the project is a minor activity. The Final EA will report the results of the request.

3.7.4 Conservation District Rules

The property is in the State Land Use Conservation District, Resource subzone. Any proposed use must undergo an examination for its consistency with the goals and rules of this district and subzone. The applicant has concurrently prepared a Conservation District Use Application (CDUA), to which this EA is an Appendix. The project consists of agricultural activities and cutting and/or removal of invasive alien ironwood (*Casuarina equisetifolia*) and selected other alien trees and landscaping with indigenous and Polynesian-introduced species in the Resource subzone of the Conservation District. The action would occur in an area greater than 10,000 square feet, would involve cutting more than five trees with diameters greater than six inches measured at ground level, and would involve landscaping and agriculture. The action is therefore a *Tree Removal Use* as defined in Section 13-5-22 (P-12, D-1), an *Agriculture Use* as defined in Section 13-5-23 (L-1, D-1), and a *Landscaping Use* as defined in Section 13-5-24 (R-5, C-1). These uses are identified land uses for the Resource subzone per Sections 13-5-22, -23 and -24. The CDUA includes a detailed evaluation of the consistency of the project with the criteria of the Conservation District permit process. Briefly, the following individual consistency criteria should be noted.

1. The proposed land use is consistent with the purpose of the Conservation District;

The purpose of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare. The action is consistent with this purpose, in that it will help reduce the prevalence of invasive alien plant species and establish indigenous plant species, and will also reduce soil erosion and polluted runoff.

2. The proposed land use is consistent with the objectives of the subzone of the land on which the use will occur;

The proposed action is consistent with the objectives of the Resource subzone, which are to develop, with proper management, areas to ensure sustained use of the natural resources of those areas. The action involves a properly managed use that ensures sustained use of the natural resources of the area by reducing the prevalence of invasive alien plant species and helps establish indigenous plant species, as well as reducing soil erosion and polluted runoff.

3. The proposed land use complies with provisions and guidelines contained in Chapter 205A, Hawaii Revised Statutes (HRS), entitled "Coastal Zone Management," where applicable;

The consistency of the action with the cited provisions and guidelines was evaluated by the Hawai'i County Planning Commission as part of the Special Management Area (SMA) permit process. The action was found to be consistent, and the action was included in the list of activities that was granted SMA Minor Permit 124.

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

The proposed action will enhance the soil cover and protect the land from erosion, polluted runoff, and alien species takeover.

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

The proposed action is compatible with, and in fact supportive of, the agricultural activities in the surrounding parcels.

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

The removal of invasive alien plants and replacement with indigenous and Polynesian-introduced species will have a marked positive impact upon the natural beauty as viewed from both sea and land.

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

The proposed action does not involve or depend upon subdivision.

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

The proposed action will have no adverse effect upon public safety, health, and welfare, as no public lands are involved or affected directly or indirectly.

PART 4: ANTICIPATED DETERMINATION

Based on evaluation of the environmental setting and impacts, as well as the comment letters received, the applicant expects that the Hawai'i State Department of Land and Natural Resources will determine that the proposed action will not have a significant effect upon the environment and will thus issue 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 a project 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 resource would be involved, committed or lost. Native ecosystems will be enhanced by removing a noxious alien species. No historic sites are present.
2. *The proposed project will not curtail the range of beneficial uses of the environment.* No restriction of beneficial uses would occur.
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 and basically environmentally benign, and 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 not have any substantial effect on the economic or social welfare of the Papa'ikou community or State.
5. *The proposed project does not substantially affect public health in any detrimental way.* The project will not affect public health in any way.
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 implementation of the Conservation Plan, which will enhance soil conservation and remove an alien species.
7. *The proposed project will not involve a substantial degradation of environmental quality.* The project is minor and environmentally benign, and it would thus not contribute to environmental degradation.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* The site supports mainly alien vegetation. No rare, threatened or endangered species of flora or fauna are known to exist on the project site, and none would be affected by any project activities. Native vegetation would be enhanced by removal of a noxious alien.
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. Those cumulative effects that exist can be seen as beneficial.

10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* No substantial effects to air, water, or ambient noise would occur. Brief, temporary effects would occur during construction and will be mitigated.

11. *The project does not affect nor would it likely to be damaged as a result of being located in environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area.* The project is outside the flood zone, according to FIRM maps. Removing ironwoods and other alien trees and replacing them with native vegetation such as hala, 'ohi'a and naupaka may tend to cause short-term instability, which may include minor rockfalls and slumps into the shoreline area below, but will likely help in promoting long-term stability of the cliffs. The project presents no substantial additional hazard to the public, and the project is not imprudent for the landowner.

12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* The project does not impact the views listed in any plan, particularly those listed in the Hawai'i County General Plan. Furthermore, the project will not impair views, and will generally improve views, of and along the coastline from Highway 19.

13. *The project will not require substantial energy consumption.* Negligible amounts of energy input will be required to implement the project.

REFERENCES

- Gagne, W., and L. Cuddihy. 1990. "Vegetation," pp. 45-114 in W.L. Wagner, D.R. Herbst, and S.H. Sohmer, eds., *Manual of the Flowering Plants of Hawai'i*. 2 vols. Honolulu: University of Hawai'i Press.
- Hawai'i State Department of Business Economic Development and Tourism (DBEDT). 1997. *State of Hawai'i Data Book*. Honolulu: DBEDT.
- Heliker, C. 1990. *Volcanic and Seismic Hazards on the Island of Hawai'i*. Washington: U.S. GPO.
- U.S. Bureau of the Census. 1991. *1990 Census of Population, General Population Characteristics*. 1990 CP-1-13. Washington: GPO.
- U.S. Soil Conservation Service. 1973. *Soil Survey of Island of Hawai'i, State of Hawai'i*. Washington: U.S.D.A. Soil Conservation Service.
- University of Hawai'i at Hilo, Dept. of Geography. 1998. *Atlas of Hawai'i*. 3rd ed. Honolulu: University of Hawai'i Press.
- Wolfe, E.W., and J. Morris. 1996. *Geologic Map of the Island of Hawai'i*. USGS Misc Investigations Series Map i-2524-A. Washington, D.C.: U.S. Geological Survey.

**ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT**

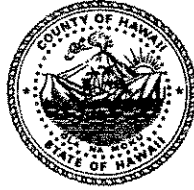
APPENDIX 1A

COMMENT LETTERS

FROM AGENCIES AND ORGANIZATIONS

IN RESPONSE TO PRE-CONSULTATION

Harry Kim
Mayor



Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

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

March 10, 2004

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

Dear Mr. Terry:

**SUBJECT: Pre-Consultation for Draft Environmental Assessment
Tree Removal & Landscaping Activities
Papaikou, South Hilo, Island of Hawaii
Tax Map Key: (3) 2-7-004:025**

This is in response to your undated letter on March 5, 2004 in which you requested our comments regarding your preparation of an Environmental Assessment in compliance with Chapter 343, HRS, for the proposed tree removal and landscaping activities in connection with the implementation of a U.S. Natural Resources Conservation Service (US-NRCS) Conservation Plan. We appreciate being afforded this opportunity to comment on the referenced project as it relates to the Hawaii County Zoning Code and other applicable land use regulations administered by this office.

We understand that the landowner, Steven Shropshire, intends to remove approximately 100 ironwood trees from the subject property. The landowner intends to replace the removed ironwood trees with more appropriate native or Polynesian-introduced species.

The subject property is zoned Agricultural (A-20a) by the County of Hawaii and is in the Special Management Area (SMA). The area of the subject property approximately 300 feet wide mauka from the shoreline is situated in the State Land Use (SLU) Conservation district with the remainder of the parcel being in the SLU Agricultural district.

Mr. Ron Terry
Geometrician Associates, LLC
Page 2
March 10, 2004

SMA Minor Permit No. 124 was approved, subject to conditions, on November 7, 2002 for the proposed US-NRCS conservation plan and a nursery operation. Therefore, no further review under the SMA guidelines is required for implementation of the conservation plan.

We understand that some tree removal and replanting activities may occur in the 40-foot shoreline setback area. Rule 11 of the Planning Department Rules of Practice & Procedure governs uses and activities in the shoreline setback area. Pursuant to Rule 11-6(b), all structures and activities that do not qualify under section 11-7(a) through (c) are prohibited in the shoreline setback area. Therefore, prior to any tree removal or other landscaping activity in the 40-foot shoreline setback area the landowner must secure a Shoreline Setback Variance or, pursuant to Rule 11-8, secure a minor structure or activity determination from the Planning Director.

Please provide the Planning Department with a copy of the EA when completed.

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

Sincerely,

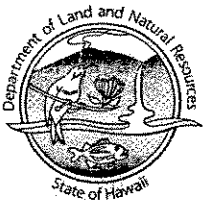


CHRISTOPHER J. YUEN
Planning Director

LMB:pak

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LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 7, 2004

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

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

TREEREMOVGEO.RCM2
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Geometrician Associates, Inc.
Ron Terry, Principal
HC 2 Box 9575
Keaau, Hawaii 96749

Dear Mr. Terry:

Subject: Pre-Consultation Assessment for the Preparation of an
Environmental Assessment for Tree Removal and Landscaping
Activities in the Conservation District South Hilo, Island of
Hawaii, Hawaii - TMK: (3) 2-7-004: 025 (por.)

This is a follow-up to our letter you dated April 6, 2003 (Ref.:
TREEREMOVGEO.RCM), pertaining to the subject matter.

Enclosed please find a copy of the Office of Conservation and
Coastal Lands comment.

The Department of Land and Natural Resources has no other comment
to offer on the subject matter at his time.

Should you have any questions, please feel free to contact
Nicholas A. Vaccaro of the Land Division Support Services Branch at
(808) 587-0384.

Very truly yours,

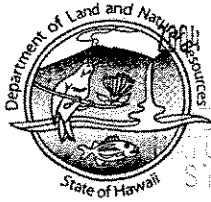
A handwritten signature in cursive script, appearing to read "Dierdre S. Mamiya".

DIERDRE S. MAMIYA
Administrator

C: HDLO

LINDA LINGLE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION



MAR 16 P 4:58

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

17-04-130

March 9, 2004

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

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

LD/NAV
TREEREMOVGEOMETRICIAN.CMT

L-1220
Suspense Date: 3/19/04

MEMORANDUM:

TO: XXX Division of Aquatic Resources
XXX Division of Forestry & Wildlife
XXX Na Ala Hele Trails
XXX Division of State Parks
Division of Boating and Ocean Recreation
XXX Engineering Division
XXX Office of Conservation and Coastal Lands
XXX Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Pre-Consultation for Preparation of a Draft Environmental Assessment for Tree Removal and Landscaping Activities in the Conservation District South Hilo, Island of Hawaii, Hawaii - TMK: 3rd/2-7-004: Portion of 025
Consultant: GEOMETRICIAN (Ron Terry 808-9825831)

Please review the attached letter (summary of proposed project) dated March 5, 2004 and location map pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

() We have no comments.

() Comments attached.

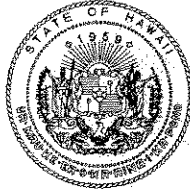
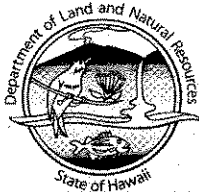
Division: _____

Signed: _____

Date: _____

Name: _____

LINDA LINGLE
GOVERNOR OF HAWAII



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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
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CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

REF:OCCL:TM

Correspondence: HA-04-130

MAR 16 2004

MEMORANDUM

TO: Dierdre S. Mamiya, Administrator
Land Division

FROM: Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

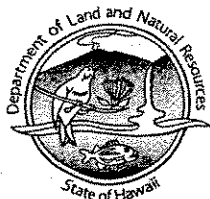
SUBJECT: Pre-Consultation for Preparation of a Draft Environmental Assessment For
Tree Removal and Landscaping Activities in the Conservation District
South Hilo, Island of Hawaii, TMK: (3) 2-7-004:025

The Department has received the attached memorandum dated March 9, 2004, regarding a pre-environmental assessment (EA) consultation for tree removal and landscaping activities in the Conservation District South Hilo, Island of Hawaii, TMK: (3) 2-7-004:025.

Departmental records indicate that the subject area lies within the Resource subzone of the Conservation District. The consultant has noted that he is aware that a Conservation District Use Application (CDUA) is required for the proposed action. Removal of the approximately 100 ironwood trees is an identified land use within the Resource subzone pursuant to § 13-5-22, P-12 TREE REMOVAL, removal of more than five trees, six inches or greater in diameter measured at ground level. This would require a Board permit.

Should you have any questions please feel free to contact Tiger Mills of our Office of Conservation and Coastal Lands at 587-0382.

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 6, 2004

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

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

TREEREMOVGEO.RCM

LD-NAV

Geometrician Associates, Inc.
Ron Terry, Principal
HC 2 Box 9575
Keaau, Hawaii 96749

Dear Mr. Terry:

Subject: Pre-Consultation Assessment for the Preparation of an
Environmental Assessment for Tree Removal and Landscaping
Activities in the Conservation District South Hilo, Island of
Hawaii, Hawaii - TMK: (3)2-7-004: 025 (por.)

Thank you for the opportunity to review and comment on the subject
matter.

A copy of your letter dated March 5, 2004 (summary of project) and
location map pertaining to the subject matter was distributed to the
following Department of Land and Natural Resources' Divisions for their
review and comment:

- Division of Forestry and Wildlife
- Na Ala Hele Trails
- Division of State Parks
- Engineering Division
- Commission on Water Resource Management
- Office of Conservation and Coastal Lands
- Land-Hawaii District Land Office

Enclosed please find a copy of the Engineering Division comment.

Based on the attached responses, the Department of Land and
Natural Resources has no other comment to offer on the subject matter.

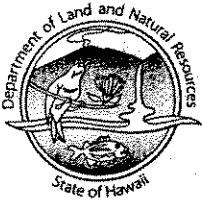
Should you have any questions, please feel free to contact
Nicholas A. Vaccaro of the Land Division Support Services Branch at
(808) 587-0384.

Very truly yours,

A handwritten signature in black ink, appearing to read "Dierdre S. Mamiya".

