

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

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March 10, 2004

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Ms. Genevieve Salmonson, Director  
State of Hawai'i  
Office of Environmental Quality Control  
Department of Health  
235 South Beretania Street, Suite 702  
Honolulu, HI 96813

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND FILING OF  
FINAL ENVIRONMENTAL ASSESSMENT  
KULAIMANO WELL DEVELOPMENT PROJECT  
TAX MAP KEY 2-08-004:003  
PEPE'EKEO, SOUTH HILO, HAWAII**

The County of Hawai'i (County), Department of Water Supply (DWS) has reviewed the Final Environmental Assessment (EA) for the subject project along with comments received on the Draft EA for the subject project during the 30-day public comment period that ended on January 22, 2004.

Consequently, the County of Hawai'i, DWS has determined that this project will not have significant environmental effects, and has issued a Finding of No Significant Impact (FONSI). Please publish this FONSI determination for this project in the March 23, 2004, issue of the OEQC *The Environmental Notice*.

We have enclosed the following items for your use in this publication notice:

1. One (1) copy of the OEQC Publication Form with project summary (project summary e-mailed to your office and hardcopy enclosed); and
2. Four (4) copies of the Final Environmental Assessment.

The following information is provided which supports our department's FONSI determination.

Identification of Proposing Agency

County of Hawai'i, Department of Water Supply

Identification of Accepting Authority

County of Hawai'i, Department of Water Supply.

... *Water brings progress...*

### Brief Description of Proposed Action

The Department of Water Supply (DWS), County of Hawai'i, is proposing to develop the Kulaimano Well Development Project within the South Hilo District of the Island of Hawai'i. This project involves the development of a new source well to improve the DWS's Pepe'ekeo potable water system and service. Future phases of this project would involve constructing a 500,000 gallon concrete water reservoir and accessory facilities utilizing this new source well.

The purpose of this project is to improve the DWS's storage capacity and water source for their water system serving the Pepe'ekeo community. This new source well will replace the existing surface water source serving this water system, and eliminate its costly monitoring, treatment, and associated operational requirements. The future reservoir will also increase this system's storage capacity.

### Determination

A Finding of No Significant Impact (FONSI) determination is warranted for the Kulaimano Well Development Project. The results of the assessments conducted have determined that the reservoir improvements proposed should not have a significant impact on the surrounding environment.

### Reasons Supporting Determination

The reasons supporting this determination are based upon the 13 Significance Criteria listed under Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's Administrative Rules.

1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource. The improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. There would be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources since none are known to be present.
2. Curtails the range of beneficial uses of the environment. The project would not curtail the range of beneficial uses of the surrounding environment. The project site is part of a larger parcel that is currently used for various agricultural activities, pasture, or is left undeveloped. The project would provide an improved water source and continued reliable water service to the community which is a beneficial use.
3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. The project would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS.
4. Substantially affects the economic, or social welfare, cultural practices of the community or State. The project would not have any significant negative impacts on economic factors,

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the Pepe'ekeo and Kulaimano communities, or their rural character. This project is not expected to significantly affect traditional native Hawaiian or other cultural practices that may be occurring in the surrounding area. There are no known traditional cultural practices occurring within the privately-owned project site.

5. Substantially affects public health. Improvements are not expected to substantially affect public health since the project would only involve limited construction work within the 1.275-acre site. The project would help the County of Hawai'i, DWS provide improved water quality and continued reliable water service to area residents.
6. Involves substantial secondary impacts, such as population changes or effects on public facilities. This project would not have any secondary impacts on the social environment or other infrastructure and public facilities. The project is limited to the development of a new production well and future concrete water tank with other accessory improvements.
7. Involves a substantial degradation of environmental quality. The improvements would not involve a substantial degradation to the quality of the surrounding environment as discussed in the Final EA.
8. Is individually limited, but cumulatively has considerable effect upon the environment or involves a commitment for larger actions. This project only involves the development of the well and future reservoir, and therefore does not involve a commitment for larger actions. Impacts associated with these improvements would not have a significant impact on the environment both individually and cumulatively.
9. Substantially affects a rare, threatened, or endangered species, or its habitat. There were no known endangered, threatened, or rare botanical resources within the project site. Furthermore, the improvements would not substantially affect endangered or threatened faunal or avifaunal resources which may occur in the general vicinity.
10. Detrimentially affects air or water quality or ambient noise levels. This project should not detrimentally impact air quality, water quality, or ambient noise levels in the immediate vicinity of the project site. Impacts associated with these factors would be limited to short-term construction activities.
11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters. The project site is not located within an environmentally sensitive area such as those identified. Construction of the new well and

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future reservoir would be in compliance with applicable County building codes and DWS System Standards.

12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies. The project would not affect scenic vistas or viewplanes since there are none located on the project site or in the immediate vicinity. There are no significant views or landforms in the immediate vicinity which would be adversely affected by the project.
13. Requires substantial energy consumption. The project would not require substantial energy consumption or increased electrical facilities because it is limited to the development of the new production well, water tank, and appurtenances.

Should you have any questions, please contact Mr. Gerald Yorita of our staff (808) 961-8070, extension 250.

Sincerely yours,



Milton D. Pavao, P.E.  
Manager

GY:sco

Encs.

2004-03-23 FONSI  
KULAIMANO WELL DEVELOPMENT PROJECT

MAR 23 2004

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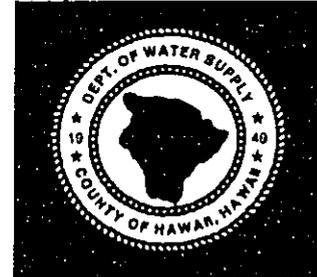
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ENVIRONMENTAL  
ASSESSMENT

KULAIMANO WELL  
DEVELOPMENT PROJECT

March 2004

Prepared For:



Dept. of Water Supply  
County of Hawaii

Prepared By:



**FINAL  
ENVIRONMENTAL ASSESSMENT  
FOR  
KULAIMANO WELL  
DEVELOPMENT PROJECT**

**KULAIMANO, SOUTH HILO, HAWAII**

**MARCH 2004**

***PROPOSING AGENCY:***

Department of Water Supply  
County of Hawaii  
345 Kekuanaoa Street, Suite 20  
Hilo, Hawaii 96720

***PREPARED BY:***



SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

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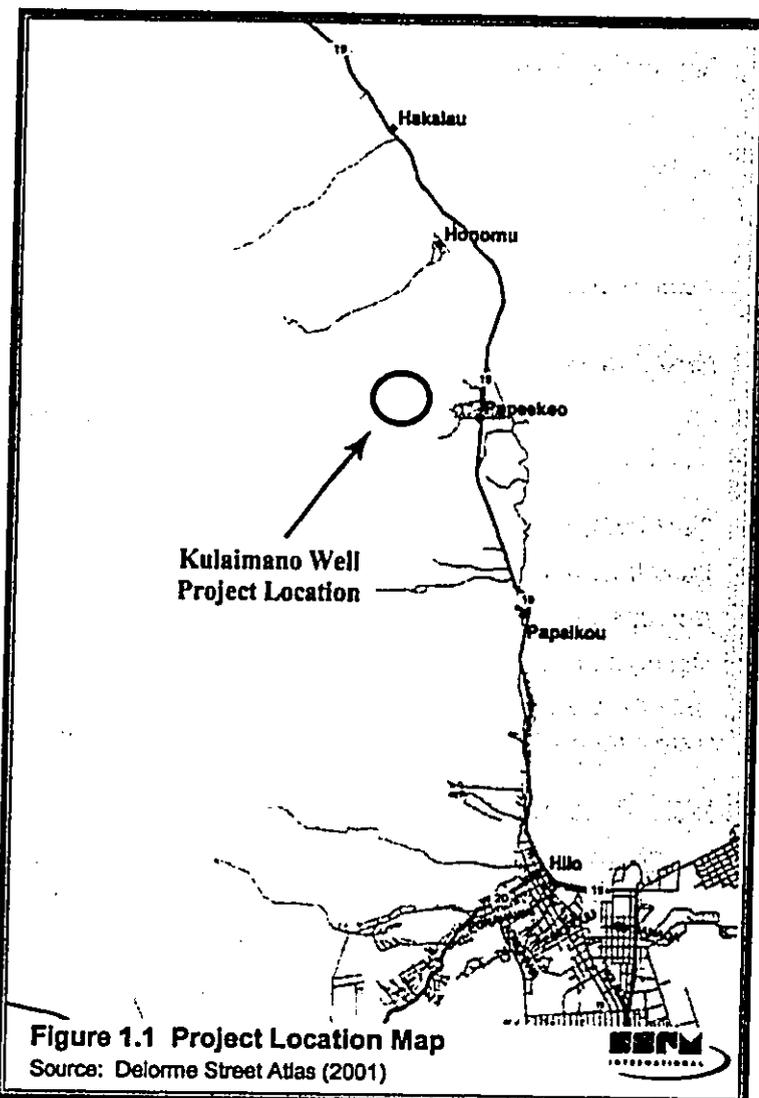
## CHAPTER 1 INTRODUCTION

### 1.1 PURPOSE FOR ENVIRONMENTAL ASSESSMENT

The County of Hawaii (County), Department of Water Supply (DWS) is proposing the Kulaimano Well Development Project in the South Hilo District of the Island of Hawaii. This project involves the development of a new source well to improve their Pepeekeo potable water system and service. Future phases of this project would involve constructing a 500,000 gallon concrete water reservoir and accessory facilities utilizing this new source well.

The project site is situated in the Kulaimano community just north of the town of Pepeekeo. Figure 1.1 shows the general location of the project planned in the area of Pepeekeo. This project would be developed on a 1.00-acre parcel that has recently been consolidated with an adjacent 0.275-acre existing County DWS reservoir site creating a total parcel of 1.275 acres. The Tax Map Key for this new 1.275-acre parcel is (3) 2-08-004: 003.

The purpose of this project is to improve the County DWS's storage capacity and water source for their water system serving the Pepeekeo community. This new source well will replace the existing surface water (springs) source serving this water system, and eliminate its costly monitoring, treatment, and associated operational requirements. The future reservoir will also increase this system's storage capacity. Table 1.1 provides the summary of pertinent information associated with this project.



**Table 1.1 Summary Information**

<b>Project Name:</b>	Kulaimano Well Development Project
<b>Proposing Agency:</b>	Department of Water Supply County of Hawaii 345 Kekuanaoa Street, Suite 20 Hilo, Hawaii 96720 Contact: Mr. Gerald Yorita
<b>Authorized Agent:</b>	SSFM International, Inc. 501 Sumner Street, Suite 620 Honolulu, Hawaii 96817 Contact: Mr. Ronald A. Sato, AICP
<b>Accepting Authority:</b>	Department of Water Supply, County of Hawaii
<b>Project Description:</b>	This project involves the drilling, testing, and development of a new well on a 1-acre parcel of land. Future phases would include development of a new concrete 0.5 MG water tank and appurtenances. The purpose of this well is to replace the existing surface water source, and the new reservoir will increase the storage capacity of the County's Pepeekeo water system. This project will improve the system's water source, service, and reliability to residents of this community.
<b>Project Location:</b>	The proposed project is located in the South Hilo District of the Island of Hawaii in the town of Pepeekeo.
<b>Land Ownership:</b>	The project site consists of a 1-acre parcel that is part of a larger approximately 798-acre property which is currently privately owned. This 1-acre parcel has recently been consolidated with their 0.275-acre existing water tank parcel, and then subdivided out from the larger property. The County of Hawaii intends to acquire this new subdivided 1.275-acre parcel.
<b>Tax Map Key:</b>	(3) 2-08-004: 003
<b>State Land Use:</b>	Agricultural District
<b>County General Plan:</b>	Intensive Agricultural
<b>County Zoning:</b>	Agricultural District, Minimum 20-acre Lots (A-20a)
<b>SMA Designation:</b>	Project site is not within the County of Hawaii's Special Management Area.

**Proposing Agency and Accepting Authority**

The Kulaimano Well Development project would involve the use of County funds for the construction of a new exploratory well and associated testing work. In addition, future development of the concrete water tank and associated facilities would similarly involve the use of County funds. As a result, this project is subject to the environmental documentation requirements prescribed under Chapter 343, Environmental Impact Statements, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's Administrative Rules.

This project may also be funded by Federal Funds through the State of Hawaii's Drinking Water State Revolving Fund (DWSRF) program. This would constitute a Federal action, and will require the project to meet all Hawaii DWSRF program requirements.

A Draft Environmental Assessment (Draft EA), prepared in conformance with State regulatory requirements to address the probable impacts on the surrounding environment resulting from the proposed well development project, was published in the December 23, 2003 issue of the State Office of Environmental Quality Control's *The Environmental Notice*. The 30-day public comment period for the review of that Draft EA ended on January 23, 2004. This Final Environmental Assessment (Final EA) has subsequently been prepared for this project to address the probable impacts on the surrounding environment resulting from the proposed well development. A Finding of No Significant Impact (FONSI) is anticipated for this project.

The County Department of Water Supply will serve as the Proposing Agency for this Kulaimano Well Development project, and this project subsequently involves an Agency Action being undertaken by this department under these environmental regulations. The Accepting Authority for this Environmental Assessment would be the County Department of Water Supply as the authorized representative for the Mayor of the County of Hawaii.

## **1.2 BACKGROUND ON EXISTING LAND USE DESIGNATIONS**

Information on the existing State and County land use designations associated with the project site and surrounding areas are provided along with applicable figures. Discussion of the project's consistency with these land use designations and applicable regulations are provided later under the plans and policies chapter of this document.

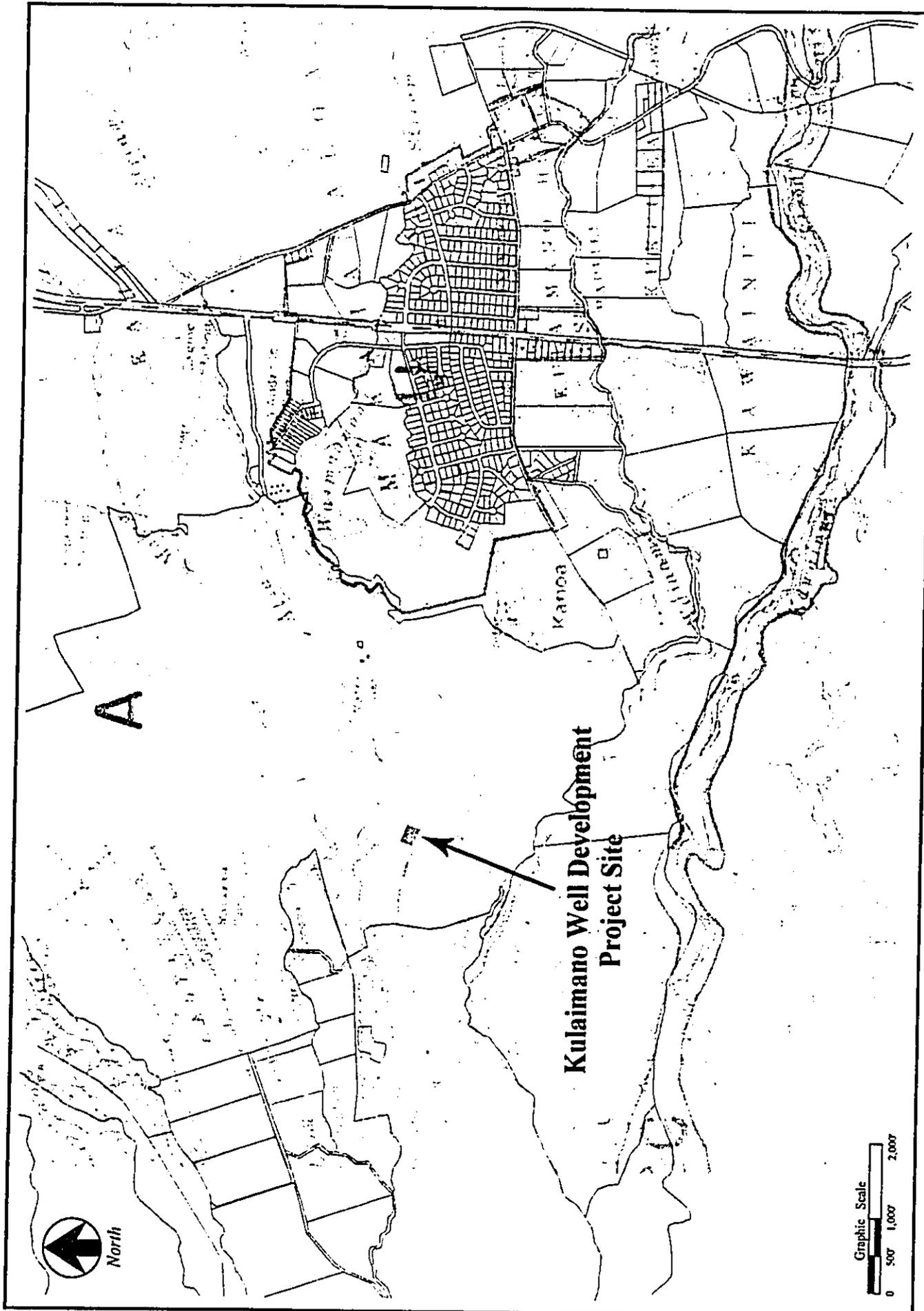
### **1.2.1 State Land Use District**

Under Chapter 205, HRS, all lands in the State of Hawaii are classified into four major land use districts (State Land Use Districts) which are the Urban, Rural, Agricultural, and Conservation districts. The boundaries of these districts are shown on maps referred to as State Land Use District Boundary Maps.

The State Land Use Commission's (LUC) Land Use District Boundary Maps for Papaikou (Map H-65) and Akaka Falls (Map H-60) indicate that the project site and immediate surrounding area are designated as "Agricultural District." Figure 1.2 shows this project area associated with these Land Use District Boundary Maps.

### **1.2.2 County of Hawaii General Plan**

The *County of Hawaii General Plan* adopted under Ordinance 89-142 serves as a policy document for the long-range comprehensive development of the island of Hawaii (County 1989). Under the Land Use Pattern Allocation Guide Map associated with this *General Plan*, the Kulaimano well project site and immediate surrounding area are identified as "Intensive Agricultural."



**STATE LAND USE DISTRICT BOUNDARY MAP**

*Kulaimano Well Development  
Department of Water Supply, County of Hawaii*

**Figure 1.2**

Source:  
State Land Use Commission (Maps H-61, H-66)  
ESRI GIS (Hawaii TMK Data)



Over the past four years, the County's *General Plan* has been in the process of being updated as required by the County Charter. Numerous public informational meetings have been held to collect public input on proposed revisions and the Planning Director and Planning Commission have forwarded their recommended changes to the County Council for action.

Currently, proposed revisions to the *General Plan* and associated Land Use Pattern Allocation Guide Map call for changing the "Intensive Agriculture" classification to that of "Important Agricultural Lands." Thus, pending this adoption, the subject parcel would be designated Important Agricultural Lands. Figure 1.3 shows the subject property in relation to the proposed Land Use Pattern Allocation Guide Map for the area.

