

FINAL ENVIRONMENTAL ASSESSMENT

County of Hawai'i Water Board Purchase of Land on Chin Chuck Road for Future Water Tank Reservoir and Well Site

TMK: (3rd) 2-9-004:056 (por.)
South Hilo District, Hawai'i Island, State of Hawai'i

May 2011

Prepared for:

**County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawai'i 96720**

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PROPOSING/
APPROVING AGENCY:

County of Hawai‘i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, HI 96720

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CLASS OF ACTION:

Use of County Funds

This document is prepared pursuant to:

The Hawai‘i Environmental Protection Act,
Chapter 343, Hawai‘i Revised Statutes (HRS), and
Title 11, Chapter 200, Hawai‘i Department of Health Administrative Rules (HAR).

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

The Water Board and the Department of Water Supply (DWS) of the County of Hawai‘i are interested in acquiring a 1.0-acre portion of TMK 2-9-004:056 near the 1,225-foot elevation on Chin Chuck Road in Hakalau as a future site for a water tank reservoir and well. The site is adjacent to an existing DWS water tank. The eventual construction of these facilities would increase the reliability of water service in the Hakalau area and allow the DWS to fulfill its mandate to provide water for customers in its service area. It would also reduce the reliance on sources that may vary in capacity based on the weather and which are thus inefficient and costly for the County of Hawai‘i. The Water Board and DWS have determined that the landowner has a unique parcel at the proper elevation in the area where the Water Master Plan contemplates improvements to the DWS water system.

This Environmental Assessment (EA) applies only to the proposed acquisition of property. The DWS would be required to prepare another EA for associated future water infrastructure improvements. The Property has a long history of cultivation of sugar cane and eucalyptus trees, and no valuable natural, historical or cultural resources are present. No streams or water features are present or would be affected, and the use is consistent with nearby land uses.

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

1.1 Project Location and Description

The Water Board and the Department of Water Supply (DWS) of the County of Hawai‘i are interested in acquiring a 1.0-acre portion of TMK 2-9-004:056 (“the Property”) near the 1,225-foot elevation on Chin Chuck Road in Hakalau as a site for a water tank reservoir and well. The Property is currently owned by Kupaianaha, LLC (“Kupaianaha”), which acquired it from the Shropshire Group, LLC (“Shropshire”). The eventual construction of these facilities would increase the reliability of water service in the Hakalau area and allow the DWS to fulfill its mandate to provide water for customers in its service area. It would also reduce the reliance on sources that may vary in capacity based on the weather and which are thus inefficient and costly for the County of Hawai‘i. It is important for any water system to have extra capacity for the sake of redundancy, so that if the largest source in the particular water system is temporarily out of service, the system continues to have adequate capacity. The Water Board and DWS have determined that the Property is uniquely located at the proper elevation in the area where the Water Master Plan contemplates improvements to the DWS water system. It should be noted that the DWS would be required to prepare another EA for the future planned improvements.

Water availability in the Hakalau-Wailea area is currently limited to one equivalent unit per pre-existing lot of record. When the DWS completes a well and related improvements in this area, water availability will increase for areas below the 340-foot elevation. The DWS is mandated with supplying water of adequate quantity and quality to customers in its service areas, and the general public will benefit from the purchase of the Property. Because these improvements are needed as redundant source and storage for the isolated Hakalau Water System, any potential future large development or subdivision would still be required to implement source improvements. However, as is standard when land is dedicated to the Water Board for water supply improvements, upon dedication of the Property to the Water Board, Shropshire will be allocated an additional equivalent units of water (in this case, eight, for use on TMKs 2-9-002:079 and 081), subject to payment of the prevailing facilities charges. When water availability in the area increases, Shropshire will be entitled to receive equivalent units up to the number of available water units, less the eight units granted through the agreement. After the completion of the future planned water improvements on the Property, the DWS will issue Kupaianaha an additional seventeen equivalent units of water, subject to payment of the prevailing facilities charges. When water availability in the area increases, Kupaianaha will be entitled to receive equivalent units up to the number of available water units, less the seventeen units granted through the agreement.

The DWS will assist Kupaianaha and Shropshire with the preparation of a subdivision request to obtain approval from the County of Hawai‘i for the subdivision of the one-acre Property to be acquired by the DWS. Kupaianaha will then be required to dedicate the property to the DWS within 60 days of the subdivision approval.

**Figure 1
Location Maps**

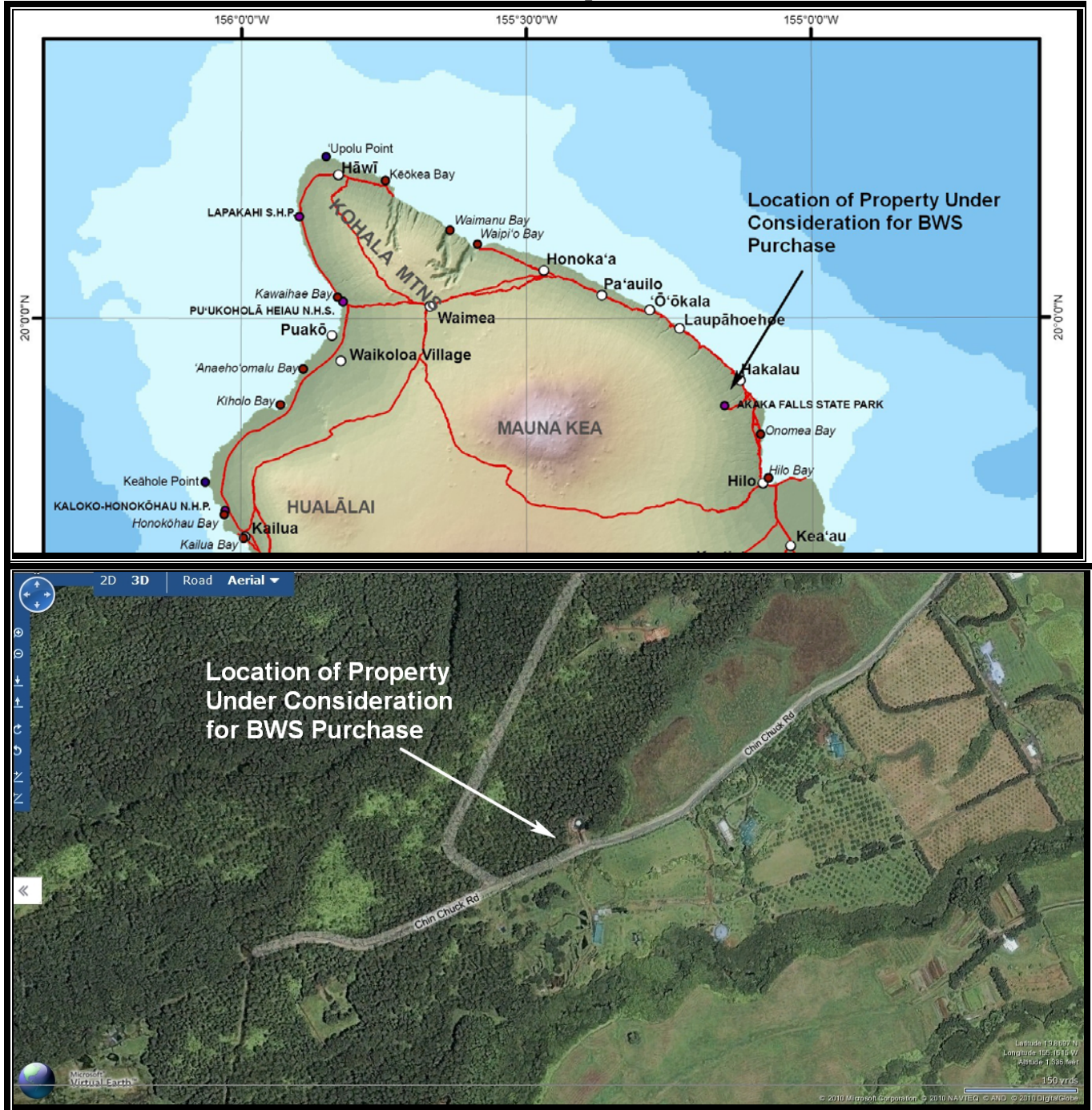
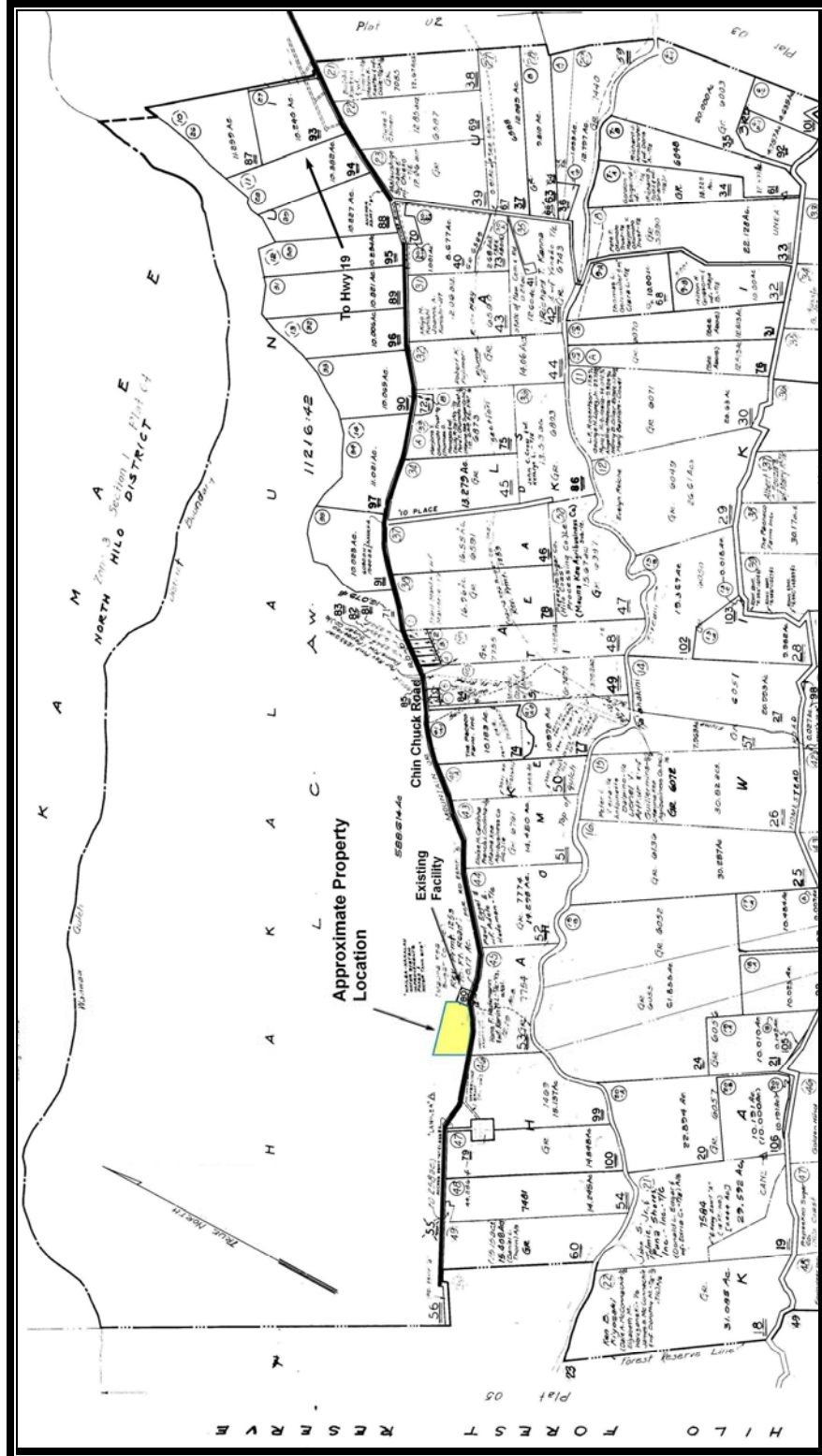


Figure 2 TMK Map



Source: Hawai'i County Real Property Tax Maps. Some labels removed, moved or altered for clarity.

Figure 3 Project Site Photographs



1.2 Purpose and Need

The Hawai'i County Department of Water Supply (DWS) requires a site in this general area at this approximate elevation to allow for planned improvements that would increase the reliability of water service in the Hakalau area and assist the DWS in the fulfillment of its mandate to provide water for customers in its service area. The project would promote public health and safety in the Hakalau area. The acquisition of the site and subsequent construction of facilities would also reduce the DWS's reliance on surface water sources that may vary in capacity according to the weather and which are subject to increasingly stringent regulations on their use. The County of Hawai'i already owns a small lot adjacent to and *makai* of the area that is the subject of the proposed action; however, the lot (TMK 2-9-004:080, site of the existing Hakalau 0.02 mg Reservoir) comprises only 0.2799 acre (12,192 square feet) and lacks sufficient size for the proposed facilities. The addition of the adjacent Property will allow the DWS to carry out the improvements needed to fulfill its mission.

1.3 Environmental Assessment Process

This Environmental Assessment (EA) process is being conducted in accordance with Chapter 343 of the Hawai'i Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawai'i Administrative Rules (HAR), is the basis for the environmental impact process in the State of Hawai'i. According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria.

Part 4 of this document states the (anticipated, in the Draft EA) finding that no significant impacts are expected to occur; Part 5 lists each criterion and presents the findings by the Hawai'i County Department of Water Supply, the proposing/approving agency. In the EA process, if the approving agency determines after considering comments to the Draft EA that no significant impacts would likely occur, then the agency issues a Finding of No Significant Impact (FONSI), and the action is permitted to occur. If the agency concludes that significant impacts are expected to occur as a result of the proposed action, then an Environmental Impact Statement (EIS) is prepared.

1.4 Public Involvement and Agency Coordination

The following agencies and organizations were consulted in development of the environmental assessment:

State:

Office of Hawaiian Affairs
Department of Health

County:

County Councilman Dominic Yagong
Department of Environmental Management
Department of Public Works
Planning Department
Police Department
Fire Department

Private:

Sierra Club
Neighboring property owners

Copies of communications received during early consultation are contained in Appendix 1a. Appendix 1b contains written comments on the Draft EA and the responses to these comments. Various places in the EA have been modified to reflect input received in the comment letters; additional or modified non-procedural text is denoted by double underlines, as in this paragraph.

PART 2: ALTERNATIVES

2.1 No Action

Under the No Action Alternative, the property for the proposed expansion of water system infrastructure in the Hakalau area would not be acquired. The public would not benefit from the improvement in service and increase in public health and safety.

2.2 Alternative Locations

The one-acre portion of TMK 2-9-004:056 has been determined to be at the proper elevation where the Water Master Plan contemplates improvements to the DWS water system. Few other properties appear to be available at the proper elevation, and none with the advantage of an existing water main near the road right-of-way. As discussed in Section 1.2, above, the adjacent DWS lot lacks sufficient size for the proposed facilities.

Although it is recognized that there are neighboring uses that require consideration in design and construction activities, particularly in regard to visual and noise impacts, there do not appear to be any substantial environmental or other disadvantages associated with the particular proposed site. The property is well suited to the proposed use, and there are no apparent reasonable alternatives. Therefore, no alternative sites have been advanced in this Environmental Assessment.

PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Basic Geographic Setting

The 1.0-acre of land which the DWS is proposing to acquire for future water system improvements is referred to throughout this EA as the *Property*. The term *project area* is used generally for this part of the Island of Hawai'i. The Property is located at approximately 1,250 feet in elevation and consists of a one-acre lot to be subdivided from TMK 2-9-004:056, which comprises 588.614 acres, at 29-800 Chin Chuck Road in Hakalau, located approximately 2.7 miles from State Highway 19.

3.1 Physical Environment

3.1.1 Climate, Geology, Soils and Geologic Hazards

Environmental Setting

The climate in the area is wet and mild, with a mean annual temperature of 72 degrees F (Armstrong 1983) and annual rainfall averaging approximately 136 inches (http://origin.www.prh.noaa.gov/hnl/climate/retrieve_norms.php?site=510905&date=0). Geologically, the site is located on the lower flank of Mauna Kea volcano, and the surface consists of weathered basalt soils derived from Pleistocene-epoch (more than 10,000 years old) lava flows of the Laupahoehoe Volcanics series (Wolfe and Morris 1996). Slopes on the Property are moderate. The Property soil is classified by the U.S. Natural Resources Conservation Service (formerly Soil Conservation Service) as Akaka silty clay loam (AkD), a well-drained, deep organic soil formed from weathered volcanic ash on 10 to 20 percent slopes. Permeability for this soil is rapid and runoff is slow. The Capability Subclass for this soil is IVE, and it is usually found in forest or in use for sugarcane cultivation (U.S. Soil Conservation Service 1973).

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. Volcanic hazard as assessed by the U.S. Geological Survey in the project area is Zone 8, on a scale of ascending risk from 9 to 1 (Heliker 1990:23). The low hazard risk is based on the fact that Mauna Kea is presently considered a dormant volcano. Only a few percent of Zone 8 areas have been covered by lava in the past 10,000 years, and they are therefore considered among the least hazardous areas on the island. As such, there is negligible risk of lava inundation, particularly over relatively short time scales.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Hazard (*Uniform Building Code, 1997 Edition*, Figure 16-2). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built, as the 6.7-magnitude quake of October 15, 2006, demonstrated. That earthquake, and a magnitude 6.0 aftershock, caused no damage to the Property. The Property does not appear to be subject to subsidence, landslides or other forms of mass wasting.

Impacts and Mitigation Measures

In general, geologic conditions impose no constraints on the proposed action, which involves acquisition of land. Future design and construction of a well and water tank reservoir will take the seismic setting into account.

3.1.2 Drainage, Water Features and Water Quality

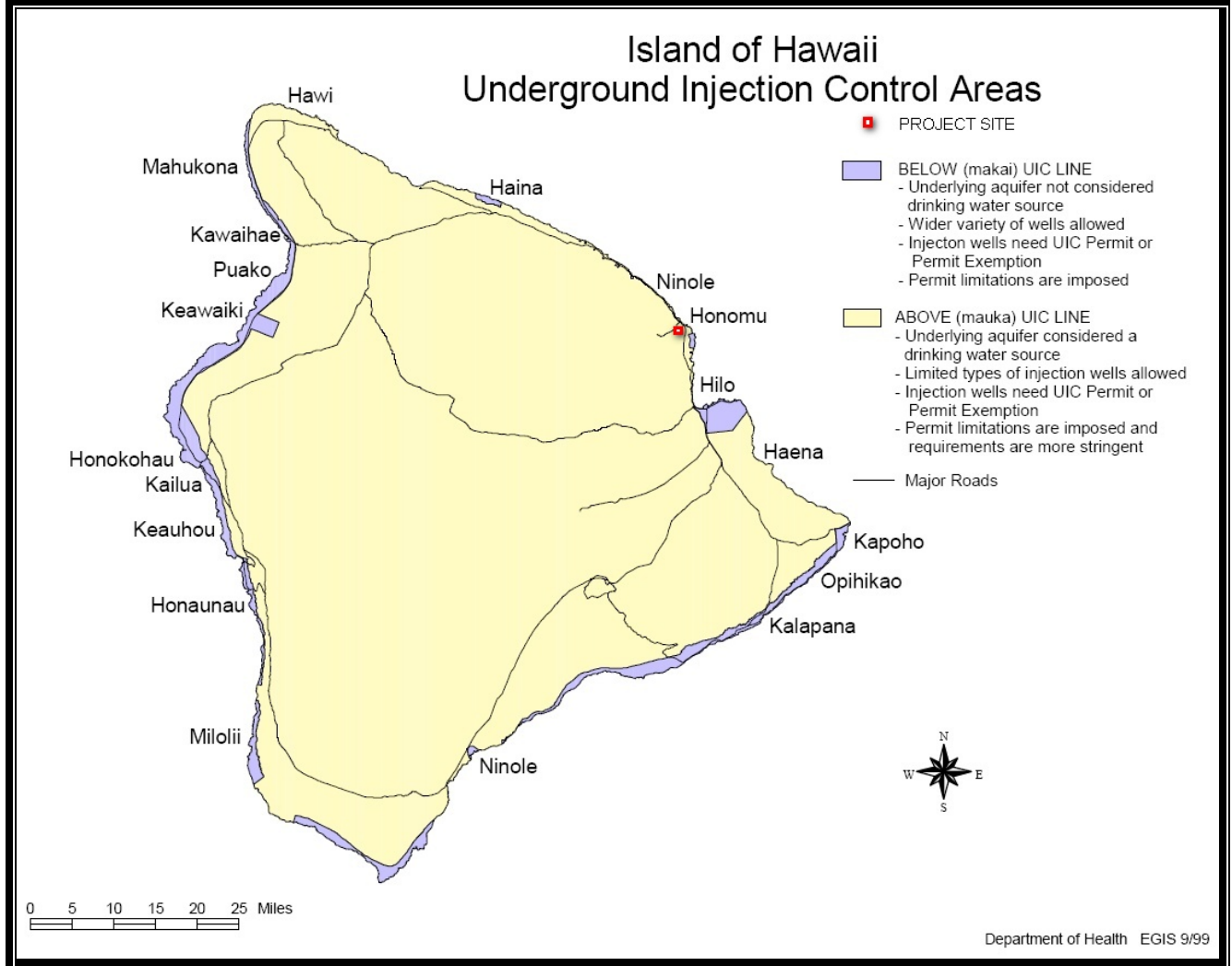
Existing Environment

Flood Insurance Rate Maps (FIRM) have not been prepared for the Property, which is thus classified as located entirely within Zone X, areas not known to be within the 500-year flood plain. The project area has perennial surface water bodies in the form of subparallel streams that deeply incise the general north to northeast-facing slope. Hakalau Stream and its associated gulch lie approximately 1,500 feet north-northwest of the Property. Because of topography, the Property is not affected in any way by this or any other stream or drainage way. No known areas of local (non-stream related) flooding are present, although local ephemeral drainages may overflow after very heavy rains.

The project site appears generally suitable for a water well source. It is located within the Hakalau Aquifer System of the East Mauna Kea Aquifer Sector (Hawai'i County Department of Water Supply 2006). The East Mauna Kea Aquifer Sector has a sustainable yield of 388 million gallons per day (mgd). According to the Hawai'i County Water Use and Development Plan Draft Update (Hawai'i County DWS 2006), there are 26 production wells in the sector, including nine municipal, five domestic, four irrigation, seven industrial, and one "other." There are also 33 wells drilled and categorized as unused. The total use in 2005 was 12.6 mgd, or less than four percent of sustainable yield. Foreseeable new wells within the next five years include the DLNR Honoka'a Well B (State Well No. 6428-01), Kukuihaele Well (6734-03), and two other DWS wells, Ahualoa Well (6331-02) and Kapulena Well (6531-01). Total pumpage from all these wells would be less than 3.0 mgd (Hawai'i County DWS 2010). Because of both location and quantity these wells would not affect the level of the aquifer near Hakalau. Although the contaminant Atrazine, which is associated with sugar cane, has been detected in some Hamakua wells (Ibid.), it has been below 15 percent of the maximum contaminant level and the water quality is generally good and acceptable for a municipal water system.

The project site is situated above or *mauka* (uphill) of the Department of Health's Underground Injection Control (UIC) line, as shown in Figure 4. For areas below the UIC line, the underlying aquifer is not considered a drinking water source and a variety of wells are allowed. Above the UIC line, the underlying aquifer is considered a drinking water source and only limited types of injection wells are allowed with more requirements and limitations. In either area, injection wells require a UIC Permit or Permit Exemption. In response to early consultation, the Wastewater Branch of the Hawai'i State Department of Health stated concern with nearby cesspools and septic tanks in a letter of December 14, 2010:

Figure 4 Island of Hawai'i Underground Injection Control Areas



“We are concerned with any potential contamination to the water wells via improper domestic wastewater treatment and disposal from a nearby source. Our records indicate that there may be cesspools installed on nearby adjacent lots. We recommend that the new proposed well be located at least 1000 feet away from the nearest cesspool. In addition, any proposed individual wastewater treatment system for the new facilities should also be located at least 1000 feet from the proposed well.” (see Appendix 1a for full text of letter).

This issue would be investigated during the EA for the well and water tank reservoir, if and when they are proposed. It should be noted that although there may be three to five properties with active or inactive residential cesspools or septic tanks within 1,000 feet, none are directly *mauka* of the well, which would tap an aquifer with a water table that would likely be over a thousand feet below the surface, which relieves concerns about minor surface contamination from cesspools or septic tanks.

Impacts and Mitigation Measure

The Property has only negligible risk of flooding. Future water tank reservoir and well development will include design that meets Chapter 27 of the Hawai‘i County Code’s requirement to manage drainage onsite. The design would also include a Storm Water Pollution Prevention Plan with appropriate Best Management Practices to limit erosion, sedimentation and pollution, in conformance with Chapter 10 of the Hawai‘i County Code and potential National Pollutant Discharge Elimination System and County grading permits.

3.1.3 Flora, Fauna and Ecosystems

Existing Environment

The vegetation of the Property and most of the land surrounding it has been managed for over a century, first as part of a sugar cane plantation, and since about 1972 as a eucalyptus tree plantation. Figure 3 provides views of the Property from Chin Chuck Road, and Figure 1 is an aerial image showing the extent of the eucalyptus in the area, in which there are scattered with pasture and farm clearings. No native forests are present. Species observed on the 1.0-acre Property are noted in Table 1 below. Aside from eucalyptus, the dense undergrowth supports a variety of weedy plants such as strawberry guava, Clidemia, Spanish clover (or Desmodium), Guinea grass (along with a large variety of other non-native grasses), Kahili ginger, and sword fern. Native species are mainly confined to common ferns, including *hapu‘u*, *uluhe* and *pakahakaha*, species which are able to establish a footing in moist forest plantings and are common in the undergrowth here. A common native grass and sedge are also present. No threatened or endangered plant species are present or would be expected here.

During the botanical reconnaissance of the property, two Hawaiian Hawks or ‘*Io* (*Buteo solitarius*) were observed circling the area. This listed endangered species favors large trees for nesting and has been known to nest in large eucalyptus trees occasionally (Clarkson and Laniawe 2000). The observation occurred in December, outside the nesting season, and the hawks were likely foraging.

Additionally, it is possible that small numbers of the endangered endemic Hawaiian Petrel (*Pterodroma sandwichensis*) and the threatened Newell’s Shearwater (*Puffinus auricularis newelli*) over-fly the project area between the months of May and November. Hawaiian Petrels were formerly common on the Island of Hawai‘i. This pelagic seabird reportedly nested in large numbers on the slopes of Mauna Loa and in the saddle area between Mauna Loa and Mauna Kea, as well as at the mid-to-high elevations of Hualālai and in the Kohala Mountains. It has within recent historic times been reduced to relict breeding colonies in a few locations. Hawaiian Petrels were first listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) in 1967 and by the State of Hawai‘i in 1973. Newell’s Shearwaters were also once common on the Island of Hawai‘i. This species breeds on Kaua‘i, Hawai‘i, and Moloka‘i. Newell’s Shearwater populations have dropped precipitously since the 1880s (Banko 1980, Day et al., 2003). This pelagic species nests high in the mountains in burrows excavated under thick vegetation, especially *uluhe* (*Dicranopteris linearis*)

Table 1. Plant Species on Project Site

Scientific Name	Family	Common Name	Life Form	Status
<i>Ageratum spp.</i>	Asteraceae	Ageratum	Herb	A
<i>Arundina graminifolia</i>	Orchidaceae	Bamboo orchid	Herb	A
<i>Bidens alba</i>	Asteraceae	Beggartick	Herb	A
<i>Blechnum appendiculatum</i>	Blechnaceae	Blechnum	Fern	A
<i>Brachiaria mutica</i>	Poaceae	California grass	Herb	A
<i>Chamaecrista nictitans</i>	Fabaceae	Partridge pea	Herb	A
<i>Chamaesyce hirta</i>	Euphorbiaceae	Garden spurge	Herb	A
<i>Christella dentata</i>	Thelypteridaceae	Downy wood fern	Fern	A
<i>Cibotium glaucum</i>	Dicksoniaceae	Hapu'u	Tree Fern	E
<i>Clidemia hirta</i>	Melastomataceae	Koster's curse	Herb	A
<i>Coix lacryma-jobi</i>	Poaceae	Job's tears	Herb	A
<i>Commelina diffusa</i>	Commelinaceae	Honohono	Herb	A
<i>Conyza bonariensis</i>	Asteraceae	Hairy horseweed	Tree	A
<i>Crassocephalum crepidioides</i>	Asteraceae	Crassocephalum	Herb	A
<i>Crotalaria sp.</i>	Fabaceae	Rattlepod	Herb	A
<i>Cynodon dactylon</i>	Poaceae	Bermuda grass	Herb	A
<i>Cyperus halpan</i>	Cyperaceae	Cyperus	Herb	A
<i>Cyperus polystachyos</i>	Cyperaceae	Cyperus	Herb	I
<i>Desmodium incanum</i>	Fabaceae	Desmodium	Vine	A
<i>Dicranopteris linearis</i>	Gleicheniaceae	Uluhe	Fern	I
<i>Digitaria setigera</i>	Poaceae	Itchy crabgrass	Herb	I
<i>Emilia fosbergii</i>	Asteraceae	Flora's paintbrush	Herb	A
<i>Eragrostis sp.</i>	Poaceae	Lovegrass	Herb	A
<i>Eucalyptus robusta</i>	Myrtaceae	Swamp mahogany	Tree	A
<i>Hedychium gardnerianum</i>	Zingiberaceae	Kahili ginger	Herb	A
<i>Kyllinga brevifolia</i>	Cyperaceae	Green kyllinga	Herb	A
<i>Lepisorus thunbergianus</i>	Polypodiaceae	Pakahakaha	Fern	I
<i>Mimosa pudica</i>	Fabaceae	Sleeping grass	Herb	A
<i>Nephrolepis mutiflora</i>	Nephrolepidaceae	Sword fern	Fern	A
<i>Panicum maximum</i>	Poaceae	Guinea grass	Herb	A
<i>Panicum repens</i>	Poaceae	Wainaku grass	Herb	A
<i>Paspalum conjugatum</i>	Poaceae	Hilo grass	Herb	A
<i>Phlebodium aureum</i>	Polypodiaceae	Golden polypody		
<i>Polygala paniculata</i>	Polygalaceae	Milkwort	Herb	A
<i>Psidium cattleianum</i>	Myrtaceae	Strawberry guava	Tree	A
<i>Psidium guajava</i>	Myrtaceae	Guava	Tree	A
<i>Rubus rosifolius</i>	Rosaceae	Thimbleberry	Vine	A
<i>Sacciolepis indica</i>	Poaceae	Glenwood grass	Herb	A
<i>Schizachyrium condensatum</i>	Poaceae	Beardgrass	Herb	A
<i>Spermacoce assurgens</i>	Rubiaceae	Buttonweed	Herb	A

fern. Newell's Shearwater was listed as a threatened species by the USFWS in 1975 and by the State of Hawai'i in 1973.