DIERDRE S. MAMIYA
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII



2004 MAR 29 A 9:00

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

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

March 9, 2004

LD/NAV
TREEREMOVGEOMETRICIAN.CMT

L-1220
Suspense Date: 3/19/04

MEMORANDUM:

TO: XXX Division of Aquatic Resources
XXX Division of Forestry & Wildlife
XXX Na Ala Hele Trails
XXX Division of State Parks
Division of Boating and Ocean Recreation
XXX Engineering Division
XXX Office of Conservation and Coastal Lands
XXX Hawaii District Land Office

RECEIVED
LAND DIVISION
HONOLULU, HAWAII
MARCH 10 A 11:08

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Pre-Consultation for Preparation of a Draft Environmental Assessment for Tree Removal and Landscaping Activities in the Conservation District South Hilo, Island of Hawaii, Hawaii - TMK: 3rd/2-7-004: Portion of 025
Consultant: GEOMETRICIAN (Ron Terry 808-9825831)

Please review the attached letter (summary of proposed project) dated March 5, 2004 and location map pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

We have no comments.

Comments attached

Division: Land

Signed: [Signature]

Date: 3/22/04

Name: Harvey Yada

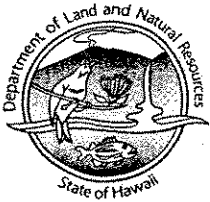
LINDA LINGLE
GOVERNOR OF HAWAII



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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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

March 9, 2004

LD/NAV
TREEREMOVGEOMETRICIAN.CMT

L-1220
Suspense Date: 3/19/04

MEMORANDUM:

TO: XXX Division of Aquatic Resources
XXX Division of Forestry & Wildlife
XXX Na Ala Hele Trails
XXX Division of State Parks
Division of Boating and Ocean Recreation
XXX Engineering Division
XXX Office of Conservation and Coastal Lands
XXX Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Pre-Consultation for Preparation of a Draft Environmental Assessment for Tree Removal and Landscaping Activities in the Conservation District South Hilo, Island of Hawaii, Hawaii - TMK: 3rd/2-7-004: Portion of 025
Consultant: GEOMETRICIAN (Ron Terry 808-9825831)

Please review the attached letter (summary of proposed project) dated March 5, 2004 and location map pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

(X) We have no comments
at this time.

() Comments attached.

Division: Aquatic Resources

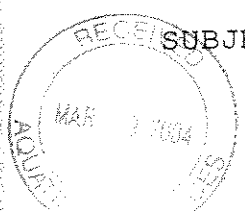
Signed: [Signature]

Date: 3/17/04

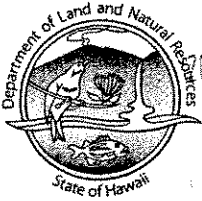
Name: William S. Devick
Administrator

Request copy of DEA
when available

RECEIVED
MAR 18 P 2 15
LAND DIVISION



LINDA LINGLE
GOVERNOR OF HAWAII



004 MAR 24 2 3 11

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
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AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

March 9, 2004

LD/NAV
TREEREMOVGEOMETRICIAN.CMT

L-1220
Suspense Date: 3/19/04

MEMORANDUM:

TO: XXX Division of Aquatic Resources
XXX Division of Forestry & Wildlife
XXX Na Ala Hele Trails
XXX Division of State Parks
Division of Boating and Ocean Recreation
XXX Engineering Division
XXX Office of Conservation and Coastal Lands
XXX Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Pre-Consultation for Preparation of a Draft Environmental Assessment for Tree Removal and Landscaping Activities in the Conservation District South Hilo, Island of Hawaii, Hawaii - TMK: 3rd/2-7-004: Portion of 025
Consultant: GEOMETRICIAN (Ron Terry 808-9825831)

Please review the attached letter (summary of proposed project) dated March 5, 2004 and location map pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

() We have no comments.

Comments attached.

Division: Engineering

Signed: Eric T. Hirano

Date: 3/24/04

Name: ERIC T. HIRANO, CHIEF ENGINEER

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LA/NAV

Ref.: TREEREMOV GEOMETRICIAN. CMT

COMMENTS

- () We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ____.
- Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone ~~X~~.
- () Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ____.
- () Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- () Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
- () Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
- () Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- () Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

- () The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- () The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

- () Additional Comments: _____

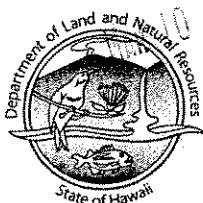
- () Other: _____

Should you have any questions, please call Mr. Andrew Monden of the Planning Branch at 587-0229.

Signed: Eric T. Hirano
ERIC T. HIRANO, CHIEF ENGINEER

Date: 3/24/04

LINDA LINGLE
GOVERNOR OF HAWAII



10 13 01 '04

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

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

March 9, 2004

LD/NAV
TREEREMOVGEOMETRICIAN.CMT

L-1220
Suspense Date: 3/19/04

MEMORANDUM:

TO: XXX Division of Aquatic Resources
XXX Division of Forestry & Wildlife
XXX Na Ala Hele Trails
XXX Division of State Parks
Division of Boating and Ocean Recreation
XXX Engineering Division
XXX Office of Conservation and Coastal Lands
XXX Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Pre-Consultation for Preparation of a Draft Environmental Assessment for Tree Removal and Landscaping Activities in the Conservation District South Hilo, Island of Hawaii, Hawaii - TMK: 3rd/2-7-004: Portion of 025
Consultant: GEOMETRICIAN (Ron Terry 808-9825831)

Please review the attached letter (summary of proposed project) dated March 5, 2004 and location map pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments.

We have no comments.

Comments attached.

Division: State Parks

Signed: [Signature]

Date: 3/12/04

Name: Daniel S. Quinn

RECEIVED
LAND DIVISION
2004 MAR 15 P 1:40

e-mail from Gerdine Markus, March 31, 2004

Hi Terry,

This sounds like a worth-while plan. What is the follow-up on replanting? Does anybody ever check afterwards? What will happen to the soil (run off) if 100 trees plus rootsystems are removed? Wouldn't the rain just flush this soil right off the cliff?

Just curious.....

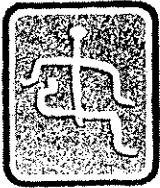
Gerdine

**ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT**

APPENDIX 1B

COMMENT LETTERS IN RESPONSE TO DRAFT EA

AND RESPONSES



NA ALA HELE
Hawai'i Trail & Access System

April 14, 2005

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

Dear Mr. Terry:

Subject: Draft Environmental Assessment (DEA) Review for Shropshire Conservation Plan in the Conservation District, TMK: 2-7-04:25, South Hilo, Hawaii

Thank you for the opportunity to comment on the proposed conservation plan for the subject property.

Currently, our abstractor is exploring a trail, that is shown on our maps, passing through the property. Based on the mandates of the Highways Act of 1892, which has been codified in Chapter 264 HRS, the State of Hawaii through the Department of Land and Natural Resources (DLNR) may claim fee simple ownership of a trail laid out by 1892. Therefore, we would like to ask for an extension from your April 22, 2005 comment due date until our Division completes an abstract.

I will keep you informed on our abstractor's findings. You can call me in Hilo at 974-4217.

Aloha,

Irving K. Kawashima
Na Ala Hele Trails & Access Program

C: Roger Imoto, Hawaii Island DOFAW, Branch Manager
Director, Office of Environmental Quality Control
Tiger Mills, DLNR

geometrician

ASSOCIATES, LLC

integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@verizon.net

May 5, 2005

Irving Kawashima
Na Ala Hele Trails and Access Program
DLNR-DOFAW
P.O. Box 4849
Hilo HI 96720-4849

Dear Mr. Kawahsima:

**Subject: Comment Letter to Draft Environmental Assessment, Shropshire
Conservation Plan, TMK: 2-7-04:25**

This letter responds to your letter of April 14, 2005, in which you stated that you required additional time to comment on the EA because of a possible trail indicated by a line on a map. Subsequent to your letter, both I and applicant Steve Shropshire have spoken to you, and it is my understanding that the line on the map was a flume right-of-way rather than a trail. If there are any other uncertainties, they can be responded to during the Conservation District Use Application process. Thank you for your review of the EA.

Sincerely,



Ron Terry

LINDA LINGLE
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: eeqc@health.state.hi.us

April 21, 2005

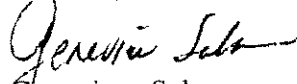
Mr. Peter Young, Chair
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809

Dear Mr. Young:

Subject: Draft EA for the Shropshire Conservation Plan, Island of Hawai'i

Thank you for the opportunity to review the subject document. We have no comments. Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,


Genevieve Salmonson
Director

C: Ron Terry

geometrician

ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@verizon.net

May 5, 2005

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

Dear Ms. Salmonson:

**Subject: Comment Letter to Draft Environmental Assessment, Shropshire
Conservation Plan, TMK: 2-7-04:25**

This letter responds to your letter of comment letter of April 21, 2005, to Peter Young, Chair of BLNR, in which you stated you had no comments. As the author of the EA and on behalf of Mr. Shropshire, I thank you for your review of the document.

Sincerely,



Ron Terry

To: Geometricians

From: Big Island Native Plant Society

RE: Shropshire Conservation Plan
in the Conservation District
South Hilo District, Hawai'i, HI.

Attention: Mr. Terry

The Draft Environmental Assessment which you prepared for the above proposed project is lacking a Floral and Faunal Survey.

The Floral Survey should be conducted by a Botanist and needs to contain a description of all of the vegetation in the area. The description of the vegetation needs to be accompanied by a comprehensive List of Vascular Plants which shows that the Botanist was able to identify every species of plant that is located in the proposed project area.

Just because a U.S. Fish and Wildlife Service official said that no Endangered or Threatened species are known to

occur in the area, does not mean that you don't have to look.

What kind of plants occur on the coastal cliffs? What plants occur in the beach strand habitat?

Lysimachia mauritiana and Schiedea globosa are rare plants that occur on coastal cliffs. Ischaemum byroni is a listed Endangered grass that exists on rocks in beach strand habitat; its Critical Habitat has been designated from Hilo to Kaimu, but it has been located occasionally from Hilo to Laupahoehoe.

As you did not identify all of the vegetation in the proposed project area you can not make the determination that there are no Endangered or Threatened species in the area, especially in a Conservation District.

The Faunal survey should be conducted by a Biologist and needs to describe all of the macro-fauna found in the area; especially that of avians.

(2)

What kind of Indigenous or Migratory avian species utilize the coastal cliff habitat?

Although the ironwood trees (Casuarina equisetifolia) are invasive alien trees, they may provide shelter for Indigenous or Migratory avian species.

The Faunal Survey should also be ~~accompanied~~ accompanied by a comprehensive list of all the animals found in the proposed project area.

I agree that removing invasive alien species is a good thing, but going into a Conservation District and removing and replacing the existing vegetation will cause a serious impact to the natural habitat found there.

Maintaining a native garden in the Conservation District will be a never-ending project as invasive species will continually try to establish themselves there. How often does the property owner plan to go into the Conservation District and spray herbicide?

The kamani (Calophyllum inophyllum)
and tree heliotrope (Tournefortia argentea)
are themselves, invasive alien species.
The 'akia (Wikstroemia uva-ursi) that
is available in nurseries is not the
Big Island variety; it is from Kauai.
It is best to plant only native plants from
the Big Island.

For 'ohia (Metrosideros polymorpha) to do
well on the coast, it will have to be
propagated from existing plants on the
coast; 'ohia that is obtained from local
nurseries will probably die in the salt spray.
Native plants that will be successful in
the project area, are ones that occur
in the area already.

Please correct the mistakes in the
Draft EA, and let me know your thoughts
on my comments.

Thank you,

David Paul

David Paul

President

Big Island Native Plant Society

David Paul
P.O. Box 2081
Keaau, HI 96749



David Paul
PO Box 2081
Keaau, HI 96749-2081

(4)

geometrician

ASSOCIATES, LLC

integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749

ronterry@verizon.net

May 5, 2005

David Paul
P.O. Box 2081
Keaau HI 96749-2081

Dear Mr. Paul:

Subject: Comment Letter to Draft Environmental Assessment, Shropshire Conservation Plan, TMK: 2-7-04:25

This letter responds to your letter postmarked April 19, 2005. As the author of the EA and on behalf of Mr. Shropshire, I offer the following point-by-point responses to your individual comments. I would first of all hope that you do not miss the forest for the trees. The whole point of the invasive tree removal is to carefully improve the habitat for native plants such as hala, naupaka, and nanea.

1. *Flora studies.* I do not concur with your assertion that the Environmental Assessment requires a complete flora survey. Flora needs to be addressed, but not necessarily through an exhaustive list. It is important to bear in mind that the activity in question consists of a Conservation Plan and Tree Removal inside and on the margins of a *farm* that has been in cultivation for over a century. A number of aliens and very few natives are present. In this case, the U.S. Fish and Wildlife Service, based on field visits by U.S. Natural Resources Conservation Service specialists, determined that the Conservation Plan activities would not impact threatened or endangered species. As documented in the EA, biologists from the Big Island Invasive Species Council specifically endorsed the tree removal aspect. The trees to be removed are all invasives that adversely impact native species. There are some common natives on the cliff margins – hala and naupaka in particular – where aliens have not overshadowed and outcompeted them. The whole purpose of the project is to remove invasives and allow such natives to thrive. Nevertheless, in deference to your concern, the full list of native species encountered under or near the trees planned for removal, and also in the cliffs below (which will not be affected by the activity), includes, besides hala and naupaka, *Sphenomeris chinensis*, *Bacopa monnieri*, and *Cibotium glaucum*. This list has been added to the Final EA. Weed species, I would repeat, are not a concern of this EA, except to state that we seek to reduce their prevalence. Please note that we did not expect any *Lysimachia mauritiana*, *Schiedia globosa* or *Ischaemum byrone* in the area to be affected, and we did not find them there or on any of the unaffected cliff areas which we

were able to survey.

2. *Fauna studies.* First, we must again make that point that an EA does not require, nor is there any point, in compiling a list of alien animal species such as rats, mongooses, pigs and mynah birds. An EA is not meant to be an encyclopedia of information about an area, but rather to present the critical information needed to make a decision about a project. Native forest birds are extremely uncommon in this area, which is dominated by alien habitat. As for native seabirds and migratory birds on the island of Hawai'i, ironwood is not beneficial to their habitat. Parrots, which are not native to Hawai'i and adversely affect native species, are attracted to ironwoods. The alien trees will be replaced with native trees, shrubs, and vines, which do have a number of beneficial habitat values. We have consulted with ornithologists who agree completely that there will be a substantial benefit to native birds.