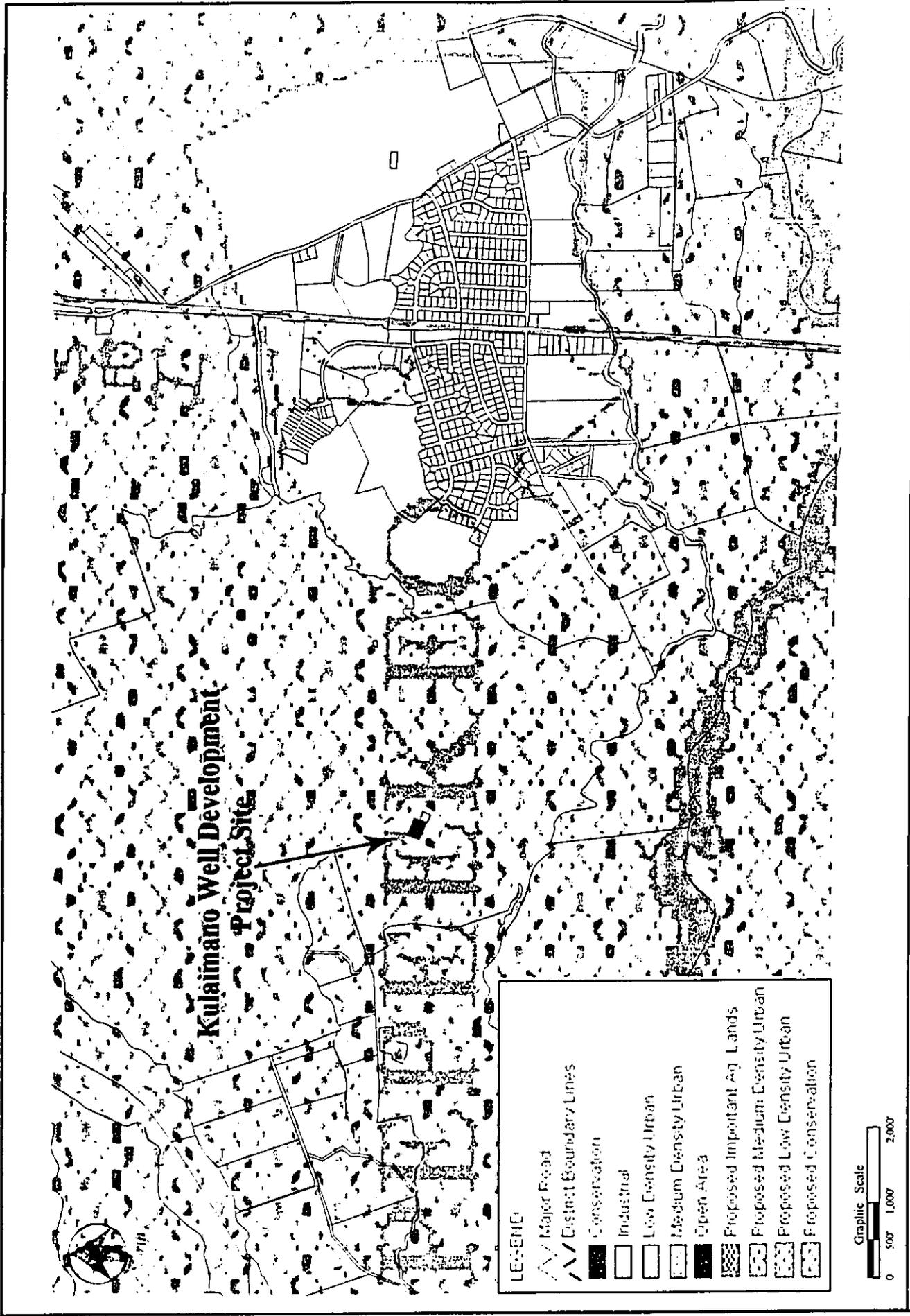
### 1.2.3 County of Hawaii Zoning District

The Kulaimano Well project site, along with surrounding properties, is located within the South Hilo District of the Island of Hawaii. As a result, the County's South Hilo District Zone Map was reviewed. Under this zoning map, the project site encompasses lands currently zoned A-20a, Agriculture District with a minimum building site area of 20 acres. Surrounding lands in the immediate vicinity of the project site are similarly zoned A-20a. Figure 1.4 shows the project site in relation to this zoning district map.

### 1.2.4 Special Management Area

Under Chapter 205A (Coastal Zone Management), HRS, the County is given authorization to regulate land uses located within the established Special Management Area for the Island of Hawaii. Review of the County of Hawaii's Special Management Area map for the Pepeekeo area determined that the SMA boundary generally follows along the shoreline makai (seaward or east) of the main highway (Hawaii Belt Road).

The well project site is situated several miles away from the shoreline at an elevation of about 840 feet mean sea level, and is subsequently well outside the SMA boundary. As a result, this project is not subject to the County Planning Department's assessment and processing procedures established under the Planning Commission's Rule 9, Special Management Area.

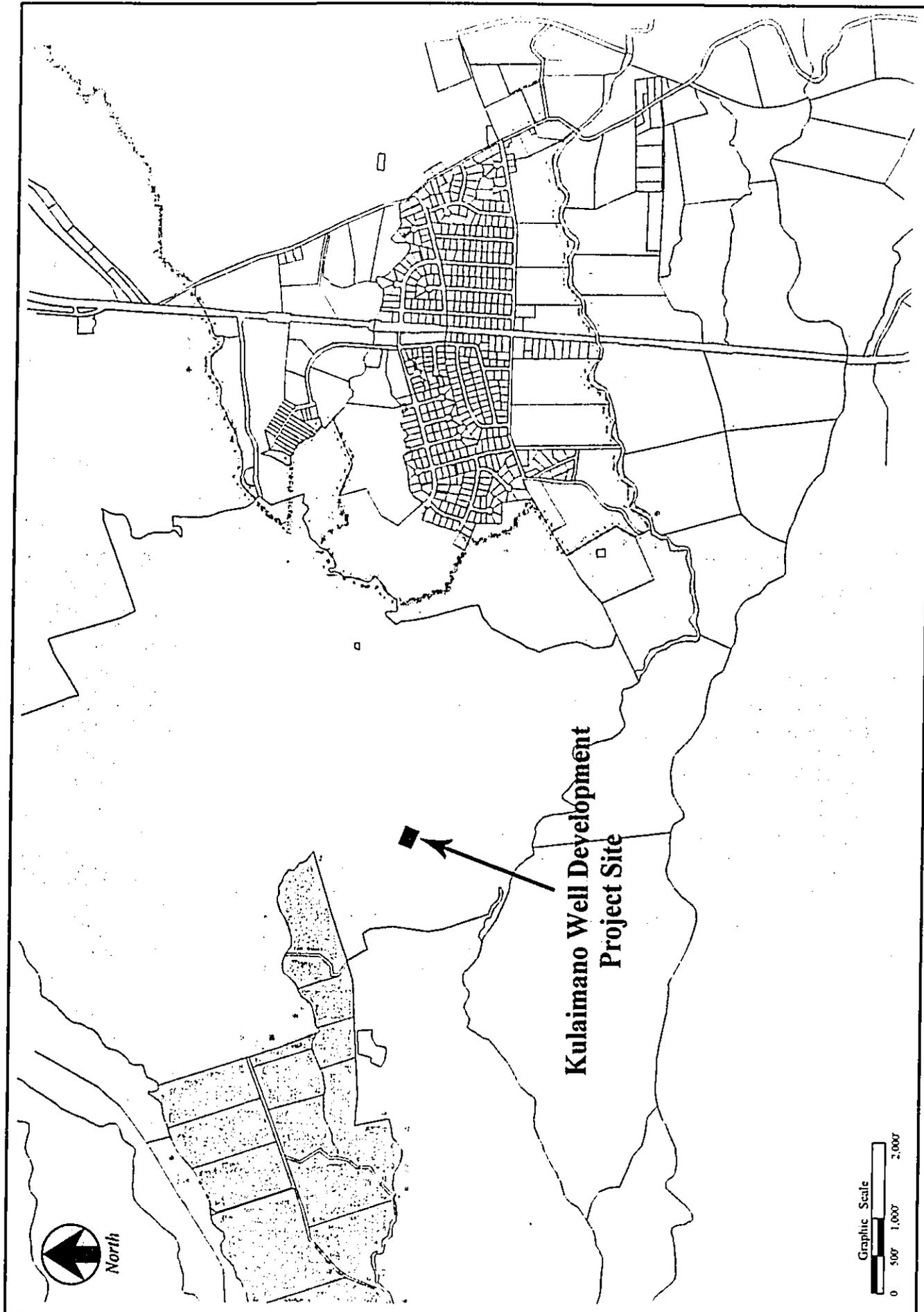


**PROPOSED COUNTY GENERAL PLAN LUPAG MAP (DEC 2001)**

*Kulaimano Well Development  
Department of Water Supply, County of Hawaii*

**Figure 1.3**

Source:  
County of Hawaii, Planning Dept.  
ASB GIS (Hawaii TMS Data)



**COUNTY ZONING MAP**

**Figure 1.4**

*Kulaimano Well Development  
Department of Water Supply, County of Hawaii*

Source:  
County of Hawaii, Planning Department 2003  
ESRI GIS (Hawaii, IMA, Inc.)



## CHAPTER 2 PROJECT DESCRIPTION

### 2.1 PROJECT LOCATION AND VICINITY

This project is located on the eastern end of the Island of Hawaii mauka (inland) of the town of Pepeekeo in the South Hilo District. The project site is situated about 6 miles north of the urbanized town of Hilo which serves as the business and government center on this eastern end of the island. This Pepeekeo area includes the Kulaimano Homestead ahupua'a, Pepeekeo land tract situated near the highway, and the larger Makahanaloa ahupua'a tract to the north. Although situated within the Pepeekeo land tract, most of the developed residential subdivisions in this area are identified as being part of the Kulaimano Subdivision. The 1-acre project parcel is actually situated within the Makahanaloa ahupua'a as shown on a vicinity map on Figure 2.1.

The northern half of the South Hilo District is a predominantly rural area located along the northeastern coastline of the island. This area outside of the more urbanized Hilo town can be characterized as having a string of smaller communities developed along the main coastal highway separated by large tracts of open and agricultural land areas (as previously shown on Figure 1.1). Most of these communities were developed as part of historic plantation agricultural operations occurring on the island. Other developed communities along this coastal corridor are Honomu to the north and Papaikou to the south.

The Kulaimano Well site is situated about 1 mile inland (mauka or westbound) of Hawaii Belt Road above the Kulaimano Subdivision (Figure 2.1). This project site is situated at about the 840-foot mean sea level elevation. Access to the County's existing reservoir and adjacent project site is via the County's Kaupakuea Homestead Road off of the highway which is routed through a residential subdivision. After about 2,500 feet, access is then through an



Unpaved Road Leading to Project Site

unpaved gravel road through privately owned property. This privately-owned road then travels mauka about another 5,000 feet before reaching the project site (see photo).

The Hawaii Belt Road (Hwy 19) is the only major public roadway facility providing vehicular access to and from the various communities along this entire coastline. This State Department of Transportation highway connects the Hilo urban center to the Pepeekeo area and other towns along the entire Hamakua coastline all the way up to Waimea to the north. In the immediate vicinity of the project area, and throughout most of the entire coastline, Hawaii Belt Road consists of an undivided two-lane rural highway.

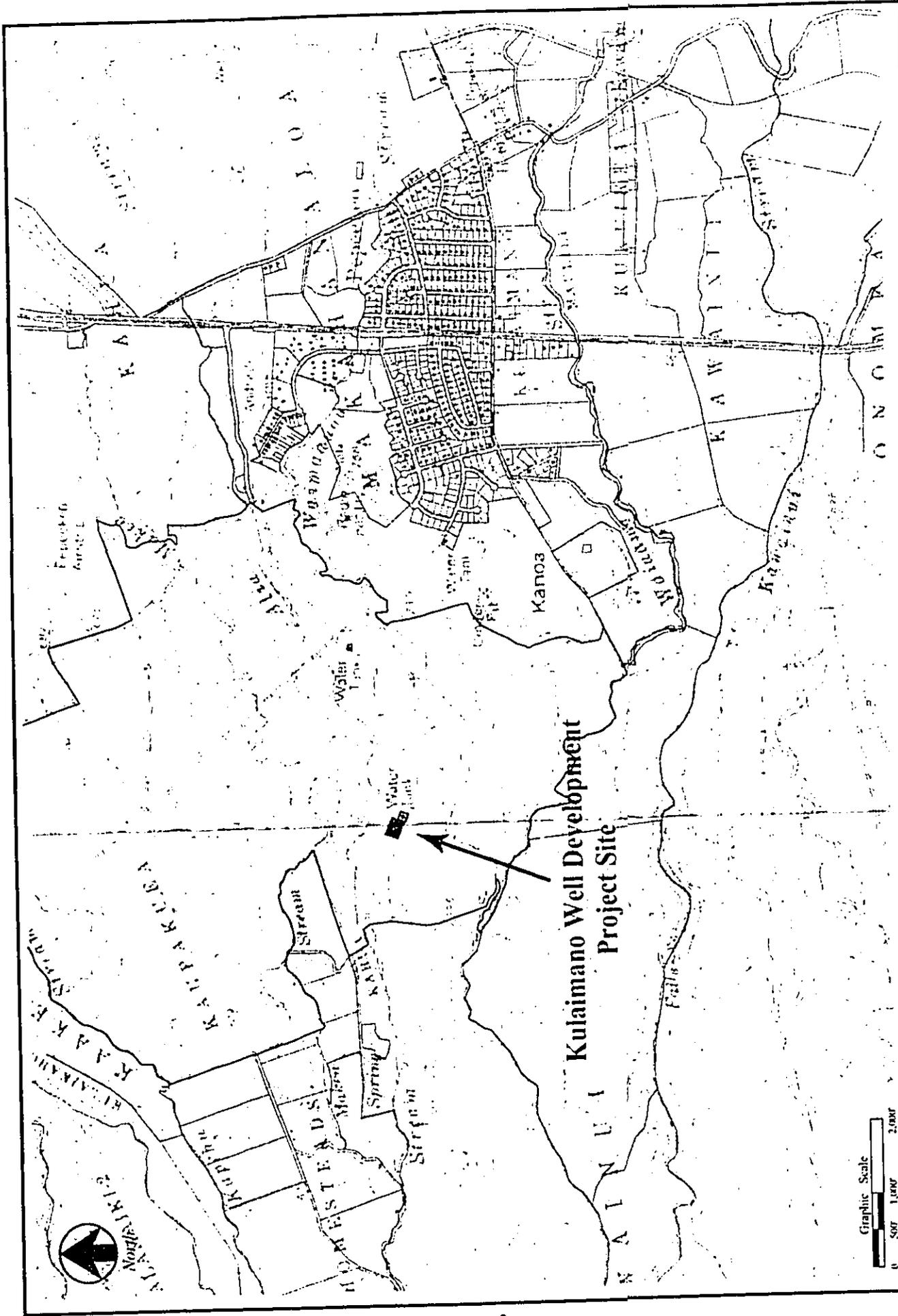


Figure 2.1

Source:  
 Debrae H. Pope ( drafts  
 ESR GIS Staff ( draft TMR Draft)

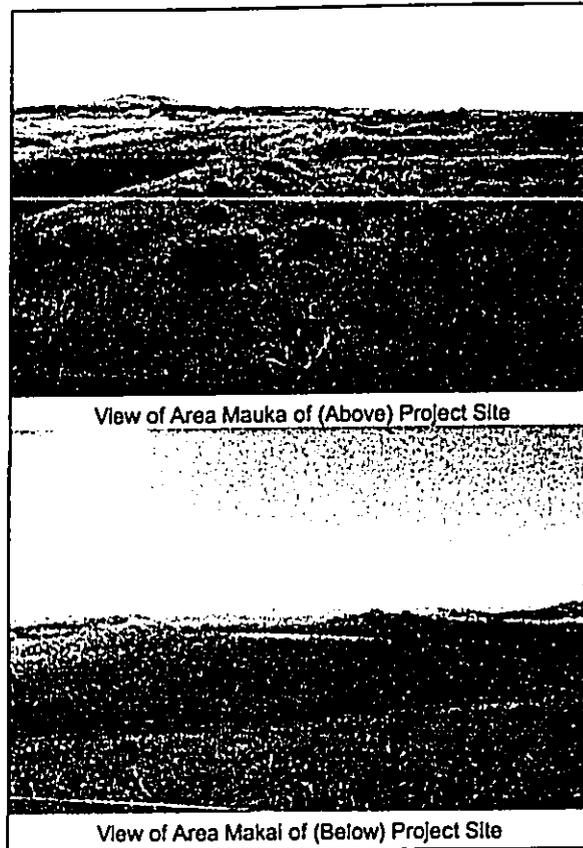
**KULAIMANO WELL DEVELOPMENT VICINITY MAP**

*Kulaimano Well Development  
 Department of Water Supply, County of Hawaii*

### Existing Surrounding Uses

Existing land uses surrounding this project site consist of large-scale agricultural activities associated with banana orchards and undeveloped land previously used for other agricultural activities (see photos). Photos of the surrounding area are provided in Appendix A of this document. With the exception of the existing reservoir, there are no other urban uses adjacent to the project site or in the vicinity.

Urban developments in this area are primarily concentrated along Hawaii Belt Road and are associated with the Pepekeo and Kulaimano homestead communities. There are a few scattered developed residential lots situated along Kaupakuea Homestead Road immediately north of Pepekeo. However, the greater concentration of residential lots is located along the highway over one-half-mile away (below) from the project site as previously shown on Figure 2.1.



Since the unpaved road leading up to the project site is privately-owned, there is minimal vehicular traffic occurring on it. Vehicular traffic on this gravel road in the vicinity of the project site would only consist of vehicles associated with existing agricultural activities on surrounding areas. Vehicular traffic on Kaupakuea Homestead Road is also light since it is generally limited to residents living along this roadway.

## **2.2 DESCRIPTION OF PROJECT**

### **2.2.1 Purpose for Project**

The purpose of this project is to improve the County DWS's water source serving the Pepekeo community, and to provide for increased water storage capacity to accommodate future development of existing house lots in the area and increase the system's reliability.

The present water system has a surface spring water source which was part of the former sugar company's water system serving this community and surrounding areas. Consequently, there are strict requirements for the treatment of this water, its monitoring for contaminants, and associated higher operational costs to the County DWS for continuing to utilize this source. Thus, the County DWS is looking to develop a replacement water source for this system which will reduce the system's dependency on the surface water source and reduce operational costs.

In addition, the County DWS would like to improve their present water storage capacity serving the Pepeekeo community. Improved water storage capacity would ensure a more reliable water system by alleviating potential shortages in water pressure, provide sufficient storage for addressing emergency purposes in this area, and accommodate future development and growth in the area.

The South Hilo District has experienced an annual average growth of 2.3 percent a year between 1970 and 1997. Furthermore, the growth in parcel inventory in this district has grown annually 7.3 percent from 1985 to 1999 (Dept. of Planning 2001). Therefore, improvements to the system's water storage capacity are needed to properly plan for and accommodate future development of vacant parcels in the area.

Hence, the objectives of this project are to improve the existing Pepeekeo water system by: 1) replacing the existing surface water source, and 2) increasing water storage capacity. The proposed improvements would subsequently achieve these objectives because it involves developing a new deep well water source that will be more reliable than a surface water source, require less monitoring and treatment for contaminants, and reduce operating costs. The future reservoir planned would also address the need for increased water storage capacity. Consequently, the proposed project would improve the County DWS's Pepeekeo water system and their ability to provide reliable water service to this community.

### **2.2.2 Existing Water System**

The County DWS Pepeekeo water system serves the residential subdivisions and other larger lots along the highway in this town area generally extending from the Kulaimano tract north to the Makahanaloa tract. This water system consists of surface water springs, a well, three reservoir tanks, and water lines varying from 1½ to 12-inches in size. The majority of water lines consist of 4- and 6-inch lines serving the developed subdivision lots.

This Pepeekeo water system was originally owned by the Pepeekeo Sugar Company which was acquired by the County in 1938 (DWS 1980). This water system obtains its water source from the Maukaloa Spring located further inland above the town and from the Kulaimano Well located below (makai) the Hawaii Belt Road (CWRM 1989).

From this spring, the DWS has an 8-inch waterline running along an unpaved road to its existing 0.30 million gallon (MG) reservoir where the new well development project is located. From this reservoir, a 12-inch waterline runs seaward (makai) along the unpaved road to another reservoir tank which then changes to an 8-inch waterline traveling down to 0.30 MG reservoir located at the Kulaimano Subdivision. From this reservoir, waterlines generally consisting of 4-, 6-, 8-, and 12-inch lines are routed along subdivision roadways to serve individual residential lots.

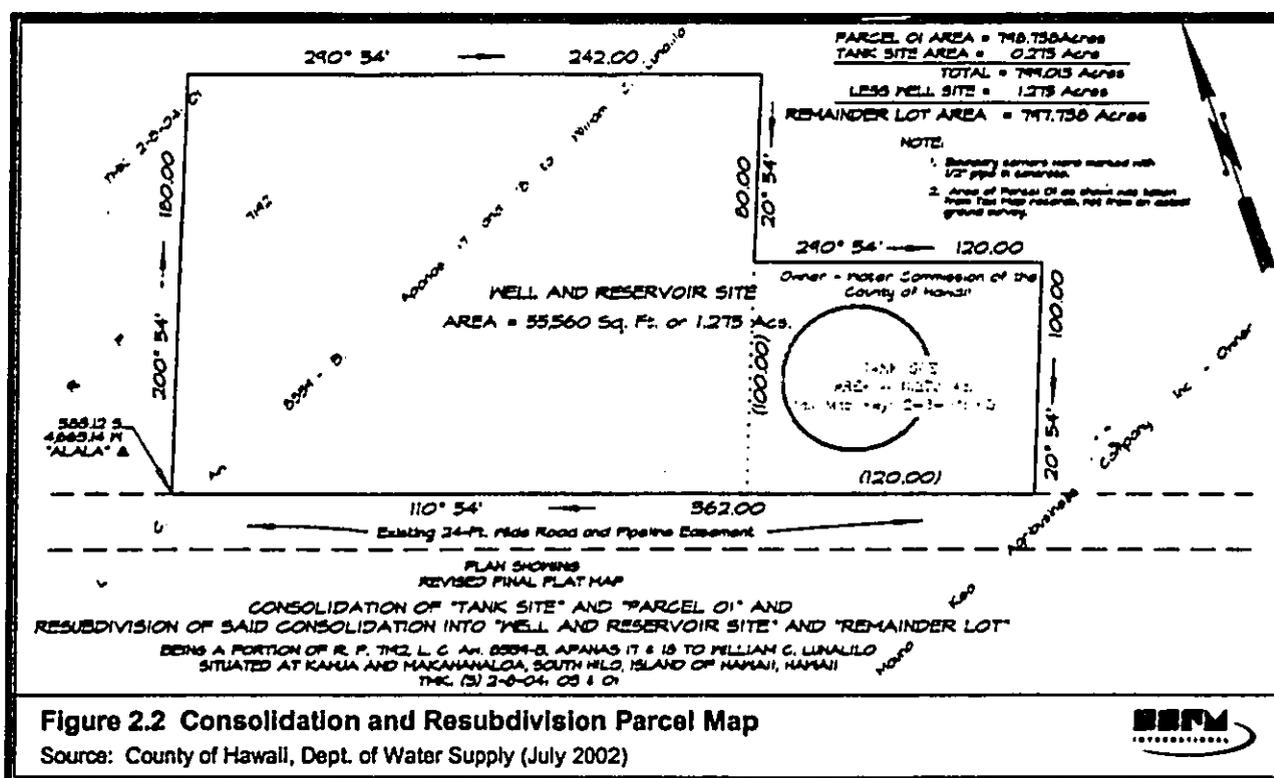
Below (makai or eastbound) the Hawaii Belt Road is the Kulaimano Well site. This well connects to the existing water system serving this area to provide another water source. From the Pepeekeo Community Center (former Pepeekeo School), 3- and 4-inch waterlines serve lower homestead parcels in the area.