Biologists believe that the leading cause of death for both these species in Hawai‘i is predation by alien mammals at the nesting colonies, followed by collision with man-made structures. Exterior lighting disorients these night-flying seabirds, especially fledglings, as they make their way from land to sea during the summer and fall. When disoriented, seabirds often collide with manmade structures and, if not killed outright, the dazed or injured birds are easy targets for feral mammals. There is no suitable nesting habitat within the project area for these birds.

Aside from the Hawaiian Hawk, few species of native forest birds would be expected on the Property due to its relatively low elevation (1,225 feet above sea level) and dominance by eucalyptus, which is inappropriate habitat. The Hawai‘i ‘Amakihi (*Hemignathus virens virens*) and the ‘Apapane (*Himatione sanguinea*) might occasionally be present.

Eucalyptus trees can offer habitat to Hawai‘i’s only land mammal, the endangered ‘ope‘ape‘a or Hawaiian hoary bat (*Lasiurus cinereus semotus*).

Impacts and Mitigation Measures

Although eventual construction of water facility infrastructure will likely involve clearing of all vegetation, the acquisition or use of the Property will not induce any adverse botanical impacts. To minimize impacts to the endangered Hawaiian hoary bat, initial clearing of the Property should avoid removal or trimming of woody plants taller than 15 feet from May 15 through August 15 each year. This period is the most vulnerable time in the bat birthing and pup rearing season, and refraining from vegetation removal or trimming is recognized as appropriate by the U.S. Fish and Wildlife Service. Additionally, the DWS should arrange a pre-construction nest search by a qualified ornithologist using standard methods if any land clearing occurs between the months of March and September, inclusive, which is the nesting period for Hawaiian Hawks. If Hawaiian Hawks are present, no land clearing should be allowed until at least October.

Under the assumption that no tower or unshielded exterior lighting will be involved in the development of the water system infrastructure, there should be no impact to listed seabirds.

3.1.4 Air Quality, Noise and Scenic Resources

Environmental Setting

Air pollution in East Hawai‘i 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 blankets the area. The persistent tradewinds keep the project area relatively free of vog for most of the year.

Noise on the Property is low and derived mainly from agricultural and some residential activities, with occasional noise from motor vehicles on the adjacent Chin Chuck Road.

The broader project area contains several sites considered significant for their scenic character in the Hawai‘i County General Plan, primarily the view of Hakalau Bay (TMK 2-9-02) and Hakalau Gulch (TMK 3-1-01). No scenic sites or vantages are located on or near the Property.

Impacts and Mitigation Measures

As the proposed action involves only acquisition of land it will not measurably affect air quality or noise levels. Air quality would be affected minimally during future grubbing, grading and construction of improvements on the Property should it be acquired. This would be covered in the future EA for the proposed improvements. Generally, in order to minimize impacts from dust, the contractor would consult with the Department of Health (DOH) and, if required, prepare a dust control plan compliant with provisions of Hawai‘i Administrative Rules, Chapter 11-60.1, “Air Pollution Control,” and Section 11-60.1-33, “Fugitive Dust.”

Eventual construction, should it occur, would entail grading, compressors, vehicle and equipment engine operation that may generate noise exceeding 95 decibels at times, impacting nearby noise sensitive receptors, including nearby residences. In cases where construction noise is expected to exceed the DOH “maximum permissible” property-line noise levels, contractors must obtain a permit per Title 11, Chapter 46, HAR (Community Noise Control) prior to construction. DOH reviews the proposed activity, location, equipment, project purpose, and timetable in order to decide upon conditions and mitigation measures, such as restriction of equipment type, maintenance requirements, restricted hours, and portable noise barriers.

The No Action Alternative might present no potential noise impacts to the few nearby sensitive receptors, but it should be noted that if the County does not acquire the Property, homes or other improvements could be built on it, which might also produce noise impacts.

No important viewplanes, scenic sites or vantages, including those recognized in the Hawai‘i County General Plan, would be affected by either the acquisition of or future construction on the Property.

3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions

Environmental Setting, Impacts and Mitigation Measures

To DWS officials’ knowledge, there have been no spills or other incidents involving hazardous or toxic substances. No permanent or temporary land use that would tend to result in these conditions appears to have ever occurred on the Property, which is former sugar cane land and currently planted in eucalyptus. The cultivation of sugar cane in the past may have involved application of agricultural chemicals. Typically, applications of pesticides and herbicides to sugar crops was limited. Arsenic-based pesticides and herbicides were historically used on sugar plantations between the early 1900s through the mid-1950s. Some recent studies have indicated that there may be elevated concentrations of arsenic in the shallow surface soils on former sugar cane lands (HDOH-HEER 2010). In general, however, unless an assessed site contained an agricultural chemical mixing or storage area, the agricultural chemicals used at a site do not pose a hazard to surface development.

It appears that the project site does not appear to pose any unreasonable risk in terms of worker or public exposure to hazardous materials or toxic substances. The DWS may investigate the Property further, including preparation of a Phase I Environmental Site Assessment, after purchase of the Property, if evidence of suspicious materials or conditions emerges.

3.2 Socioeconomic and Cultural

3.2.1 Socioeconomic Characteristics

Table 2 provides information on the socioeconomic characteristics of Hakalau along with those of Hawai'i County as a whole for comparison, from the 2000 U.S. Census of Population.

The future construction of a water well and water tank reservoir would enhance public health and safety for this rural area. No relocation of businesses or homes, disruption of local traffic patterns, substantial effects to neighborhood character or integrity, or any other social impacts are involved in the proposed action.

Table 2. Selected Socioeconomic Characteristics

CHARACTERISTIC	COUNTY OF HAWAI'I	HAKALAU
Total Population	148,677	370
Percent Caucasian	31.5	34.1
Percent Asian	26.7	38.1
Percent Hawaiian	9.7	1.4
Percent Two or More Races	28.4	24.3
Median Age (Years)	38.6	46.2
Percent Under 18 Years	26.1	20.8
Percent 65 Years and Over	13.5	23.2
Percent Households with Children	21.3	16.8
Average Household Size	2.75	2.61
Percent Housing Vacant	15.5	7.8

Source: U.S. Bureau of the Census. May 2001. *Profiles of General Demographic Characteristics, 2000 Census of Population and Housing, Hawai'i*. (U.S. Census Bureau Web Page).

While the No Action Alternative would not require the expenditure of public funds and would not produce any neighborhood impacts, it would obviate public benefit from the project.

3.2.2 Cultural and Historic Resources

Background

The Property is located in the *ahupua'a* of Hakalau Nui, in the South Hilo District (close to the border with North Hilo) on the northeast side of the Island of Hawai'i. Hakalau, in the Hawaiian language, is literally translated as “many perches” (Pukui and Elbert 1974), which may be related to the topography of the area, which includes numerous gulches and high seacliffs.

According to the model developed by Kirch (1985), the Settlement or Colonization period of Hawai'i is believed to have occurred between A.D. 300-600 from the southern Marquesas Islands. Early Hawaiian farmers developed new subsistence strategies during this period, adapting familiar patterns and traditional tools for use in their new environment. Order was kept through adherence to their ancient and ingrained philosophy of life and through the principle of genealogical seniority. According to Fornander (1973), Hawaiians brought from their homeland a variety of Polynesian customs including the major gods of Kane, Ku and Lono; the *kapu* system of law and order; *pu'uhonua* or places of refuge or asylum; the *'aumakua* concept of a family or ancestral spirit and the concept of *mana*.

The Development Period, which lasted from A.D. 600-1100, brought changes that included an evolution of traditional tools as well as some distinctly Hawaiian inventions. The evolution of the adze was an example of the former, while the latter included the two-piece fishhook and the octopus-lure breadloaf sinker. Another invention was the *lei niho palaoa*, an item worn by those of high rank which represented a trend toward greater status differentiation.

The Expansion Period from A.D. 1100 to 1650 saw an increase in social stratification and major socioeconomic changes. It also was a time of expansive settling, with the development of the most favorable windward areas as well as more marginal areas on the island's leeward side. This was the time of the greatest population growth as large irrigated field systems were developed and expanded into more arid areas. *Loko* or fishpond aquaculture also flourished during this period.

The second major migration to Hawai'i also occurred during the Expansion Period, with the settlers for this expansion coming from Tahiti in the Society Islands.

The earliest historical knowledge of Hilo comes from legends written by Kamakau (1961) of a 16th century chief 'Umi-a-Liloa (son of Liloa), who at that time ruled the entire island of Hawai'i. Descendants of Umi and his sister-wife were referred to as “Kona” chiefs, controlling Ka'ū, Kona, and Kohala, while descendants of Umi and his Maui wife were “Hilo” chiefs, controlling Hāmākua, Hilo, and Puna (Kelly 1981:1). According to Kamakau (1961), both sides fought over control of the island, desiring access to resources such as feathers, *māmaki* tapa, and canoes on the Hilo side, and *wauke* tapa, and warm lands and waters on the Kona side (c.f. Kelly 1981:3).

The concept of the *ahupua'a* was established in Hawai'i during the 15th century, adding a new component to what was already a well-stratified society. *Ahupua'a* were usually wedge or pie-shaped, encompassing all of the eco-zones from the mountains to the sea and extending several hundred yards beyond the shoreline, assuring a diverse subsistence resource base. This land unit became the equivalent of a local community with its own social, economic and political significance.

Cordy (1994) developed a settlement model for the adjacent region of Hāmākua using a variety of early historic records and accounts, which probably applies to the Hakalau area as well. The model posited four basic zones: the seashore, seaward upland slopes, *'ohi'a-koa* forest, and gulches. The shoreline, which in most places is just a pile or rubble at the base of the cliff, was used to gather shoreline resources and fish. *Ahupua'a* boundary markers in the form of *ahu* (stone cairns) were placed on the shore. Most of the habitation and agriculture happened on the seaward upland slopes (where the Property is located), which were transected by the main trail paralleling the coast between 0.3 and 1.3 miles inland. Three to four families lived in the residential structures. The families farmed mainly dryland taro, with bananas, sweet potatoes, sugar cane, and livestock in the form of pigs, chickens and dogs. The area also held *heiau*, or temples, and smaller shrines. Trails led to the *'ohi'a-koa* forest zone (where the Property is located), as wood, bark, feathers, wild bananas and fruit that could be used for dye could be obtained there. *Ahu* marking *ahupua'a* boundaries were also present in gulches.

Hawai'i's history took a sharp turn on January 18, 1778 with the arrival of British Capt. James Cook in the islands. On a return trip to Hawaii ten months later, Kamehameha visited Cook aboard his ship the Resolution off the east coast of Maui and helped Cook navigate his way to Hawai'i Island. Cook exchanged gifts with Kalaniopu'u at Kealakekua Bay the following January, and Cook left Hawai'i in February. However, Cook's ship then sustained damage to a mast in a severe storm off Kohala and returned to Kealakekua, setting the stage for his death on the shores of the bay.

The following year, in 1780, Kalaniopu'u designated his son, Kiwalao, to be his successor, and granted Kamehameha guardianship of the war god Ku'ka'ilimoku. When it appeared Kiwalao was not honoring his land claims, Kamehameha usurped Kiwalao's authority with a sacrificial ritual and retreated to his district of Kohala where he farmed the land, growing taro and sweet potatoes. Civil war broke out when Kalaniopu'u died in 1782 and Kiwalao was killed. The wars between Maui and Hawai'i Island would continue until 1795.

Two American vessels visited Hawaiian waters in 1790. The crew of one of the ships, the Eleanor, massacred more than 100 Hawaiians at Olowalu on Maui before leaving crewmember John Young on land. The other vessel, the Fair American, was captured off the western coast of Hawai'i and its entire crew – with the exception of Isaac Davis – was killed. Kamehameha did not take part but kept the Fair American as part of his fleet. Young eventually made his way to Hawai'i Island where he became governor, living at Kawaihae.

By 1796, Kamehameha had conquered every island kingdom except Kauai, but it wasn't until 1810, after Kaumuali'i of Kauai pledged his allegiance to Kamehameha, that all of the Hawaiian Islands were unified under a single ruler.

Following the death of Kamehameha I in 1819, the Hawaiian religious and political systems underwent radical change. Just moments after Kamehameha's death, Ka'ahumanu proclaimed herself "*Kuhina nui*" (Prime Minister), and within six months the ancient *kapu* system was overthrown. Less than a year after Kamehameha's death, Protestant missionaries arrived from America (Kamakau 1961, and Fornander 1973).

The *Mahele 'Aina* or division of lands that took place in 1848 placed all land in Hawai'i into three categories: Crown Lands, Government Lands and Konohiki Lands. Ownership rights were subject to the rights of the native tenants, or those individuals who lived on the land and worked it for their subsistence and for their chiefs.

Like all the area between Hilo and Kohala, the cliffs, steep valleys and streams in the project area presented major obstacles to foot travel in traditional times. According to Cordy (1994), the *ahupua'a* in Hāmākua were probably centered on the main drainages and the boundaries typically followed natural features such as ridges and drainages. The many small *ahupua'a* along the coast probably arose because land units became divided in the lower elevation areas where traditional agriculture and settlement were concentrated. Smaller units of land, the *ili*, which like *ahupua'a* were oriented perpendicular to the shoreline and provided access to a diverse range of natural resources, were significant for their association with the *'ohana* as the family land holding unit, an important social element in the traditional Hawaiian land use system. The same was probably true in this adjacent region of the Hilo *moku*. King David Kalakaua (1972) described the region between Hilo and Waipi'o as follows:

"In the time of Līloa [c. 1400s], and later, this plateau was thickly populated, and requiring no irrigation, was cultivated from the sea to the line of frost. A few *kalo* patches are still seen, and bananas grow, as of old, in secluded spots and along the banks of the ravines; but the broad acres are green with cane, and the whistle of the sugar cane-mill is heard above the roar of the surf...(1972:284)."

One of the earliest western visitors to the rugged windward coast was British missionary William Ellis, who wrote of his journey in 1823 from Hilo to Waimea:

"The coast from Waiakea to this place is bold and steep, and intersected by numerous valleys or ravines; many of these are apparently formed by the streams from the mountains, which flow through them to the sea. The rocks along the coast are volcanic, generally a brown vesicular lava. In the sides and bottoms of some the ravines, they were occasionally of very hard compact lava, or a kind of basalt.

This part of the island, from the district of Waiakea to the northern point, appears to have remained many years undisturbed by volcanic eruptions. The habitations of the natives generally appear in clusters at the opening of the valleys, or scattered over the face of the high land. The soil is fertile, and herbage abundant" (Ellis 1979).