3. *Effects on cliff/beach plant species.* The invasive trees, which are all at the very top of the cliff and in the area mauka of it, will be topped for removal back over the top of the cliff and not by dropping them onto the cliffs or shore below. These cliffs do not appear to contain any rare natives species, but we agree that effects on any native species that might survive on the cliffs or beach strand are important. The removal activities have been designed to minimize any impact. And again, the whole point is that ironwoods shade out native species and also accelerate cliff erosion. Natives are far better at conserving soil and reducing erosion. Any short-term impacts to species on the cliff face itself will be minimal and long-term impacts will be highly beneficial.

4. *Use of herbicides to maintain natives.* In the absence of ironwood many natives thrive well with little maintenance. A one-time treatment of herbicide will be required to keep the trunks of the removed aliens from resprouting. This is a common practice for Conservation areas such as Hawai'i Volcanoes National Park and is in the overall interest of maintaining the habitat. Herbicide may also be periodically applied to reduce invasive grasses on the margins of the planted area.

5. *Use of Calophyllum inophyllum (true kamani) and Tournefortia argenta (tree heliotrope).* We do not concur with your assertion that these are "invasive" aliens. A good source of information for what constitutes a truly harmful or "invasive" alien is the Hawai'i Ecosystems at Risk project (HEAR), available on the web at: <http://www.hear.org/plants/>. This database lists hundreds of plants include all the invasive trees that the applicant has proposed for removal, and does not include true kamani or tree heliotrope.

6. *Suggested plant list.* We appreciate your suggestions and will pass them on the landscape architect, who is skilled in designing low-maintenance native plantings.

Sincerely,



Ron Terry

LINDA LINGLE
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:

EPO-05-029

April 25, 2005

Mr. Ron Terry
GeoMetricain Associates
HC 2 Box 9575
Keaau, HI 96749

Dear Mr. Terry,

SUBJECT: Draft Environmental Assessment
Shropshire Conservation Plan in the Conservation District
Papa'ikou, Hilo, Island of Hawaii, Hawaii

Thank you for allowing us to review and comment on the subject document. We have no comment at this time and please refer to our website for the Standard Comments (<http://www.state.hi.us/health/environmental/env-planning/landuse/landuse.html>). If there are any questions about these standard comments please contact Jiakai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

June F. Harrigan-Lum
JUNE F. HARRIGAN-LUM, MANAGER
Environmental Planning Office

geometrician

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integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@verizon.net

May 5, 2005

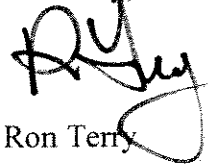
June F. Harrigan-Lum, Manager
Environmental Planning Office
Hawai'i State Department of Health
P.O. Box 3378
Honolulu HI 96801-3378

Dear Ms. Lum:

**Subject: Comment Letter to Draft Environmental Assessment, Shropshire
Conservation Plan, TMK: 2-7-04:25**

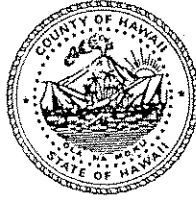
This letter responds to your letter of comment letter of April 25, 2005, in which you referred us to the standard comments of DOH on environmental planning. As part of the project is supported by the U.S. Natural Resources Conservation Service and involves implementation of structural and practice-relate Best Management Practices to reduce erosion, all applicable safeguards will be followed. As the author of the EA and on behalf of Mr. Shropshire, I thank you for your review of the document.

Sincerely,



Ron Terry

Harry Kim
Mayor



Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

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

April 19, 2005

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

Dear Mr. Terry:

**SUBJECT: Draft Environmental Assessment (DEA)
Tree Removal & Landscaping Activities
Papaikou, South Hilo, Island of Hawaii
Tax Map Key: (3) 2-7-004:025**

We are in receipt of the subject Draft Environmental Assessment and after careful review we have no additional comments to those provided in our pre-consultation letter dated March 10, 2004.

Thank you for the opportunity to review an comment on this DEA. 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, appearing to read "Chris Yuen", is written over a light blue horizontal line.

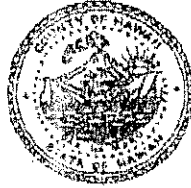
CHRISTOPHER J. YUEN
Planning Director

LMB:cd
P:\Wpwin60\Larry\EA-EIS Comments\Geometrician-Shropshire2-7-4-25DEAcmnts.doc

Hawai'i County is an equal opportunity provider and employer.

03/04/2005 09:00 FAX 00001000

Harry Kim
Mayor



Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

County of Hawaii
PLANNING DEPARTMENT

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

April 21, 2005

Mr. Samuel J. Lemmo
Administrator
Department of Land and Natural Resources
Office of Conservation and Coastal Lands
P.O. Box 621
Honolulu, Hawaii 96809

RECEIVED
OFFICE OF CONSERVATION
AND COASTAL LANDS
2005 APR 29 P 1:44
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

Dear Mr. Lemmo:

Subject: Draft Environmental Assessment/Conservation District Use Application
(CDUA) HA-3224

Applicant: Steve Shropshire

Land Owner: Shropshire Group, LLC

Project: Implementation of a U.S. Natural Resources Conservation Service
(NRCS) soil conservation plan

Tax Map Key: (3) 2-7-004:025

This is in response to your letter dated March 8, 2005 requesting our comments on the subject CDUA. Please accept our apologies for not providing this response by the requested suspense date.

We understand the proposed actions within the Conservation district include:

1. The removal of alien trees, especially ironwood near the edge of the sea cliff and replant the area with native and Polynesian-introduced species;
2. Grubbing of noxious weeds and grasses with a tractor;
3. Installation of drainage ditches and grass waterways, per grading and engineering plan;
4. Planting of cover crops and riparian barrier; and
5. Installing windbreaks and implementation of a landscaping plan.

Hawai'i County is an equal opportunity provider and employer

Mr. Samuel J. Lemmo
DLNR-OCCL
Page 2
April 21, 2005

The subject property is zoned Agricultural (A-20a) by the County of Hawaii and is in the Special Management Area (SMA). The area of the property from the shoreline to approximately 300 feet inland is within the State Land Use Conservation district with the remaining portion being in the Agricultural district.

SMA Minor Permit No. 124 was approved, subject to conditions, on November 7, 2002 for the proposed US-NRCS soil conservation plan and a nursery operation. Therefore, no further review under the SMA guidelines is required for implementation of the proposed soil conservation plan.

However, prior to the removal of any trees, landscaping or land altering activities within the 40-foot shoreline setback area, the applicant must secure a Shoreline Setback Variance or a Determination of Minor Structure or Minor Activity pursuant to Rule 11, Planning Department Rules of Practice and Procedure.

Thank you for the opportunity to comment on this application. Should you have questions, please feel welcome to contact Larry Brown or Esther Inamura of my staff at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN
Planning Director

LMB:cd

P:\WP\WIN60\Larry\DLNR Correspondence\Lemmo-Shrepahim 2-7-4-25.doc

geometrician

ASSOCIATES, LLC
integrating geographic science and planning

phone: (808) 982-5831 fax: (808) 966-7593 HC 2 Box 9575 Kea'au Hawai'i 96749
ronterry@verizon.net

May 5, 2005

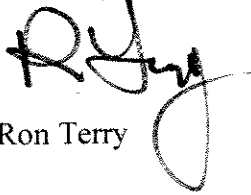
Christopher J. Yuen, Director
Hawai'i County Planning Department
101 Pauahi Street, Suite 3
Hilo HI 96720

Dear Mr. Yuen:

**Subject: Comment Letter to Draft Environmental Assessment, Shropshire
Conservation Plan, TMK: 2-7-04:25**

This letter responds to your letter of April 19, 2005, in which you stated that you had no additional comments other than those provided in the preconsultation letter of March 10, 2004, and your subsequent letter of April 21, 2005. All the points touched on in all three letters was included in the Draft EA. The applicant is aware that there are permit requirements relative to the Shoreline Setback area, and expects to be consulting with your office soon. Thank you very much for your review of the EA.

Sincerely,



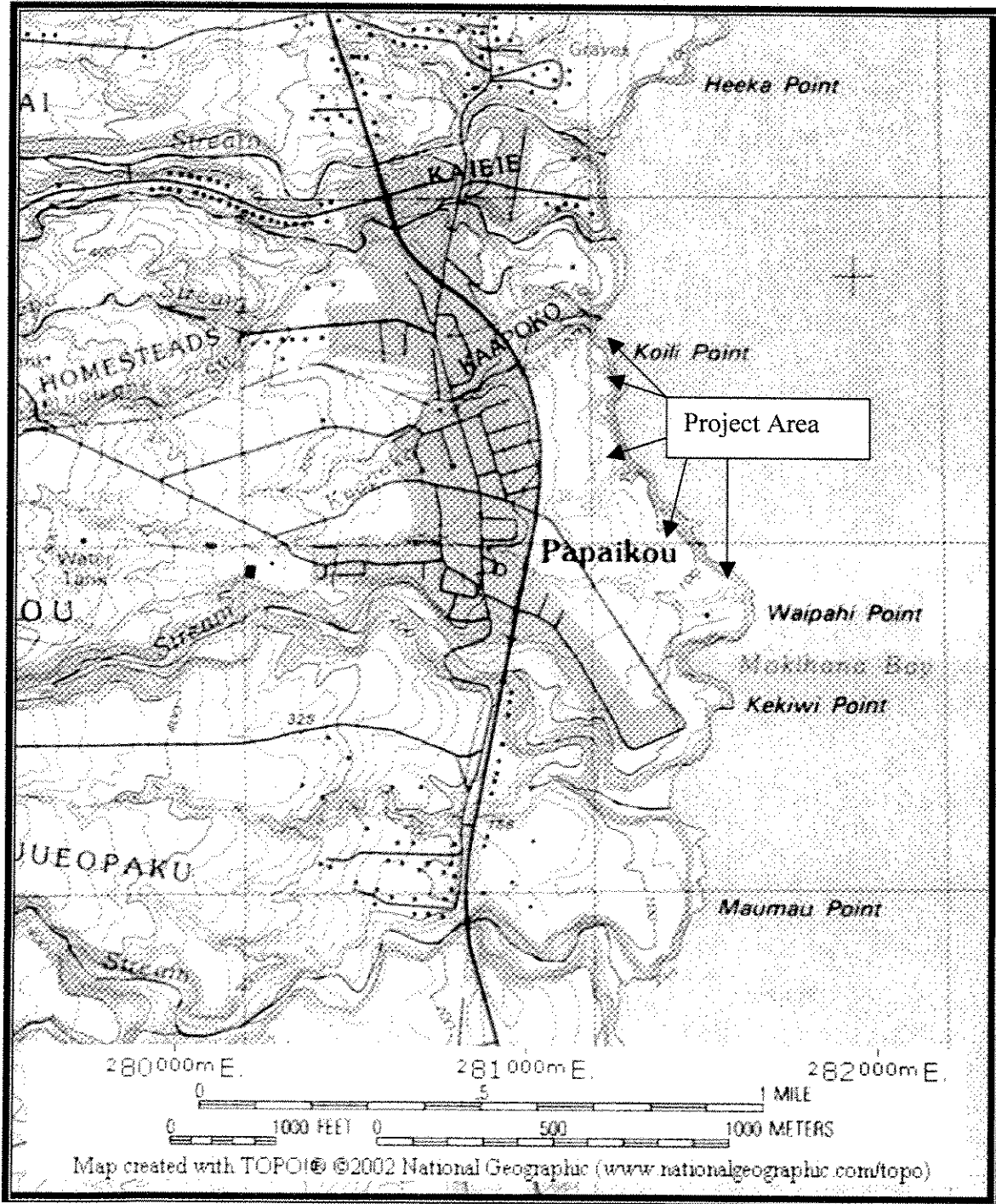
Ron Terry

**ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT**

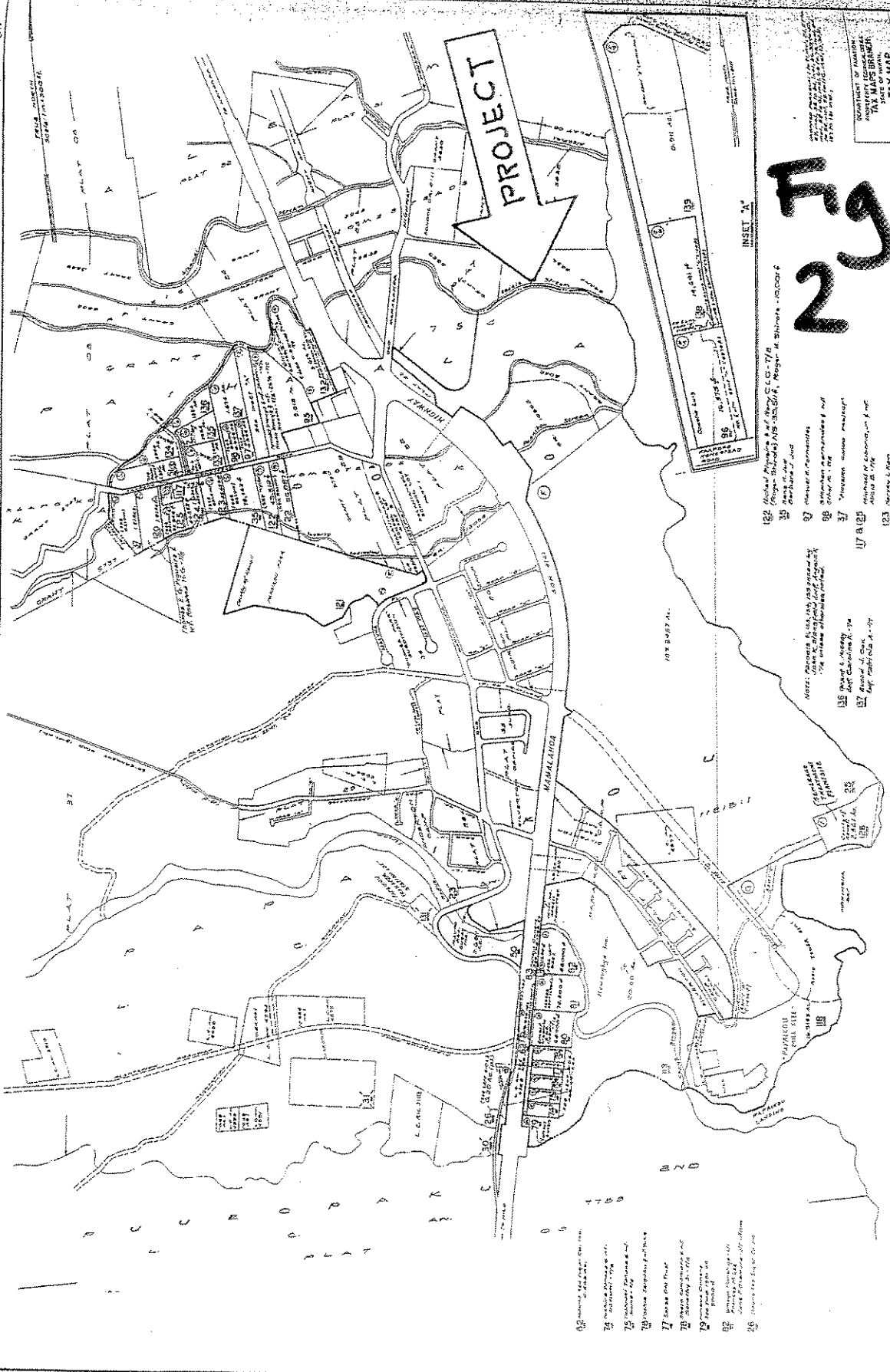
APPENDIX 2

FIGURES

Figure 1
Project Location Map



Note: Conservation District is a 300-foot wide strip mauka of seacliff.