### 2.2.3 Property Information and Site Conditions

The exploratory well and future reservoir facility is proposed to be developed on a 1.0-acre parcel. This parcel was previously a portion of a larger 798-acre parcel of land that is privately-owned, and identified as Tax Map Key (TMK) (3) 2-8-004: 001. An existing County DWS water reservoir is located on an abutting 0.275-acre parcel identified as TMK: (3) 2-8-004: 003.

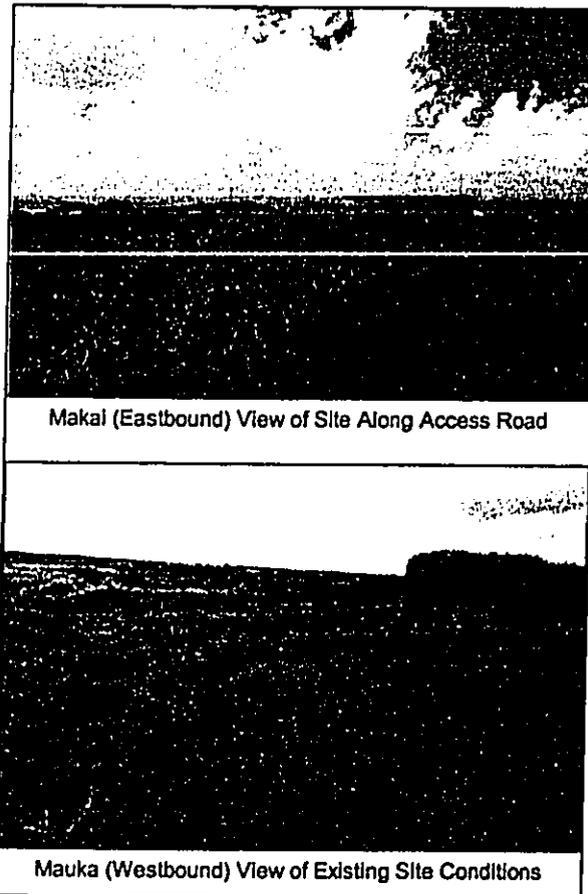
This 1-acre parcel has recently been consolidated with the County DWS's existing reservoir site (TMK 2-8-004: 003), and then resubdivided to create a single 1.275-acre parcel. Based upon the Planning Department's comment letter (September 17, 2003) in Appendix B, this consolidation and resubdivision was completed on August 1, 2002 under file SUB 7559.

This new 1.275-acre site is now identified as TMK No. 2-8-004: 003 which is the same parcel number used for the County's existing reservoir site. A plat map showing the consolidation and re-subdivision of this newly established parcel is provided on Figure 2.2 below.



### **Existing Site Conditions**

The project site is currently undeveloped and relatively flat in topography with a slight slope that flows in the easterly direction towards a shallow gully (see photo). There are no man-made structures or other urban related facilities present on the site, or any agricultural or urban activities occurring on the parcel. Vegetation on the parcel can be characterized as consisting of introduced brush and scrub vegetation typical of other undeveloped parcels in the surrounding area since this area was historically used for sugar cane cultivation (see photo). Thus, there are remnant patches of old sugar cane present, and heavy growth various other types of other weeds such as kikuyu or California grass. Appendix A includes more photographs of the existing project site.



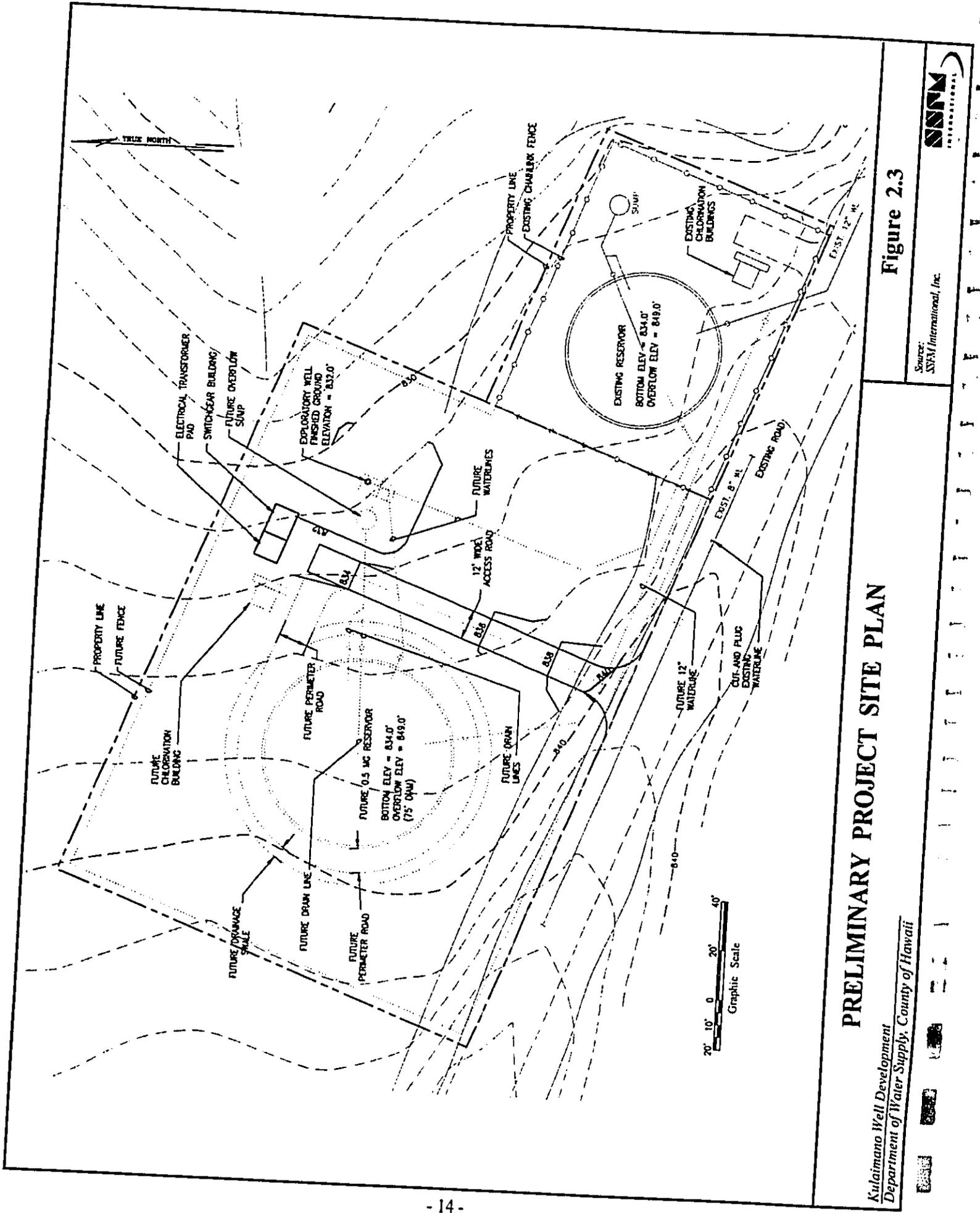
#### **2.2.4 Proposed Project Improvements**

The County DWS is proposing to drill a new exploratory well on the project site, and test it for its use as a permanent deep well water source. If feasible, a well would then be constructed and put into production serving the Pepeekeo Water System. Future phases would include development of a concreted water reservoir of 500,000 gallons and accessory structures. A site plan for the proposed improvements is shown on Figure 2.3.

#### **Exploratory Well and Source Development**

Construction activities for the well testing and development will conform to: 1) the State Commission on Water Resource Management's "Hawaii Well Construction and Pump Installation Standards", 2) the County of Hawaii's "Water System Standards", and 3) special provisions developed to supplement the water system standards as part of the project's design.

The Contractor will clear and grade the site as necessary prior to moving and setting up the drilling rig at the site, and implement measures for erosion control in accordance with design plans. When the project is completed, the Contractor will also clean up the well site, and be responsible for all grading work required leaving the site in a neat and orderly condition.



**PRELIMINARY PROJECT SITE PLAN**

Kulaimano Well Development  
 Department of Water Supply, County of Hawaii

**Figure 2.3**

Source: SSFM International, Inc.



### Well Drilling Activities

The exploratory well is planned to be drilled within the project site up to a maximum depth of approximately 902 feet. Drilling will allow for the construction of a 16-inch diameter cased well to a depth of 852 feet. A solid steel corrosion resistant casing will be installed in the exploratory well, and would be properly aligned and welded continuously over its entire length. However, the exact depth of the hole to be drilled and cased would depend on the nature of the material encountered from drilling activities and on hydrologic conditions.

After encountering water in the drill hole, water samples will be obtained and water level readings determined. All drilling and testing equipment including pipe, tools, and pump to be put into the well or open hole will be first washed and disinfected by chlorination. A continuous log of drilling activities will be kept to include recording the general character, thickness, type and drilling characteristics of materials, the color and hardness of the formations, and all other data which may be helpful in the interpretation of the geology, hydrology, and drilling condition in the area.

### Test Pumping and Well Development

Testing of the well shall consist of pumping tests to determine yield, drawdown, recovery, and quality of water at various rates of pumping. The test-pumping unit may be electrically or fossil fuel powered, and will be designed to be soundproofed to avoid any stoppage due to noise complaints by affected residents. A long-term continuous pumping test around-the-clock (24 hours a day) for up to 7 days will be conducted during the day and night, and possibly on weekends and holidays as required.

A test pump assembly will be installed capable of discharging at various sustained rates between 350 and 700 gallons of water per minute to the ground surface. The test pump assembly will be capable of pumping within a design specified rate range for a period of up to 170 continuous hours. The rate of discharge from the well would be measured with an approved water meter. The testing shall include measuring the rate of discharge and drawdown at the various pumping rates and the rate of recovery.

The Contractor will also provide the necessary facilities and make arrangements for the proper discharge and disposal of the pumped well water during the entire test period and any other pumping period. Adequate lighting will be provided for safe night operation of all the test equipment in and outside of the housed working area.

The development of the well would be considered complete and satisfactory if the well and pumped water remains free of any drill cuttings, sand, cave-in and other materials after three (3) consecutive 30 minute intervals of pump surging at a specified rate. The well will then be disinfected to remove bacteriological contamination that may have been introduced during the drilling process. Disinfection will be done by a chlorine solution of water and available chlorine compounds. The Contractor will also select a qualified water-testing laboratory, and have a

bacteriological test made prior to removal of the test pump to assure that the well is not contaminated.

#### **Future Reservoir Development**

Future phases of improvements will include construction of a concrete water tank/reservoir with a capacity of 500,000 gallons along with accessory facilities related to this new water tank. Figure 2.5 previously showed a preliminary location planned for this water tank. Preliminary concepts for this future concrete water tank indicate it could have a diameter of 75 feet, and have a height of 15 feet. However, the actual design specifications for this forthcoming reservoir will be developed in the future.

Accessory structures associated with this reservoir would include: 1) a chlorination building, 2) switchgear building to house pump controls, air compressor, recorder, and other equipment, and 3) transformer building for the power line serving this reservoir. These concrete masonry unit (CMU) built structures would likely be constructed on concrete pads having dimension of about 10 feet by 12 feet. Utility line improvements would consist of connecting the existing water main running within the private roadway to the new concrete tank and buildings.

A paved access road 12 feet wide would be provided for access into this site by County DWS staff for maintenance activities. The entire property would be enclosed with a 6-foot tall chain link fence for security, and the driveway entrance would be gated with a chain link fence.

The existing reservoir is still planned to remain with development of this new future reservoir. This reservoir would continue to be used as part of the County DWS's Pepeekeo water system serving as a back-up storage tank for the surface water source.

#### **Development Schedule and Construction Cost Estimates**

Upon completion of the environmental review process, design work for this well development project would be completed and submitted to pertinent agencies for review and approval. This will include obtaining a Permit for the well's construction, testing, and pump installation. Completion of this phase of work is planned to be completed in February 2005. Acquisition of the additional property for this project by the County DWS would also be initiated after successful development of this well source.

The estimated budget for the construction of the well testing and development phase of this project is \$600,000.

Construction of a future 0.50 MG reservoir on the project site would occur in the future after completion of this Kulaimano Well development portion. However, there is presently no planned date established for the design and construction of this reservoir facility. There are also no construction cost estimates available for this future reservoir since no design plans have been developed. However, other reservoirs of similar size have been in the range of \$1.20 million.

A listing of required discretionary land use approvals and ministerial permits for this project is provided.

State of Hawaii Permits

1. Well Permit
2. Construction Noise/Air Pollution Permit – Only if required
3. NPDES Permit – Construction Activities

County of Hawaii Approvals and Permits

1. Subdivision Application
2. Plan Approval
3. Grading and building permits

### **2.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION**

Alternatives to the proposed well development and future reservoir improvements were considered and evaluated by the County DWS. However, these alternatives were eliminated from further consideration because they would not adequately address the need to replace the existing surface water source and provided improved water storage capacity and service to those areas of the Peepeekeo community.

No Action Alternative

The No Action Alternative would preclude the development of the Kulaimano Well and future reservoir and appurtenances. As a result, the present surface water source would continue to be used in serving the Peepeekeo community and surrounding area. The County DWS would still need to meet the strict water quality monitoring and testing requirements along with associated costs for using this water source. There would also be no change to the existing water system infrastructure and capacity.

This situation could pose potential problems and difficulties in meeting water service demand and quality since this source could be more easily impacted by surface runoff pollutants and other surface contaminants. These sources thus don't have the amount of natural filtering that groundwater sources have resulting in the need for strict disinfecting and water quality monitoring. The water yield from the existing spring may also vary more dependent upon rainfall and seasonal conditions as compared to groundwater sources. Consequently, this alternative was eliminated from further consideration because it will not achieve the project's need and objectives.

**Delayed Action Alternative**

The Delayed Action Alternative would involve postponing the development of the Kulaimano Well project to some date in the future. As a result, there would be no changes to the existing water system, service capacity, and water source.

This situation would pose the same potential problems and difficulties for the County DWS as those explained under the No Action Alternative. This includes the concerns with water quality from surface pollutants and contaminants, and potential for greater variation in water yield which would impact the system's reliability in meeting water demand.

Delaying action on this project to some time in the future will also increase the costs for later implementing the improvements due to rising construction costs associated with inflation. In addition, currently planned budgetary appropriations and possible Federal funding from the State's DWSRF program may be lost or difficult to reallocate for this project if delayed. Consequently, this alternative was also eliminated from further consideration because it will not achieve the project's need and objectives. There were also no significant benefits gained from delaying this project in terms of environmental impacts.

## CHAPTER 3 PHYSICAL AND BIOLOGICAL ENVIRONMENT

This chapter discusses the existing physical and biological environment of the project area, and the probable impacts associated with the construction of the proposed well and future concrete water tank and accessory facilities. If necessary, mitigative measures are discussed.

### 3.1 CLIMATE, TOPOGRAPHY, AND SOILS

Climate on the Island of Hawaii, as well as within the State of Hawaii, can be characterized as having low day-to-day and month-to-month variability. Differences in the climates of various areas are generally attributable to the island's geologic formation and topography creating miniature ecosystems ranging from tropical rain forests to dryer plains along with corresponding differences in temperature, humidity, wind, and rainfall over short distances (Dept. of Geography 1998).

The climate of the Kulaimano project site in the South Hilo District of the Island of Hawaii is generally cooler and wetter than other areas of the island such as on the western (Kona) side. Average monthly temperatures recorded at Hilo International Airport in 2000 ranged between 69 and 76 degrees Fahrenheit with a recorded low of 58 degrees and high of 86 degrees. The annual rainfall recorded at Papaikou in 2000 was 179.4 inches which was about 31 inches more than their annual average of about 148 inches. Annual rainfall to the north in Laupahoehoe averages about 121 inches (NOAA 2000).

The prevailing trade winds in this area of South Hilo are from the east to west direction and usually dominate from April to November. Winds from the southwest are infrequent, occurring only a few days a year, and mainly during the winter when associated with "Kona" storms. Wind speeds average about 15 miles per hour and mostly vary between approximately 10 and 20 miles per hour (Dept. of Geography 1998).

#### 3.1.1 Regional Geology and Topography

The Island of Hawaii is the largest island in the Hawaiian Archipelago, and covers an area of approximately 4,000 square miles which is about twice the size of all other Hawaiian Islands combined. This island was formed by the activity of five shield volcanoes which are: 1) Kohala (long extinct); 2) Mauna Kea (some activity during recent geologic times); 3) Hualalai (last erupted in 1801 and is considered dormant); 4) Mauna Loa (still active); and 5) Kilauea (still active).

The project site is situated along the lower slopes of the eastern end of the Mauna Kea Mountain Range which forms the north central portion of the island. The dome of Mauna Kea is 30 miles across and covered with cinder cones most of which are located near the top and clustered into zones (Stearns 1967). Rocks associated with this volcano are divided into the

older Hamakua Volcanic Series and a younger Laupahoehoe Volcanic Series. The Hamakua Series is further divided into the upper and lower members, with lower members exposed only in the lower part of the sea cliffs along the Hamakua coastline (Macdonald, Abbott, and Peterson 1983).

The topographic features of this project site are generally typical of surrounding agricultural and undeveloped open space lands in the surrounding vicinity as shown on project site photos in Appendix A. The property has a gentle slope of less than 6 percent running from the southwestern end of the parcel towards the northeastern end where a drainageway is located as previously shown on the Site Plan (Figure 2.5). The site is located at elevations ranging from a high of 846 feet mean sea level (MSL) in the southwestern corner down to 826 feet MSL in the northeastern corner.

### 3.1.2 Soils

#### SCS Soil Survey

Under the U.S. Department of Agriculture, Soil Conservation Service's *Soil Survey of Island of Hawaii, State of Hawaii* (SCS 1973), soils situated on the subject property consist of that associated with the Kaiwiki Series. Soils present on the project site consist entirely of Kaiwiki silty clay loam, 0 to 10 percent slopes (KaC) as shown on Figure 3.1.