The numerous gulches of the Hilo and Hāmākua districts also presented a challenge to Isabella Bird, who wrote of her travels from Hilo to Waipio in 1873. Making the trip on the back of a mule, Bird described how the methods of traversing the gulches had evolved from the use of ropes and mountaineering methods to four-legged mounts, which were somewhat less physically taxing but no less exciting as the animals would “slip, jump and scramble” up and down steep pathways, with rivers or streams to be crossed in nearly every ravine. The difficulties meant that such travel was not taken lightly, and only those with good reason would attempt the journey to areas made remote by geography. Those included *paniolo*, who would round up several dozen of the many semi-wild bullocks roaming the slopes of Mauna Kea and drive them to Hilo. One of the gulches she crossed was at Hakalau:

“All of the gulches for the first twenty-four miles contain running water. The great Hakalau gulch we crossed early yesterday, has a river with a smooth bed as wide as the Thames at Eton” (Bird 1964).

Plantation cultivation of sugar cane took hold in the area around the mid-19th century. The Metcalf Plantation was founded in Kaupakuea, about three miles southeast of the Property, in 1857. In 1861 the plantation became the first in Hawai‘i to use the vacuum pan in the production of sugar. In 1874, following the death of plantation owner Theophilus Metcalf, the plantation was purchased by Honolulu businessman Chun Afong, who changed its name to Pepeekeo Sugar Company. The plantation was purchased in 1893 by Alexander Young, who sold his interest to C. Brewer and Company in 1904. In 1946, Honomu Sugar Company, which was located between Pepeekeo and the Property, merged with Pepeekeo Sugar. Hakalau Sugar Company was added to the plantation in 1963. In 1971, the Wainaku, Hakalau, Pepeekeo and Papaikou sugar companies were consolidated into a cooperative, Hilo Coast Processing Company, which included independent cane growers. Two years later it merged with Mauna Kea Sugar Company (formerly known as Onomea Sugar), which, with 18,000 acres, became the State’s fourth largest plantation. At that time the mills at Wainaku and Hakalau were closed and the Pepeekeo mill modernized (HSPA 1988). Sugar cane cultivation persisted until the late 1980s in this area.

From 1909 to 1913, the Hāmākua Division of the Hilo Railroad was built to service sugar mills north of Hilo (<http://www.thetrainmuseum.com/history.htm>). The cost of expanding the railway from Hilo and Puna, which included the building of 13 trestles and more than a half-mile of tunnels spanning gulches, proved to be too much for the railroad company, which was sold in 1916 and reorganized into the Hawaii Consolidated Railway. In addition to the conveyance of sugar, the new company also operated a sightseeing service called the Scenic Express that provided passengers with views of the rugged Hāmākua Coast. During World War II, the railroad carried battle-weary troops bound for Camp Tarawa in Waimea. The tsunami that struck the island on April 1, 1946 collapsed the bridges and trestles, which proved a fatal blow to the rail line. The Territory of Hawai‘i later acquired the rights-of-way, some of which are still used for the current highway. (<http://www.oralhistory.hawaii.edu/pages/historical/tsunami.html>). Steel salvaged from dismantled bridges was used to widen railroad bridges to accommodate motor vehicle traffic. Among the most notable examples is the bridge over Hakalau Gulch, which was widened to two lanes with salvaged steel (Birnie n.d.).

In 2006, Continental Pacific LLC, which purchased some of the HCPC property following its closing in 1994, donated the oceanfront site of the former Hakalau Sugar Mill to the County of Hawai‘i. County officials noted that since the closure of the mill in 1973 the beach area, one of the few shoreline areas on the Hilo-Hāmākua coast with relatively easy ocean access, had become popular with surfers, fishermen and beachgoers. The former mill site included an easement leading from the County road (*Hawai‘i County Weekly News*, May 12, 2006). Access practices to both mountain and shoreline areas, which have changed since the days of the plantations when all residents were part of an economic community, continues to be an important issue in Hāmākua.

Archaeological Resources

The surface of the Property was repeatedly disturbed by sugar cane cultivation for over a century, followed by over four decades of eucalyptus tree plantation. No archaeological remains are present. In a January 3, 2011 letter, Acting Archaeology Branch Chief of the State Historic Preservation Division (SHPD) Theresa Donham stated:

“We have no records of known historic properties within or near the proposed tank and well parcel, which is situated at approximately 1,225-ft elevation along Chin Chuck Road. Historic maps of the Hakalau Plantation on file in our office indicate that the proposed site is within the area intensively cultivated for sugar through the mid-twentieth century. There are no indications of former flumes or ditches that could have potential historic value within this parcel. We have previously responded to a request for Chapter 6E and National Historic Preservation Act Section 106 consultation regarding Eucalyptus and Albizia timber harvesting within Parcel 56. In this prior review, we determined that no historic properties would be affected due to prior use of the parcel for sugar cane cultivation (*Log 25400, Doc. 0005MS01*).

We have received no new information regarding this parcel since the May 18, 2000 review and believe that **no historic properties will be affected** by the acquisition and use of one acre for a water reservoir.” (see full text of letter in Appendix 1a)

Despite the apparent absence of archaeological resources, it is recommended that as a further precaution during future development of the Property for a well and water tank reservoir, contractors be made aware of the possibility of uncovering cultural material. Contractors should be required, in the unlikely event that human skeletal remains, undocumented archaeological resources, or cultural or traditional remains are encountered during ground disturbance, to halt work in the immediate area of the discovery and contact the State Historic Preservation Division as outlined in Hawai‘i Administrative Rules 13§13-275-12.

Cultural and Archaeological Resources

As discussed in the previous section, no archaeological remains reflecting cultural history or supporting cultural values are present. The context of the Property is private agricultural property along Chin Chuck Road. The vegetation is eucalyptus planted after sugar cane agriculture and does not contain the quality and quantity of resources that would be important for native gathering.

Furthermore, no caves, springs, *pu 'u*, native forest groves, gathering resources or other natural features are present on or near the Property. The Property does not support any traditional resource uses, nor are there any Hawaiian customary and traditional rights or practices known to be associated with the property. In summary, it would appear that no known valuable natural, cultural or historical resources are present. As part of the EA an effort was made to obtain information about any potential traditional cultural properties and associated practices that might be present, or have taken place in this area of Hakalau. The State Historic Preservation Division and the Office of Hawaiian Affairs were contacted by letter, as were neighbors. No information regarding specific resources or activities on or near the Property was provided.

Given the context, with no archaeological or other historic properties, no association with cultural history or legend, no resources important for native gathering or ceremonial activities, and no indications of cultural use or value, it would appear that no valuable natural, cultural or historical resources would be affected.

Although there are no indications so far from literature review or consultation with the State Historic Preservation Division, the Office of Hawaiian Affairs, or local residents knowledgeable about Hawaiian cultural practices that there are any traditional cultural properties or practices on or near the large agricultural lot that includes the Property, various parties including the Office of Hawaiian Affairs and State Historic Preservation Division were supplied a copy of the Draft EA in order to help finalize this finding. No party reviewing the Draft EA supplied any cultural information.

3.3 Infrastructure

3.3.1 Utilities

Existing Facilities and Services, Impacts and Mitigation Measures

Electrical power to the site is supplied along Chin Chuck Road by Hawai'i Electric Light Company (HELCO), a privately owned utility company regulated by the State Public Utilities Commission, via its island-wide distribution network. Telephone service is provided to the site by Hawaiian Telcom. However, while utilities are anticipated to be required for future contemplated improvements, none are required for the proposed action as it involves only acquisition of property. Sewage facilities in the area consist of individual wastewater systems, although none is required for the proposed action nor the anticipated future construction of DWS facilities.

3.3.2 Roadways and Traffic

Existing Facilities

Access to the Property would be from Chin Chuck Road, which is maintained by the County of Hawai'i and intersects with Highway 19 approximately 2.7 miles *makai* of the Property. Chin Chuck Road has two lanes for the first 1.5 miles *mauka* of Highway 19 and for the next two miles, including the section fronting the Property, it is a one-lane road. The Property lies approximately a half-mile

from the *mauka* end of Chin Chuck Road in an area with only a few farms and residences and very light traffic.

Impacts and Mitigation Measures

Because the proposed action involves only acquisition of property, its implementation would have no effect on local traffic. Impacts from any subsequent proposed construction of DWS facilities would be addressed in a future EA, but they would likely be limited and mitigable by a construction-phase traffic control plan involving warning signs and flagmen.

3.4 Secondary and Cumulative Impacts

3.4.1 Growth-Inducing and Other Secondary Impacts

Growth-Inducing Impacts

The provision of roads, electrical utilities, water supply and similar infrastructure may not only serve but also induce growth, whether planned or unplanned. This can produce a wide variety of secondary impacts, such as increased traffic and demand for public services that may exceed the cost of tax revenues gained by development.

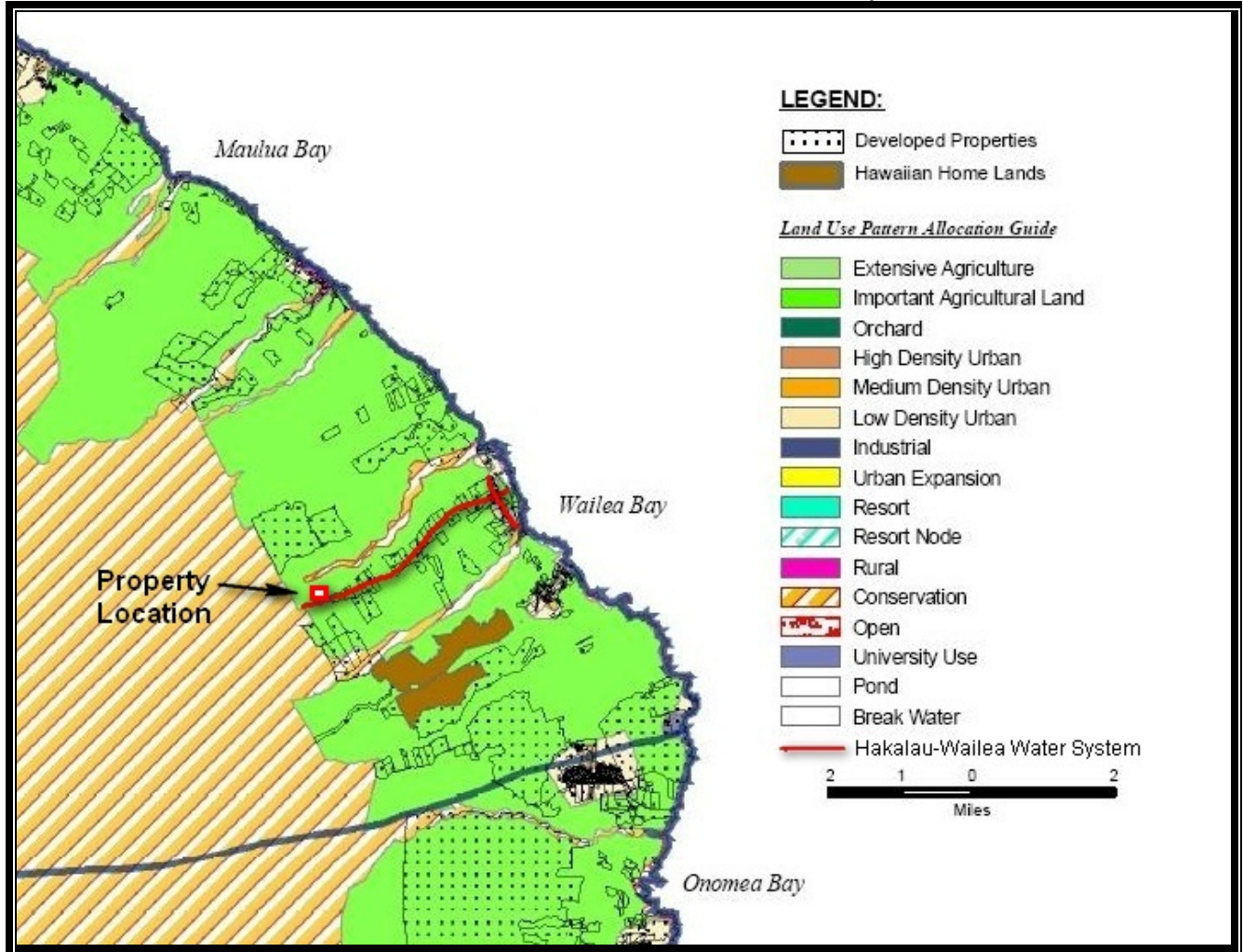
As discussed in Section 1.1, the limitation on source, storage and transmission in the DWS service areas of Hakalau-Wailea has generally not restricted existing residential and agricultural properties from acquiring one meter per lot. However, it has constrained the ability to provide additional water for new agricultural subdivisions, *ohana* properties, etc. Although as discussed in Section 1.1, the priority function of the new facilities that acquisition of the Property would make possible would be to provide system redundancy, there will be some additional water services for future residential, agricultural, and perhaps even commercial and industrial development. The actual number and nature of potential new services cannot be estimated at this point, when the capacity of the well and the sizing of the water tank reservoir have not been determined and the system has not been tested. The growth-inducing effects, if any, of the future water infrastructure must also await specific details on the nature and timing of that infrastructure in the context of the land use designations in existence at that time. Water supply is a necessary – but not sufficient – condition for development. In other words, there are many other factors that must be in place for subdivision to be practical. Assuming appropriate zoning, there are still the factors of roadway and drainage improvements, which depend on property attributes such as slope, hydrology, and location relative to roads and highways. These may be critical factors affecting the potential price and sometimes even the feasibility of a subdivision. Also important is the market price and rate of absorption of subdivided lots, which vary through time. These factors, and not the availability of potable water supply, are the principal reason that there are thousands of acres of property in South Hilo, North Hilo and Hāmākua that could potentially be subdivided but have not been.

What is known is the number and location of water credits that will be supplied to the current Property owner as compensation for subdividing and providing the Property at a location desired by the DWS. Per the agreement negotiated between the owner and previous owner and the Water Board, upon dedication of the Property to the Water Board and restoration of the Hakalau Iki Spring, the Shropshire Group, LLC (former property owner) will be allocated eight additional equivalent units for use on TMKs 2-9-002:079 and 081, subject to payment of the prevailing facilities charges. These units are one component of the infrastructure required to develop these industrially zoned properties *makai* of Highway 19. If other than industrial uses are proposed, these properties would likely require a change of zone, during which time the environmental impacts and other aspects of the project would be studied and disclosed as part of the process, which involves a recommendation by the Planning Commission and a vote by the County Council. After the completion of the future planned water improvements on the Property, the DWS will issue an additional seventeen equivalent units of water, subject to payment of the prevailing facilities charges, to property owner Kupaianaha, LLC, for use on the property from which the project site is being subdivided, TMK 2-1-004:056. These water equivalent units will likely be used to subdivide this 588-acre agricultural property into additional lots. Such lots in the Chin Chuck Road area would match the General Plan Designation (Important Agricultural Lands), zoning (Agriculture, 20-acre minimum lot size), and adjacent land use, which consists of approximately 160 large agriculture lots. The total level of development represented by these additional 25 units is relatively modest. The impacts on public infrastructure and traffic of developing these lots combined with those of others that could possibly ensue the water system development will be addressed during: 1) the EA that would occur at the time the new well and water tank reservoir are proposed and 2) land use approvals for actual development proposals that come forward, if and when they do.