209

INSET 'A'

182 Richard Properties & of Hwy S.C.G. 7/18
 35 Regis Properties 115-120-121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

PROPERTY OF HAWAII	
TAX MAP	
TAX MAP	
ZONE	2
TRACED	7
DATE	04
SCALE 1" = 300'	

FOR PROPERTY ASSESSMENT PURPOSES
 SUBJECT TO CHANGE

Figure 3a View of Portion of Subject Area from Highway 19



Figure 3b View of Subject Area in Location with Fewer Ironwoods

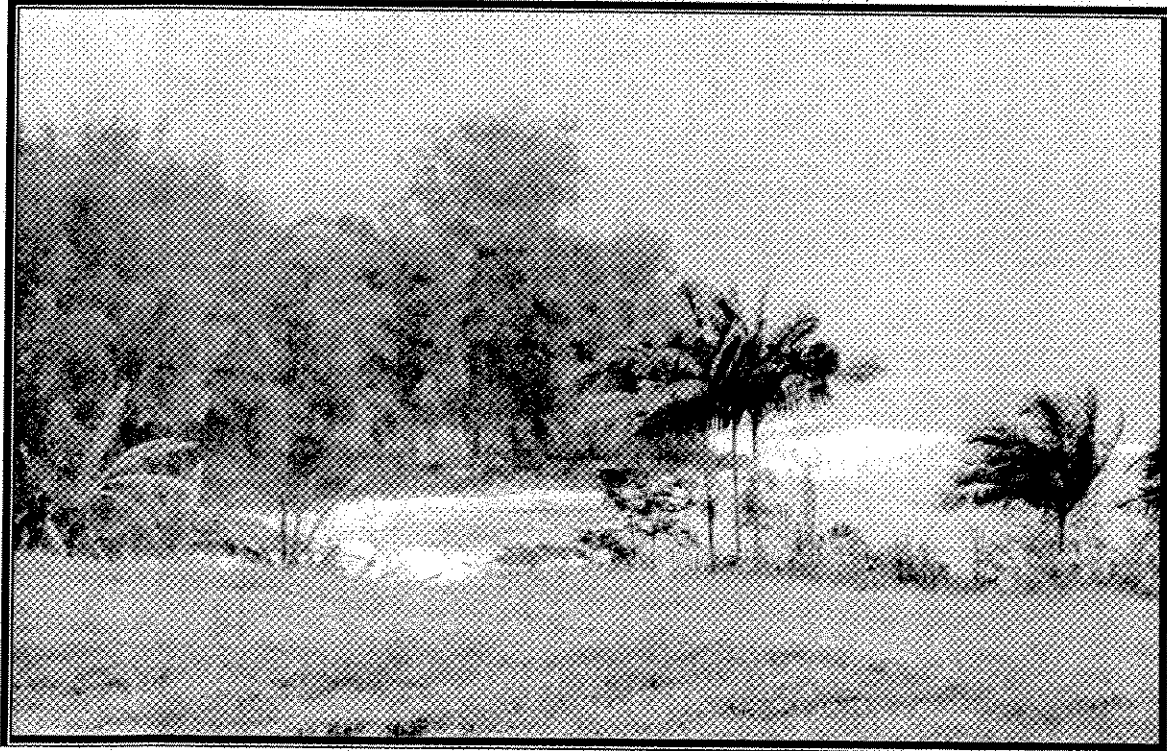


Figure 3c Naupaka of Reduced Vigor in Shade of Ironwoods



Figure 3d Hala Juveniles Sprouting in Full Sun



Figure 3e Cliff Face with Native and Alien Vegetation



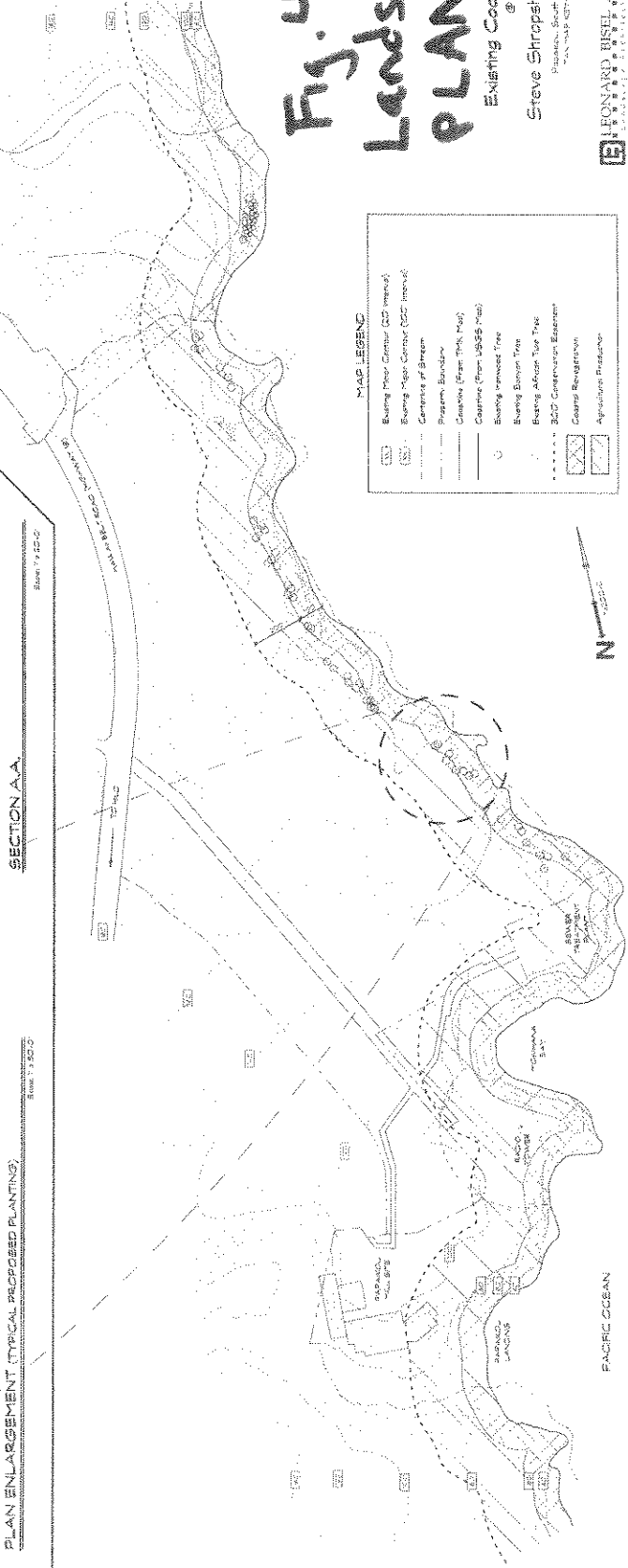
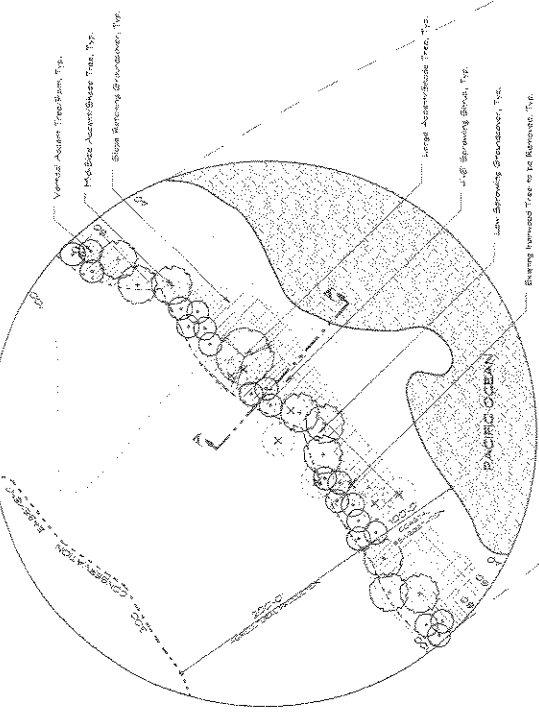
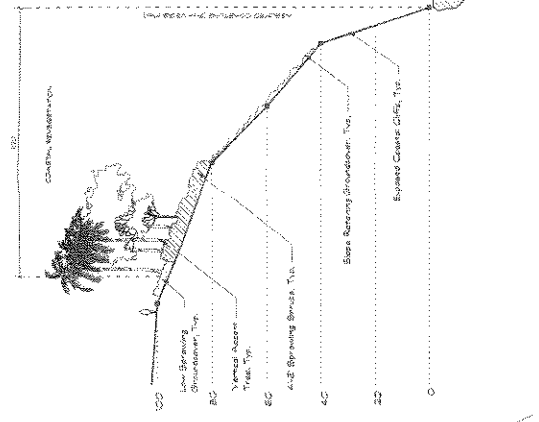
PLANT LEGEND

	LARGE ACCENT SHADE TREE Corymbium rostratum, Albion
	MEDIUM ACCENT SHADE TREE Corymbium rostratum, Albion
	VERTICAL ACCENT SHADE TREE Corymbium rostratum, Albion
	LOW SPREADING GROUNDCOVER Panicum, Muhlenbergia, Paspalum, Sporobolus, Muhlenbergia, Paspalum, Sporobolus
	SLOPE RETAINING GROUNDCOVER Panicum, Muhlenbergia, Paspalum, Sporobolus

Fig. 4 Landscape PLAN

Existing Coastal Trees
Steve Shropshire Property

LEONARD BISEL ASSOCIATES, LLC
10000 W. 10th Ave., Suite 100, Denver, CO 80202
Tel: 303.751.1000



**ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT**

APPENDIX 3

SOIL CONSERVATION PLAN

AND CORRESPONDENCE

Conservation Plan

Mr. Steven Shropshire
P.O. Box 1146
Hilo, HI 96720

Introduction & Objective: This 108 Acre parcel, TMK: (3) 2-7-004:025 is located in the Papaikou area of the Hamakua Soil and Water Conservation District. The elevation ranges from sea level to 190 ft. It receives an average annual rainfall of 150 inches. The soils that occupy this parcel is HoC, Hilo Silty Clay Loam 0-10% slopes, HoE, Hilo Silty Clay Loam 20-35% slopes, and RB, or Rough Broken Land. His objective is to raise Dracaena at a profitable level while conserving and enhancing his natural resources. Also, to be in compliance with the County of Hawaii Grading Ordinance, and other State and County Laws pertaining to County Special Management Areas, and State of Hawaii, Department of Land and Natural Resources Conservation District Land.

Dracaena

Tract: 2270

CONTOUR FARMING

(330) Tillage and planting operations will be performed on the contour to increase water infiltration and reduce concentrated water flows. Contour lines will be layed out by NRCS personnel prior to planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	11.5 ac.	9	2003		
2	12.6 ac.	9	2003		
3	20.3 ac.	9	2003		
4	20.9 ac.	9	2003		
5	13.1 ac.	9	2003		
Total:	78.4 ac.				

COVER AND GREEN MANURE CROP

(340) NRCS recommended adapted cover crops will be established within orchard rows. This will reduce erosion. Permanent cover crops should be fertilized according to a soil test for rapid establishment. Permanent cover crops should be mowed as needed to maintain a desirable height and control weeds. Strips immediately under tree rows are to be kept free of vegetation either mechanically or with approved herbicides.

Cover crop will be a mixture of Carpet Grass, and Annual Rye.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	11.5 ac.	9	2003		
2	12.6 ac.	9	2003		
3	20.3 ac.	9	2003		
4	20.9 ac.	9	2003		
5	13.1 ac.	9	2003		
Total:	78.4 ac.				

(300) Establish a windbreak at location shown on plan map. May be used to protect farmstead, soil resources, improve aesthetics, water conservation, or improve wildlife habitat.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	450.0 ft.	9	2003		
2	450.0 ft.	9	2003		
3	850.0 ft.	9	2003		
4	3,000.0 ft.	9	2003		
5	550.0 ft.	9	2003		
Total:	5,300.0 ft.				

RIPARIAN FOREST BUFFER

(391) An area of trees, shrubs and/or other woody vegetation will be planted adjacent to and up-gradient from a water body to reduce sediment, organic material, nutrients, and pesticides in surface and shallow groundwater runoff, and to stabilize streambank and reduce erosion. Noxious, and invasive species like Albizia, and Ironwood will be selectively removed, and replaced with more desirable species.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	0.2 ac.	9	2003		
3	0.3 ac.	9	2003		
4	0.4 ac.	9	2003		
5	0.2 ac.	9	2003		
Total:	1.1 ac.				