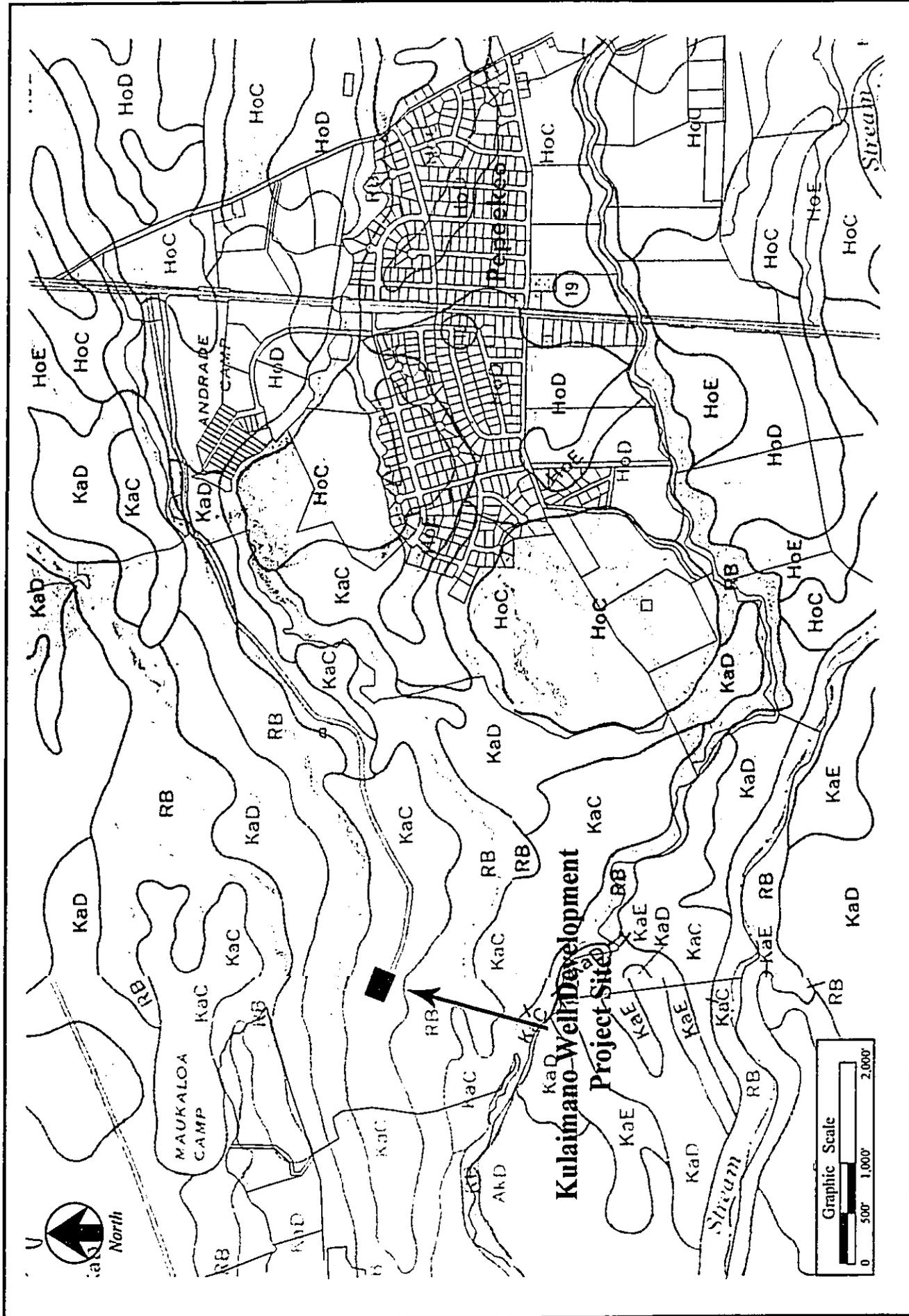
The Kaiwiki series of soils consist of well-drained silty clays that formed in a series of layers of volcanic ash and have a banded appearance. They are gently sloping to steep soils on uplands at an elevation ranging from 800 to 1,500 feet. These soils were described as being used for sugarcane (SCS 1973).

Kaiwiki silty clay loam (KaC) has a representative profile surface layer that is dark-brown silty clay loam about 15 inches thick. The subsoil is dark-brown and dark reddish-brown silty clay loam about 48 inches thick. The surface layer is very strongly acid and medium acid while the subsoil medium acid to strongly acid. The soil dehydrates irreversibly into fine gravel-size aggregates. The erosion hazard is slight, permeability is rapid, and runoff is slow (SCS 1973).

#### Land Study Bureau

Under the Land Study Bureau's *Detailed Land Classification - Island of Hawaii*, (LSB 1965), soils situated on the subject property consist of land given an overall master productivity rating of "C" or "Fair" with land type number 76 (C76). This rating for the project site is described below.

1. C76 - Kaiwiki soil series having deep depth, moderately fine texture, non-stony character, is well-drained, and is moderately suited for machine tillability.



**SOIL CONSERVATION SERVICE SOIL MAP**

**Figure 3.1**

Kulaimano Well Development  
 Department of Water Supply, County of Hawaii

Source:  
 U.S. Soil Survey of Island of Hawaii (1973)  
 ENRI GIS (Hawaii TMK Data)



### 3.1.3 Effects from Construction Activity

Construction of the exploratory well and future new concrete water tank with appurtenances is not expected to have a significant impact on the property's present topography or the physical character of the immediate area. As already discussed, the topography of this project site is generally level with a slight slope of less than 6 percent. As a result, the present site does not have any physical conditions or constraints requiring significant grade changes or cut and fill work.

Grading activities for the project site should generally be limited to creating a pad for the concrete water tank along with paving an access road adjacent to the exploratory well and future water tank to allow for County DWS testing and maintenance activities. These grading activities would therefore be relatively minor and not require creating significant cuts or fills of the property. Thus, such grading activities are not expected to significantly alter the existing condition of the site or adversely impact surrounding areas.

Trench work to connect the well and future reservoir tank to the County's existing system would only involve minor short connection lengths. This would involve connecting it to the current reservoir or existing water main within the access road. Installation of these underground connections would thus have minimal effect on the existing topography or condition of the gravel roadway. A Grading Plan will be developed during the project's design, and submitted to pertinent County agencies for their review and approval.

Construction of the exploratory well, new concrete water tank, and appurtenances would inevitably involve some land disturbing activities that may result in some soil erosion. To minimize potential short-term erosion impacts during construction activities, various erosion control measures are available for implementation. Necessary measures would be developed during the final design of this project, and would comply with the County's Erosion and Sedimentation Control regulations prescribed under Chapter 10 of the Hawaii County Code (County 2000).

Erosion control measures considered to minimize effects during construction may include: use of temporary sprinklers in non-active construction areas; stationing water trucks on the site during construction to provide immediate sprinkling in active construction areas; use of temporary berms and cut-off ditches; use of temporary silt fencing, sand bags, or screens; thorough watering of graded areas after construction activity has ceased for the day; or sodding or planting slopes immediately after grading work has been completed. The actual measures will be included in an erosion control plan submitted to the County for ministerial approval. Grading activities will also be performed in accordance with applicable provisions of permits obtained from the County and State Department of Health (DOH), as necessary.

### **Other Short-Term Construction Impacts**

Other typical short-term impacts that are usually associated with construction related activities may include fugitive dust emissions, construction noise from equipment, and traffic disturbances from construction vehicles occurring along the Hawaii Belt Road. Minimal vehicular traffic presently occurs along the site's access road, and traffic volumes along Hawaii Belt Road in this area are generally moderate. Given the relatively small construction operation and workers required, there should be minimal disturbances to traffic flow along the highway from construction-related traffic.

Fugitive dust emissions and construction noise are not expected to cause much disturbance or annoyance to surrounding properties or residents. There are no homes or other noise sensitive uses in the immediate vicinity of the project site as shown on the project site photos in Appendix A. Surrounding properties consist of vacant undeveloped land and agricultural fields. The Kulaimano Subdivision is over 4,000 feet away from the project site.

Although these potential short-term effects should have minimal impacts, other possible mitigative measures would be considered for implementation during construction. Such measures would be determined during the project's design and preparation of construction plans. Measures considered could include the use of wind breaks or watering to reduce dust and planting disturbed areas immediately after grading work has been completed. Specific measures will be incorporated as part of the Grading Plan and best management practices (BMPs) developed. These measures would be designed to make construction activities comply with pertinent Administrative Rules of the State Department of Health such as Title 11: Chapter 46 (Community Noise Control), and Chapter 60 (Air Pollution Control).

## **3.2 NATURAL HAZARDS**

This section addresses natural and urban-related hazards applicable to the site. Potential natural hazards addressed include earthquakes, lava flows, hurricane, and flooding hazards. There are no other known potential urban-related hazards applicable to the project site such as airport clear zones, hazardous wastes, or other site safety issues associated with urban use.

### **3.2.1 Earthquake and Lava Flow Hazards**

#### **Earthquake Hazards**

Earthquakes in the Hawaiian Islands are primarily associated with volcanic eruptions resulting from the inflation or shrinkage of magma reservoirs beneath which shift segments of the volcano (Macdonald, et. al. 1983). Although difficult to predict, an earthquake of sufficient magnitude causing structural or other damage to the Kulaimano Reservoir may occur in the future. Most of the earthquakes that have occurred were volcanic earthquakes causing little or no damage. The seismic risk classification of the Island of Hawaii is a rating of Zone 4 (USGS 1997).

The Island of Hawaii experiences thousands of earthquakes each year, however, most are so small that they can only be detected by instruments. There are some strong enough to be felt, and a few cause minor to moderate damage. Most of this island's earthquakes are directly related to volcanic activity, and are caused by magma moving beneath the earth's surface. Earthquakes may occur before or during an eruption, or may result from the underground movement of magma that comes close to the surface. A few of the island's earthquakes are less directly related to volcanism. These originate in the zones of structural weakness at the base of the volcanoes or deep within the earth beneath the island (USGS 1997).

The locations of larger damaging earthquakes of magnitude 6 or greater since 1868 on the Island of Hawaii have generally occurred on the southern half of the island primarily on the eastern end. Plots of recent earthquakes of magnitude 4.0 and greater from 1962 to 1985 also determined that few have generally occurred in the South Hilo District (see Figure 3.2). As shown, there was only one large earthquake recorded in the project area whereas the great majorities are centered on the southeastern end of the island (USGS 1997).



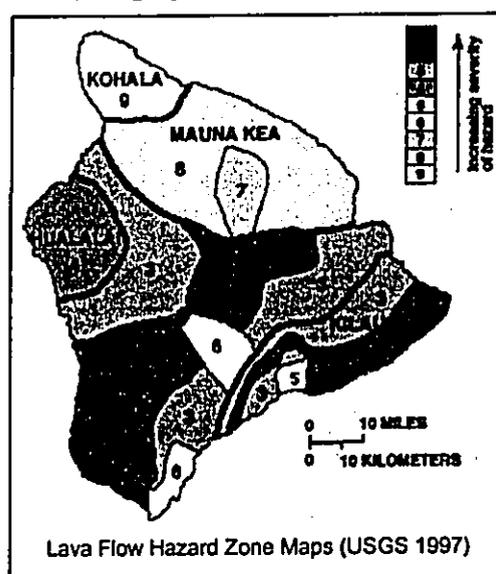
#### Potential Impacts from Future Earthquakes

There is the possibility of future earthquakes occurring on the Island of Hawaii, therefore, potential damage to constructed building structures, infrastructure, and other facilities may occur from an earthquake of sufficient magnitude. However, damages to structures will be minimized by following appropriate Department of Water Supply building design and construction standards established under County building codes and standards for this concrete water tank and accessories. Thus, the risk of potential damage to the facilities planned on the project site will not be more than other existing land uses in the South Hilo region.

### Lava Flow Hazards

Volcanic hazard zone maps developed for the Island of Hawaii were revised by the U.S. Geological Survey in 1997. The current map divides this island into zones ranked from 1 through 9 based on the probability of coverage by lava flows (see graphic). Hazard zones from lava flows are based mainly on the location and frequency of both historic and prehistoric eruptions. Hazard zones also take into account the larger topographic features of volcanoes that affect the distribution of lava flows (USGS 1997).

Based upon this map, the South Hilo district area was given a hazard zone rating of 8, and was the only area on the island with this rating. This zone rating reflects no percentage of area covered by lava since 1800, none in the last 750 years, and only a few percent of area covered in the past 10,000 years (USGS 1997). Consequently, the potential for damages to the Kulaimano exploratory well, reservoir and appurtenances from lava flow hazard is minimal.



### **3.2.2 Hurricane Hazards**

The three major elements of a hurricane making it hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (FEMA 1993). Of these three, only strong winds and heavy rainfall could affect the project. The site is located approximately 2 miles inland from the shoreline and at an elevation of approximately 840 feet mean sea level. As a result, this location makes impacts from large waves and storm surge extremely unlikely. Impacts associated with heavy rainfall are addressed later under drainage facilities.

A hazard mitigation report prepared by the Federal Emergency Management Agency after Hurricane Iniki in 1992 determined that nine hurricanes approached within 300 nautical miles (about one day's travel time) of the Hawaiian Islands' coastlines between 1970 and 1992. Most hurricanes affecting the islands have focused on Kauai. Based upon a tracking of hurricanes since 1950, there appears to be no geographical or meteorological reasons why hurricanes miss the other islands but tend to steer toward Kauai (FEMA 1993).

Although unpredictable, the Island of Hawaii has historically received less threat and damage from hurricanes as compared to Kauai. However, as with other existing and future developments in the South Hilo District as well as on the Island of Hawaii, structures built on the project site could potentially receive some damage from the high winds of a hurricane passing close to the island.

The potential damage to the proposed well should be minimal since this would involve little above-ground structures, and the materials of such structures would be steel. Similarly, the concrete water tank's impact from high winds should be minimal due to the type of material (concrete and steel) used. Accessory facilities such as a water meter could sustain some damage from strong winds or flooding. However, this probability should similarly be quite low since these facilities would be made of metal components. To minimize potential damages, the water tank and facilities would be designed and constructed in accordance with appropriate County DWS design requirements and standards. Thus, the risk of potential damage from high winds should be considerably less than other existing developments in the Pepekeo and Kulaimano communities.

### **3.2.3 Flooding Hazards**

The Flood Insurance Rate Map (FIRM), Community Panel Number 155166 0650 C (1995), was researched to identify floodways that may affect the project area. Unfortunately, this FIRM panel was not printed since the entire area is in Zone X which represents areas determined to be outside the 500-year flood plain.

Based upon field inspections of the property and surrounding area, there appears to be no streams or major drainageways running through the project site. North of the property is the Alia Stream running in a west to east (mauka to makai) direction based upon the U.S. Geological Survey map for this area. Runoff from the project site and immediate surrounding area appear to sheet flow towards this drainageway which appeared overgrown with brush and weeds at the time of the survey.

Given this information, the project site is not situated in an area that has been historically subject to flood inundation by a tsunami or a 100-year flood. Therefore, the project should not be adversely affected by these hazards, and is not subject to County requirements and design standards described under Chapter 27, Flood Control of the Hawaii County Code. Drainage improvements planned for the property would utilize catch basins and dry wells, and are discussed further under Chapter 5.

## **3.3 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES**

Research of available information was conducted to determine the presence of historic sites in the immediate vicinity of the Kulaimano well and reservoir project site. Research of the State Historic Preservation Division's (SHPD) web site determined there were no prior available archaeological studies conducted for the project site or in the immediate vicinity (SHPD, Jun 2003). Furthermore, there were no historic sites listed on the National or State Register of Historic Places present on the project site or in the immediate vicinity (SHPD, Jan 2003).

The Kulaimano project site consists of undeveloped agricultural and pasture land as shown on the site photos in Appendix A. Based upon a field visit, there were no structures or other noticeable features on the property which may be associated with potential historic sites such as

rock walls, heiau, or historic plantation features. The project site and surrounding area appears to have been previously used for agricultural activities or pasture land. Surrounding properties are currently being used for banana production.

Therefore, the project should not have a significant impact on historic sites since there do not appear to be any historical structures or sites present. Further, the project site does not consist of any sandy soils which are commonly associated with subsurface human remains. The site appears to have been disturbed from historic plantation agricultural use of the property and surrounding area. Therefore, the likelihood of encountering historic sites or subsurface human remains should be relatively low.

Nevertheless, in the event significant historic properties such as subsurface human remains, cultural layer, artifacts, or other features indicating human activity older than 50 years are encountered during construction activities, all work will stop immediately and the SHPD notified.

#### Cultural Resources

In terms of cultural resources, this project is not expected to significantly affect traditional native Hawaiian cultural practices other traditional cultural practices occurring in the surrounding area. There are no known traditional cultural practices occurring within the project site since this privately-owned property consists of undeveloped pasture land which has been previously used for agricultural activities. Adjacent areas surrounding this project site are similarly used for pasture or agricultural activities, and the adjoining parcel is currently used for an existing water reservoir.

The project would also not restrict access to surrounding areas which may be potentially used for traditional native Hawaiian cultural practices since the proposed well and reservoir site along with the existing reservoir would only encompass 1.275 acres. Thus, this project would not significantly restrict access to other surrounding areas that may be used for cultural practices because improvements would only be limited to this site. This project would not prevent access to shoreline areas or surrounding mauka areas that may be used for traditional gathering or other cultural practices. Temporary construction activities would similarly not restrict or prohibit access to mauka land areas that may be used for traditional gathering or other cultural practices.

### **3.4 BOTANICAL RESOURCES**

The Kulaimano Well Development project site is located at about the 840-foot elevation placing this project area within the dryland forest and shrub vegetation zone. This vegetation zone typically includes areas that have been used for cattle grazing and sugar and pineapple cultivation. Dryland forest typically ranged from the 650 to 1,000-foot elevation up to the 3,000-foot elevation (Sohmer and Gustafson 1987).

Based upon the field inspection, botanical resources present on the project site and in the immediate surrounding area appear typical of the dryland forest and shrub vegetation zone. As shown on the site photographs in Appendix A, the project site consists predominantly of vacant pasture land. Vegetation on the parcel can be characterized as consisting of introduced brush and scrub vegetation similar to surrounding parcels in the area. There are remnant patches of old sugarcane and heavy growth other types of other weeds such as Kikuyu or California grass. Surrounding areas in the immediate vicinity similarly consist of large-scale agricultural activities associated with banana orchards and undeveloped land previously used for other agricultural activities.

Development of the property for the exploratory well, new concrete water reservoir, and appurtenance facilities is not expected to have a significant impact on existing botanical resources on the property or in the immediate vicinity. No threatened or endangered species or species of concern are known to be present on the project site due to the historic use of the area for large scale sugarcane cultivation, and currently for the existing water tank. Existing plant species predominantly consist of introduced species of weeds having little value for preservation.

### 3.5 AVIFAUNAL AND FERAL MAMMALS

No avian species listed as endangered, threatened, proposed, or as a candidate species by the U.S. Fish and Wildlife Service or by the State of Hawaii under its endangered species program are known to be present on the project site or in the immediate vicinity. The project site is not located within a State designated Natural Area Reserve. Further, it is not within an area designated as habitat for the recovery of Hawaiian forest birds since such areas are situated above the 3,000-foot elevation (FWS, 2003).

Avian species present on the project site would likely consist of introduced species such as various types of pigeons and doves, babblers, silvereyes, saltators, and cardinals. Vegetation on the project site consists predominantly of introduced species and weeds reflecting decades of disturbance as part of large scale agricultural cultivation. Thus, there are no wetlands present on the site or in the immediate vicinity which may serve as important nesting or foraging habitat for endangered or threatened species.

Mammals present on the project site would likely consist of feral mammals typical of surrounding agricultural lands. No mammals were observed at the project site during a recent visit to the property. Mammals likely to be present in the area include feral or domestic dogs (*Canis familiaris*), Indian mongoose (*Herpestes auropunctatus*), feral cats (*Felis catus*) and wild pigs (*Sus scrofa*). Although no rodents were detected, it is likely that Roof rats (*Rattus r. rattus*), Norway rats (*Rattus norvegicus*), and possibly Polynesian rats (*Rattus exulans hawaiiensis*) as well as House mice (*Mus musculus*) may be present in the surrounding agricultural land (van Viper 1982).

There are no known federally listed endangered, threatened, proposed, or candidate mammalian species likely to be present on the project site or in the immediate vicinity. The project site does not contain wetlands or important forest reserves that are suitable for such species. Existing mammalian species present are introduced species all of which are predators to avian populations. Consequently, construction of the well and future reservoir is not expected to have a significant impact on important avian or mammalian species that may be present in the area.

### 3.6 AIR QUALITY

Ambient air quality standards (AAQS) have been established by both Federal and State governments that limit ambient concentrations of particulate, matter less than 10 microns (PM<sub>10</sub>), sulfur dioxide, nitrogen dioxide, carbon monoxide (CO), ozone, and lead. In addition, a State standard has been established for hydrogen sulfide. State AAQS are more stringent than the comparable national limits (NAAQS) except for the standards for sulfur dioxide, particulate matter and lead, which are set at the same levels.

Air quality issues most applicable to the proposed Kulaimano Well and Reservoir project site concern short-term construction related emissions such as fugitive dust. Vehicular emissions (carbon monoxide) from traffic occurring along Hawaii Belt Road and the access road are not considered to be an important factor influencing this project area.

A summary of both State and National AAQS is presented below. Hawaii's standards are not divided into primary and secondary standards as are the National standards. Primary standards are intended to protect public health with an adequate margin of safety while secondary standards are intended to protect public welfare through the prevention of damage to soils, water, vegetation, man-made materials, animals, wildlife, visibility, climate, and economic values.