Although the exact location and rate of new development cannot currently be forecasted, a very important factor in the analysis of induced growth is the extent to which community plans call for additional growth, and whether the scale of potential growth is within the scope of the community vision. The best existing guide for this the Hawai‘i County General Plan, and in particular the Land Use Pattern Allocation Guide (LUPAG) map. The LUPAG map is a graphic representation of the Plan and helps establish the basic urban and non-urban form for areas. Figure 5 depicts the LUPAG classification in the Hakalau-Wailea water system area. Nearly the entire area is classified as Important Agricultural Lands, with some Conservation land as well. A very limited area of industrial land is present above Hakalau Bay near the former sugar cane mill. Zoning matches the LUPAG classification for most of this area, and new “developments” proposed within the framework of existing designations would likely to take the form of large lot agricultural subdivisions, which is consistent with existing land use. As discussed previously, any new development near Hakalau Bay would be required to conform with the zoning in place at the time.

Given the context – a large number of existing properties that even without additional water services could be developed with homes or subdivisions but have not done so, as well as other and often more difficult to overcome requirements for subdivision including roads, drainage improvements, and markets for lots – the future water system improvements are unlikely to trigger any large or rapid growth spurt in Hakalau-Wailea area. Secondary effects of rapid, unplanned growth, such as

Figure 5
LUPAG Classifications in Hakalau-Wailea Water System Area



Source: Draft County of Hawai'i Water Use and Development Plan

overcrowded schools or traffic congestion, do not appear likely. However, the provision of more secure and reliable water service and improved fire protection, as well as perhaps an increase in the number of water services, may also serve additional development that serves community vision, which is being defined in the developing Hāmākua Community Development Plan.

Other Secondary Impacts

Aside from the potential for indirect growth induction, as discussed above, neither the purchase of the Property by the County nor the ensuing construction of water system facilities would involve any secondary impacts. Although the Project would provide some short-term construction jobs, these would almost certainly be filled by local residents and would not induce in-migration.

3.4.2 Cumulative Impacts

Cumulative impacts result when implementation of several projects that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. The adverse effects of eventual development of the Property for a water well and water tank reservoir– very minor and temporary disturbance to air quality, noise, visual quality during construction – are very limited in severity, nature and geographic scale. While development of residential, road and industrial projects of relatively small scale takes place periodically in the Rural South Hilo, review of projects listed in the OEQC *Environmental Notice* and other sources indicates no major projects that would tend to produce impacts that would accumulate with those from a water well and water tank reservoir. This situation would be re-examined during the EA for the water system infrastructure when it is specifically proposed.

3.5 Required Permits and Approvals

The following permits and approvals would be required for purchase of the Property:

- Hawai‘i County Planning Department Subdivision Approval

A determination of the specific permits required for the future development of water infrastructure would be determined as part of the EA for such facilities, if and when they are proposed.

3.6 Consistency With Government Plans and Policies

3.6.1 Hawai‘i State Plan

Adopted in 1978 and last revised in 1991 (Hawai‘i Revised Statutes, Chapter 226, as amended), the Plan establishes a set of themes, goals, objectives and policies that are meant to guide the State’s long-run growth and development activities. The three themes that express the basic purpose of the *Hawai‘i State Plan* are individual and family self-sufficiency, social and economic mobility and community or social well-being. The proposed project would promote these goals by allowing for the future enhancement of public health and safety on the Island of Hawai‘i, thereby enhancing quality-of-life and community and social well-being.

3.6.2 Hawai‘i State Land Use Law

All land in the State of Hawai‘i is classified into one of four land use categories – Urban, Rural, Agricultural, or Conservation – by the State Land Use Commission, pursuant to Chapter 205, HRS. The property is in the State Land Use Agricultural District. The proposed use is consistent with intended uses for this Land Use District.

3.6.3 Hawai‘i County Zoning and General Plan

Hawai‘i County General Plan Land Use Pattern Allocation Guide (LUPAG). The LUPAG map component of the *General Plan* is a graphic representation of the Plan’s goals, policies, and standards as well as of the physical relationship between land uses. It also establishes the basic urban and non-urban form for areas within the planned public and cultural facilities, public utilities and safety features, and transportation corridors. As discussed in Section 3.4.1, the General Plan LUPAG designation for the Property is Important Agricultural Lands. As the action is a public purpose use, the action is consistent with this designation.

Hawai‘i County Zoning and SMA. County zoning is A-20a (Agriculture, minimum lot size 20 acres). The Hawai‘i County Code, Chapter 25, Section 25-4-11(c) states: that “Public uses, structures and buildings and community buildings are permitted uses in any district, provided that the director has issued plan approval for such use.” Minimum lot size requirements do not apply for such public purposes uses. Therefore, subdivision of a one-acre lot for water system infrastructure would be allowed by the Hawai‘i County Planning Department. The Property is not situated within the County’s Special Management Area (SMA).

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

PUBLIC UTILITIES

Goals

- (a) Ensure that properly regulated, adequate, efficient and dependable public and private utility services are available to users.
- (b) Maximize efficiency and economy in the provision of public utility services.
- (c) Design public utility facilities to fit into their surroundings or concealed from public view.

Policies

- (a) Public utility facilities shall be designed to complement adjacent land uses and shall be operated to minimize pollution or disturbance.
- (b) Provide utilities and service facilities that minimize total cost to the public and effectively service the needs of the community.
- (c) Utility facilities shall be designed to minimize conflict with the natural environment and natural resources.
- (d) Improvement of existing utility services shall be encouraged to meet the needs of users.
- (f) Develop short and long-range capital improvement programs and plans for public utilities within its jurisdiction that are consistent with the General Plan.

Public Utilities – Water

Policies

- (a) Water system improvements shall correlate with the County's desired land use development system.
- (b) All water systems shall be designed and built to Department of Water Supply standards.
- (c) Improve and replace inadequate systems.
- (e) Water system improvements should be first installed in areas that have established needs and characteristics, such as occupied dwellings, agricultural operations and other uses, or in areas adjacent to them if there is need for urban expansion.
- (f) A coordinated effort by County, State and private interests shall be developed to identify sources of additional water supply and be implemented to ensure the development of sufficient quantities of water for existing and future needs of high growth areas and agricultural production.
- (k) Promote the use of ground water sources to meet State Department of Health water quality standards.

Standard

- (a) Public and private water systems shall meet the requirements of the Department of Water Supply and the Subdivision Control Code.

Courses of Action – South Hilo

- (a) Continue to implement water system maintenance and improvement programs in order to provide the city with a dependable and consistently safe drinking water supply.
- (c) Further investigate future ground water resources.
- (d) Replace existing surface sources with groundwater sources to meet State Department of Health standards.

Discussion: The proposed action satisfies relevant policies, standards and courses of action related to water systems in the South Hilo District.

PUBLIC LANDS – GOALS

- (a) Utilize publicly owned lands in the best public interest and to the maximum benefit for the greatest number of people.
- (b) Acquire lands for public use to implement policies and programs contained in the General Plan.

Discussion: The action would acquire land that would be publicly owned and that would implement General Plan policies.

PART 4: DETERMINATION

Based on the findings below, and upon consideration of comments to the Draft EA, the Hawai‘i County Department of Water Supply has determined that the Proposed Action will not significantly alter the environment, as impacts will be minimal, and has therefore issued a Finding of No Significant Impact (FONSI).

PART 5: FINDINGS AND REASONS

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

1. *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* No valuable natural or cultural resources would be committed or lost. The surrounding area is mostly agricultural lots, some with residences or facilities that would directly benefit from the project.
2. *The proposed project will not curtail the range of beneficial uses of the environment.* The proposed action expands and in no way curtails beneficial uses of the environment.
3. *The proposed project will not conflict with the State's long-term environmental policies.* The State’s long-term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. The action is minor, environmentally beneficial, and the future water system infrastructure would fulfill aspects of these policies calling for an improved social and economic environment. It is thus consistent with all elements of the State’s long-term environmental policies.
4. *The proposed project will not substantially affect the economic or social welfare of the community or State.* The action would not have any adverse effect on the economic and social welfare of the County or State, and would facilitate improvements of the water system infrastructure of the Hakalau area, thereby improving public health and safety.
5. *The proposed project does not substantially affect public health in any detrimental way.* The future improvements made possible by the proposed action would benefit public health and safety by allowing for improvements to the Hakalau area’s water system infrastructure.
6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* No secondary effects are expected to result from the proposed action, which would allow improvement of water system facilities for an existing service area and would not induce in-migration or affect public facilities. Given the context – a large number of existing properties that even without additional water services could be developed with homes or subdivisions but have not done so, as well as other and often more difficult to overcome requirements for subdivision including roads, drainage improvements, and markets for lots – the future water system improvements are unlikely to trigger any large or rapid growth spurt in Hakalau-Wailea area. Secondary effects of rapid, unplanned growth, such as overcrowded schools or traffic congestion, do not appear likely. However, the provision of more secure and reliable water service and improved fire protection, as well as perhaps

additional water services, may also serve additional development that serves community vision, which is being defined in the developing Hāmākua Community Development Plan.

7. *The proposed project will not involve a substantial degradation of environmental quality.* The action involves only the acquisition of property by the County and is therefore minor and environmentally benign, and would not contribute to environmental degradation. Any future improvements will involve implementation of best management practices for construction that will avoid degradation of the environment in any substantial way.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* No endangered species of flora are present on the Property. Impacts to wide-ranging endangered fauna can be avoided by mitigation measures as specified.
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 action is not related to additional activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* No adverse effects on these resources would occur. Any future improvements resulting from the proposed action will include mitigation of construction-phase impacts which will preserve water quality. Ambient noise impacts due to construction will be temporary and restricted to reasonable daytime hours. Design features of modern wells and reservoirs help to mitigate permanent noise impacts, which will not be substantial.
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.* Although the Property is located in an area with volcanic and seismic risk, the entire Island of Hawai‘i shares this risk, and the acquisition of the Property is not imprudent. Future design and construction will employ standards appropriate to the seismic zone.
12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* No scenic vistas and viewplanes identified in the Hawai‘i County General Plan will be adversely affected by the action.
13. *The project will not require substantial energy consumption.* The purchase of the Property involves no energy use and no adverse effects are expected. Construction of future water system improvements will require only minimal consumption of energy. Water wells consume energy to operate but are essential to provide pure, sanitary water for public health and safety.

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

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ENVIRONMENTAL ASSESSMENT

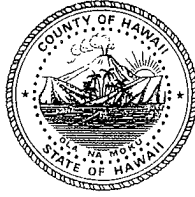
**County of Hawai'i Water Board
Purchase of Land on Chin Chuck Road
for Future Water Tank Reservoir and Well Site**

**County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawai'i 96720**

**APPENDIX 1a
Comments in Response to Early Consultation**

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William P. Kenoi
Mayor



Harry S. Kubojiri
Police Chief

Paul K. Ferreira
Deputy Police Chief

County of Hawai'i

POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawai'i 96720-3998
(808) 935-3311 • Fax (808) 961-8865

November 18, 2010

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

Dear Mr. Terry:

**Subject: Early Consultation for Environmental Assessment for County
Acquisition of Property in Hakalau for Future Water Supply Facilities
Location, TMK 2-9-004:056 (por.), South Hilo District, Island of Hawai'i**

Staff, upon reviewing the provided document, does not anticipate any significant impact to traffic and/or public safety concerns.

Thank you for allowing us the opportunity to comment.

If you have any questions, please call Captain Robert Wagner of our South Hilo Patrol Division at 961-2214.

Sincerely,

DEREK D. PACHECO
ASSISTANT POLICE CHIEF
AREA I OPERATIONS BUREAU

RW:lli

William P. Kenoi
Mayor



Darryl J. Oliveira
Fire Chief

Glen P. I. Honda
Deputy Fire Chief

County of Hawai'i
HAWAII FIRE DEPARTMENT
25 Aupuni Street • Suite 2501 • Hilo, Hawai'i 96720
(808) 932-2900 • Fax (808) 932-2928

November 16, 2010

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

Dear Mr. Terry,

**SUBJECT: EARLY CONSULTATION FOR ENVIRONMENTAL
ASSESSMENT FOR COUNTY ACQUISITION OF PROPERTY IN HAKALAU
FOR FUTURE WATER SUPPLY FACILITIES LOCATION, TMK: 2-9-004:056
(POR.), SOUTH HILO DISTRICT**

The Hawai'i Fire Department does not have any comments to offer at this time regarding the above-referenced early consultation on Environmental Assessment.

Thank you for the opportunity to comment. A copy or Notice of Availability of Environmental Assessment is not needed when completed.

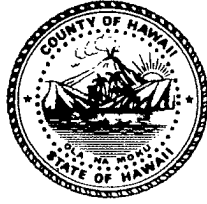
Sincerely,


DARRYL OLIVEIRA
Fire Chief

GA:lc



William P. Kenoi
Mayor



BJ Leithead Todd
Director

Margaret K. Masunaga
Deputy

County of Hawai'i

PLANNING DEPARTMENT

Aupuni Center • 101 Pauahi Street, Suite 3 • Hilo, Hawai'i 96720
Phone (808) 961-8288 • Fax (808) 961-8742

November 29, 2010

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

Dear Mr. Terry:

**SUBJECT: Early Consultation for Draft Environmental Assessment
Project: County Acquisition of Property in Hakalau for Future
Water Supply Facilities
TMK: (3) 2-9-004:056; Hakalau Nui, South Hilo, Hawai'i**

Thank you for your letter received November 12, 2010, requesting comments from this office regarding the Draft Environmental Assessment (DEA) for the County acquisition of property in Hakalau for future water supply facilities.

The subject parcel is zoned A-20a (Agricultural-20 acre minimum lot size) and is situated within the State Land Use Agricultural and Conservation Districts. In addition, according to the County of Hawai'i General Plan 2005 (amended December 2006), the subject property is designated as Important Agricultural Lands and Conservation by the Land Use Pattern Allocation Guide. The subject area is not within the Special Management Area (SMA).

According to Chapter 25 of the Hawai'i County Code, *any substation used by a public or private utility for the purpose of furnishing telephone, gas, electricity, water, sewer, radio, or television shall be a permitted use in any district provided that the use is not hazardous or dangerous to the surrounding area and the director has issued plan approval for such use.* Therefore, plan approval will be required for any future planned improvements to the property. Also please note that there is a pending Subdivision application (SUB-08-000711) for the subject parcel that received Tentative Subdivision Approval on March 11, 2009.

Mr. Ron Terry
Geometrician Associates, LLC
November 29, 2010
Page 2

We have no further comments to offer, at this time. However, please keep us informed and provide our department with a copy of the Final Environmental Assessment for our records.

If you have any further questions or if you need further assistance, please feel free to contact Bethany Morrison of this office at 961-8138.

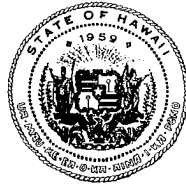
Sincerely,


BJ LEITHEAD TODD
Planning Director

BJM:cs

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LINDA LINGLE
GOVERNOR OF HAWAII



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

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

In reply, please refer to:
DOH/CWB

12012PSW.10

December 2, 2010

Mr. Ron Terry
Principal
Geometrician Associates, LLC
PO Box 396
Hilo, Hawaii 96721

Dear Mr. Terry:

**SUBJECT: Early Consultation for Environmental Assessment for County Acquisition of Property in Hakalau for Future Water Supply Facilities Location South Hilo District, Island of Hawaii, Hawaii
TMK: (3) 2-9-004: 056**

The Department of Health, Clean Water Branch (CWB), has reviewed the document received November 15, 2010 regarding the subject project and offers these comments. Please note that our review is based solely on the document for the subject project and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at

<http://hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf>

1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Anti-degradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

- a. Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. This includes areas used for a construction base yard and the storage of any construction related equipment, material, and waste products. An NPDES permit is required before the start of the construction activities.
- b. Hydrotesting water,
- c. Construction dewatering effluent.