FILTER STRIP

(393) A strip or area of vegetation will be installed to remove sediment and other pollutants from runoff or waste water by filtration, deposition, infiltration, absorption, decomposition, and volatilization, thereby reducing pollution and protecting the environment. Filter strip will be a mixture of Carpet Grass and Annual Rye, and will be a minimum width of 15 feet.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	0.3 ac.	9	2003		
3	0.5 ac.	9	2003		
4	0.5 ac.	9	2003		
5	0.3 ac.	9	2003		
Total:	1.6 ac.				

... terraces, channels, or a combination ridge and channel, will be constructed according to NRCS design, standards and specifications across the slope to reduce slope length, reduce erosion, reduce sediment content in runoff water, intercept and conduct surface runoff at a nonerosive velocity to a stable outlet, retain runoff for moisture conservation, prevent gully development, reform the land surface, improve farmability, reduce flooding, or improve water quality. The Terraces will be vegetated with a mixture of Carpet Grass and Annual Rye.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	275.0 ft.	9	2003		
2	495.0 ft.	9	2003		
3	1,430.0 ft.	9	2003		
4	1,705.0 ft.	9	2003		
5	935.0 ft.	9	2003		
Total:	4,840.0 ft.				

CERTIFICATION OF PARTICIPANTS

Mr. Steven Shropshire
 Mr. Steven Shropshire Date

CERTIFICATION OF:

District Conservationist
Harry Toki 9/17/02
 Harry Toki Date

CONSERVATION DISTRICT
James Blachly 9/19/02
 Hamakua Soil & Water Conservation District Date

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TABLE 1. LIST OF SPECIES SUITABLE FOR RIPARIAN FOREST BUFFER (page 1 of 2)

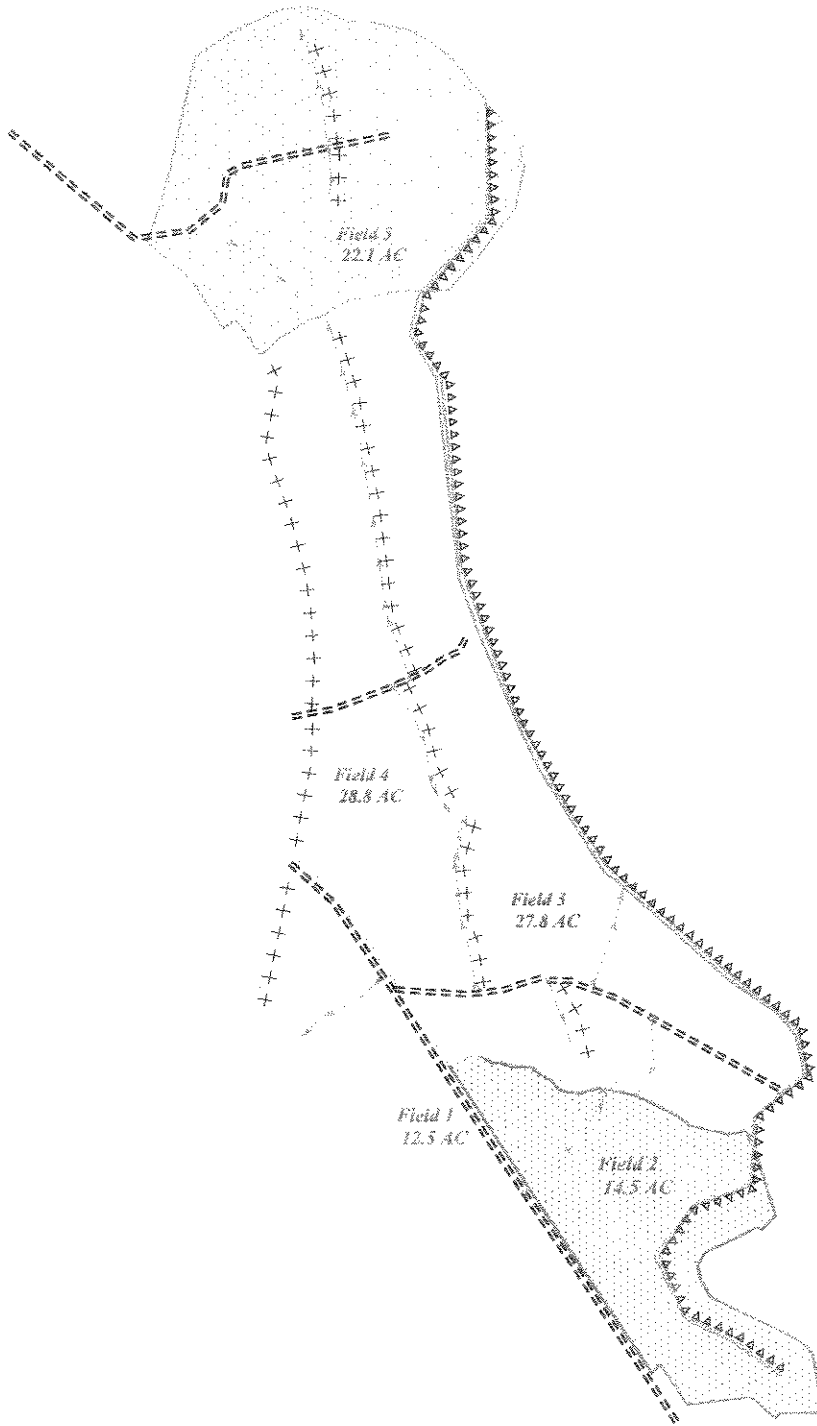
Common Name	Scientific Name	Relative Growth rate	Approx. 20-yr Height (feet)	Plant Spacing (feet)	Adaptation			Wed. IS ₃	Functional Benefits ²
					Elevation (feet)	Rainfall (inches)			
'a'ali'i	<i>Dodonaea viscosa</i>	Moderate	10	10 X 10	0-7,000	20+	UPL	1-5	
akia	<i>Mikstroemia uva-ursi</i>	Rapid	5	4X4	1,350-3,650	20+	UPL	1-5	
ala'a	<i>Pouteria sandwicensis</i>	Moderate	25	10X10	800-3,000	80+	UPL	1-5	
alahoe	<i>Canthium odoratum</i>	Moderate	15	10X10	0-3,000	40+	UPL	1-5	
beach morning glory	<i>Ipomoea pes-caprae</i>	Rapid	1-6'	1X1	0-1,200	20+	FAC	1-5	
beech vine	<i>Vitex trifida</i> var. <i>variegata</i>	Rapid	15	4X4	0-4,000	50+	UPL	1-5	
bermuda juniper	<i>Juniperus bermudiana</i>	Moderate	40	10X10	0-3,500	40	UPL	2-5	
brushbox	<i>Tristania conferta</i>	Rapid	60	10X10	0-3,000	20+	UPL	1-4,5	
coconut palm	<i>Cocos nucifera</i>	Moderate	60	10X10	0-1,500	20+	FACU	4,5	
dracaena	<i>Dracaena deremensis</i>	Moderate	15	6X6	0-2,000	50+	UPL	1-5	
dracaena	<i>Dracaena fragrans</i>	Moderate	15	6X6	0-2,000	50+	UPL	1-5	
false kamani	<i>Ternstroemia catappa</i>	Moderate	60	10X10	1,500-5,000	30+	UPL	4,5	
hala	<i>Pandanus tectorius</i>	Moderate	20-30	10X10	0-2,000	45+	FAC*	4,4,5	
hap'ū	<i>Cibotium</i> sp.	Moderate	15	10X10	100-7,000	40+	FAC*	1-5	
hau	<i>Hibiscus filiosus</i>	Moderate	7-35	10X10	0-1,000	20+	FACW	1-5	
kava	<i>Piper methysticum</i>	Rapid	6'	1X1	60-4,800	30+	UPL	1-5	
koa	<i>Acacia koa</i>	Moderate	100	15X15	150-7,000	30+	UPL	4,4,5	
koaia	<i>Acacia koaia</i>	Moderate	30	40X10	90-5,000	20+	UPL	1,5,5	
keho'ona	<i>Senna quadrifida</i>	Moderate	10	6X6	20-3,000	20+	UPL	1-5	
kou	<i>Cordia subcordata</i>	Moderate	10	10X10	0-700	30+	UPL	1-5	

1/ This list is not all-inclusive. Species not included on this list may be used, with approval from the HDO, Hawaii State Resources Conservationist.
 2/ Functional benefits: 1. Wildlife Habitat; 2. Removal of Nutrients; 3. Rain Stabilization; 4. Flood Buffer.
 3/ Wetland Indicator Status determined from the National List of Wetland Plants (Cowardin et al., 1979) (http://www.fws.gov).

Conservation Plan Map

Mr. Steven Shropshire #4
TMK: (3) 2-7-004:025
Hamakua Soil & Water Conservation District
108 Ac.
Date: 09/05/2002

Hilo Service Center
Natural Resources Conservation Service
Assisted By: Kori Hleashima, Soil Con.



Legend

- ++ Windbreaks
- ▲▲▲ Riparian Forest Buffer
- - - Filter Strip
- - - Terrace
- = = = Field Road

400 0 400 800 1200 Feet



USDA
Natural Resources Conservation Service

Our People...Our Islands...In Harmony

October 10, 2002

Paul Henson, Field Supervisor
U.S. Fish and Wildlife Service
Pacific Islands Ecoregion
300 Ala Moana Blvd, Room 3108
Honolulu, HI 96850

Dear Mr. Henson:

The Natural Resources Conservation Service (NRCS), in cooperation with **Mr. Steven Shropshire**, is planning to implement a conservation plan and contract under the Environmental Quality Incentives Program (EQIP) on the Island of Hawaii. The attached map with The Nature Conservancy's (TNC's) Hawaii Natural Heritage Program data depicts the project area and provides information on species in the surrounding area.

The project is on TMK# (3) 2-7-004:025 (108 acres). These former sugarcane lands will be used for to grow *Dracaena*. The vegetation is currently a variety of truck crops, guinea grass, and fallow papaya. Mr. Shropshire intends to install terraces, plant a cover crop of Carpet and Annual Rye Grass, plant windbreak trees, install a filter strip and riparian forest buffer, and plant *Dracaena* on the contour.

According to the Natural Heritage data, no endangered or threatened plant or animal species are known to occur in the area. NRCS staff has inspected the area as well and found no T&E species.

Based on the above information and the history of the area, the NRCS has determined that this project will have no effect on threatened or endangered species because listed species and/or critical habitat do not exist in the project area. Your concurrence with this determination within 30 days is requested in accordance with the consultation requirements of Section 7 of the Endangered Species Act of 1973, as amended.

If you have any questions, please contact Harry Toki, District Conservationist, at (808) 933-8353.



KENNETH M. KANESHIRO
State Conservationist

cc: Harry Toki, NRCS Hilo Field Office, 154 Waiuanue Ave, Rm 322, Hilo, HI 96720
Mr. Steven Shropshire, P.O. Box 1146, Hilo, HI 96720
Terrell Kelley, State Biologist, USDA-NRCS
Shirley Nakamura, Resource Conservationist, USDA-NRCS

934.9185



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
1-2-2003-1-016

OCT 24 2002

Mr. Kenneth M. Kaneshiro
State Conservationist
Natural Resources Conservation Service
P.O. Box 50004
Honolulu, Hawaii 96850

Re: Informal Consultation for the Environmental Quality Incentives Program (EQIP) Contract and Implementation of a Conservation Plan with the Natural Resources Conservation Service (NRCS) and Mr. Steven Shropshire (TMK: (3) 2-7-004: 025 [108 acres]), Island of Hawaii

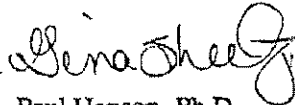
Dear Mr. Kaneshiro:

This responds to your October 10, 2002, letter in which you request concurrence from the U. S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (Act) with the NRCS's determination that the above referenced project is not likely to affect any federally listed or proposed species, or proposed or designated critical habitat. Your letter was received in this office on October 15, 2002. The proposed project intends to install terraces, a filter strip, and riparian forest buffer and plant a cover crop of carpet and annual rye grass, windbreak trees, and *Dracaena* on the contour.

Based on the information you provided and information in our files, the Service concurs with the NRCS's determination that no federally listed or proposed species, or proposed or designated critical habitat are likely to be affected by the implementation of the proposed project. No endangered or threatened plant or animal species are known to occur in the area.

We appreciate your interest and concern for natural resources. If you have any questions, please contact Lorena Wada, Supervisory Fish and Wildlife Biologist (phone: 808/541-3441; fax: 808/541-3473).

Sincerely,


Paul Henson, Ph.D.
Field Supervisor

Steve Shropshire

From: "Duane Nelson" <dnelson03@fs.fed.us>
To: "Steve Shropshire" <SHROPSHIS001@hawaii.rr.com>
Sent: Wednesday, October 23, 2002 1:18 AM
Subject: Re: "Invaders of the Forest"

Ironwood is invasive as evidenced by its dramatic spread in the north Hamakua district and relatively high scores in a risk assessment run by Curt Daehler of University of Hawaii.

Coconut is not invasive. Whether it is the best choice for your situation is really a matter of your objectives for the land. One concern to keep in mind is the safety issue of falling coconuts. If there will be a lot of human use of the area, coconuts will need routine maintenance to prune off nuts before they fall. There are dwarf varieties of coconut that do not reach heights that make nut pruning costly.

If you want to consider other species, I can make a list of species available to you that have been run through Dr. Daehler's risk assessment and were found to not be invasive. The list also indicates species that did not "pass"

I will not be in my office until Friday, so I may not be able to respond to further requests for a few days.

Aloha and thanks for asking.