Summary of National and State Ambient Air Quality Standards

Pollutant	Sampling Period	NAAQS Primary	NAAQS Secondary	State Standards
Particulate Matter Less Than 10 Microns (PM <sub>10</sub> )	Annual	50	50	50
	24-Hour	150	150	150
Sulfur Dioxide	Annual	80	n/a	80
	24-Hour	365	n/a	365
Nitrogen Dioxide	Annual	100	100	70
Carbon Monoxide	8-Hour	10	10	5
	1-Hour	40	40	10
Ozone	1-Hour	235	235	n/a
Hydrogen Sulfide	1-Hour	n/a	n/a	35
Lead	Quarter	1.5	1.5	1.5

Note: All concentrations in micrograms per cubic meter (µg/m<sup>3</sup>) except for carbon monoxide which is in milligrams per cubic meter (mg/m<sup>3</sup>)

### **Impacts from Short-Term Construction Activities**

Impacts associated with this project would be limited to short-term construction activities since there would essentially be no activities occurring on the property once it's constructed with the exception of periodic maintenance activities conducted by County DWS staff. Short-term impacts on air quality from construction activities would predominantly be associated with fugitive dust emissions and exhaust emissions from on-site construction equipment. Fugitive dust emissions would generally arise from clearing, grading, and other dirt moving activities associated with site clearing and ground preparation for the exploratory well and future concrete water tank.

Grubbing and grading activities would be limited due to the small size of the project site (1.275 acres including existing reservoir), the nature of this type of project, and the property's relatively gentle sloping topography. Grading activities occurring should be predominantly limited to creating pads for structures, well drilling, water tank, and access driveway. These efforts would therefore minimize the amount of excavation required and limit fugitive dust emissions.

There are no residences or other sensitive uses within the immediate vicinity of the project site. Surrounding uses consist of undeveloped land and large scale banana cultivation as shown on the photos in Appendix A. Nevertheless, minor short-term impacts associated with fugitive dust emissions on surrounding areas would be mitigated through the implementation of a dust control plan as described below.

State air pollution controls prohibit visible emissions of fugitive dust from construction activities at the property line. Therefore, a dust control plan would be prepared and implemented to have the contractor comply with these regulations. Adequate fugitive dust control can usually be accomplished by establishing a frequent watering program or implementing other measures to address grubbing and grading activities. Some measures that could be considered during the project's design for implementation by the contractor may include:

1. Limiting the areas that are disturbed at any given time;
2. Applying chemical soil stabilizers, mulching, or using wind screens;
3. Establishing a road cleaning or tire washing program to reduce fugitive dust emissions from trucks using paved roadways in the project site; and
4. Establishing landscaping early in the construction schedule to control dust.

On-site mobile and stationary construction equipment would also emit air pollutants from engine exhausts. Minor nitrogen dioxide emissions from construction equipment should not violate stricter State standards since such emissions would be short-term and the standards are set on an annual basis. Short-term carbon monoxide emissions from construction equipment would similarly be low and should be relatively insignificant.

### 3.7 NOISE

Potential noise impacts associated with this project would mainly be associated with short-term construction activities. Due to the nature of this exploratory well and reservoir project, no long-term noise impacts from project-related vehicular traffic or noise impacts from operation of this well and water reservoir are anticipated.

#### Short-Term Noise Impacts from Construction Activities

Noise from construction activities are regulated under Title 11, Chapter 46 (Community Noise Control) of the State DOH's Administrative Rules. Under these regulations, the project site and immediate vicinity fall under the Class C zoning district classification. This Class C classification applies to properties zoned agricultural, country, industrial, or of other similar land uses. *Under the County's zoning map for the area, the project site and surrounding area is zoned Agricultural District, Minimum 20-acre Lots (A-20a).* As a result, the maximum permissible noise levels under this Class is 70 dBA at the property line during both daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) hours.

Development of the exploratory well, future concrete water tank, and related appurtenances will involve some grading activities along with the construction of the facilities themselves. The various construction phases of any development would inevitably generate some noise levels due to equipment noise and other related construction activities. Typical ranges of construction equipment noise vary between 70 and 95 dBA. Earthmoving equipment, such as bulldozers and diesel powered trucks, will probably be the noisiest equipment used during construction.

However, any noise impact from these activities would be relatively short-term and minor given the type and size of the facilities being developed by the County DWS. Furthermore, there are no noise sensitive uses located in the immediate vicinity of the site such as residences, schools, or hospitals. The actual noise levels would be dependent upon the construction methods and equipment employed during each stage of the development process. Construction equipment would be equipped with mufflers as required under DOH regulations.

In cases where construction noise exceeds, or is expected to exceed, the maximum permissible noise level allowable to property line limits, a noise permit would be obtained from the DOH by the contractor to allow these activities. This permit includes restrictions to help mitigate potential noise impacts resulting from short-term construction activities. Such restrictions would be followed by the contractor. Specific permit restrictions included as conditions under this permit for construction activities are:

- No permit shall allow construction activities generating noise levels beyond the maximum permissible sound level at the property line before 7:00 a.m. and after 6:00 p.m. of the same day, Mondays through Fridays.

- No permit shall allow construction activities generating noise levels beyond the maximum permissible sound level at the property line before 9:00 a.m. and after 6:00 p.m. on Saturdays.
- No permit shall allow construction activities generating noise levels beyond the maximum permissible sound level at the property line on Sundays and holidays.

### 3.8 VISUAL RESOURCES

There are no unique natural or topographical features, landmarks, or other land forms of significant or important visual character present on the project site or in the immediate vicinity. As discussed in Chapter 2 and shown on the site photographs in Appendix A, the property consists of vacant pasture land formerly used for large-scale plantation agriculture, and surrounding uses consist of more pasture land and agricultural activities. The character of the area is distinctly agricultural and rural in nature with sporadic homes visible in the distance.

Review of the County's draft *General Plan's* section on natural beauty (Planning Dept 2001) identified a few sites of notable natural beauty in the region. These sites were: 1) Onomea Bay area, 2) Onomea Arch, 3) Akaka and Kahuna Falls, and 4) Kolekole Gulch. However, the Onomea sites along the shoreline are located several miles away from the project site, and the water falls and Kolekole Gulch are located several miles north and mauka (inland) of the site.

There are also no public scenic views or viewing points present on the project site or in the immediate vicinity since the property and surrounding area are currently private-owned and used for agricultural activities. The access road leading up to the well site is also privately-owned and unpaved restricting access to the general public. This well site is not visible from the highway since it is located well inland and already screened by existing banana plots, other vegetation, and the natural topography of the area. Mauka (inland) views from the highway in the project vicinity are also obscured by existing vegetation and land uses developed along the highway corridor.

Construction of the exploratory well and future concrete water tank is not expected to have a significant impact on important scenic views or negatively impact visual resources. This project should not affect public views of the four natural beauty sites identified in the proposed *General Plan* since they are located considerable distances away. The project would not impact important public viewing points since there are none in the immediate area, and structures would not be visible from the highway.

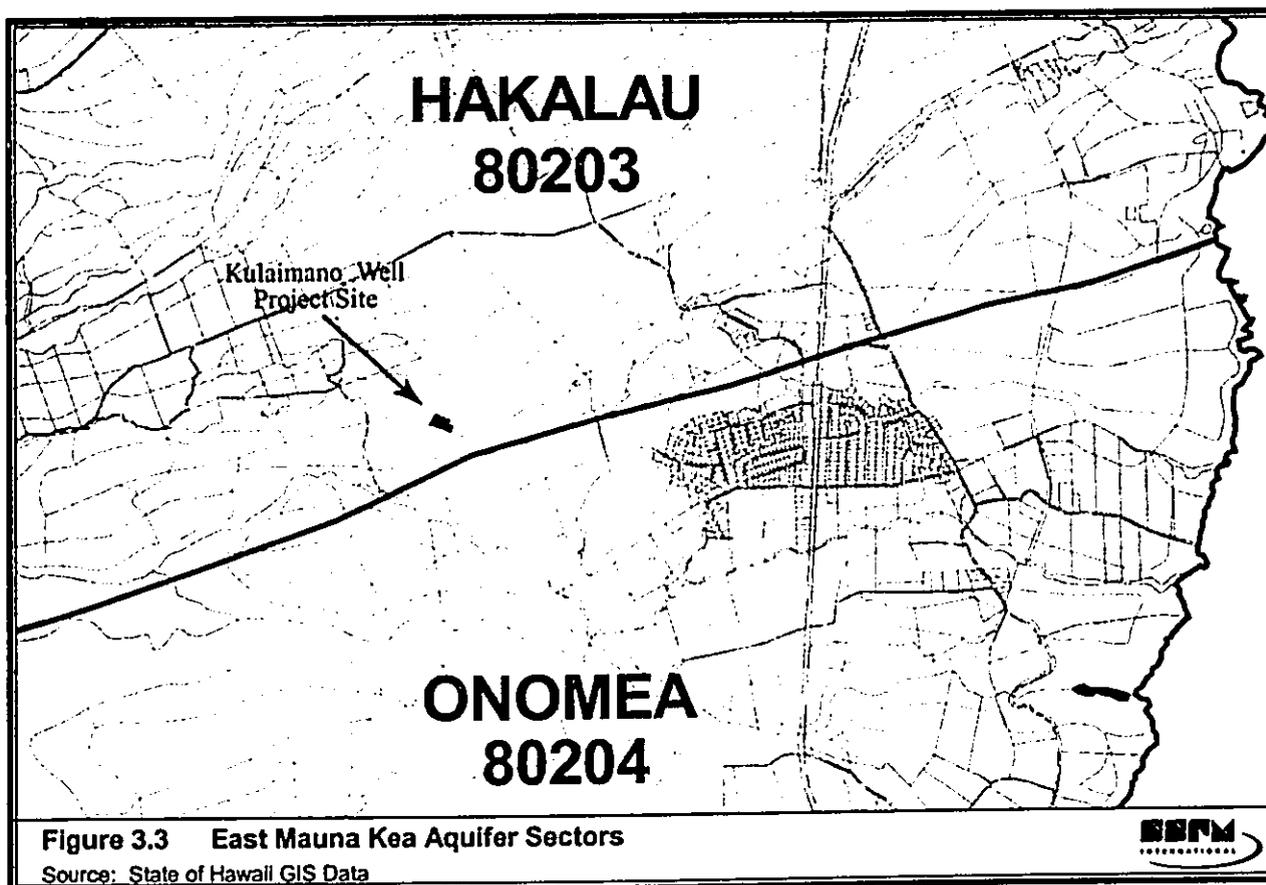
In order to further minimize views of the future reservoir from the sporadic surrounding mauka residences, suitable earth tone colors will be considered for painting the tank. Also, landscaping using Native Hawaiian plants to further screen views will be considered as part of the project's design as appropriate.

### 3.9 HYDROGEOLOGICAL RESOURCES

Under the State's Water Resource Protection Plan, aquifers of the Island of Hawaii have been classified under an aquifer coding system to identify and describe these aquifers. This system is comprised of Aquifer Sectors, and then Aquifer Systems located within these sectors. An Aquifer Sector reflects an area with broad hydrogeological (subsurface) similarities while maintaining traditional hydrographic (surface), topographic and historical boundaries. The Aquifer system is an area within a sector that is more specifically defined by hydrogeologic continuity, particularly hydraulic connections among aquifer types and units.

#### Existing Aquifer System

The Kulaimano Well project is located within the East Mauna Kea Aquifer Section (Sector 802) which includes most of eastern portion of the island of Hawaii. Within this East Mauna Kea Aquifer Section, there are four Aquifer Systems which are identified as the Honokaa, Paauilo, Hakalau, and Onomea Systems (CWRM 1989). Based upon State Geographic Information System (GIS) data, the project site is situated within the Hakalau Aquifer System (System 80203) as shown on Figure 3.3 below. The County water system from this site serving the Kulaimano community also crosses into the Onomea System (System 80204).



A large part of the Hakalau Aquifer Section is comprised of the Laupahoehoe lava series covering the older Hamakua series associated with the shield building of Mauna Kea. The Hamakua Volcanics comprises the bulk of the volcanic rock underlying this region, however, the distribution of the Laupahoehoe Volcanics is greater at the lower elevations (CWRM 1990).

Basal water in this Hamakua basaltic formation extends more than 5 miles inland, and high level dike water occurs at great depth inland towards the Mauna Kea rift zone. The Laupahoehoe lava formation carries perched water, and serves as a partial caprock for basal water in the Hamakua lavas. The sustainable yield for this system was estimated to be 150 million gallons per day (mgd) reflecting the large size of this aquifer system and high rainfall occurring. Thus, a large amount of potable basal groundwater could be developed from this system (CWRM 1990).

The County DWS's Pepeekeo water system serves the residential subdivisions and other larger lots along the highway in this Kulaimano and Pepeekeo town areas. This water system obtains its water source from the Maukaloa Spring located inland and from the Kulaimano Well located below (makai) the Hawaii Belt Road (CWRM 1989). As a result, the only groundwater source presently serving this community is from the Kulaimano Well drawing from the Onomea Aquifer System.

#### **Probable Project Impacts**

The Kulaimano Well Development project will improve the existing Pepeekeo water system as the new deep well source will be more reliable than the surface water source and will require less monitoring and treatment for contaminants, and reduce operating costs. The future reservoir planned would also address the need for increased water storage capacity. Consequently, the proposed project would improve the Pepeekeo water system and enable the DWS to provide reliable water service to this community.

The drilling and testing of the exploratory well will be conducted in accordance with applicable Department of Health regulations to prevent contamination of the underlying aquifer. Furthermore, the testing shall include measuring the rate of discharge and drawdown at the various pumping rates and the rate of recovery. Should the testing prove feasible, a well would then be constructed and put into production serving the Pepeekeo water system. Given the large size of the aquifer system and its high sustainable yield of 150 million gallons per day, the development of the new deep well is not anticipated to have a significant effect on the aquifer. As a result, the project should not adversely impact the underlying aquifer system and contaminate water sources.

Future construction of the new concrete water tank along with accessory structures are not expected to have a significant impact on hydrogeological resources. Construction of these facilities should involve relatively minor grading and fill activities to establish the foundation for the reservoir tank, service road, and other accessory equipment. Appropriate geotechnical studies would be conducted during the project's design to determine necessary foundation requirements.

### 3.10 STREAMS AND AQUATIC RESOURCES

Based upon the *Hawaii Stream Assessment* report (HCPSU 1990), there are two perennial streams located in the general vicinity of the well project site. These streams are the Alia Stream (HSA Code 8-2-39) located about 400 feet to the north and Waimaauou Stream (HAS Code 8-2-41) situated about 400 feet to the south. Both of these streams were not identified as having any special areas associated with them such as natural or cultural resources of particular value. Such resource categories of value include wetlands, priority aquatic sites, historic sites, recovery habitat for waterbirds, or wildlife sanctuaries (HCPSU 1990).

Based upon the field inspection of the project site, there were also no major streams or drainage ways identified running through the property or in the immediate vicinity. Consequently, there were no significant aquatic resources present on the project site or in the immediate vicinity.

The proposed well and future reservoir improvements are not expected to have an adverse effect on streams or important aquatic resources since none are present on the site or immediate vicinity. Construction improvements for the new well would be limited to drilling activities on the site, associated testing activities, and appurtenances added when put into production. Development of the future reservoir would similarly be limited to site improvements for the concrete water tank, access, accessory structures, and site improvements.

As a result, such improvements would not change or alter the bed or banks associated with other streams or drainage ways in the larger area. Runoff from the project site would be directed either into injection wells or a detention basin established on site. However, the additional increase in runoff due to the creation of impervious surfaces would be small and should not adversely affect surrounding properties which are undeveloped pasture or used for larger scale agricultural activities.

## CHAPTER 4 ECONOMIC AND SOCIAL FACTORS

### 4.1 ECONOMIC AND FISCAL FACTORS

Construction of the new Kulaimano well and future reservoir should have a small minor positive economic impact mainly associated with the creation of short-term construction related jobs.

#### Construction Related Jobs

The preliminary estimated construction cost for this project was \$600,000 for development of the new well and an estimated \$1.2 million for a future concrete reservoir as discussed in Chapter 2. As a result, about \$1.8 million (2003 dollars) would be spent for construction of these new facilities.

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. Based upon the construction budget, it was estimated that about 14 (about 5 for the well and 9 for reservoir) new direct full-time construction jobs would be created by the project. Direct construction jobs created would also stimulate indirect and induced employment within other industries on the island such as retail, restaurants, material distributors, and other related businesses supporting the construction industry. It was estimated that about another 18 indirect and induced jobs could be generated by this project for a total employment impact in the range of 32 jobs.

These new jobs created would also generate additional personal income for construction workers on the order of about \$690,000. Personal income is defined as the wages paid to the direct construction workers or operational employees associated with a development. It is anticipated that these construction jobs would likely be filled by residents from the Island of Hawaii employed within the construction industry. Indirect and induced income would also be generated on the order of about \$600,000 from this project. Thus, this project is estimate to generate a total of about \$1,290,000 in total (direct and indirect) construction income.

Therefore, implementation of this project would create several beneficial short-term construction related jobs over several months (estimated 1 to 1.5 years for both) for the County and State. The 14 direct construction jobs generated would be rather small in comparison to the approximately 4,000 construction jobs already occurring on the island (READ 2003), but it will provide a small minor positive economic impact. These additional jobs will also provide a small positive impact to supporting business such as manufacturers, building and equipment suppliers, etc. Similarly, the additional construction jobs would generate additional income for individuals that would be spent within the local and State-wide economy creating a short-term minor positive impact.

### **Fiscal Factors**

Fiscal impacts associated with this project would primarily involve some additional tax revenue generated to the State. Tax revenue sources for State government are composed primarily of general excise taxes (GET) on development costs and construction materials, along with corporate income tax. In addition, GET taxes on indirect and induced income spent stimulated by the spending of direct income would also contribute new revenues to the State.

The \$1.8 million construction budget expended by the County for construction of the new well and future reservoir would generate a relatively small increase in tax revenue to the State. About \$75,000 would be generated in GET from construction revenue, and another \$25,000 in GET from direct and indirect construction income spent. Other corporate tax, income tax, and excise taxes would generate another \$70,000. Thus, total State revenues generated from this project were estimated to be on the order of \$170,000. This amount is relatively minimal in comparison to State-wide total revenues, but it would result in a minor short-term positive impact on the State's fiscal condition.

County revenues are primarily limited to tax revenues on privately-owned property and improvements. This project is thus expected to have minimal impact on the current or future levels of County tax revenues being generated. The 1-acre privately-owned project site would be acquired by the County at fair market value. Based upon County property tax data, the market land value for this Agricultural property class site is estimated to be about \$3,000 per acre, and subsequently generates only about \$10 per acre annually in County tax revenue. As a result, acquisition of the property by the County for this project would reduce County property tax revenues by about \$10 per year which has minimal or insignificant effect.

This project is not expected to generate any new permanent in-migrant residents to the Island of Hawaii to fill the few short-term construction related jobs created. Thus, there would not be any impact on State and County operational expenditures for public services serving this community and surrounding areas.

## **4.2 SOCIAL IMPACT FACTORS**

The Kulaimano Well project site is situated within the Makahanaloa ahupua'a tract located over 1.25 miles inland (mauka) of the Hawaii Belt Road highway. This project would improve the County DWS's existing water system serving the Kulaimano Subdivision and Pepekeo town area which are generally developed along the rural highway. This community is made up predominantly of residential lots, and has similar rural characteristics with other surrounding communities.

The nature of this South Hilo to North Hilo (Hamakua) coastline is one of strings of separated small subdivisions and communities predominantly concentrated along the main coastal highway. Pepekeo town was once a plantation agricultural town where hundreds of surrounding acres were cultivated for sugar cane by the Pepekeo Sugar Company. Thus, much

of the older existing residential areas, or camps, present were associated with families working for this sugar company. Since then, this plantation town has since transformed into the current rural subdivision along with more recent expansions of subdivision areas.

**Population, Housing, and Economic Characteristics**

The population for the Pepeekeo census designated place (CDP), which includes the project service area, was 1,697 persons based upon the recent 2000 Census data. There were 623 households and the median age of residents was 40.8 years (Bureau of the Census 2001). Table 4.1 shows this CDP census information in comparison to both the County and State.

Description	Pepeekeo CDP		Hawaii County		State of Hawaii	
	No.	%	No.	%	No.	%
Total Population	1,697		148,667		1,211,537	
Age:						
0 - 5 years	110	6.4%	8,130	6.1%	78,163	6.5%
5 - 19 years	327	19.3%	33,690	22.7%	249,088	20.6%
20 - 64 years	912	53.8%	85,738	57.7%	723,685	59.7%
65 + years	348	20.5%	20,119	13.5%	160,601	13.3%
Median Age	40.8 years		38.6 years		38.2 years	
Number of Households	623		52,985		403,240	
Owner-occupied units	407 (65%)		34,175 (65%)		227,888 (57%)	
Renter-occupied units	216 (35%)		18,810 (35%)		175,352 (44%)	
Average Family Size	3.20		3.24		3.42	
Average Household Size	2.72		2.75		2.92	

Source: U.S. Census, Bureau, Census 2000

Based upon this recent year 2000 census, there has been relatively minimal change to the population in this community over the past 10 years. The 1990 census recorded a population of 1,813 (Bureau of the Census 1991). Thus, the 2000 population actually reflects a decrease of 116 persons (about 1%) since 1990.