You must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI forms may be picked up at our office or downloaded from our website at

<http://hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html>

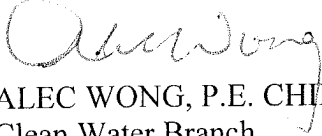
3. For other types of wastewater not listed in Item No. 2 above or wastewater discharging into Class 2 or Class AA waters, an NPDES individual permit will need to be obtained. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at
<http://hawaii.gov/health/environmental/water/cleanwater/forms/environmental/water/cleanwater/forms/indiv-index.html>
4. Please call the Army corps of Engineers at (808) 438-9258 to determine which Department of the Army (DA) permit(s) shall be required for the subject project. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.
5. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

Mr. Ron Terry
December 2, 2010
Page 3

12012PSW.10

If you have any questions, please visit our website at <http://hawaii.gov/health/environmental/water/cleanwater/index.html>, or contact the Engineering Section, CWB, at 586-4309.

Sincerely,


ALEC WONG, P.E. CHIEF
Clean Water Branch

SW:ml

c: DOH-EPO #I-3436 [via email only]



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

HRD10/5389

November 22, 2010

Geometrician Associates, LLC
Attention: Ron Terry
PO Box 396
Hilo, Hawai'i 96721

Re: Early consultation for Environmental Assessment for county acquisition of property in Hakalau for future water supply facilities location, TMK 2-9-004:056 (por.), South Hilo District, Island of Hawai'i

Aloha e Mr. Terry:

The Office of Hawaiian Affairs (OHA) is in receipt of your notice for early consultation on the above-referenced project. We thank you for the opportunity to provide input into the decision-making process.

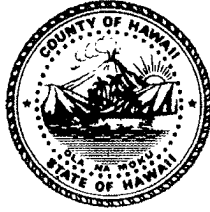
OHA understands that the Water Board and Department of Water Supply of the County of Hawai'i plan to acquire a one-acre portion of the subject parcel for a future site for a water tank reservoir and well. In order to comply with Chapter 343, Hawai'i Revised Statutes and Title 11, Chapter 200, Hawai'i Administrative Rules, your firm will prepare the draft Environmental Assessment (EA) that analyzes the impacts of the proposed project.

Based on the proposed analysis documented in your letter, OHA does not have any "comments on any special environmental conditions or impacts related to the purchase and proposed use." We look forward to receiving and reviewing the draft EA upon its completion.

'O wau iho nō me ka 'oia'i'o,

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

Clyde W. Nāmu'o
Chief Executive Officer



William P. Kenoi
Mayor

William T. Takaba
Managing Director

Frank J. DeMarco, P.E.
Director

Ivan M. Torigoe
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
25 Aupuni Street • Hilo, Hawai'i 96720
(808) 961-8083 • Fax (808) 961-8086
http://co.hawaii.hi.us/directory/dir_envmng.htm

December 1, 2010

Mr. Ron Terry
Principal
GEOMETRICIAN ASSOCIATES, LLC
P. O. Box 396
Hilo, HI 96721

RE: Early Consultation for Environmental Assessment for County Acquisition of Property in Hakalau for Future Water Supply Facilities Location, TMK:2-9-004:056 (por.), South Hilo District, Island of Hawai'i

Dear Mr. Terry,

We have no comments to offer on this project.

Thank you for allowing us to review and comment on this project.

Sincerely,

A handwritten signature in black ink that reads "Frank DeMarco".

Frank J. DeMarco, P.E.
DIRECTOR

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



KEITH R. RIDLEY
ACTING DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

LUD 3 2 9 004 056 – ID537
Hakalau Water Supply

December 14, 2010

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

Dear Mr. Terry:

Subject: Early Consultation for Environmental Assessment for County Acquisition of Property in Hakalau for Future Water Supply Facilities Location TMK (3) 2-9-004: 056, Chin Chuck Road, South Hilo, Hawaii 96720

Thank you for the opportunity to review the subject project which proposes to develop an area in South Hilo on Chin Chuck Road for a water supply facility. We have the following comments and information on the subject property:

We are concerned with any potential contamination to the water wells via improper domestic wastewater treatment and disposal from a nearby source. Our records indicate that there may be cesspools installed on nearby adjacent lots. We recommend that the new proposed well be located at least 1000 feet away from the nearest cesspool. In addition, any proposed individual wastewater treatment system for the new facilities should also be located at least 1000 feet from the proposed well.

Also, all wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62 "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules.

Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at phone (808) 586-4294 or fax to (808) 586-4300.

Sincerely,

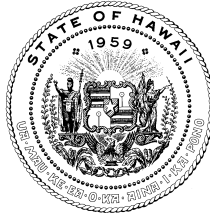
A handwritten signature in black ink, appearing to read "Marshall Lum".

MARSHALL LUM, P.E., ACTING CHIEF
Wastewater Branch

LM:lmj

c: DOH's Environmental Planning Office (EPO I-3436)
DOH-WWB's Hilo Staff – Mr. Jerry Nunogawa

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

WILLIAM J. AILA, JR.
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY H. KAULUKUKUI
FIRST DEPUTY

WILLIAM M. TAM
INTERIM 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

January 3, 2010

Mr. Ron Terry
Geometrician Associates
P. O. Box 396
Hilo, Hawaii 96721
(rterry@hawaii.rr.com)

LOG NO: 2010.3708
DOC NO: 1101TD01
Archaeology

Dear Mr. Terry:

Subject: **Chapter 6E-8 Historic Preservation Review – Early Consultation
Environmental Assessment for County Acquisition of a Water Reservoir/Well Site
Hakalau Ahupua‘a, South Hilo District, Island of Hawai‘i
TMK: (3) 2-9-004: 056 (por.)**

Thank you for notifying us of this proposed project, which involves the acquisition of a 1.0-acre portion of the subject parcel by the County of Hawai‘i Department of Water Supply. The purpose of the acquisition is to allow for the eventual construction of a water tank and well.

We have no records of known historic properties within or near the proposed tank and well parcel, which is situated at approximately 1,225-ft elevation along Chin Chuck Road. Historic maps of the Hakalau Plantation on file in our office indicate that the proposed site is within the area intensively cultivated for sugar through the mid-twentieth century. There are no indications of former flumes or ditches that could have potential historic value within this parcel. We have previously responded to a request for Chapter 6E and National Historic Preservation Act Section 106 consultation regarding Eucalyptus and Albizia timber harvesting within Parcel 56. In this prior review, we determined that no historic properties would be affected due to prior use of the parcel for sugar cane cultivation (*Log 25400, Doc. 0005MS01*).

We have received no new information regarding this parcel since the May 18, 2000 review and believe that **no historic properties will be affected** by the acquisition and use of one acre for a water reservoir.

If you have any questions at this time, please contact me (808) 933-7653.

Aloha,

A handwritten signature in black ink, appearing to read "Theresa K. Donham".

Theresa K. Donham
Acting Archaeology Branch Chief
Historic Preservation Division

cc: Steve Shropshire
(steve@alohagreen.com)

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ENVIRONMENTAL ASSESSMENT

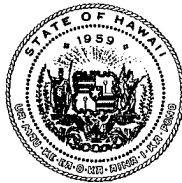
**County of Hawai'i Water Board
Purchase of Land on Chin Chuck Road
for Future Water Tank Reservoir and Well Site**

**County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawai'i 96720**

**APPENDIX 1b
Comments to Draft EA and Responses**

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NEIL ABERCROMBIE
GOVERNOR OF HAWAII



LORETTA J. FUDDY, A.C.S.W., M.P.H.
INTERIM DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

LUD 3 2 9 004 056 – ID634
Water Board Purchase

March 22, 2011

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

Dear Mr. Terry:

Subject: Draft Environmental Assessment County of Hawaii Water Board Purchase of Land on
Chin Chuck Road for Future Water Tank Reservoir and Well Site
Chin Chuck Road, Hakalau, Hawaii 96710 TMK (3) 2-9-004: 056

Thank you for the opportunity to review the subject project which proposes the purchasing of land on Chin Chuck Road for future water tank reservoir and well site. We have the following comments and information on the subject property:

We have no objections to the purchasing of land for the future water tank reservoir and well site. As stated previously, our main concerns are any potential contamination to the water wells via improper domestic wastewater treatment and disposal from a nearby source. Well placement should be upgradient of any existing or future individual wastewater treatment systems and at least 1,000 feet away.

Also, all wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62 "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules.

Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at (808) 586-4294 or fax to (808) 586-4300.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marshall Lum".

MARSHALL LUM, P.E., ACTING CHIEF
Wastewater Branch

LM:cle

c: DOH-WWB's Hilo Staff – Mr. Jerry Nunogawa

geometrician

ASSOCIATES, LLC
integrating geographic science and planning

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

May 5, 2011

Marshall Lum, P.E., Acting Chief
DOH Wastewater Branch
P.O. Box 3378
Honolulu HI 96801

Dear Mr. Lum:

Subject: Comment to Draft Environmental Assessment, County of Hawai'i Water Board Purchase of Land on Chin Chuck Road for Future Water Tank Reservoir and Well Site, TMK: (3rd.) 2-9-004:056 (por.)

Thank you for the comment letter dated March 22, 2011, indicating that your agency had no objections to the purchase of land for future DWS actions. In answer to your specific comments:

1. *Use of site for well relative to adjacent wastewater sources.* The County DWS shares your concern for safe drinking water. As indicated in the Draft EA, this issue would be investigated during the EA for the well and water tank reservoir, if and when they are proposed. Although there may be three to five properties with active or inactive residential cesspools or septic tanks within 1,000 feet, none are directly *mauka* of the well, which would tap an aquifer with a water table that would likely be over a thousand feet below the surface, relieving concerns over minor surface contamination from cesspools or septic tanks. Considering the depth of the well and the lack potential sources of contamination, good water quality is expected from an exploratory well in this area. Water quality tests will verify this, and only if the water meets standards will the well be incorporated into the DWS water system.

2. *Wastewater plans for facilities.* Currently, DWS does not envision any need for wastewater facilities at the site, but if plans change, DWS will ensure that all plans conform with applicable DOH Administrative Rules and understands that DOH may review the plans.

We very much appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090.

Sincerely,



Ron Terry, Principal, Geometrician Associates

Cc: Kurt Inaba and Ryan Quitoriano, Hawai'i County Department of Water Supply
Steve Shropshire



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

HRD10/5389B

April 7, 2011

Geometrician Associates, LLC
Attention: Ron Terry
PO Box 396
Hilo, Hawai'i 96721

Re: Comments on Draft Environmental Assessment for County of Hawai'i Water Board Purchase of Land on Chin Chuck Road for Future Water Tank Reservoir and Well Site, TMK 2-9-004:056 (por.), South Hilo District, Hawai'i

Aloha e Mr. Terry:

The Office of Hawaiian Affairs (OHA) is in receipt of your request for comments on the above-referenced project. We thank you for the opportunity to provide input into the decision-making process.

OHA understands that the Water Board and Department of Water Supply (DWS) of the County of Hawai'i plan to acquire a 1-acre portion (the Property) of a 588-acre parcel on Chin Chuck Road parcel near the 1,225-foot elevation in Hakalau, Hawai'i. The Property was chosen for its elevation in relation to the Water Master Plan for the area and will serve as a site for a water tank reservoir and well, which are needed to increase the reliability of water service for the area. As noted in your letter, DWS will be required to prepare another environmental review document for the installation of these features.

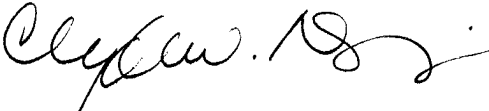
OHA notes that the proposed action involves substantial cooperation with the current landowner, the Kupaianaha, LLC and the previous landowner, Shropshire Group LLC. Under the terms of the agreement between Kupaianaha, Shropshire Group, and DWS, DWS will assist and pay for the costs of subdividing the parcel, pay for an independent appraisal of the property, and purchase the property for the appraised value. Shropshire Group will prepare the environmental review documents for the proposed action and dedicate the Property and all necessary easements to DWS. In exchange, Shropshire Group will receive 8 equivalent units of

Ron Terry
Geometrician Associates, LLC
April 7, 2011
Page 2 of 2

water (i.e., 600 gallons per day maximum daily usage) to be used on TMK (3) 2-9-002:079 & 81 and Kupaianaha will receive 17 equivalent units of water once all improvements are completed.

Based on the information contained in your letter, OHA does not oppose the finding of no significant impact for the proposed parcel acquisition. Thank you once again for the opportunity to comment. Should you have any questions, please contact Everett Ohta at 594-0231 or by email at everetto@oha.org.

‘O wau iho nō me ka ‘oia‘i‘o,



Clyde W. Nāmu‘o
Chief Executive Officer

C: OHA Trustee Robert K. Lindsey, Jr.
OHA Hawai‘i Community Resources Coordinator
Ryan G. Quitarano, Hawai‘i County Department of Water Supply

geometrician

ASSOCIATES, LLC
integrating geographic science and planning

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

May 5, 2011

Clyde Nāmu‘o, Administrator
Office of Hawaiian Affairs
711 Kapiolani Blvd., Suite 1250
Honolulu HI 96813

Dear Mr. Nāmu‘o:

Subject: Comment to Draft Environmental Assessment, County of Hawai‘i Water Board Purchase of Land on Chin Chuck Road for Future Water Tank Reservoir and Well Site, TMK: (3rd.) 2-9-004:056 (por.)

Thank you for the comment letter dated April 7, 2011, indicating that OHA does not oppose a Finding of No Significant Impact for the project based on the information presented in the Draft EA.

We very much appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090.

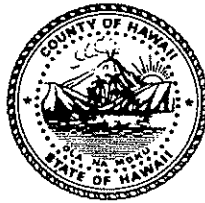
Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Kurt Inaba and Ryan Quitarano, Hawai‘i County Department of Water Supply
Steve Shropshire

William P. Kenoi
Mayor



BJ Leithead Todd
Director

Margaret K. Masunaga
Deputy

County of Hawai'i

PLANNING DEPARTMENT

Aupuni Center • 101 Pauahi Street, Suite 3 • Hilo, Hawai'i 96720
Phone (808) 961-8288 • Fax (808) 961-8742

April 12, 2011

Mr. Ron Terry
Geometrician Associates, LLC
P.O. Box 396
Hilo, Hawai'i 96721

Dear Mr. Terry:

SUBJECT: Review of Draft Environmental Assessment
Project: County of Hawai'i Water Board Purchase of Land on Chin
Chuck Road for Future Water Tank Reservoir and Well Site
TMK: (3) 2-9-004:056; Hakalau Nui, South Hilo, Hawai'i

Thank you for your letter received March 9, 2011, requesting comments from this office regarding the Draft Environmental Assessment (DEA) for the County of Hawai'i Water Board purchase of land on Chin Chuck Road for future water tank reservoir and well site on a portion of the subject property.