Duane A. Nelson

Forest Health Coordinator
Institute of Pacific Islands Forestry
USDA- Forest Service
23 E. Kawili Street
Hilo, HI 96720

ph: 808-933-8121 ext 15
fax: 808-933-8120

11/13/2002

Scientific name	Common name	Family	Pests according to experts	WRA Score		WRA Rating	Agreement between experts	WRA says "Pest", experts say "Not a pest"	WRA says "Not a pest", experts say "Pest"
				WRA Score	WRA Rating				
<i>Acacia auriculiformis</i>	Darwin Black Wattle	Fabaceae	MAJOR	13	PEST	✓	✓		
<i>Acacia confusa</i>	Formosan koa	Fabaceae	MAJOR	9	PEST	✓	✓		
<i>Acacia melanoxylon</i>	Australian blackwood	Fabaceae	MAJOR	12	PEST	✓	✓		
<i>Acalypha hispida</i>	chenille plant	Euphorbiaceae		2	OK (2nd screen)	✓	✓		
<i>Acalypha wilkesiana</i>	beefsteak plant	Euphorbiaceae	MINOR	-2	OK	✓	✓		
<i>Adenanthera pavonina</i>	peacock tree	Fabaceae		7	PEST	✓	✓		
<i>Agathis robusta</i>	Queensland kauri	Araucariaceae		-5	OK	✓	✓		
<i>Albizia lebbek</i>	woman's-tongue tree	Fabaceae	MAJOR	7	PEST	✓	✓		
<i>Anacardium occidentale</i>	cashew tree	Anacardiaceae		0	OK	✓	✓		
<i>Annona cherimola</i>	cherimoya	Annonaceae		-4	OK	✓	✓		
<i>Annona muricata</i>	soursop	Annonaceae		-3	OK	✓	✓		
<i>Annona squamosa</i>	sugar apple	Annonaceae		-2	OK	✓	✓		
<i>Artiggonon leptopus</i>	Mexican creeper	Polygonaceae	MINOR	19	PEST	✓	✓		
<i>Aptenia cordifolia</i>	hearts and flowers	Aizoaceae		3.5	OK (2nd screen)	✓	✓		
<i>Arachis pintoii</i>	perennial peanut	Fabaceae		-1	OK	✓	✓		
<i>Araucaria columnaris</i>	Cooks pine	Araucariaceae		-5	OK	✓	✓		
<i>Ardisia crenata</i>	coral ardisia	Myrsinaceae	MAJOR	7	PEST	✓	✓		
<i>Ardisia elliptica</i>	shoebutton ardisia	Myrsinaceae	MAJOR	11	PEST	✓	✓		
<i>Areca catechu</i>	betel nut palm	Palmae		-4	OK	✓	✓		
<i>Artabotrys hexapetalus</i>	climbing ylang-ylang	Annonaceae		-1	OK	✓	✓		
<i>Artocarpus altilis</i>	breadfruit	Moraceae		-12	OK	✓	✓		
<i>Averrhoa carambola</i>	starfruit	Oxalidaceae		-1	OK	✓	✓		
<i>Axonopus compressus</i>	broadsleaf carpet grass	Poaceae	MINOR	15	PEST	✓	✓		
<i>Azadirachta indica</i>	neem	Meliaceae		5	PEST	✓	✓		
<i>Bambusa vulgaris</i>	common bamboo	Poaceae		5	EVALUATE	✓	UNDECIDED		
<i>Barringtonia asiatica</i>	sea putat	Lecythidaceae		5	OK (2nd screen)	✓	✓		
<i>Bischofia javanica</i>	bishopwood	Bischofiaceae		-8	OK	✓	✓		
<i>Bougainvillea glabra</i>	paperflower	Nyctaginaceae		7	PEST	✓	✓		
<i>Bracharia mutica</i>	para grass	Poaceae	MAJOR	-1	OK	✓	✓		
<i>Bryonia disticha</i>	snow bush	Euphorbiaceae		12	PEST	✓	✓		
<i>Calopogonium mucunoides</i>	calapo	Fabaceae	MINOR	-5	OK	✓	✓		
<i>Cananga odorata</i>	perfume tree	Annonaceae		6	OK (2nd screen)	✓	✓		
<i>Capiscum frutescens</i>	wild pepper	Solanaceae		3	OK (2nd screen)	✓	✓		
<i>Cardiospermum halicacabur</i>	balloon vine	Sapindaceae	MINOR	5	OK (2nd screen)	✓	✓		
				12	PEST	✓	✓		

Scientific name	Common name	Family	Pests according to experts	WRA Score		WRA Rating	Agreement between WRA and experts	WRA says "Pest", experts say "Not a pest"	WRA says "Not a pest", experts say "Pest"
				WRA Score	WRA Rating				
<i>Carica papaya</i>	papaya	Caricaceae		2	OK (2nd screen)	✓			
<i>Carissa grandiflora</i>	Natal plum	Apocynaceae		-1	OK	✓			
<i>Cassia fistula</i>	golden shower tree	Fabaceae		3	OK (2nd screen)	✓			
<i>Cassia javanica</i>	pink shower tree	Fabaceae		-1	OK	✓			
<i>Cassia xnealiae</i>	rainbow shower tree	Fabaceae		-8	OK	✓			
<i>Casuarina cunninghamiana</i>	cunninghamia beefwood	Casuarinaceae		12	PEST	✓			
<i>Casuarina equisetifolia</i>	iron wood	Casuarinaceae	MINOR	15	PEST	✓			
<i>Catharanthus roseus</i>	Madagascar periwinkle	Apocynaceae	MAJOR	2	OK (2nd screen)	✓			
<i>Centrosema pubescens</i>	centro	Fabaceae		11	PEST	✓			✓
<i>Chrysophyllum oliviforme</i>	satin leaf	Sapotaceae		4	EVALUATE				UNDECIDED
<i>Cinnamomum camphora</i>	camphor tree	Lauraceae	MAJOR	7.5	PEST	✓			
<i>Citharexylum spinosum</i>	fiddlewood	Verbenaceae	MAJOR	7	PEST	✓			
<i>Citrus limon</i>	lemon	Rutaceae		-3	OK	✓			
<i>Clerodendrum quadrilocular</i>	bronze leaved clerodend	Verbanaceae		11	PEST	✓			
<i>Clusia rosea</i>	autograph tree	Clusiaceae	MINOR	4	EVALUATE				UNDECIDED
<i>Coccoloba uvifera</i>	ivy gourd	Cucurbitaceae	MAJOR	21	PEST	✓			
<i>Coccoloba uvifera</i>	sea grape	Polygonaceae		-5	OK	✓			
<i>Cochlospermum vitifolium</i>	buttercup tree	Bixaceae		-4	OK	✓			
<i>Codiaeum variegatum</i>	croton	Euphorbiaceae		-4	OK	✓			
<i>Coffea arabica</i>	coffee	Rubiaceae		2	PEST (2nd screen)	✓			
<i>Conocarpus erectus</i>	button mangrove	Combretaceae	MINOR	4	OK (2nd screen)	✓			
<i>Coprosma repens</i>	creeping miroplant	Rubiaceae		1	OK (2nd screen)	✓			
<i>Cordia sebestena</i>	geiger tree	Boraginaceae		-1	OK	✓			
<i>Cotoneaster pinnosus</i>	silverleaf cotoneaster	Rosaceae	MINOR	7	PEST	✓			
<i>Crescentia cujete</i>	calabash tree	Bignoniaceae		-8	OK	✓			
<i>Cryptomeria japonica</i>	Japanese cedar	Taxodiaceae	MINOR	-3	OK	✓			✓
<i>Cuphea hyssopifolia</i>	false heather	Lythraceae		5	OK (2nd screen)	✓			
<i>Delaisia odorata</i>	German ivy	Asteraceae	MAJOR	14	PEST	✓			
<i>Delonix regia</i>	royal poinciana	Fabaceae		-1	OK	✓			
<i>Dracaena draco</i>	dragon tree	Agavaceae		-5	OK	✓			
<i>Elaeagnus umbellata</i>	autumn olive	Elaeagnaceae		13	PEST	✓			✓
<i>Elaeocarpus angustifolius</i>	blue marble tree	Elaeocarpaceae		2	OK (2nd screen)	✓			
<i>Eremochloa ophiuroides</i>	centipede grass	Poaceae		8	PEST	✓			✓
<i>Erigeron karwinskianus</i>	Mexican daisy	Asteraceae	MAJOR	11	PEST	✓			

Scientific name	Common name	Family	Pests according to experts	WRA Score		WRA Rating	WRA says "Pest", experts say "Not a pest"	WRA says "Not a pest", experts say "Pest"
				WRA Score	WRA Rating			
<i>Eriobotrya japonica</i>	loquat	Rosaceae	MINOR	0.5	EVALUATE	UNDECIDED		
<i>Erythrina crista-galli</i>	cockspur coral tree	Fabaceae		6	OK (2nd screen)	✓	Agreement between experts	WRA says "Pest", experts say "Not a pest"
<i>Erythrina variegata</i>	coral tree	Fabaceae		-2	OK	✓		
<i>Eucalyptus deglupta</i>	Indonesian gum	Myrtaceae		2	OK (2nd screen)	✓		
<i>Evolvulus glomeratus</i>	blue daze	Convolvulaceae		0	OK	✓		
<i>Fagraea berteriana</i>	blue daze	Loganiaceae		-1	OK	✓		
<i>Ficus benghalensis</i>	pua keni keni	Moraceae	MINOR	3	OK (2nd screen)	✓		
<i>Ficus benjamina</i>	Indian banyon	Moraceae		4	EVALUATE	UNDECIDED		
<i>Ficus elastica</i>	weeping fig	Moraceae		-5	OK	✓		
<i>Filicium decipiens</i>	Indian rubberplant	Moraceae	MINOR	-3	OK	✓		
<i>Flemingia macrophylla</i>	fem tree	Sapindaceae		4	OK (2nd screen)	✓		
<i>Fraxinus uhdei</i>	Flemingia	Fabaceae	MAJOR	0	OK	✓		
<i>Galphimia gracilis</i>	tropical ash	Oleaceae		0	OK	✓		
<i>Gardenia jasminoides</i>	slender goldshower	Malphigiaceae		-2	OK	✓		
<i>Glitricidia sepium</i>	Cape jasmine	Rubiaceae		0	OK	✓		
<i>Graptophyllum pictum</i>	mother of cocoa	Fabaceae		-3	OK	✓		
<i>Gualacum officinale</i>	caricature-plant	Acanthaceae		-5	OK	✓		
<i>Harpullia pendula</i>	lignum vitae	Zygophyllaceae		-6	OK	✓		
<i>Heliconia caribaea</i>	tulipwood	Sapindaceae		-4	OK	✓		
<i>Hernandia sonora</i>	lobster claw	Heliconiaceae		-1	OK	✓		
<i>Hibiscus rosa-sinensis</i>	topote	Hernandiaceae		-5	OK	✓		
<i>Holmskioldia sanguinea</i>	Chinese hibiscus	Malvaceae		-2	OK	✓		
<i>Impatiens balsamina</i>	Chinese hatplant	Verbenaceae		-1	OK	✓		
<i>Impatiens wallerana</i>	Balsam hatplant	Balsaminaceae		5	EVALUATE	UNDECIDED		
<i>Jasminum fluminense</i>	balsam impatens	Balsaminaceae	MINOR	6	OK (2nd screen)	✓		
<i>Jasminum multiflorum</i>	busy Lizzy	Balsaminaceae	MINOR	16	PEST	✓		
<i>Juniperus chinensis</i>	Brazilian jasmine	Oleaceae	MINOR	2	OK (2nd screen)	✓		
<i>Justicia brandegeana</i>	star jasmine	Oleaceae		-3	OK	✓		
<i>Lagenaria siceraria</i>	Chinese juniper	Cupressaceae		-1	OK	✓		
<i>Lagerstroemia speciosa</i>	shrimp plant	Acanthaceae		0	OK	✓		
<i>Leptospermum scoparium</i>	bottle gourd	Cucurbitaceae		-4	OK	✓		
<i>Leucaena leucocephala</i>	queen's crape myrtle	Lythraceae	MAJOR	3	PEST (2nd screen)	✓		
<i>Ligustrum japonicum</i>	broom teatree	Myrtaceae	MAJOR	15	PEST	✓		
<i>Ligustrum lucidum</i>	leucaena	Fabaceae	MINOR	6	EVALUATE	UNDECIDED		
	Japanese privet	Oleaceae		8	EVALUATE	UNDECIDED		
	Glossy privet	Oleaceae		8	EVALUATE	UNDECIDED		

Scientific name	Common name	Family	Pests according to experts	WRA Score		WRA Rating	Agreement between WRA and experts	WRA says "Pest", experts say "Not a pest"	WRA says "Not a pest", experts say "Pest"
				WRA Score	WRA Rating				
<i>Ligustrum sinense</i>	Chinese privet	Oleaceae	MAJOR	11	PEST	✓	✓		
<i>Magnolia grandiflora</i>	southern magnolia	Magnoliaceae		0	OK	✓			
<i>Meila azedarach</i>	Chinaberry tree	Meliaceae	MINOR	14	PEST	✓			
<i>Merremia tuberosa</i>	wood rose	Convolvulaceae	MINOR	12	PEST	✓			
<i>Monstera deliciosa</i>	swiss-cheese plant	Araceae	MINOR	1	OK (2nd screen)	✓		✓	
<i>Montanoa hibiscifolia</i>	treedaisy	Asteraceae	MINOR	13	PEST	✓			
<i>Mortezuma speciosissima</i>	maga	Bombacaceae		-1	OK	✓			
<i>Moringa oleifera</i>	horse-raddish tree	Moraceae		1	OK (2nd screen)	✓			
<i>Muntingia calabura</i>	Jamaica cherry	Tiliaceae		12	PEST	✓		✓	
<i>Nolina recurvata</i>	ponytail palm	Agavaceae		-4	OK	✓			
<i>Olea europaea</i>	olive tree	Oleaceae	MAJOR	6	EVALUATE		UNDECIDED		
<i>Ophiopogon japonicus</i>	mondo grass	Liliaceae		3	OK (2nd screen)	✓			
<i>Panicum maximum</i>	Guinea grass	Poaceae	MAJOR	17	PEST	✓			
<i>Paspalum dilatatum</i>	Dallis grass	Poaceae	MINOR	12	PEST	✓			
<i>Paspalum vaginatum</i>	seashore paspalum	Poaceae		7	PEST	✓		✓	
<i>Passiflora edulis</i>	passion fruit	Passifloraceae	MINOR	6	OK (2nd screen)		✓	✓	
<i>Passiflora rubra</i>	red passionfruit	Passifloraceae		9	PEST	✓			
<i>Pennisetum clandestinum</i>	kikuyu grass	Poaceae	MAJOR	18	PEST	✓			
<i>Pennisetum purpureum</i>	elephant grass	Poaceae	MAJOR	16	PEST	✓			
<i>Persea americana</i>	avocado	Lauraceae		3	OK (2nd screen)	✓			
<i>Petra volubilis</i>	sandpaper vine	Verbenaceae		-1	OK	✓			
<i>Photinia davidiana</i>	photina	Rosaceae		-2	OK	✓			
<i>Pimenta dioica</i>	allspice tree	Myrtaceae	MAJOR	7	PEST	✓			
<i>Pimenta racemosa</i>	bay rum tree	Myrtaceae		-3	OK	✓			
<i>Pinus radiata</i>	Monterey pine	Pinaceae	MINOR	5	OK (2nd screen)		✓	✓	
<i>Pittosporum undulatum</i>	Australian cheesewood	Pittosporaceae		9	PEST	✓			
<i>Pittosporum viridiflorum</i>	Cape cheesewood	Pittosporaceae		-2	OK	✓			
<i>Plumeria rubra</i>	frangipani	Apocynaceae		-5	OK	✓			
<i>Podocarpus elatus</i>	plum pine	Podocarpaceae		-2	OK	✓			
<i>Polyscias filicifolia</i>	geranium aralia	Araliaceae		0	OK	✓			
<i>Polyscias guilfoylei</i>	feruleaf aralia	Araliaceae		1	EVALUATE		UNDECIDED		
<i>Pongamia pinnata</i>	Indian beech	Fabaceae		6	OK (2nd screen)	✓			
<i>Pritchardia pacifica</i>	Fiji fan palm	Palmae		-4	OK	✓			
<i>Pseudobombax ellipticum</i>	shavingbrush tree	Bombacaceae		-2	OK	✓			