Although the population has decreased slightly, the number of households in this CDP actually grew by 27 households (about 4.5%) from the 596 total recorded in 1990. This increase in households has helped to reduce the average family size and household size which were 3.43 and 3.04 persons, respectively.

As shown on Table 4.1, the Pepeekeo CDP has a higher percentage of persons aged 65 and older in comparison to the County and State as a whole. Further, the median age in 1990 was 34.4 years in comparison to the more recent year 2000 median age of 40.8 years. Thus, these demographic data showing increased median age with minimal change to the community's population appears to reflect a relatively stable community that has experienced little change with some growth in homes, and the aging of long-time residents.

### **Probable Impacts on Social Character**

Development of the project is not expected to cause a significant impact to the existing resident population in the Pepeekeo community or the South Hilo District. This project only involves constructing a new well to provide a better and more reliable source of potable water compared to the present surface water source. A future concrete water tank and appurtenances would similarly improve the storage capacity for this water system. As a result, this project does not involve the development of new housing units nor would it increase the resident or visitor population in the area or County.

The proposed well and future concrete tank with accessory facilities would be appropriately designed to be compatible with the existing surrounding environment which is currently undeveloped and used for agricultural activities. Such design features would include painting structures using natural earth tone colors. There is also another existing water tank already present that would be integrated with this project. Therefore, this project should not change or negatively alter the existing rural and agricultural character of the area. Furthermore, this reservoir project would not cause a nuisance or hazard to this community since it is located a considerable distance away (mauka) from existing residences.

## **4.3 SECONDARY AND CUMULATIVE IMPACTS**

### **Secondary Impacts**

Secondary impacts, or indirect effects, are effects which are caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable. Such effects may include growth inducing impacts and other effects related to changes in land use patterns, population density or growth rate, and related effects on air, water, and other natural systems. The proposed well development project and accessory facilities are expected to have minimal if any secondary impacts on resident population, land use patterns, public facilities and infrastructure, and the natural environment.

Construction of this project is expected to generate only minor short-term impacts associated with these activities. Creation of short-term construction jobs are not expected to generate a substantial number of workers in-migrating to the Island of Hawaii to fill these jobs. It is anticipated that qualified local contractors on the island or within the State of Hawaii would likely be used for the project's construction. These workers would thus have minimal if any effect on the County's residential population or housing demand.

This project would not affect the County's resident population growth projected for the region, and thus not generate the associated secondary effects on infrastructure, public facilities, and housing. Although the project would improve the water source and storage capacity of the water system, such enhancements are not expected to significantly affect the County's rate of in-migration or potential relocation to the Pepeekeo area. Such decisions would be more appropriately based upon economic factors (jobs), housing supply and costs, schools, etc.

### **Cumulative Impacts**

Cumulative impacts are effects on the environment which result from the incremental impact of a project when added to past, present, and reasonably foreseeable future actions. The cumulative impacts associated with this well development project includes assessing the various implementation phases of the project to evaluate it, and incorporating other known planned improvements within the study area that would effect or be affected by the project.

The assessment results discussed in this document incorporated the future planned development of a concrete reservoir and accessory structures. There are no other known developments planned in the immediate area. Existing surrounding uses consist of undeveloped land formerly used for former sugar cane cultivation, and present banana agricultural activities.

Therefore, the discussion of impacts presented within this document has included the cumulative effects associated with the project and other reasonably foreseeable future actions being implemented. The assessment results in this document show that there are no major cumulative impacts associated with this project.

## CHAPTER 5 INFRASTRUCTURE FACILITIES

This chapter addresses the project's probable effect on existing infrastructure associated with the Kulaimano Well Development project. Due to the nature of this project, impacts would be more related to short-term construction activities, and should thus not have a significant impact on infrastructure facilities.

### 5.1 WATER FACILITIES

The County DWS Pepekeo water system serves the residential subdivisions and other larger lots along the highway in this community generally extending from the Kulaimano tract north to the Makahanaloa tract. As discussed in Chapter 2, this water system consists of surface water springs, a well, three reservoir tanks, and water lines varying from 1½ to 12-inches in size. The majority of water lines consist of 4- and 6-inch lines serving the developed subdivision lots.

The proposed project is not expected to have an adverse impact on the County's existing water system serving the Kulaimano subdivision and Pepekeo town areas. Instead, the project is intended to improve the existing system's reliability by providing a better water source instead of surface water springs. This source improvement would reduce the costly and stringent water quality and maintenance requirements associated with the surface water source. Furthermore, the future reservoir planned would improve the system's storage capacity increasing its reliability for residents.

### 5.2 WASTEWATER FACILITIES

The project site is presently not connected to a County wastewater collection and treatment system since it is undeveloped and located within an agricultural area. The adjacent existing County DWS reservoir is similarly not connected to or served by a wastewater treatment system since such infrastructure is not necessary for this reservoir.

The proposed well development project will similarly not require any wastewater facilities since it consists only of a well and future reservoir. This project site would only require periodic visits by DWS staff for maintenance or other operational activities. As a result, there will not be any need to provide on-site wastewater treatment. Therefore, this project will have no impact on existing wastewater facilities.

### 5.3 DRAINAGE FACILITIES

The project site does not have any existing drainage improvements present since it is undeveloped. Surface runoff from the project site and immediate surrounding area appear to sheet flow in a makai (northeast) direction towards a drainageway located north of the site. The

unpaved private roadway leading up to the project site also does not have any inlets or drainage improvements associated with it. This drainageway, which is overgrown with brush and weeds, eventually leads to the Alia Stream located further north. The entire project site and immediate surrounding area is in Zone X under the FIRM which represents areas determined to be outside the 500-year flood plain.

Construction of the new well and future concrete water tank would create new impervious areas at the project site. These impervious surfaces would be from the access driveway and service road around the water tank, the water tank structure, production well structure, and accessory structures for the reservoir.

Increased surface runoff generated from this project would be directed to a detention basin located within the project site. Thus, the overall drainage patterns and discharge quantities in the surrounding area will be maintained. As a result, there should not be a substantial increase in runoff occurring from the newly established project site of only one acre. Therefore, the project should not have a significant adverse impact on existing drainage facilities, water quality in the area, or surrounding properties which are undeveloped or used for agricultural activities. Furthermore, design plans would be prepared and coordinated with the County Department of Public Works for review and approval prior to construction.

#### **5.4 SOLID WASTE**

The County Department of Environmental Management, Solid Waste Division, operates two County landfills, one in Kona (Puuanahulu Landfill) and the other in Hilo (Hilo Landfill). Construction waste, junked cars, large white goods, and dead animals from the project area are generally delivered directly to the Hilo landfill.

There are also a total of 21 solid waste transfer stations located throughout the Island of Hawaii. In the project area, there is a transfer station located in Honomu and in Papaikou. Disposal of solid waste are either privately contracted for pick-up or taken to such transfer stations. Presently, there is no solid waste being generated from the project site since it is undeveloped.

Construction of the development well project will generate solid waste typical of normal construction related activities. No solid waste is expected to be generated as part of the operations of the production well or future water reservoir when completed. Construction-related solid wastes will be generated over a relatively short time period, and consist primarily of vegetation, rocks, and other debris resulting from the clearing, grubbing, and grading of the area. The contractor will be required to remove all debris from the project site, and properly dispose those permitted at the Hilo landfill in conformance with County regulations. Consequently, such activities are expected to have minimal impact on County solid waste facilities.

## 5.5 TRANSPORTATION FACILITIES

The Hawaii Belt Road (Hwy 19) is the only major public roadway facility providing vehicular access to and from the various communities strung along this entire coastline. This State highway connects the Hilo urban center to the Pepeekeo area and other towns along the entire Hamakua coastline all the way up to Waimea to the north. In the immediate vicinity of the project area, and throughout most of the entire coastline, Hawaii Belt Road consists of an undivided two-lane rural highway.

Access to the County's existing reservoir site and project site is via the County's Kaupakuea Homestead Road intersecting with the Hawaii Belt Road. This two-laned undivided roadway runs through a residential subdivision about 2,500 feet from the highway which then changes to an unpaved gravel road routed through privately owned property. This privately-owned road then travels mauka (inland) about another 5,000 feet before reaching the project site.

Traffic along Kaupakuea Homestead Road is light since it is generally limited to use by residents living in the area. The gravel roadway further inland has hardly any vehicle traffic because it is privately-owned and restricted. During a field survey conducted of the project site, only two vehicles were observed using this private road during the 1-hour visit.

Impacts on existing transportation facilities associated with this project would primarily be associated with construction related activities. Once completed, vehicular traffic to this project site would be limited to periodic inspections or other maintenance activities by County DWS staff. Thus, there would be no long-term impact on transportation facilities resulting from this project.

During construction activities, vehicular traffic to and from the project site would be limited to vehicles used by construction workers and the transport of equipment and machinery. This additional traffic would be short-term and should not have a significant impact on traffic occurring along this unpaved road and Kaupakuea Homestead Road. Furthermore, the short-term construction related traffic should not cause significant traffic congestion or adverse impacts along the Hawaii Belt Road highway. The majority of regular traffic occurring would be construction workers heading to and leaving the project site.

## CHAPTER 6 PUBLIC FACILITIES AND UTILITIES

This chapter addresses the probable impact on public facilities and utilities serving the subject property. In summary, the Kulaimano Well project is not expected to have any significant effect on these facilities.

### 6.1 ELECTRICAL AND COMMUNICATION FACILITIES

Hawaii Electric Light Company, Inc. (HELCO) and Verizon Hawaii, Inc. (Verizon) currently provide electrical and telephone service, respectively, to existing developments in the surrounding vicinity. HELCO presently has overhead electrical lines situated on utility poles primarily routed along Hawaii Belt Road. However, there are no existing electrical lines routed along the unpaved privately-owned road in the vicinity of the project site.

There are no electrical or communication utilities presently serving the 1-acre project site since it is undeveloped. The existing County DWS reservoir located adjacent to this site similarly does not have electrical or communication lines serving this facility. Instead, solar-powered photovoltaic panels are used to serve the transformer, switchgear, and chlorination buildings there. A propane tank is also present on site.

Preliminary plans are to obtain electrical power from HELCO to service the future well pump and reservoir facility. As a result, an extension of overhead electrical lines from a nearby sub-station in the area will be required to extend electrical service to the project site. This additional electrical demand is not expected to have a significant impact on HELCO's ability to continue providing electrical service from nearby substations or other generating facilities. Design plans will be appropriately coordinated with HELCO during the project's design phase to evaluate electrical demands and utility line extension requirements.

The project would not impact Verizon's facilities or ability to provide communication service to communities in the surrounding area.

### 6.2 RECREATIONAL FACILITIES

There are no existing public recreational facilities present in the immediate vicinity of the project site since the surrounding area generally consists of undeveloped or agricultural land used for banana production. The County does have a few parks located within the Kulaimano and Pepekeo town areas. There is Kulaimano Park situated within the Kulaimano subdivision off of Alia Street, and Pepekeo Playground located as part of the town's community center along Old Mamalahoa Highway.

Development of the proposed well and future reservoir is expected to have minimal or no impact on these existing recreational facilities since they are located a considerable distance away. The nearest park is Kulaimano Park situated about 1-mile makai or below (east) the well site. Operation of the well and future reservoir would not impact activities conducted there. Short-term construction activities may increase vehicular traffic in the area, but these additional vehicles should not adversely impact park activities which usually occur on weekends.

### **6.3 MEDICAL FACILITIES**

The only major medical facility in the vicinity of the project site is the Hilo Medical Center located adjacent to the Wailuku River in Hilo town. Hilo Medical Center (HMC) is the largest facility in the Hawaii Health Systems Corporation. Established in 1897, HMC has grown from a 10-bed hospital to the present facility of 275 licensed beds, consisting of 141-acute licensed beds including a 20-bed psychiatric unit, a separate 134-bed licensed extended care facility and an accredited home care agency (HSHPDA 1998).

The project is expected to have minimal impact on the Hilo Medical Center's facilities and its operations. This project would not generate permanent additional residents on the island which may place increased demands on medical services. The project site is also situated several miles away from the hospital, so its construction and operation would not impact the hospital's operations.

### **6.4 EDUCATIONAL FACILITIES**

The Kalaniana'ole Elementary and Intermediate School is a State Department of Education operated school providing public education for students in grades Kindergarten through 8<sup>th</sup> grade. Serving students from Papaikou, Pepeekeo, Honomu, Hakalau, Paukaa and Honolii Pali, this school has a long tradition of providing for the many small towns that it serves. This school is located in the town of Papaikou, and their enrollment count for the 2002-2003 school year was 391 students (DOE 2003)

The Kulaimano Well project should have minimal if any impact on Kalaniana'ole Elementary and Intermediate School since this campus resides in another town located a considerable distance away from the project site. This project would not result in a new students enrolling into this school, therefore, existing school facilities along with teacher staffing requirements would not be affected. Furthermore, the construction activities conducted at the Kalaimano Well project site are not expected to interfere with or disrupt school activities given the distance of the property from this school.

## **6.5 POLICE PROTECTION**

The project site is situated within the Hawaii County Police Department's South Hilo patrol district (HCPD 2003). This site is covered under their department's Beat 153 which generally includes inland areas between Lae O' Puni Point in Onomea to Alia Point in northern Pepeekeo (HPD 1998). The Clem Akina Park mini-station is situated in the town of Pepeekeo. This police mini-station is used by community policing officers operating of the Hilo District Station.

Development of the project is expected to create no additional demand for police protection and related services. Operations conducted at the project site would also minimize the need for police protection since the only activities occurring involving personnel would be for periodic maintenance activities by County DWS staff. In addition, short-term construction activities occurring at the site are not expected to impact the daily operations of police department staff.

## **6.6 FIRE PROTECTION**

The Hawaii County Fire Department's Central Station situated in Hilo town along Kinoole Street is the closest station to the project site. This fire station services the County's South Hilo district, and would subsequently service the Kulaimano Well project site.

The project should have minimal impact on the fire department's ability to provide fire protection services to the project site and surrounding area. The proposed well and future reservoir would be constructed in conformance with County building code requirements. The project site will provide suitable access for fire and emergency vehicles onto the site, subject to improvements deemed necessary by the Fire Department. The design of the project would be coordinated with the Fire Department to ensure that facilities and improvements meet applicable requirements including N.F.P. 1231 (Rural Firefighting).

## CHAPTER 7 CONFORMANCE WITH PLANS AND POLICIES

This chapter discusses the project's conformance with the State Land Use District regulations, and the County's General Plan goals and policies, and Zoning District standards.

### 7.1 STATE LAND USE DISTRICT

The project site is situated at the boundary between State LUC's Land Use District Boundary Maps H-61 (Piihonua) and H-65 (Papaikou) as previously shown on Figure 1.2. Based upon these land use district maps, the project site is designated as "Agricultural District."

Permitted uses within the State Agricultural District are prescribed under Title 13, Chapter 205 (Land Use Commission), Hawaii Revised Statutes (HRS) and the State Land Use Commission's Administrative Rules prescribed under Title 15, Subtitle 3, Chapter 15, Hawaii Administrative Rules (HAR). Soils associated with the project site have an overall master productivity rating class "C" under the Land Study Bureau's detailed land classification (LSB 1965). Consequently, the proposed well development and future reservoir project is a permitted use under §205-4.5 (7), HRS which specifies public uses such as utility lines, water storage tanks and appurtenant small buildings such as booster pumping stations.

A well permit will be required for this project from the State Commission on Water Resource Management, Department of Land and Natural Resources, under Chapter 174C (State Water Code), HRS. This permit would be obtained prior to construction activities associated with the exploratory well testing and development.

### 7.2 CHAPTER 344, STATE ENVIRONMENTAL POLICY

This section discusses the project's conformance and consistency with the pertinent goals, policies, and guidelines described under Chapter 344, State Environmental Policy, HRS.

#### Environmental Policy

1. *Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawaii.*

The project would be consistent with this environmental policy because the well and future reservoir would provide improved water source and ensure continued reliable water service for the community in the future. This project would not have an adverse impact on natural resources or the environment as discussed in the various sections of this document. The proposed well and future reservoir, along with construction activities conducted, would meet all applicable Federal, State and County regulations to protect the environment and obtain necessary permits. Best management practices would be implemented during construction to minimize runoff and other short-term impacts such as fugitive dust and noise.

2. *Enhance the quality of life by:*
  - A. *Setting population limits so that the interaction between the natural and manmade environments and the population is mutually beneficial.*
  - B. *Creating opportunities for the residents of Hawaii to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments.*
  - C. *Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian.*
  - D. *Establishing a commitment on the part of each person to protect and enhance Hawaii's environment and reduce the drain on nonrenewable resources.*

The project would be consistent with these environmental policies regarding the quality of life. The proposed project does not involve the development of any new homes or visitor units. Thus, these improvements would not adversely affect the existing or future projected resident population in the Pepekeo and Kulaimano communities. This project would support the community by assisting the County DWS in providing improved, continuous, and reliable water service without adversely affecting the physical and social environment. The resulting interaction between the natural and man-made environments would continue to be mutually beneficial.

Construction of the project would create additional short-term construction related jobs for island residents helping County residents improve their quality of life and economic activity. Such short-term construction jobs are expected to be filled by Hawaii residents not resulting in any in-migration.

The project does not conflict with the policy of establishing communities providing a sense of identity and wise use of land since it would simply support the existing community already present by improving the water source and system reliability. As discussed in this document, the project should not adversely affect the natural environment and will be designed to be compatible with the environment.

## **Guidelines**

### **1. Population**

- A. Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation.*
- B. Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.*

This project would not affect the existing or future projected resident population in Pepeekeo. These improvements do not involve any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawaii residents not resulting in any in-migration.

### **2. Land, water, mineral, visual, air, and other natural resources**

- A. Encourage the management practices which conserve and protect watersheds and water sources, forest, and open space areas.*
- B. Establish and maintain natural area preserves, wildlife preserves, forest preserves, marine preserves, and unique ecological preserves.*

The project would be consistent with these guidelines because the improvements would not adversely impact those natural resources identified such as watersheds, forest preserves, wildlife preserves, or unique ecological preserves. The project would not impact an area that is valuable as important open space area since it is currently used for pasture and agricultural activities. Appropriate measures would be incorporated into the project's design to minimize erosion and address appropriate drainage requirements.

### **3. Flora and fauna**

- A. Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard.*
- B. Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.*

As discussed in this document, the project would not impact endangered plants or animals since none are known to be present on the site, and existing plants are primarily invasive introduced species. This project would not introduce new plants or animals to the area which may have an ecological hazard. Areas of the project site not used for facilities and appurtenances would be landscaped as appropriate with compatible trees, shrubs, or other suitable vegetation. Thus, this project would be consistent with these guidelines.

**4. Parks, recreation, and open space**

- A. Establish, preserve and maintain scenic, historic, cultural, park and recreation areas including the shorelines, for public recreational, educational, and scientific uses.*

The project is not expected to impact significant historic properties or cultural resources and practices as discussed in Chapter 3 since there are no known sites present or traditional cultural practices affected by the property. The improvements would not adversely impact recreational areas, educational facilities, or scenic visual resources since none are located in the immediate vicinity.

**5. Economic development**

- A. Promote and foster the agricultural industry of the State; and preserve and conserve productive agricultural lands.*

The project would be consistent with this guideline because it is not expected to significantly impact the agricultural industry. The property proposed for the improvements is currently undeveloped and not used as part of other agricultural activities occurring in the area. The small area removed (1.0 acre) from potential agricultural use should have no effect on the overall agricultural operations occurring in the South and North Hilo Districts or on the County's agricultural industry.

**6. Citizen participation**

- A. Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.*

The environmental review process undertaken allows for public and government agency input to express concerns and comments associated with the project. Such opportunities include pre-assessment consultation efforts and the availability of the Final EA for public review. Thus, the public consultation process incorporated within this environmental review process provides the general public and decision-makers with a diverse array of information to consider in evaluating this project.

**7.3 COUNTY OF HAWAII GENERAL PLAN**

This section discusses the project's conformance and consistency with relevant goals, policies, and standards from the County's existing *General Plan* dated November 1989.