The subject parcel is zoned A-20a (Agricultural-20 acre minimum lot size) and is situated within the State Land Use Agricultural and Conservation Districts. In addition, according to the County of Hawai'i General Plan 2005 (amended December 2006), the subject property is designated as Important Agricultural Lands and Conservation by the Land Use Pattern Allocation Guide. The subject area is not within the Special Management Area (SMA).

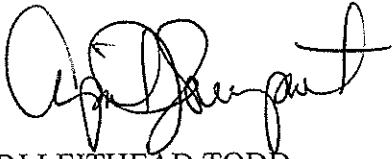
According to Chapter 25 of the Hawai'i County Code, *any substation used by a public or private utility for the purpose of furnishing telephone, gas, electricity, water, sewer, radio, or television shall be a permitted use in any district provided that the use is not hazardous or dangerous to the surrounding area and the director has issued plan approval for such use.* Therefore, plan approval will be required for any future planned improvements to the property.

Mr. Ron Terry
Geometrician Associates, LLC
April 12, 2011
Page 2

We have no further comments to offer, at this time. However, please keep us informed and provide our department with a copy of the Final Environmental Assessment for our records.

If you have any further questions or if you need further assistance, please feel free to contact Bethany Morrison of this office at 961-8138.

Sincerely,



Ben BJ LEITHEAD TODD
Planning Director

BJM:bjm

P:\wpwin60\Bethany\EA-EIS Review\draftea County of Hawaii Water Board purchase of land Chin Chuck Road.doc

xc: Hawai'i County Department of Water Supply

geometrician

ASSOCIATES, LLC

integrating geographic science and planning

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

May 5, 2011

Bobby Jean Leithead-Todd, Director
Hawai'i County Planning Dept.
101 Aupuni Street, Suite 3
Hilo HI 96720

Dear Ms. Leithead-Todd:

Subject: Comment to Draft Environmental Assessment, County of Hawai'i Water Board Purchase of Land on Chin Chuck Road for Future Water Tank Reservoir and Well Site, TMK: (3rd.) 2-9-004:056 (por.)

Thank you for the comment letter dated April 12, 2011, confirming the land use designations and need for Plan Approval that were stated in the EA. In conformance with your request, we will supply your agency with a copy of the Final EA.

We very much appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Kurt Inaba and Ryan Quitariano, Hawai'i County Department of Water Supply
Steve Shropshire

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

April 8, 2011

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

Dear Mr. Terry:

SUBJECT: COUNTY OF HAWAII WATER BOARD PURCHASE OF LAND ON CHIN CHUCK
ROAD FOR FUTURE WATER TANK RESERVOIR AND WELL SITE, SOUTH
HILO DISTRICT, HAWAII

We would like to acknowledge receipt of the Draft Environmental Assessment (DEA) and express our appreciation for the opportunity to comment on the proposed project.

At this time, our only comment is that sufficient land should be acquired to accommodate any additional treatment facilities which may be required in addition to the well, storage and disinfection facilities. These additional treatment facilities may be needed if it is determined that the source water contains contaminants that exceed the safe drinking water standards.

Since the scope of the DEA is limited to acquisition of land for the tank and well site, we are deferring further comment on the project until a later time, when the DEA for the construction of the well and tank is issued for review and comment.

We acknowledge the benefits in developing alternate sources of water in the event of a loss of a primary water source.

If there are any questions, please call Craig Watanabe at 586-4258.

Sincerely,

For 
JOANNA L. SETO, P.E, CHIEF
Safe Drinking Water Branch
Environmental Management Division

CW:cb

geometrician

A S S O C I A T E S , L L C
integrating geographic science and planning

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

May 5, 2011

Joanne L. Seto, P.E., Chief
DOH Safe Drinking Water Branch
P.O. Box 3378
Honolulu HI 96801

Dear Ms. Seto:

Subject: Comment to Draft Environmental Assessment, County of Hawai'i Water Board Purchase of Land on Chin Chuck Road for Future Water Tank Reservoir and Well Site, TMK: (3rd.) 2-9-004:056 (por.)

Thank you for the comment letter dated April 8, 2011, indicating your agency's concern that sufficient land should be reserved to accommodate any necessary treatment facilities. According to the DWS, the size of the proposed purchase should be sufficient for the anticipated facilities. DWS will ensure that your agency is supplied a copy of any future Draft EAs for facilities that are proposed for the property.

We very much appreciate your review of the document. If you have any questions about the EA, please contact me at (808) 969-7090.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: Kurt Inaba and Ryan Quitarano, Hawai'i County Department of Water Supply
Steve Shropshire

ENVIRONMENTAL ASSESSMENT

**County of Hawai'i Water Board
Purchase of Land on Chin Chuck Road
for Future Water Tank Reservoir and Well Site**

**County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawai'i 96720**

**APPENDIX 2
Agreement Between Water Board and Property Owners**

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LAND COURT

REGULAR SYSTEM

Return by Mail (x) Pickup () To:

WATER BOARD OF THE COUNTY OF HAWAI'I
345 Kekūanaō'a Street, Suite 20
Hilo, Hawai'i 96720

TITLE OF DOCUMENT:

AGREEMENT

PARTIES TO DOCUMENT:

WATER BOARD OF THE COUNTY OF HAWAI'I, whose principle place of business and mailing address is 345 Kekūanaō'a Street, Suite 20, Hilo, Hawai'i 96720.

KUPAIANAHA, LLC, a Hawai'i Limited Liability Company, whose mailing address is P.O. Box 1375 Honoka'a, Hawai'i 96727 and **SHROPSHIRE GROUP LLC**, a Hawai'i Limited Liability Company, whose mailing address is P.O. Box 1146 Hilo, Hawai'i 96721.

PROPERTY DESCRIPTION:

Those certain parcels of real property situated at Hakalau, District of South Hilo, Island and County of Hawai'i, State of Hawai'i, containing an area of approximately 588.614 acres as delineated on the map attached as Exhibit "A".

Affects Tax Map Key: (3) 2-9-004:056

This document contains 26 pages

AGREEMENT

This Agreement ("Agreement") is entered into this 15 day of DECEMBER, 2010, by and between the WATER BOARD OF THE COUNTY OF HAWAII ("Water Board"), KUPAIANAHA, LLC, a Hawaii Limited Liability Company whose mailing address is P.O. Box 1375 Honokaa, Hawaii 96727 ("Kupaianaha") and SHROPSHIRE GROUP LLC, a Hawaii Limited Liability Company, whose mailing address is P.O. Box 1146 Hilo, Hawaii 96721 ("Shropshire").

RECITALS

WHEREAS, Kupaianaha is the fee simple owner of those certain parcels of real property situated at Hakalau, District of South Hilo, Island and County of Hawaii, State of Hawaii, Tax Map Key Number (3) 2-9-004:056, and containing an area of approximately 588.614 acres (the "Land") as delineated on the map attached as Exhibit "A";

WHEREAS, the Water Board/Department of Water Supply of the County of Hawaii (collectively "DWS") is interested in acquiring land for a tank and well site near the 1225-foot elevation on the Land in order to increase the water availability in the area and reduce the reliance on surface waters as the regulations on the use of surface water are becoming increasingly stringent and compliance with the various regulations has become costly;

WHEREAS, the Land contains an approximately one acre site, as shown on the map attached as Exhibit "B" ("The Property") at the proper elevation and which is in the area where the Water Master Plan contemplates improvements to the DWS' water system, including a tank and well-site;

WHEREAS, Shropshire previously owned the Land and was negotiating with DWS to sell The Property subject to certain terms and conditions prior to selling the Land to Kupaianaha;

WHEREAS, Shropshire sold the Land to Kupaianaha via Warranty Deed on April 13, 2009 after entering into an agreement with Kupaianaha which contemplated a future agreement with DWS regarding The Property;

WHEREAS, Kupaianaha has agreed to deed The Property to the Water Board to facilitate the DWS' improvements subject to certain terms and conditions, including the provision of equivalent units of water as described in this Agreement;

WHEREAS, when DWS completes the drilling of the well and the building of the tank site and related facilities ("Water Improvements") on The Property, the water availability in the area which is currently limited to one (1) equivalent unit per pre-existing lot of record, will increase for areas below the 340 foot elevation;

WHEREAS, DWS is willing to agree to accept The Property subject to the terms and conditions herein as the water availability in the area will be increased and the general public will benefit to the same extent the parties herein will benefit, and therefore it is in the best interest of the public;

NOW THEREFORE, in consideration of the covenants, conditions, and agreements of the parties as set forth herein, and the mutual benefit to be derived by the parties therefrom, the parties hereby agree as follows:

1. **SHROPSHIRE AND KUPAIANAHA'S OBLIGATIONS.**

- a. Shropshire shall grade The Property for testing the soil for suitability for a tank site. A geotechnical report determining the foundation requirements to install a concrete tank on The Property shall be submitted to DWS for review and approval. Shropshire shall be responsible for preparing an Environmental Assessment and Environmental Impact Statement, if necessary, and otherwise

comply with the requirements of Hawai'i Revised Statutes Chapter 343, and pay all related costs. Should DWS determine that it is not feasible to build a concrete tank on The Property, this Agreement shall be deemed null and void and neither party shall have any further duty or obligation hereunder.

- b. Within sixty (60) days of the later of the subdivision approval or appraisal of The Property, as described below, Kupaianaha shall dedicate The Property via warranty deed, free and clear of all liens and encumbrances.
- c. Kupaianaha and Shropshire shall also grant all necessary easements for the Water Improvements to the Water Board within sixty (60) days of the later of the subdivision approval or appraisal of The Property, as described below.
- d. If for any reason Kupaianaha and Shropshire do not ~~timely~~ ^{SWS IRD} dedicate the Property and all necessary easements, said failure will be considered a material breach of ^{SWS ↓ IN ACCORDANCE WITH PARAGRAPHS 16 AND 1 C ABOVE} this Agreement, and this Agreement will be terminated with no further right or obligation on the part of either party.
- e. All Deeds and Grants of Easements shall be on DWS' standard forms as attached in Exhibit "C" and Exhibit "D".
- f. Should Shropshire not comply with its obligations under this Agreement, Kupaianaha may either perform those obligations, or terminate this agreement with no further right or obligation on the part of any party.

DTA
dms
SM/NP

SM/NP
ADORE

2. WATER BOARD'S OBLIGATIONS.

- a. Upon the execution of this Agreement DWS shall survey and assist Kupaianaha in preparing an application to obtain approval from the County of Hawai'i for the

subdivision of The Property as delineated on Exhibit "B", pursuant to Section 23-11, Chapter 23, Hawai'i County Code, relating to "public utility or public rights-of-way subdivisions."

J.P.D. SUS *SUS J.P.D.*
DTM *THE* *OF THE PROPERTY*
dmj *↓*

- b. DWS shall bear all costs and expenses of ~~the~~ subdivision, provided that if for any reason, Kupaianaha does not dedicate said parcel, Kupaianaha shall reimburse DWS all costs and fees associated with said subdivision.
- c. DWS shall have The Property appraised by an independent appraiser and shall pay all costs associated therewith.
- d. DWS shall purchase The Property from Kupaianaha at the appraised value per the terms of this Agreement and provided title free and clear of all liens and encumbrances can be delivered. An escrow company shall be used for the sale/purchase transaction and DWS shall bear all escrow costs.
- e. Upon dedication of The Property, Shropshire shall be allocated eight (8) equivalent units of water to be used on TMK (3) 2-9-002:079 & 081. Shropshire understands that when the water availability in the area increases, it will only be entitled to receive equivalent units up to the number of available water units less the eight (8) equivalent units granted herein (For example if the water availability in the area increases to twenty-eight (28) equivalent units per lot of record, Shropshire shall only be entitled to receive twenty (20) additional units). Shropshire understands that the eight (8) equivalent units mentioned herein are additional equivalent units, will only be available when the restoration of the Hakalau Iki Spring source is approved by Department of Health as a groundwater source and are subject to payment of the prevailing facilities charges.

f. Water availability in the area will increase upon completion of Water Improvements. In consideration of the conveyance of The Property and all necessary easements to the Water Board, DWS shall allocate seventeen (17) equivalent units of water to Kupaianaha, for use on TMK (3) 2-9-004:056 after the completion of the Water Improvements. Kupaianaha understands that the seventeen (17) equivalent units mentioned herein are additional equivalent units and subject to payment of the prevailing facilities charges. Kupaianaha understands that when the water availability in the area increases, it will only be entitled to receive equivalent units up to the number of available water units less the seventeen (17) equivalent units granted herein.

3. **EQUIVALENT UNITS.**

- a. An Equivalent Unit is equal to six hundred (600) gallons per day (gpd) maximum daily water usage. Maximum daily usage is defined as 1.5 times the average daily usage. The DWS reserves the right to require Shropshire to allocate more than one Equivalent Unit to the development of any lot (residential, condominium or other).
- b. All Equivalent Units granted herein shall remain appurtenant to the property to which is originally assigned, shall be used on that property and shall not be transferable or assignable, except to successors in interest of those lands or any part thereof. All assignments are subject to the approval of the Water Board.
- c. Shropshire and Kupaianaha shall allocate one (1) Equivalent Unit per single family residential unit, each equivalent unit consisting of 600 gallons per

maximum day. Water allocation for multiple family residential units, commercial, industrial, agricultural and other uses shall be based on an engineer's assessment of the project water use based on accepted industry standards, review of water use, or similar activities or based on other methods to which Water Board, through DWS, and Shropshire or Kupaianaha, as applicable may mutually agree.

- d. Shropshire and Kupaianaha understand and agree that the granting of such equivalent units and any assignment thereof is subject to any and all improvements required by DWS in order to utilize such units.

4. **AUTOMATIC EXPIRATION OF EQUIVALENT UNITS.**

The Equivalent Units as provided herein shall expire within twenty (20) years of the date of this Agreement if not actually in use, and any unfulfilled duties and obligations of the parties to this Agreement shall cease and be null and void without further action by any party.

5. **NO DEEMED APPROVAL.**

Nothing contained in this Agreement shall be deemed to be an approval of any construction or installation of Shropshire pursuant to this Agreement by any County of Hawai'i department or agency, nor shall this Agreement be deemed to require any County of Hawai'i department or agency to approve any proposed development of The Property by Shropshire.

6. **DEFAULT.**

In the event Kupaianaha and/or Shropshire fail to dedicate The Property and easements as provided for herein Shropshire and Kupaianaha shall not be entitled

to any additional Equivalent Units as provided in this Agreement and to the extent that any approvals or changes in zone and/or subdivision approvals have been given based upon this Agreement, they shall be revoked and nullified.

7. **INVALIDITY.**

If any provision of this Agreement is void or unenforceable for any reason, this entire Agreement is null and void and neither party shall have any further obligation or duty hereunder.

8. **CAPTIONS.**

The captions used in this Agreement are for convenience of reference only, and are not a part of this Agreement, and do not in any way limit or amplify the terms and provisions hereof.

9. **ENTIRE AGREEMENT.**

This Agreement contains the entire understanding between the parties, and there are not any agreements, understandings, warranties or representations between Shropshire and Water Board except as set forth herein. Any and all oral or written representations, correspondence, letters of intent and agreements are merged into and superseded by this Agreement and shall be of no force or effect.