Scientific name	Common name	Family	Pests according to experts	WRA Score		WRA Rating	Agreement between experts and experts	WVKA says "Pest", experts say "Not a pest"	WVKA says "Not a pest", experts say "Pest"
				WRA Score	WRA Rating				
<i>Psidium cattleianum</i>	strawberry guava	Myrtaceae	MAJOR	18	PEST	✓			
<i>Psidium guajava</i>	common guava	Myrtaceae	MAJOR	21	PEST	✓			
<i>Pyracantha angustifolia</i>	narrowleaf firethorn	Rosaceae	MAJOR	13	PEST	✓			
<i>Ravenala madagascariensis</i>	traveler's palm	Strelitziaceae		5	EVALUATE				
<i>Rhaphiolepis indica</i>	Indian hawthorn	Rosaceae		3	OK (2nd screen)	✓			
<i>Rhaphis excelsa</i>	lady palm	Palmae		0	OK	✓			
<i>Rhodomyrtus tomentosa</i>	rose myrtle	Myrtaceae	MAJOR	8	PEST	✓			
<i>Russelia equisetiformis</i>	fire cracker plant	Scrophulariaceae		-2	OK	✓			
<i>Samanea saman</i>	monkeypod tree	Fabaceae	MINOR	4	OK (2nd screen)			✓	
<i>Schefflera arboricola</i>	dwarf umbrella-tree	Araliaceae		3	EVALUATE				
<i>Schinus molle</i>	Peruvian pepper tree	Anacardiaceae	MINOR	10	PEST	✓			
<i>Senna alata</i>	candle bush	Fabaceae	MINOR	10	PEST	✓			
<i>Senna surattensis</i>	kolomona	Fabaceae	MINOR	0	OK			✓	
<i>Sesbania grandiflora</i>	agati	Fabaceae		3	OK (2nd screen)	✓			
<i>Solanum maxima</i>	cup of gold	Solanaceae		3	EVALUATE				
<i>Solanum seaforthianum</i>	Brazilian nightshade	Solanaceae	MINOR	9	PEST	✓			
<i>Spathodea campanulata</i>	African tulip tree	Bignoniaceae	MAJOR	14	PEST	✓			
<i>Spondias dulcis</i>	wi apple	Anacardiaceae		-5	OK	✓			
<i>Stemmadenia littoralis</i>	lechese	Apocynaceae		-5	OK	✓			
<i>Stenotaphrum secundatum</i>	St. Augustine grass	Poaceae	MINOR	15	PEST	✓			
<i>Stylosanthes guianensis</i>	slydo	Fabaceae		11	PEST	✓			
<i>Swietenia mahagoni</i>	West Indian mahogany	Meliaceae		-6	OK	✓		✓	
<i>Syngonium podophyllum</i>	arrowhead plant	Araceae	MAJOR	15	PEST	✓			
<i>Tabebuia donnell-smithii</i>	gold tree	Bignoniaceae		-4	OK	✓			
<i>Tabebuia heterophylla</i>	pink trumpet-tree	Bignoniaceae		1	OK (2nd screen)	✓			
<i>Tamarindus indica</i>	tamarind	Fabaceae		-3	OK	✓			
<i>Tamarix aphylla</i>	Athel tamarisk	Tamaricaceae		13	PEST	✓		✓	
<i>Tecoma stans</i>	yellow bells	Bignoniaceae	MINOR	8	PEST	✓			
<i>Tectona grandis</i>	teak	Verbenaceae		-5	OK	✓			
<i>Terminalia catappa</i>	tropical almond	Combretaceae	MINOR	4	OK (2nd screen)			✓	
<i>Tetrazygia bicolor</i>	Florida clover ash	Melastomataceae	MINOR	3	EVALUATE				
<i>Theobroma cacao</i>	cocoa	Sterculiaceae		-5	OK	✓			
<i>Thevetia peruviana</i>	be-still tree	Apocynaceae	MINOR	9	PEST	✓			
<i>Thunbergia erecta</i>	bush thunbergia	Bignoniaceae		-2	OK	✓			

Scientific name	Common name	Family	Pests according to experts	WRA Score		WRA Rating	Agreement between WRA and experts	WRA says "Pest", "Not a pest", "Not a pest"	WRA says "Not a pest", "Not a pest"
<i>Tipuana tipu</i>	tipu tree	Fabaceae		0		OK	✓		
<i>Tournefortia argentea</i>	tree heliotrope	Boraginaceae	MAJOR	-1		OK	✓		
<i>Veitchia merrillii</i>	Manila palm	Palmae		-2		OK	✓		
<i>Wedelia trilobata</i>	wedelia	Asteraceae	MAJOR	13		PEST	✓		
<i>Zamia furturacea</i>	cardboard plant	Zamiaceae		-2		OK	✓		
<i>Zingiber zerumbet</i>	shampoo ginger	Zingiberaceae	MINOR	-1		OK	✓		
<i>Zoysia japonica</i>	Korean lawngrass	Poaceae		6	OK (2nd screen)				✓
<i>Zoysia tenuifolia</i>	templegrass	Poaceae	MINOR	-2		OK			✓

**ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT**

APPENDIX 4

**ARCHAEOLOGICAL SURVEY AND
CONCURRENCE LETTER**



Paul H. Rosendahl, Ph.D., Inc.

Archaeological • Historical • Cultural Resource Management Studies & Services

224 Waianuenu Avenue • Hilo, Hawai'i 96720 • (808) 969-1763 • FAX (808) 961-6998

P.O. Box 23305 • G.M.F., Guam 96921 • (671) 472-3117 • FAX (671) 472-3131

Report 2352-082503

September 8, 2003

**REQUEST TO STATE HISTORIC PRESERVATION DIVISION
FOR DETERMINATION OF "NO HISTORIC PROPERTIES AFFECTED"**

Makai Lands Subdivision

*Lands of Papaikou, Kaapoko, and Paihaaloa
South Hilo District, Island of Hawai'i (TMK:3-2-7-04:25)*

Prepared by
Paul H. Rosendahl, Ph.D.

Introduction

At the request of Mr. Steve Shropshire of Shropshire Group LLC, Paul H. Rosendahl, Ph.D., Inc. (PHRI) conducted an historic properties assessment survey of the approximately 107 acre subject project area, which is situated *makai* (seaward) of Papaikou Village and the Mamaloahoa Highway (Hawaii Belt Road), in the Lands of Papaikou, Kaapoko, and Paihaalo, South Hilo District, Island of Hawai'i (TMK:3-2-7-04:25) (see Fig. 1, at end). This survey was conducted in connection with the preparation and processing of a consolidation and resubdivision application to the County of Hawaii, and in response to a recommendation made by the State Historic Preservation Division (SHPD) to the Hawaii County Planning Department (letter dated June 9, 2003). The basic objective of the work was to request of and obtain from the SHPD a formal determination of "no historic properties affected." The present report provides appropriate documentation supporting such a request to the SHPD in accordance with the general guidance provided by Chapter 284: Section 5 (b) of the SHPD Draft Rules and Regulations (HAR Title 13, DLNR; Subtitle 13, SHPD)(5/31/01). The following documentation supports our professional opinion that no significant historic sites are likely to be present within the subject project area because of extensive land-alteration and intensive sugarcane cultivation activities dating from the latter half of the 19th century and continuing to recent times.

Survey Objectives and Scope of Work

The basic objectives of the assessment survey were to determine the following: (a) the general nature, extent, and potential significance of any historic properties (archaeological-historical remains) that might be present, (b) the historic preservation implications of any such properties for the feasibility of any proposed future development; and (c) the general scope of work and level of effort for any subsequent archaeological-historic preservation work that might be appropriate and/or required. The ultimate objective of any such subsequent work would be to comply with all current historic preservation requirements of the Hawaii State Historic Preservation Division (SHPD) and the Hawaii County Planning Department (HCPD).

Based on discussions with Mr. Shropshire, review of relevant recent correspondence to the HCPD from the SHPD (letter dated June 9, 2003) and the US Department of Agriculture-Natural Resources Conservation Service (memorandum dated 24 April 2003), a preliminary review of prior archaeological work done recently by PHRI within the general vicinity subject project area, and in the general Hilo area, and our familiarity with both the general project area and the current regulatory review requirements of the SHPD and the Hawaii County Planning Department, the following scope of work was determined to be appropriate for the assessment survey:

1. Conduct appropriate background review and research;
2. Mobilization—including all field work preparations, field crew travel time, and demobilization;

3. Conduct variable intensity, sample coverage, pedestrian and vehicular surface reconnaissance fieldwork only of the subject project area—including (a) relatively higher intensity coverage of stream gulches, cliff edges along the gulches, and the cliff edges along the shoreline, and (b) relatively lower intensity coverage of the previously cultivated sloping tablelands between the stream gulches;
4. Conduct post-field analysis of field and other data;
5. Prepare a written assessment survey report—including description and evaluation of assessment survey findings, and a scope of work and cost estimate for any additional archaeological work that might be required by various regulatory agencies in connection with any development applications; and
6. Coordinate and consult with client, client representatives, agency staff, etc. (as appropriate and/or required).

Based on available information regarding the status and past land use history of the general project area, the likelihood of encountering potentially significant historic—particularly within the previously cultivated sloping tablelands between the stream gulches—was anticipated to be low, and it was thought it might be possible to request of and receive from SHPD a formal determination of “no historic properties affected”. Such a determination should satisfy the historic preservation review requirements of the SHPD and the Hawaii County Planning Department. This preliminary assessment was made here with the qualification that it is always possible—no matter how unlikely, that potentially significant resources requiring subsequent additional work, such as full archaeological inventory survey, might be encountered during the assessment survey fieldwork.

Project Area Description

The project area consists of approximately 107 acres of previously cultivated land located within the gently sloping *makai* tablelands of the former Onomea Surgar Company on the east coast of the Island of Hawaii, within the Lands of Papaikou, Kaapoko, and Paihaaloa, South Hilo District (TMK:3-2-7-04:25) (see Figure 1, at end). The subject parcel is situated *makai* of Papaikou Village and the Mamalahoa Highway (Hawaii Belt Road), and extends about 0.9 miles along the shoreline, roughly from Kaieie Stream on the north to just inland of Kekiwi Point of the south. It is generally defined by the Mamalahoa Highway on the western (inland) side, Kaieie Stream on the north, the sharp upper edge of the existing sea cliffs or *pali* on the eastern (seaward) side, and an existing residential subdivision referred to as Silverton Camp Mauka/Garden Subdivision/Camp Makai and the old Papaikou Mill site on the south.

The project area rises in elevation from c. 80-100 ft along the upper edge of the sea cliffs to c. 180-190 ft along the Mamalahoa Highway, and is bisected by several drainages—including both shallow ones that have been modified by cultivation and deep, steeply-sided ones that remain heavily vegetated and inaccessible from within the project area. While most of the project area consisted of recently grubbed old cane land with a scrubby cover of grasses and weeds, the vegetation cover along the upper edge of the sea cliff consisted of a relatively open canopy primarily of native *hala* (pandanus; *Pandanus odoratissimus* L.f.) and introduced common ironwood trees (*Casuarina equisetifolia* L.), with a variable density ground cover of native *naupaka-kahakai* (beach *naupaka*; *Scaevola serica* Vahl) and introduced grasses.

Background

Background research conducted before inspection fieldwork did not yield knowledge of any previously identified archaeological sites. While the general coastal area did appear to fall within the limits of the area covered by A.E. Hudson (Hudson n.d.) during his 1930-1932 Bishop Museum survey of East Hawaii Island, Hudson did not specifically identify any sites within or in the immediate vicinity of the present field inspection project area.

Inspection of the current tax map plat containing the project area indicated the prior presence of two small grants (Grants 8032 and 10568) and a portion of a larger third grant (Grant 754) in the northern portion of the project area—south of Kaieie Stream and in the seaward end of the Land of Paihaaloa, and a 3.86 acre land commission award parcel, L.C.Aw. 4977 (R.P. 4694) to Keheanakahi, in the land of Papaikou in the southern inland portion of the project area. The current tax map plat also indicates the presence of the old Papaikou Mill site to the south of and just outside of the project area, adjacent to and above Papaikou Landing on the north side of Kapue Stream, and the apparent absence of any plantation-era cemeteries often found adjacent to the edge of the sea cliff along the immediate shoreline.