**A. Economic**

**1. Goals:**

- a. Provide residents with opportunities to improve their quality of life.*  
*b. Economic development and improvement shall be in balance with the physical and social environments of the island of Hawaii.*

*Policies:*

- a. *The County of Hawaii's land, water, air, sea, and people shall be considered as essential economic resources for present and future generations and should be protected and enhanced through the use of economic incentives.*
- b. *The County shall strive for full employment.*

2. *Standards:*

- a. *The island of Hawaii should be developed into a unique scientific and cultural model. The island should become a model of living where economic gains are in balance with social and physical amenities. Development should be reviewed on the basis of total impact on the residents of the County, not only in terms of immediate short run economic benefits.*

The project would be consistent with these goals, policies, and standards because it would create additional short-term construction related jobs for island residents helping the County strive for full employment. As discussed throughout this document, the new well and future reservoir are not expected to have a significant impact on the environment. This project would assist the County DWS in providing an improved source of potable water and reliable water service to the Pepeekeo and Kulaimano communities without adversely effecting the physical and social environment. This water system improvement will provide a long-term benefit for residents, and reduce the County's maintenance costs associated with the current surface water source.

**C. Environmental Quality**

1. *Goals:*

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

2. *Policies:*

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

3. *Standards:*

- a. *Pollution shall be prevented, abated, and controlled at levels which will protect and preserve the public health and well-being, through the enforcement of appropriate Federal, State and County standards.*
- b. *Federal and State environmental regulations shall be adhered to.*

Improvements made to this water system would be consistent with this policy and goal since it would provide an improved source of potable water that will help ensure continued reliable water service for residents in the future. This project would

not have an adverse impact on the environment as discussed in this document. All water structures and appurtenances constructed would meet all applicable Federal, State and County regulations to protect the environment and meet water quality requirements. This would include coordinating the review and approval of construction plans with pertinent government agencies.

**D. Flood Control and Drainage**

1. *Goals:*

- a. *Conserve scenic and natural resources.*
- b. *Protect human life.*
- c. *Prevent damage to man-made improvements.*
- d. *Control pollution.*
- e. *Reduce surface water and sediment runoff.*

2. *Policies:*

- a. *All development generated runoff shall be disposed of in a manner acceptable to the Department of Public Works.*
- b. *It is the responsibility of both the government and the private sector to maintain and improve existing drainage systems and to construct new drainage facilities.*

Given the small size of the property (1 acre), this project would not cause a significant increase in surface runoff or alter existing drainage patterns in the surrounding area. Design of the new well, concrete water tank, maintenance driveway around it and other accessory structures would meet County standards and requirements addressing runoff. A detention basin is proposed to mitigate increased runoff from newly created impervious surfaces, and the project's construction plans would be submitted to the County DPW for their review and approval.

**E. Historic Sites**

1. *Goals:*

- a. *Protect and enhance the sites, buildings and objects of significant historical and cultural importance to Hawaii.*

2. *Policies:*

- a. *The County of Hawaii shall require both public and private developers of land to provide a historical survey prior to the clearing or development of land when there are indications that the land under consideration has historical significance.*

This project is not expected to impact significant historic properties or cultural resources and practices as discussed in Chapter 3 since there are no known sites present or traditional cultural practices affected by the property. Coordination would

be conducted with the SHPD to address the potential presence of historic sites as part of this environmental review process. In the event subsurface historic properties, such as burials, are encountered during construction, all work would stop and the SHPD would be notified. Treatment of any properties would be conducted in conformance with Chapter 6E, HRS and the §13-300 of the HAR.

**F. Natural Beauty**

**1. Goals:**

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

**2. Policies:**

- a. *Access easement to public or private lands which have natural or scenic value shall be provided or acquired for the public.*

The project would not impact coastal or other scenic resources since there are none present on the project site or in the immediate vicinity. There are also no public scenic lookouts or viewing points from the project site or existing adjacent reservoir since surrounding areas are privately owned including the access road leading to the site. This document addressed visual resources and the minimal impacts resulting in greater detail. Finally, no public access or easement is necessary for this property since it does not have natural or scenic value.

**G. Natural Resources and Shoreline**

**1. Goals:**

- a. *Protect and conserve the natural resources of the County of Hawaii from undue exploitation, encroachment and damage.*
- b. *Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.*
- c. *Protect rare or endangered species and habitats native to Hawaii.*
- d. *Protect and effectively manage Hawaii's open space, watersheds, and natural areas.*
- e. *Ensure that alterations to existing land forms and vegetation, except crops, and construction of structures cause minimum adverse effect to water resources, and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.*

**2. Policies:**

- a. *The County shall encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on*

*the environment and depletion of energy and natural resources to the fullest extent.*

- b. The County shall encourage an overall conservation ethic in the use of Hawaii's resources by protecting, preserving, and conserving the critical and significant natural resources of the County of Hawaii.*
- c. The County shall encourage the protection of watersheds, forest, brush, and grassland from destructive agents and uses.*
- d. The installation of utility facilities, highways and related public improvements in natural and wildland areas should avoid the contamination or despoilment of natural resources where feasible by design view, conservation principles, and by mutual agreement between the County and affected agencies.*

The project would be consistent with these goals and policies. There are no rare or endangered species or significant habitats present in the project area which would be adversely affected by the improvements. As discussed in this document, the project is not expected to have a significant impact on the physical environment which includes natural resources, recreational amenities, and scenic resources. This project would not impact watersheds, forest reserves, or other important vegetation. Appropriate measures would be incorporated into the project's design to minimize erosion and address appropriate drainage requirements.

**J. Public Utilities**

**1. Goals:**

- a. Ensure that adequate, efficient and dependable public utility services will be available to users.*
- b. Maximize efficiency and economy in the provision of public utility services.*
- c. To have public utility facilities which are designed to fit into their surroundings or concealed from public view.*

**2. Policies:**

- a. Public utility facilities shall be designed so as to complement adjacent land uses and shall be operated so as to minimize pollution or disturbance.*
- b. Provide utilities and service facilities which 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.*

- e. The County shall develop short and long range capital improvement programs and plans for public utilities within its jurisdiction and which are consistent with the County General Plan.*

The project would be consistent with these goals and policies because the new well developed and future reservoir planned would ensure that improved water source and adequate, efficient, and dependable water service are provided to the community. The concrete water tank would fit into the surrounding area, which is predominantly comprised of pastures and agricultural activities, and would be situated away from public view due to its location further inland. This project would not create adverse pollution or disturbances to surrounding residents since none are present in the immediate vicinity. Appropriate measures would be incorporated into the project's design to minimize noise and fugitive dust emissions during construction. Thus, the new well and reservoir would help the DWS meet improve water source and provide dependable water supply to the community.

#### Water

##### *Policies:*

- a. Water system improvements and extensions shall promote the County's desired land use development pattern.*
- b. All water systems shall be designed and built to Department of Water Supply standards.*
- c. Improve and replace inadequate systems.*
- d. Water system improvements should be first installed in areas which have established needs and characteristics, such as occupied dwellings and other uses, or in areas adjacent to them if there is need for urban expansion, or to further the expansion of the agricultural industry.*

This project would be consistent with these policies since it would support providing continued dependable water service to area residents. The design of the new well and reservoir improvements would also meet DWS standards and requirements.

## **7.4 COUNTY ZONING DISTRICT**

The Kulaimano Well project site is presently zoned Agricultural District with a minimum 20-acre building site area (A-20a). Under the Hawaii County Code, Chapter 25, Zoning (Zoning Code), the proposed project is considered a "public structure." This is because the new well, future water tank, and accessory utilities would serve a County government function for public benefit by providing improved and more reliable water service to the community. As a result, public structures such as this water reservoir are permitted uses in any district, and may be subject to Plan Approval for this use by the County Planning Director (§25-4.11).

The project would also be consistent with the minimum design standards for this Agricultural District. A discussion of the project's consistency is listed below:

1. The height limit under this zoning district is 45 feet under §25-5-73 of the County's Zoning Code. As discussed in Chapter 2, this new concrete water tank would be less than this height limit. Therefore, the project would be consistent with this height limit.
2. The minimum building site area permitted under the Agricultural District is five acres under the Zoning Code. Under the present A-20a zoning for the site, the minimum site area is 20 acres. The proposed project would be located on a property that is approximately 1.275 acres (1.0 acre site plus 0.275 acre existing reservoir) in size after its consolidation with the existing County DWS reservoir site. It would thus be considered a non-conforming parcel based upon this minimum building site area requirement. Following the County's acquisition and consolidation of parcels, the County will re-subdivide the new 1.275-acre parcel in accordance with the County of Hawaii's Subdivision Code (Chapter 23). It should be noted that the requirements of the Subdivision Code, including lot sizes and standards, do not apply to public utilities provided that the Planning Director, upon conferring with the Chief Engineer And Manager of the DWS, may require necessary improvements to further the public safety and welfare (§23-11). Thus, this new project site would continue to be a non-conforming parcel in terms of building site area.
3. The minimum building site average width is 200 feet for the first 5 acres of required area. Since the existing reservoir site was a non-conforming parcel, this new project site would continue to be non-conforming in terms of building site average.
4. The minimum yard setbacks for parcels under this zoning district are 30 feet for front and rear yards, and 20 feet for side yards. However, access to this 1.275-acre project site is by an existing 24-foot-wide road and pipeline easement. As a result, there is no front or rear yard for this parcel since all property line boundaries are considered side yards. Therefore, the minimum yard setback from all property lines is 20 feet. The new Kulaimano well and future concrete reservoir tank project would be designed to meet these yard setback requirements.

## **7.5 COMPLIANCE WITH FEDERAL CROSS-CUTTING REQUIREMENTS**

This project may be funded by Federal Funds through the State of Hawaii's Drinking Water State Revolving Fund, or DWSRF, program. As a result, this would constitute a Federal action, and will require the project to meet all Hawaii DWSRF program requirements. The project's compliance and consistency with these Federal regulations and authorities are discussed.

### **7.5.1 National Historic Preservation Act and Archaeological and Historic Preservation Act**

The National Historic Preservation Act (NHPA), as amended (16 U.S.C. § 470), directs Federal agencies to integrate historic preservation into all activities which either directly or indirectly involve land use decisions. This is to ensure Federal leadership in the preservation of historic resources of the United States.

The Archaeological and Historic Preservation Act (AHPA), as amended (16 U.S.C. § 469-469c), further the policies of the Historic Sites Act of 1935 by providing for the preservation of cultural resources that may be damaged by Federally authorized construction activities.

#### **National Historic Preservation Act**

Under the NHPA, Section 106 and 110 are most pertinent to this project. Section 106 consultation procedures are defined by the Advisory Council on Historic Preservation (ACHP) under their regulations 36 CFR Part 800, Protection of Historic Properties. These consultation procedures require Federal agencies to take into account the effects of their undertakings on historic properties. If this project is eventually Federally funded, it would constitute a Federal "undertaking" necessitating compliance with these consultation procedures.

Based upon the preliminary assessment conducted thus far, there appears to be no historic properties present on the 1.0-acre undeveloped property being acquired. There are no known historic sites present on this property or in the immediate vicinity, and it was likely used for sugar cane production by the former Pepeekeo Sugar Company. Further, the site does not consist of any sandy soils which are commonly associated with subsurface human remains making the likelihood of encountering such sites relatively low. Therefore, the project should have no effect on historic sites since there do not appear to be any historical structures or sites present.

Consultation with the State Historic Preservation Division (SHPD) was conducted under this environmental review process to evaluate potential project impacts on historic sites and obtain a determination. A pre-assessment consultation letter with information was already provided, and a copy of the Draft EA was provided for their review. Furthermore, the Draft EA was provided to other pertinent parties for review and comment such as the Hawaii Island Burial Council, State Office of Hawaiian Affairs, and State Department of Hawaiian Home Lands. Based upon SHPD's review of the Draft EA as documented in their letter dated January 15, 2004 and included in Appendix B, they determined that this project should have no effect on historic sites because intensive cultivation has altered that land.

Section 110 of the NHPA describes the responsibilities of Federal agencies regarding the identification, evaluation, registration, protection, and preservation of historic properties eligible or listed on the National Register of Historic Places. It also requires minimizing harm to National Historic Landmarks. As previously mentioned, and discussed in Section 3.3, this project would not affect any National Historic Landmarks since none are present on the project

site or immediate vicinity. Furthermore, there does not appear to be any historic sites present or affected by the project which are eligible for or listed on the National Register of Historic Places.

#### **Archaeological and Historic Preservation Act**

Under the AHPA, Section 469a-1 (Data Recovery) is most pertinent to this project. This section generally addresses data recovery and protection of data when a project may result in the irreparable loss or destruction of significant historic data. It specifies the notification and request for preservation of data along with surveying of the site and compensation.

As previously discussed, the project is not expected to have an effect on historic sites since there are none known to be present on the site or in the immediate vicinity. As a result, construction of this well and future reservoir would not result in the need for data recovery or the protection of such data as stipulated under this Act.

#### **7.5.2 Clean Air Act**

The Clean Air Act (16 U.S.C. § 7506(c)) was established to protect and enhance the quality of the Nation's air resources to promote the public health and welfare and the productive capacity of its population. Individual States administer much of this law by setting air pollutant limits, processing permit applications, and implementing plans addressing compliance with this Act.

The project would be consistent with this Act and the State's implementation regulations and requirements since it would not generate long-term impacts on air quality. Given the type of improvements associated with this developmental well and future reservoir, the only potential effects on air quality would be associated with short-term construction activities which were addressed under Section 3.6. The contractor will need to comply with fugitive dust emissions or obtain a permit from the State Department of Health.

#### **7.5.3 Coastal Zone Management Act**

The Coastal Zone Management (CZM) Act encourages the management of coastal areas and provides grants for maintaining coastal zone areas. It requires Federal agencies to be consistent with the enforceable policies of State coastal zone management programs when conducting activities affecting a coastal zone. It is intended to ensure that Federal activities are consistent with state programs for the protection and, where possible, enhancement of the nation's coastal zones.

The State's CZM policies and regulations are prescribed under Chapter 205A, HRS. The project would be consistent with those pertinent State CZM objectives and policies as discussed below. Those objectives which do not have policies that are pertinent to this project are identified below as well.

##### **A. Objectives:**

1. *Provide coastal recreational opportunities accessible to the public. (Not applicable)*

2. *Protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*
3. *Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.*
4. *Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*
5. *Provide public or private facilities and improvements important to the State's economy in suitable locations.*
6. *Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*
7. *Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*
8. *Stimulate public awareness, education, and participation in coastal management.*
9. *Protect beaches for public use and recreation. (Not applicable)*
10. *Implement the State's ocean resources management plan. (Not applicable)*

A discussion of this project's conformance and consistency with the various applicable policies developed for each objective is provided. In summary, the well development and reservoir project would be consistent with applicable policies. Therefore, the project would be consistent with these CZM objectives.

**B. Policies:**

1. *Historic Resources:*
  - a. *Identify and analyze significant archaeological resources;*
  - b. *Maximize information retention through preservation of remains and artifacts or salvage operations; and*
  - c. *Support state goals for protection, restoration, interpretation, and display of historic resources.*

As discussed in Chapter 3, the project is not expected to impact historic resources since there are none known to be present on the project site and surrounding areas. Furthermore, the project site appears to have been previously disturbed from prior plantation agricultural activities. Coordination with the SHPD was conducted under this environmental review process and confirmed these assessment findings. If necessary, appropriate measures will be implemented during construction to mitigate potential impacts on historic resources.

2. *Scenic and open space resources:*
  - a. *Identify valued scenic resources in the coastal zone management area;*
  - b. *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the*

*alteration of natural landforms and existing public views to and along the shoreline; and*

- c. Encourage those developments which are not coastal dependent to locate to inland areas.*

The project is consistent with these policies since the improvements would not adversely affect scenic and open space resources as discussed in Chapter 3. There were no scenic resources present within the immediate project area that would be affected or any scenic viewing points nearby since the larger area is privately-owned. The project would minimize alterations to natural landforms and appropriately designed to be compatible with the surrounding environment. This proposed well is not coastal dependent and is thus located well inland at over 800 feet elevation.

3. *Coastal Ecosystems:*

- a. Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*

The project will be consistent with this policy since it would not disrupt existing streams through diversions or channelization, or degrade coastal water ecosystems. Best management practices would be implemented during the project's construction to minimize erosion and runoff. Such measures would be developed during the design of this project, and would comply with the County's Erosion and Sedimentation Control regulations. Other mitigative measures would be specified as part of applicable National Pollutant Discharge Elimination System (NPDES) permits obtained for this project.

4. *Economic uses:*

- a. Concentrate coastal dependent development in appropriate areas.*

The project is not a coastal dependent development, and is appropriately sited well inland to serve the community's water needs.

5. *Coastal hazards:*

- a. Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.*
- b. Ensure that developments comply with requirements of the Federal Flood Insurance Program.*
- c. Prevent coastal flooding from inland projects.*

The project would not be located in coastal areas that are typically subject to storm wave, tsunami, and flooding because it is located well inland. This site is not located within a designated flood hazard area under the FIRM, or subject to non-point source pollution hazards. The project's design is intended to minimize downstream coastal

flooding by providing a detention basin for increased runoff from the site due to impervious surfaces created.

6. *Managing development:*

- a. *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
- b. *Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*
- c. *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

The project is consistent with these policies as it will be developed in accordance with all applicable laws, rules and regulations. Furthermore, appropriate coordination with agencies is being conducted in a coordinated manner to minimize overlapping or conflicting permit requirements. Lastly, the potential impacts of the project will be communicated to the public through the environmental review processes.

7. *Public participation:*

- a. *Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities.*

This Draft EA document published under the environmental review process disseminated information available to the public, government agencies, and concerned organizations on the probable impacts resulting from the project.

#### 7.5.4 Endangered Species Act

The Endangered Species Act (16 U.S.C. § 1531) was established to ensure that Federal agencies use their authorities to protect and conserve endangered and threatened species. In particular, Section 7 of this Act requires such agencies to prevent or modify projects authorized, funded, or carried out that are likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of critical habitat of such species.

If this project is Federally funded, it would constitute a Federal "action" making it subject to Section 7 consultation under the Endangered Species Act. This project should not be considered a "major construction activity" therefore "informal consultation" would be conducted with the U.S. Fish and Wildlife Service (FWS). This consultation would be conducted to ensure that the project is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

Based upon the assessment conducted thus far, there appears to be no known endangered or threatened species present on the project site or in the immediate vicinity. As discussed in Chapter 3, the site consists of invasive introduced plant species after likely being used for sugar cane cultivation by the former Pepeekeo Sugar Company. Surrounding areas are either undeveloped or being used for banana cultivation. In addition, this site has not been designated as critical habitat by the FWS.

The site does not appear to have other resources, such as wetlands, which may be suitable for habitat by endangered birds or mammals. The majority of mammals present likely consist of alien species such as rodents or feral animals normally harmful to native avian and plant communities. No federally endangered, threatened, or candidate species, significant wetlands, or other Federal trust resources under their jurisdiction thus occur at the project site. Therefore, construction of the production well and future reservoir on the project site should not jeopardize the continued existence of a listed species or adversely affect designated critical habitat.

Consultation with the FWS was performed as part of this environmental review process to obtain further input and comments on this assessment. This included providing the FWS with a copy of the Draft EA for their review and comments. A pre-assessment consultation letter was already provided to the FWS in September 2003 soliciting their comments.

#### **7.5.5 Farmland Protection Policy Act**

The Farmland Protection Policy Act (7 U.S.C. § 4201) was established to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. It is also to assure that federal programs are administered in a manner that will be compatible with State, local, and private programs and policies to protect farmland.

The project should not have an adverse impact on farmlands present on the Island of Hawaii since this would only involve 1.0 acre of land being used by the County DWS. The subject parcel is presently undeveloped and not utilized for agriculture production as other surrounding areas. Further, the Land Study Bureau's overall productivity rating for the property was "C". If this project is Federally funded, the Farmland Conversion Impact Rating Form (AD 1006) would be completed and coordinated with the Natural Resources Conservation Service for their evaluation and processing.

#### **7.5.6 The Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act (16 U.S.C. § 661) was enacted to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. This requires Federal agencies to take into consideration the effect that water-related projects would have on fish and wildlife resources, take action to prevent loss or damage to these resources, and provide for the development and improvement of these resources.

This project would not involve the control or modification of any natural streams or body of water. The improvements would be limited to the project site, and the testing and development of a new production well. Consequently, this is not expected to negatively impact fish and wildlife resources in the immediate vicinity.

Consultation with the FWS and State DLNR was performed as part of this environmental review process to obtain further input and comments on this assessment. This included providing these agencies with a copy of the Draft EA for review and comments. Pre-assessment consultation letters were already provided to these agencies in September 2003 soliciting their comments. No information or major concerns have been identified thus far associated with this project's effects on fish and wildlife resources.

#### **7.5.7 Executive Order 11988 Floodplain Management**

Executive Order 11988 requires Federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains. It also requires agencies to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

The proposed improvements would not be constructed within or modify a designated floodplain as identified under the FIRM. A letter from the U.S. Corps of Engineers (Appendix B) also stated that this project site contains no waters of the U.S. subject to their jurisdiction. Consequently, this project would not conflict with this Executive Order.

#### **7.5.8 Executive Order 11990 Protection of Wetlands**

Executive Order 11990 was issued to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. This Order requires Federal agencies, in their planning actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided.