10. **NO PARTY DEEMED DRAFTER.**

The Parties agree that no party shall be deemed to be the drafter of this Agreement, and further that in the event this Agreement is ever construed by a court of law, such court shall not construe this Agreement or any provision of this Agreement against any party as the drafter of this Agreement.

11. **APPLICABLE LAW.**

This Agreement shall be governed and construed in accordance with the laws of the State of Hawai'i and any lawsuit shall be brought in the Circuit Court of the Third Circuit of the State of Hawai'i.

12. **MODIFICATIONS IN WRITING.**

This writing contains the entire agreement of the parties hereto concerning the subject matter hereof, and this Agreement supersedes all other agreements and understandings (whether oral or written) heretofore or contemporaneously herewith among the parties. The provisions of this Agreement may not be modified, altered or changed except by another written instrument executed by the parties hereto.

13. **BENEFIT.**

All of the terms, rights, obligations, covenants and agreements of the parties set forth in this Agreement shall be binding upon and be for the benefit of the parties hereto and their respective successor and assigns and shall be recorded at the State of Hawai'i Bureau of Conveyances and/or Land Court as applicable.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year set forth.

RECOMMEND APPROVAL:



Milton D. Pavao, PE
Manager-Chief Engineer
Department of Water Supply

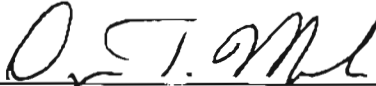
APPROVED AS TO
FORM AND LEGALITY:



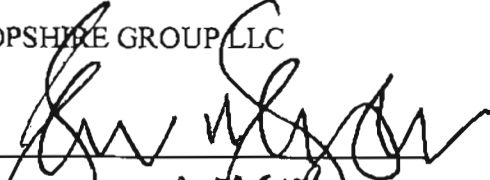
Assistant Corporation Counsel
County of Hawai'i

Date: 1/21/11

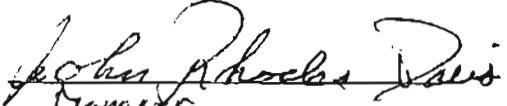
WATER BOARD OF THE COUNTY
OF HAWAI'I

By: 
Its Chairman
Dwayne T. Mukai

SHROPSHIRE GROUP LLC

By: 
Its ~~Manager~~
Steven H. Shropshire

KUPAIANAHA LLC

By: 
Its ~~Manager~~
John Rhodes Davis

Attachments: Exhibit A
Exhibit B
Exhibit C
Exhibit D

STATE OF HAWAI'I)
) SS.
COUNTY OF HAWAI'I)

On this 15th day of December, 2010, before me personally appeared Steven H. Shropshire who, being by me duly affirmed, did say that s/he is the manager of Shropshire Group LLC and that the instrument was signed on behalf of the company and that s/he acknowledged the instrument to be the free act and deed of the said company.

Sarah Mahidashti, Sarah Mahidashti
Notary Public, State of Hawaii, Third Judicial Circuit

My commission expires: April 19, 2013

L.S.

NOTARY PUBLIC CERTIFICATION
Sarah Mahidashti Third Judicial Circuit
Doc. Description: Agreement for
Tank sites

SH/NP

No. of Pages: 124 Date of Doc. 12-15-10

Sarah Mahidashti 12-15-10
Notary Signature Date

L.S.

STATE OF HAWAII)
) SS.
COUNTY OF HAWAII)

On this 15th day of December, 2010, before me personally appeared John Rhodes Davis who, being by me duly affirmed, did say that s/he is the manager of Kupainaha LLC and that the instrument was signed on behalf of the company and that s/he acknowledged the instrument to be the free act and deed of the said company.

Sarah Mahidashti, Sarah Mahidashti
Notary Public, State of Hawaii, Third Judicial Circuit

My commission expires: April 19, 2013

L.S.

NOTARY PUBLIC CERTIFICATION
Sarah Mahidashti Third Judicial Circuit
Doc. Description: Agreement for
Tank Sites

SH/NP

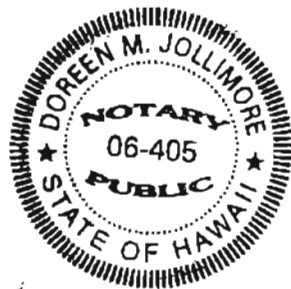
No. of Pages: 24 Date of Doc. 12-15-10

Sarah Mahidashti 12-15-10
Notary Signature Date

L.S.

STATE OF HAWAI'I)
) SS:
COUNTY OF HAWAI'I)

This 24-page Agreement for Tank Sites,
dated December 15, 2010, was sworn to before me this 25th day of January,
2011, in the Third Circuit of the State of Hawai'i by Dwayne T. Mukai, to me personally
known, who, being by me duly sworn, did say that the person is the Chairman of the Water
Board of the County of Hawai'i and that the seal affixed to the foregoing instrument is the seal of the
Department of Water Supply of the County of Hawai'i, and that the instrument was signed and sealed
in behalf of the Water Board by authority of the Water Board and said Dwayne T. Mukai
acknowledged the instrument to be the free act and deed of the Water Board.



Doreen M. Jollimore
Notary Public – Doreen M. Jollimore
State of Hawai'i
My commission expires: July 9, 2014.
Commission #06-405



DATE	2	9	04
SCALE	1:500 FT.		
CONTAINING	PARCELS		

EXHIBIT A

[Handwritten signature]

Map of ...

Done at ... 1884



TRIMED	BIVISION
ZONE	SEC PLAT
2	9 04
CONTAINING	PARCELS
SCALE 1" = 1000'	

EXHIBIT B

[Handwritten signature]

As shown on map of Douglas & Davis as New York State Highway. (Map of New York State)

Eng. W. H. Bell
 100 W. 10th Street
 New York, N. Y.

DEED

KNOW ALL MEN BY THESE PRESENTS:

That _____, [*insert name(s) – if
land court property include full name*] _____ [*insert marital or legal status, i.e.
unmarried, married, husband and wife, trustee under that certain Trust Agreement dated __, a
Hawaii Corporation, a Hawaii Limited Liability Company, etc.*] whose address is _____
_____, hereinafter called the “GRANTOR”, in consideration of the
sum of ONE DOLLAR (\$1.00) and other good and valuable consideration to them paid by the
WATER BOARD OF THE COUNTY OF HAWAII, whose principal place of business and
mailing address is 345 Kekuanaoa Street, Suite 20, Hilo, Hawaii 96720, hereinafter called the
“GRANTEE”, the receipt whereof is hereby acknowledged, does hereby grant, bargain, sell and
convey unto said Grantee, its legal successors and assigns, in fee simple absolute, all of the
property described in Exhibit A attached hereto and by reference made a part hereof.

TOGETHER with all and singular the improvements, tenements, rights, easements,
privileges, hereditaments and appurtenances thereunto belonging to or in anywise appertaining or
held and enjoyed therewith, and the reversion and reversions, remainder and remainders, rents,
issues and profit thereof, and all of the estate, right, title and interest of the Grantor, both at law
and in equity therein and hereto;

TO HAVE AND TO HOLD the same unto the GRANTEE, its legal successors and
assigns, absolutely and forever.

AND said Grantor does hereby covenant to and with said GRANTEE, its legal successors
and assigns, that they are lawfully seised in fee simple of the above-described property; and they



have good right and lawful authority to sell and convey the same as aforesaid; that the same is free and clear of liens and encumbrances of any kind and character; and that they and their heirs shall warrant and defend the title against the lawful claims and demands of all persons whomsoever.

The terms "Grantor" and "Grantee" as and when used herein, or any pronouns used in place thereof, shall mean and include the masculine, feminine or neuter, the singular or plural number, individuals, partnerships, trustees or corporations and their and each of their respective successors, heirs, personal representatives, successors in trust and assigns, according to the context thereof. All covenants and obligations undertaken by two or more persons shall be deemed to be joint and several unless a contrary intention is clearly expressed elsewhere herein.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands on this _____ day of _____, 2003.

(NAME OF GRANTOR)

By _____
(Its)

RECOMMEND APPROVAL:

Milton D. Pavao, Manager

By _____
(Its)

GRANTOR

APPROVED AS TO
FORM AND LEGALITY

Corporation Counsel
County of Hawaii

WATER BOARD OF THE
COUNTY OF HAWAII

By _____
Its Chairman

Date: _____

GRANTEE

[Handwritten Signature]
R.V.

LAND COURT SYSTEM REGULAR SYSTEM
Return by Mail (x) Pickup () To:

WATER BOARD OF THE COUNTY OF HAWAII
345 Kekuanaoa Street, Suite 20
Hilo, Hawaii 96720

TITLE OF DOCUMENT:

DEED

PARTIES TO DOCUMENT

GRANTOR:

GRANTEE: WATER BOARD OF THE COUNTY OF HAWAII, whose address is
345 Kekuanaoa Street, Suite 20, Hilo, Hawaii 96720.

PROPERTY DESCRIPTION:

(Location)

(Lot No.; R.P. Grant No.; Land Commission Award No.)

(District)

Affects Tax Map Key: (3)

This document contains _____ pages



STATE OF HAWAII)
)
COUNTY OF HAWAII)

SS

On this _____ day of _____, 2003, before me personally
appeared _____
to me known to be the person(s) described in and who executed the foregoing instrument and
acknowledged that _____ executed the same as _____ free act and deed.

Notary Public, State of Hawaii
My Commission Expires: _____

[NOTE: This acknowledgement is for an individual or for joint owners. If a corporation or other entity, the appropriate acknowledgement must be used.]

EXHIBIT A

All metes and bounds descriptions must be
Prepared, stamped and signed by a licensed Professional
Land Surveyor registered to practice in the State of Hawaii

SLS
R.D.

STATE OF HAWAII)
)
COUNTY OF HAWAII)

SS

On this _____ day of _____, 2003, before me appeared _____, to me personally known, who being by me duly sworn, did say that _____ is the _____ of the Water Board of the County of Hawaii and that the seal affixed to the foregoing instrument is the seal of the Department of Water Supply of the County of Hawaii, and that the instrument was signed and sealed in behalf of the Water Board by authority of said Water Board, and said _____ acknowledged the instrument to be the free act and deed of the Water Board.

Notary Public, State of Hawaii

My Commission Expires: _____

Sample Copy Only



GRANT OF EASEMENT

KNOW ALL MEN BY THESE PRESENTS:

That _____ [insert name (full name if land court property and marital or legal status)], whose address is _____, hereinafter called the "GRANTOR", in consideration of the sum of ONE DOLLAR (\$1.00) paid by the WATER BOARD OF THE COUNTY OF HAWAII#, whose principal place of business and mailing address is 345 Kekūanaō'a Street, Suite 20, Hilo, Hawaii# 96720, hereinafter called the "GRANTEE", the receipt whereof is hereby acknowledged, does hereby grant and convey unto the said Grantee, its legal successors and assigns, the right in the nature of a perpetual easement to install, maintain, operate, repair, remove and replace any and all pipelines, equipment, structures, or other related facilities in, over and across the following described property:

All of that certain parcel or parcels of land more fully described in Exhibit A attached hereto and by this reference made a part hereof.

TOGETHER with the right of ingress and egress thereto and therefrom over the Grantor's adjoining land for the purpose of operating, maintaining and replacing any pipeline or pipelines, equipment, structures, and other related facilities.

TO HAVE AND TO HOLD the same unto the Grantee, its legal successors and assigns, forever.

IT IS MUTUALLY UNDERSTOOD AND AGREED that until such time as the roadway described in Exhibit A attached hereto is dedicated to and accepted by the County of Hawaii#,



the grant of this easement does not obligate or in any way charge the Grantee, its successors and assigns, with any duties and responsibilities with regard to ownership, condition, care, and maintenance of said roadway; and the Grantor its successors and assigns, shall be responsible for the care, condition, and maintenance of the roadway described therein; and shall indemnify and hold Grantee harmless from any claims or suits arising out of the care, condition, and maintenance of said roadway.

IT IS FURTHER MUTUALLY UNDERSTOOD AND AGREED that the Grantor will not at any time erect any building or structure of any kind either above, on or below the surface of the ground within said easement areas, unless such building or structure shall be so constructed as not to interfere with said Grantee's said pipelines, equipment, structures and other related facilities, and also so as to allow open, free and unrestricted access, free of any gates, fences, or other interferences of any kind, either locked or unlocked, to said Grantee in the maintenance, operation, replacement or removal of said pipelines or conduits and other appliances, equipment or structures, or for other reasonable purposes, and the Grantor hereto agrees that the Grantee shall not be liable or responsible for any damage to any building foundation or building or structure of any kind within said easement areas caused by or resulting from the exercise by said Grantee of the rights hereon granted.

AND said Grantor does hereby covenant with said Grantee that it is lawfully seised in fee simple of said granted property and that it has good right to grant and convey an easement as aforesaid; and that said property is free and clear of all liens and encumbrances; and that Grantor, and its successors and assigns will warrant and defend the same unto the Grantee, its legal successors and assigns, against the lawful claims and demands of all persons.



LAND COURT SYSTEM

REGULAR SYSTEM

Return by Mail (x) Pickup () To:

WATER BOARD OF THE COUNTY OF HAWAII
345 Kekūanaō'a Street, Suite 20
Hilo, Hawaii 96720

TITLE OF DOCUMENT:

GRANT OF EASEMENT

PARTIES TO DOCUMENT

GRANTOR:

GRANTEE: WATER BOARD OF THE COUNTY OF HAWAII, whose address is
345 Kekūanaō'a Street, Suite 20, Hilo, Hawaii 96720.

PROPERTY DESCRIPTION:

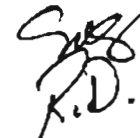
(Location)

(Lot No.; R.P. Grant No.; Land Commission Award No.)

(District)

Affects Tax Map Key: (3)

This document contains _____ pages



Sample Copy Only

EXHIBIT "A"

All metes and bounds descriptions must be prepared, stamped and signed by a Licensed Professional Land Surveyor registered to practice in the State of Hawaii.

A handwritten signature in black ink, appearing to be "S. D. K. D.", written over a circular stamp.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands on
This _____ day of _____, 2003.

(NAME OF GRANTOR)

By _____
Its

RECOMMEND APPROVAL:

By _____
Its

Milton D. Pavao, Manager

GRANTOR

APPROVED AS TO
FORM AND LEGALITY

WATER BOARD OF THE
COUNTY OF HAWAII#1

Deputy Corporation Counsel
County of Hawaii#1

By _____
Its Chairman

Date: _____

GRANTEE

Sample Copy Only



STATE OF HAWAII)
) SS
COUNTY OF HAWAII)

On this _____ day of _____, 2003, before me appeared _____, to me personally known, who being by me duly sworn, did say that _____ is the _____ of the Water Board of the County of Hawaii and that the seal affixed to the foregoing instrument is the seal of the Department of Water Supply of the County of Hawaii, and that the instrument was signed and sealed in behalf of the Water Board by authority of said Water Board, and said _____ acknowledged the instrument to be the free act and deed of the Water Board.

Notary Public, State of Hawaii
Name (print) _____
My Commission Expires: _____

STATE OF HAWAII)
) SS
COUNTY OF HAWAII)

On this _____ day of _____, 2003, before me personally appeared _____ to me known to be the person(s) described in and who executed the foregoing instrument and acknowledged that _____ executed the same as _____ free act and deed.

Notary Public, State of Hawaii
Name (print) _____
My Commission Expires _____

Handwritten signature
R. V.