According to the USDA-Natural Resource Conservation Service (file memo dated 24 April 2003), a staff soil conservationist had previously noted the presence of "...a railroad berm below the edge of the pali (cliff) along the coastline" during a field visit made in December 2002 to the subject parcel. The specific location of this berm was not indicated and no evidence of any such berm was seen during our recent assessment survey. Furthermore, neither the current tax map nor the USGS quad map for the area has any indication of a railroad route along the coastline.

Field Methods

The field inspection was carried out on August 24, 2003 by PHRI Principal Archaeologist Dr. Paul H. Rosendahl and PHRI Supervisory Archaeologist Alan B. Corbin, M.A. Variable intensity 100% surface coverage inspection fieldwork was conducted by means of pedestrian ground survey and vehicular traverses. Ground visibility varied from generally very good to excellent. Special attention was given to the pedestrian coverage of cliff edges along gulches and the shoreline, and to the general location of the land commission award parcel (L.C.Aw. 4977) and grants shown on the current tax map. While the shallow drainages that crossed the project area were easily accessible and evidenced previous modification by cane cultivation, the very steeply sided, heavily vegetated deeper gulches were not accessible from the project area.

Assessment Survey Results and Conclusion

No archaeological evidence of any kind—e.g., surface artifacts and/or scatters of midden remains—was identified during the field inspection. While the general area of the inspection might have been occupied and/or utilized by native Hawaiians for residential occupation and/or dryland agricultural exploitation prior to historic plantation activities, a hundred years or more of intensive sugarcane cultivation and more recent grubbing activities most likely would have fully obliterated any physical evidence of any such prior land uses. Due to the negative results of the field inspection, it is my professional opinion that no further historic preservation work of any kind is needed and that it is believed appropriate for the SHPD to prepare and issue a written determination of "no historic properties affected", in accordance with the general guidance provided by Chapter 284: Section 5 (b) of the SHPD Draft Rules and Regulations (HAR Title 13, DLNR; Subtitle 13, SHPD) (5/31/01).

Reference Cited

Hudson, A.E.

n.d. Archaeology of East Hawaii. Unpublished Manuscript. Department of Anthropology, B.P. Bishop Museum (1932).

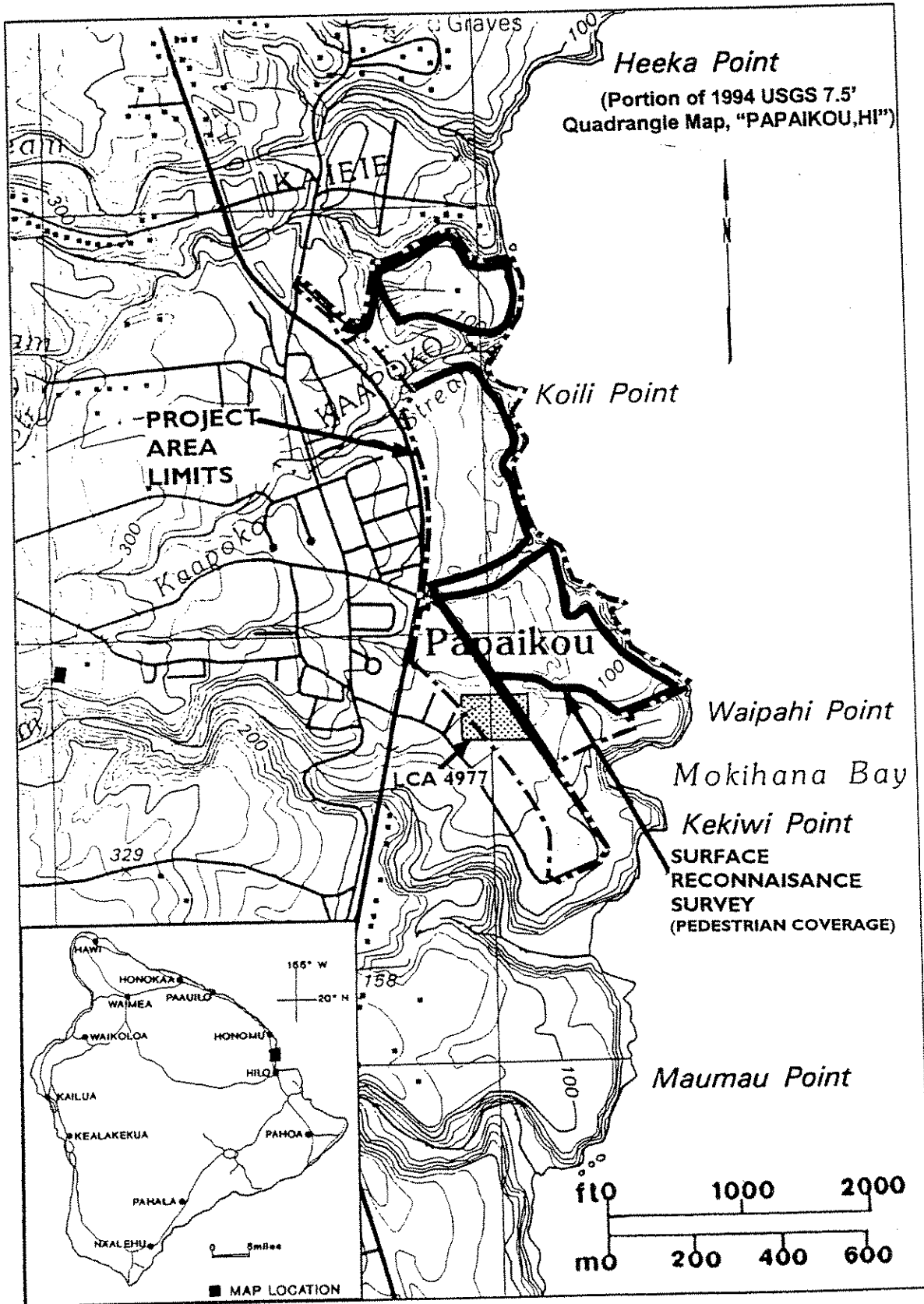


Figure 1. Project Area and Location Map

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
801 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

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

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU
DEPUTY DIRECTOR - WATER

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

September 12, 2003

HAWAII HISTORIC PRESERVATION
DIVISION REVIEW

Log: 2003.1685
Doc: 0309MM14

Applicant/Agency: Shropshire Group LLC
Address: P.O. Box 1146, Hilo, Hawaii 96721
Project: Makai Lands Subdivision
Location: Papaikou, Kaapoko, and Paihaaloa, South Hilo, Hawaii Island
Tax Map Key: (3) 2-7-004:025

1. We believe there are no historic properties present:

- a. intensive cultivation has altered the land
- b. residential development/urbanization has altered the land
- c. previous grubbing/grading has altered the land
- d. an acceptable archaeological assessment or inventory survey found no historic properties*
- e. other *PHRI Report 2352-082503, received by SHPD 9/10/03

2. This project has already gone through the historic preservation review process.

- a. mitigation has been completed
- b. other:

Thus, we believe that "no historic properties will be affected" by this undertaking.

Signed MaryAnne B. Maigret Date 9/12/03

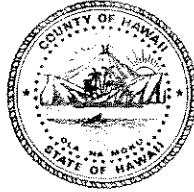
MaryAnne B. Maigret, Assistant Archaeologist
Historic Preservation Division, Hawaii Island

**ENVIRONMENTAL ASSESSMENT
SHROPSHIRE CONSERVATION PLAN
IN THE CONSERVATION DISTRICT**

APPENDIX 5

SPECIAL MANAGEMENT AREA PERMIT

Harry Kim
Mayor



Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

November 7, 2002

Mr. Steven H. Shropshire, Manager
Shropshire Group, LLC
P.O. Box 1146
Hilo, Hawaii 96721

Dear Mr. Shropshire:

**SUBJECT: Special Management Area (SMA) Use Permit Assessment Application
(SMAA No. 02-40) & SMA Minor Permit No. 124
Applicant: Steven H. Shropshire
Request: To Implement a Federal NRCS Soil Erosion Conservation Plan
& Bulk Export Commercial Nursery Operation
TMK: 2-7-004: 025, Papaikou, South Hilo, Hawaii**

This is to acknowledge receipt of the above SMA assessment application. SMA Minor Permit No. 124 has been approved for the proposed conservation plan and nursery operation. Enclosed with this letter is SMA Minor Permit No. 124, subject to conditions.

This project involves the implementation of a soil erosion conservation plan prepared in cooperation with the federal Natural Resources Conservation Service (NRCS) - USDA (United States Department of Agriculture). The second aspect of the proposal is the use of the property for the commercial nursery operation of Aloha Green Plants. No construction is planned or proposed for this project.

In addition to the SMA minor permit and pursuant to SMA Rule 9-4(10)C, the two proposals are exempt from the SMA definition of "development" as both uses are consistent with the exemption criteria of Rule 9-4(10)B(viii). The nursery operation is an activity consistent with the use of parcel 25 for an agricultural purpose. The rule specifically exempts the cultivating, planting, growing, and harvesting of plants or crops. The proposed conservation measures are exempt under the other agricultural purpose classification of the exemption rule. Therefore, pursuant to Rule 9-10G, the soil conservation plan and the commercial nursery business is exempt from the SMA rules.

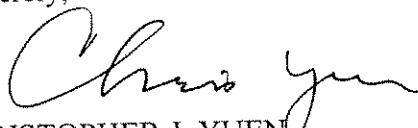
Mr. Steven H. Shropshire, Manager
Shropshire Group, LLC
Page 2
November 7, 2002

The property's state land use designation and County zoning is Agricultural, but a corridor along the coastline is in the state land use Conservation district. The General Plan's LUPAG map designation is Open along the coastline and Low Density for the inland remainder of the lot. The use of the property for agricultural development is consistent with the agricultural zoning and the Open designation. No conservation work is planned in the state Conservation district coastline corridor until a state permit is obtained. In addition, according to the General Plan, parcel 25 is not listed as a site example of natural beauty or a viewpoint or view-plane.

Haw. Rev. Stat. sec. 205A-26(3)(D) is the SMA guideline that requires, where reasonable, to minimize any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast. Hawaii State Route 19 is the nearest coastal state highway to parcel 25, mauka of and at an elevation above the project site. From the highway, the line of sight toward the sea overlooks parcel 25. Therefore, since no new construction is required of this project and the only development is for open dracaena stock fields, the proposed use should not substantially interfere with or detract from the line of sight guideline.

Although an SMA minor permit has been granted and the proposal is exempt from further SMA review, it is still subject to all other applicable state and County regulations. If you have any questions, please call Earl Lucero of my staff at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN
Planning Director

EML:mad

P:\WpWin60\CZM\SMMAA\2002\SMMAA02-40LShropshireSMM124

cc: Long Range Planning
Ms. Kori D. Hisashima, Soil Conservationist – USDA-NRCS

SPECIAL MANAGEMENT AREA MINOR USE PERMIT NO. 124

Approved Development:

To implement preventive soil erosion practices and measures of the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) conservation plan (September 17, 2002) on approximately 108 acres. This project includes the use of Parcel 25 for the commercial nursery operation of Aloha Green Nursery, to expand the stock fields for Dracaena, the primary crop. Nursery operations will propagate, cut, process, and finish the crop for out-of-state bulk export. Agricultural activity will also include some fruit and vegetable production.

Applicant's Name: Steven H. Shropshire

TMK: 2-7-004: 025

Land Area: 112.7 acres

**Compliance with Objectives and Policies of Chapter 205-A, Hawaii Revised Statutes
regarding the Special Management Area**

Check all objectives and policies found to be consistent with proposed development.
Issuance of SMA Minor Use Permit requires that activity be consistent with all objectives & policies.

- Development will not have any significant adverse environmental or ecological effect, except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options.
- The proposed development is consistent with the Hawaii County General Plan and Zoning Code.

Compliance with Objectives and Policies of Chapter 205-A, Hawaii Revised Statutes regarding the Special Management Area

Check all objectives and policies found to be consistent with proposed development.
Issuance of SMA Minor Use Permit requires that activity be consistent with all objectives & policies.

- The proposed development does not conflict with the following objectives of Chapter 205A, Hawaii Revised Statutes to:
 - Provide coastal recreational opportunities accessible to the public.
 - Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.
 - Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.
 - Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.
 - Provide public or private facilities and improvements important to the State's economy in suitable locations.
 - Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution.
 - Improve the development review process, communication, and public participation in the management of coastal resources and hazards.
 - Stimulate public awareness, education, and participation in coastal management.
 - Protect beaches for public use and recreation.
- The proposed development is consistent with the following policies of Chapter 205A, Hawaii Revised Statutes relating to:
 - Recreational resources
 - Historic resources
 - Scenic and Open Space resources
 - Coastal Ecosystems
 - Economic Uses
 - Coastal Hazards
 - Managing Development
 - Public Participation
- Beach Protection
- The proposed development conforms with the requirements of Hawaii Revised Statutes Chapter 343, Environmental Impact

Conditions of Approval

1. The applicant(s), its successors or assigns shall be responsible for complying with all stated conditions of approval.
2. SMA Minor Permit No. 124 is valid for a period of not more than five (5) years from the Planning Director's date of approval, indicated below.
3. The applicant(s), its successors or assigns shall comply with all other laws, rules, regulations and requirements, including the Department of Public Works.
4. Consult with the State Department of Land and Natural Resources to determine whether a Conservation District Use Permit will be required to implement the proposed soil conservation plan. No work shall be allowed in the area of Parcel 25 in the State Land Use Conservation District.
5. The shoreline setback on Parcel 25 is 40-feet, measured inland from the pali cliff line. No work is allowed within the 40-foot shoreline setback area.
6. Request(s) for an extension of time shall be submitted to the Planning Director. Pursuant to SMA Rule 9-11E, written requests shall be filed sixty (60) days before the expiration of this permit. The request shall state the length of time requested and the reasons for the time extension.
7. The Planning Director may grant an extension of time upon the following circumstances:
 - a) non-performance is a result of unforeseen conditions or conditions beyond the control of the applicant, successors, assigns, and are not a result of their fault or negligence;
 - b) granting of the time extension would not be contrary to the original reasons for the granting of the permit; and
 - c) the time extension granted shall be for a period not to exceed the period originally granted for performance (i.e., a condition to be performed within one year may be extended for up to one additional year).
7. Should any of the conditions not be met or substantially complied with in a timely fashion, the Director may initiate procedures to revoke the permit.