The field survey conducted of the project site determined that there were no wetlands present on the site or in the immediate vicinity that would be affected by the project improvements. Consequently, the project would not affect or result in the loss or destruction of wetland, and will not conflict with this Executive Order.

#### **7.5.9 Safe Drinking Water Act**

The Safe Drinking Water Act (42 U.S.C. § 300) was established to protect public health by regulating the nation's public drinking water supply. This law incorporates many actions to protect drinking water and its sources such as rivers, lakes, reservoirs, springs, and ground water wells. Under this Act, it authorizes the U.S. Environmental Protection Agency (EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The EPA works with States to make sure that these standards are met.

The main purpose for this project is to provide an improved high quality freshwater source for the County DWS's to serve the Kulaimano and Pepekeo communities. Currently, these communities are served by a surface water source that was initially established during the sugar cane plantation era. Consequently, the County DWS has to conduct strict and costly monitoring and water treatment activities for this system. The project addresses these issues by replacing this surface water source with an aquifer source that will improve water quality, reduce treatment and monitoring costs, and provide a more reliable water source.

#### **7.5.10 The Wild and Scenic Rivers Act**

The Wild and Scenic Rivers Act (16 U.S.C. § 271) was established to preserve the free-flowing state of rivers that are listed in the National Wild and Scenic Rivers System or rivers under study for inclusion due to its scenic, recreational, historic, or other similar values. This Act establishes requirements applicable to water resource projects and protects both the river, or river segments, and the land immediately surrounding them.

There are no rivers within the project site or in the immediate vicinity which are included under this National Wild and Scenic Rivers System, or rivers under study for its inclusion. Consequently, this project would not impact such designated rivers or be in conflict with this Act's requirements.

#### **7.5.11 The Wilderness Act**

The Wilderness Act (16 U.S.C. § 1131) establishes a system of National Wilderness areas and a policy for protecting and managing this system. The Act prohibits motorized equipment, structures, roads, commercial enterprises, aircraft landings, and mechanical transport in areas.

There are no areas within the project site or in the immediate vicinity which are included under this National Wilderness system. Consequently, this project would not impact such wilderness areas or be in conflict with this Act's restrictions on uses.

#### **7.5.12 Environmental Justice**

Executive Order 12898 covering Environmental Justice is intended to ensure that Federal agencies identify and address disproportionately high and adverse human health or the environmental effects of their policies, programs, and activities on minority and low income populations.

The proposed improvements would not result in a disproportionately high impact on minority populations or low-income populations in the area. This includes short-term construction related effects, long-term, and cumulative effects as discussed in various sections of this document. The project would not require the acquisition or displacement of any homes and the associated effects on resident populations from such actions since the parcel is presently

undeveloped and surrounded by agricultural uses. Consequently, this project would be consistent with Executive Order 12898 regarding Environmental Justice. The improvements would improve the quality of potable water serving the community and increase the reliability of the water system.

## CHAPTER 8 AGENCY AND PUBLIC CONSULTATION

Consultation with various Federal, State, and County government agencies was conducted to obtain their comments and concerns associated with the project as part of the environmental assessment process.

### 8.1 DRAFT EA PRE-ASSESSMENT CONSULTATION EFFORTS

Letters providing project information along with a preliminary site plan were sent to various consulted parties in September 2003 to solicit their initial comments and concerns associated with the project as part of the preparation of a Draft EA. A listing of agencies and organizations for which consultation letters were sent is provided below. Those providing written response are identified with a "»" symbol. Copies of written comments received along with written responses are included in Appendix B. Comments received have been addressed in the appropriate sections of the previously published Draft EA.

#### Federal Agencies

- » U.S. Army Engineer District, Department of the Army
- » U.S. Department of Agriculture, Resources Conservation Service
- U.S. Department of the Interior, Pacific Island Region, Fish and Wildlife Service
- U.S. Department of the Interior, Water Resources Division, Geological Survey
- » U.S. Department of Transportation, Federal Highway Administration, Hawaii Division

#### State of Hawaii Agencies

- » Department of Accounting and General Services
- Department of Agriculture
- Department of Agriculture, Agribusiness Development Corporation
- Department of Business, Economic Development and Tourism
- Department of Business, Economic Development and Tourism, Energy, Resources and Technology Division
- » Department of Education
- Department of Hawaiian Home Lands
- Department of Health
- Department of Land and Natural Resources
- Department of Land and Natural Resources, Land Division, Hawaii District Branch
- » Department of Land and Natural Resources, Division of Boating and Ocean Recreation, Hawaii District Branch<sup>1</sup>

<sup>1</sup> Telephone call received from a Ms. Nancy Murphy regarding pre-assessment consultation letters sent out. She indicated their division did not have any comments on the project.

- » Department of Land and Natural Resources, Forestry Division, Hawaii District Branch
- » Department of Land and Natural Resources, State Historic Preservation Division
- » Department of Transportation
- Department of Transportation, Hawaii District Office, Highway Division
- Land Use Commission, Department of Business, Economic Development and Tourism
- » Office of Hawaiian Affairs
- Office of Planning, Department of Business, Economic Development and Tourism

**County of Hawaii Agencies**

- Civil Defense Agency
- » Department of Environmental Management
- » Department of Parks and Recreation
- » Department of Public Works
- » Department of Research and Development
- Department of Water Supply
- Hawaii County Council Chair James Arakaki
- Hawaii County Council Member Leningrad Elarionoff, District 9; Chair, Committee on Public Works and Intergovernment Relations
- » Hawaii Fire Department
- » Hawaii Mayor Harry Kim
- » Hawaii Police Department
- Mass Transit Agency
- » Planning Department

**Utilities & Other Organizations**

- Hawaii Electric Light Company, Inc.

**8.2 DRAFT EA COMMENTS**

The Draft EA for this well development project was published in the December 23, 2003, issue of the State Office of Environmental Quality Control's *The Environmental Notice*, initiating a 30-day public comment period that ended on January 23, 2004. Copies of the Draft EA were distributed to the following parties for review and comments. Those parties that submitted comments are indicated by "»" next to them. Comment letters received from these parties along with corresponding response letters from the applicant are included in Appendix B. This Final EA has incorporated additional information in response to comments received on the Draft EA.

**Federal Agencies**

- U.S. Army Engineer District, Department of the Army
- U.S. Department of Agriculture, Resources Conservation Service
- U.S. Department of the Interior, Pacific Island Region, Fish and Wildlife Service
- U.S. Department of the Interior, Water Resources Division, Geological Survey
- U.S. Department of Transportation, Federal Highway Administration, Hawaii Division

**State of Hawaii Agencies**

- » Department of Accounting and General Services
- Department of Agriculture
- Department of Agriculture, Agribusiness Development Corporation
- Department of Business, Economic Development and Tourism
- Department of Business, Economic Development and Tourism, Land Use Commission
- » Department of Education
- Department of Hawaiian Home Lands
- Department of Health
- » Department of Health, Environmental Management Division, Safe Water Drinking Branch
- » Department of Land and Natural Resources
  - » Commission on Water Resource Management
  - » Division of Forestry and Wildlife
    - Division of State Parks
    - Division of Aquatic Resources
    - Engineering Division
  - » Na Ala Hele Trails
    - Office of Conservation and Coastal Lands
- » Department of Land and Natural Resource, Land Division, Hawaii District Branch
- » Department of Land and Natural Resources, State Historic Preservation Division
- Department of Transportation
- Department of Transportation, Hawaii District Office, Highway Division
- » Office of Environmental Quality Control
- » Office of Hawaiian Affairs
- Office of Planning, Department of Business, Economic Development and Tourism

**County of Hawaii Agencies**

- » Civil Defense Agency
- » Department of Environmental Management
- Department of Parks and Recreation

- Department of Public Works
- Department of Research and Development
- Department of Water Supply
- Hawaii County Council Chair James Arakaki
- Hawaii County Council Member Leningrad Elarionoff, District 9; Chair, Committee on Public Works and Intergovernment Relations
- Hawaii Fire Department
- Hawaii Mayor Harry Kim
- » Hawaii Police Department
- Mass Transit Agency
- » Planning Department

**Utilities & Other Organizations**

- Hawaii Electric Light Company, Inc.
- Hilo Library
- Laupahoehoe Library

## CHAPTER 9 FINDINGS AND ANTICIPATED DETERMINATION

To determine whether a proposed action may have a significant effect on the environment, the Approving Agency needs to consider every phase of the action, the expected primary and secondary consequences, cumulative effect, and the short- and long-term effects. The Approving Agency's review and evaluation of the proposed action's effect on the environment would result in a determination whether: 1) the action would have a significant effect on the environment, and an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect warranting a Finding of No Significant Impact (FONSI).

This chapter discusses the results of the assessment conducted for the proposed improvements associated with the Kulaimano Well Development project in relation to the 13 Significance Criteria prescribed under the State Department of Health's Administrative Rules Title 11, Chapter 200. The purpose of this assessment was to consider the "significance" of potential environmental effects which includes the sum of effects on the quality of the environment along with the overall and cumulative effects. The findings are discussed below for each of these criteria.

### 9.1 PRELIMINARY FINDINGS

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The proposed improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. As discussed in the various chapters of this document, the improvements would not negatively impact any natural or cultural resources of significance. The property to be acquired for the new well and future concrete water tank is presently undeveloped and overgrown with introduced vegetation. There would be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources since none are known to be present.

No surface archaeological or historic resources appear present on the property due to its historical use for sugar cane production. However, in the event any subsurface historic properties or burials are encountered during construction, all work would stop and the SHPD notified. Treatment of any findings would be conducted in compliance with Chapter 6E, HRS and the §13-300, HAR. The project site is not known to be used for any traditional native Hawaiian or other cultural practices. Development of the project would also not prevent access to mauka land areas which may be used for traditional gathering or other cultural practices.

2. *Curtails the range of beneficial uses of the environment.*

The project would not curtail the range of beneficial uses of the surrounding environment. The property proposed to be acquired by the County is part of a larger parcel that is currently used for various agricultural activities, pasture, or undeveloped. Consequently, the present and historic use of the property was for agricultural production and not available to the general public for use. The project would provide a needed improvement in providing an improved water source and continued reliable water service to the community which is a beneficial use.

3. *Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*

The improvements would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. A discussion of the project's consistency with applicable guidelines was provided previously. This Final EA addressed the probable environmental impacts associated with the project of which most would be primarily associated with short-term construction activities. Consequently, the improvements are not expected to have a significant impact on natural resources or the surrounding environment.

4. *Substantially affects the economic, or social welfare, cultural practices of the community or State.<sup>2</sup>*

As discussed in this document, the project would not have any significant negative impacts on economic factors, the Pepeekeo and Kulaimano communities, or its rural character. This project would create some minor short-term construction related jobs and increased tax revenue that would have a minor positive effect on the overall economy of the County and State.

This project is not expected to significantly affect traditional native Hawaiian cultural practices other traditional cultural practices occurring in the surrounding area. There are no known traditional cultural practices occurring within the project site since this privately-owned property is generally used for various agricultural activities, and was used for sugarcane cultivation prior to that. Adjacent areas surrounding this project site are similarly used for banana cultivation. The project would also not restrict access to surrounding areas which may be potentially used for traditional native Hawaiian cultural practices since the entire site with the improvements would only be a little over one acre in size.

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<sup>2</sup> This significance criteria were modified to reflect the recent change to Chapter 343, HRS approved by the Governor as Act 50 on April 26, 2000. This Act added "cultural practices" as part of the factors considered in determining the significance of an effect.

5. *Substantially affects public health.*

Improvements are not expected to substantially affect public health since the project would only involve limited construction work within the 1.275-acre site. The project would help the County DWS provide improved water quality and continued reliable water service to area residents.

Construction activities are similarly not expected to cause significant air pollution in the form of fugitive dust or generate any other type of pollutants which may have an adverse affect on public health. Construction activities would occur only during a short time period, and best management practices would be incorporated into the project's design to further minimize nuisances and other typical impacts associated with construction activity.

6. *Involves substantial secondary impacts, such as population changes or effects on public facilities.*

This project would not have any secondary impacts on the social environment or other infrastructure and public facilities. The project is limited to the development of a new production well and future concrete water tank with other accessory improvements. As a result, the improvements do not include new housing units or visitor unit which would affect the area's resident population and demand for public facilities.

7. *Involves a substantial degradation of environmental quality.*

The improvements would not involve a substantial degradation to the quality of the surrounding environment. This document discussed the probable impacts of several environmental factors associated with these improvements which determined that there should not be an adverse impact on the quality of the existing environment.

8. *Is individually limited, but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*

This project only involves the development of the well and future reservoir, and therefore does not involve a commitment for larger actions. Impacts associated with these improvements were addressed in this document, and showed that this project would not have a significant impact on the environment both individually and cumulatively.

9. *Substantially affects a rare, threatened, or endangered species, or its habitat.*

As discussed in this document, there were no known endangered, threatened, or rare botanical resources within the project site. The improvements would also not substantially affect endangered or threatened faunal or avifaunal resources which may occur in the general vicinity. Necessary control measures and best management practices would also be implemented to minimize runoff and other potential short-term impacts associated with construction activity. Thus, the project is not expected to substantially affect rare, threatened, or endangered species or potential habitat for such species.

*10. Detrimentially affects air or water quality or ambient noise levels.*

This project should not have a detrimentally significant impact on air, water quality, or ambient noise levels in the immediate vicinity of the project site. Impacts associated with these factors would be limited to short-term construction activities. The immediate surrounding area is comprised of agricultural uses and open pastures. There are scattered housing units located in the surrounding area, but none are situated in the immediate vicinity of the project site. Short-term construction related impacts are expected to be minor due to the relatively low amount of grading and excavation required. To further minimize impacts, construction activities would be subject to applicable State regulations addressing air quality, noise, and water quality.

*11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.*

The project site is not located within an environmentally sensitive area such as those identified. Construction of the new well and future reservoir would be in compliance with applicable County building codes and DWS system standards.

*12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.*

The project would not affect scenic vistas or viewplanes since there are none located on the project site or in the immediate vicinity. There are no significant views or landforms in the immediate vicinity which would be adversely affected by the project.

*13. Requires substantial energy consumption.*

The project would not require substantial energy consumption or increased capacity of supporting electrical facilities because it is limited to the development of the new production well, water tank, and appurtenances.

## **9.2 ANTICIPATED DETERMINATION**

A Finding of No Significant Impact (FONSI) determination is warranted for the Kulaimano Well Development project based upon the information provided in this Final EA document. The results of the assessments conducted have determined that the new exploratory well and future reservoir facility proposed should not have a significant impact on the surrounding environment. These assessment results are also based upon the agency and public review comments received on the Draft EA published and distributed for public review. The preliminary findings supporting this anticipated determination are based upon the previous discussion of the project's affect on the environment in relation to the 13 Significance Criteria.

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## Statement of SSFM International, Inc.'s Quality Process

*It is the policy of SSFM to have a consistent and systematic approach to the development and review of its reports and other project deliverables.*

All projects and products of our service are subject to a quality process and in no case will the quality review be eliminated. The main purpose of this process is to assure:

- ❖ Clarity, completeness, coordination, and accuracy of documents.
- ❖ That the project, study or investigation meets the Client's objectives.
- ❖ That the requirements of our Agreement with the Client have been met, and the Client has received the value of the fee to be paid.

The Preparation Of This Report Was The  
Responsibility Of And Completed By:

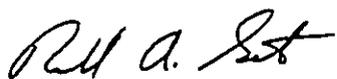


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The Quality Review Of This Report Was The  
Responsibility Of And Completed By:



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3/10/04

date

# APPENDICES

# **APPENDIX A**

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## ***PHOTOGRAPHS OF PROJECT SITE AND SURROUNDING AREAS***



Photo 1  
Northwest (Mauka) View of  
Existing Reservoir

Photo 2  
View Of Existing  
Reservoir Facility

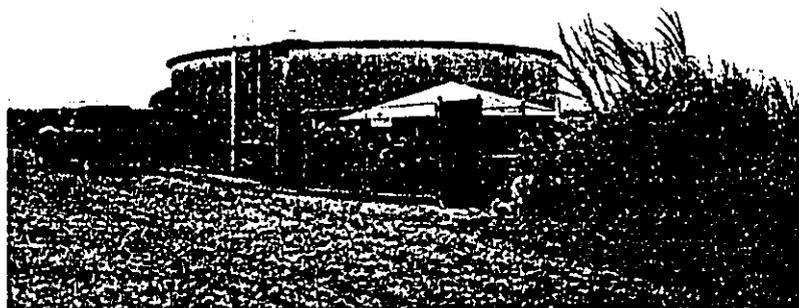


Photo 3  
Westbound (Mauka) View of  
Access Road

**PHOTOGRAPHS OF PROJECT SITE  
AND SURROUNDING AREA**

**Figure A-1**

*Kilauea Well Development Project  
County of Hawaii, Department of Water Supply*

*Source:  
SSFM International, Inc.*





Photo 4  
Eastbound (Makai) View of  
Access Road

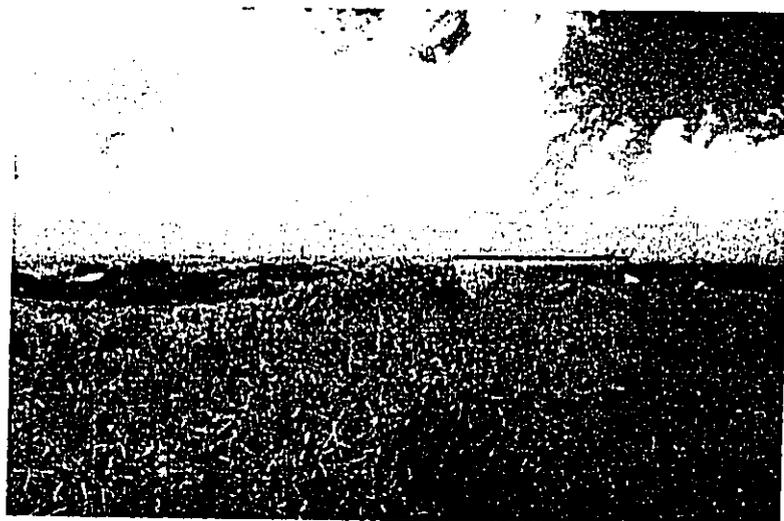


Photo 5  
Eastbound (Makai) View of Site



Photo 6  
Northbound (Makai) View of  
Site Along Existing Reservoir

**PHOTOGRAPHS OF PROJECT SITE  
AND SURROUNDING AREA**

**Figure A-2**

*Kulaamau Well Development Project  
County of Hawaii, Department of Water Supply*

*Source:  
SSFM International, Inc.*



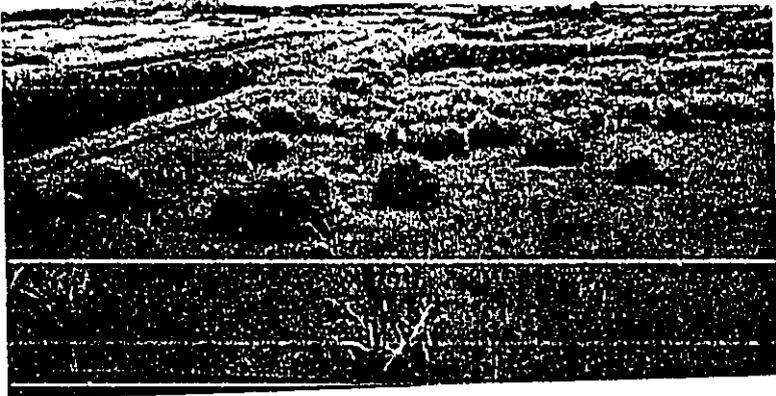


Photo 7  
Westbound (Mauka)  
View of Site



Photo 8  
Northwest (Mauka)  
View of the Site



Photo 9  
Northeast (Makai) View of  
Surrounding Area

**PHOTOGRAPHS OF PROJECT SITE  
AND SURROUNDING AREA**

**Figure A-3**

*Kilauea Well Development Project  
County of Hawaii, Department of Water Supply*

Source:  
SSFM International, Inc.





Photo 10  
East (Makai) View of  
Surrounding Area



Photo 11  
Southeast (Makai) View of  
Surrounding Area



Photo 12  
Southwest (Mauka) View of  
Surrounding Area

**PHOTOGRAPHS OF PROJECT SITE  
AND SURROUNDING AREA**

**Figure A-4**

*Kulaupuna Well Development Project  
County of Hawaii, Department of Water Supply*

Source:  
SSFM International, Inc.



# **APPENDIX B**

---

## **CONSULTATION EFFORTS**

# **APPENDIX B-1**

---

***DRAFT EA PRE-ASSESSMENT  
CONSULTATION***



REPLY TO  
ATTENTION OF

Regulatory Branch

DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96859-5440

September 5, 2003

SSFM INTERNATIONAL, INC  
RECEIVED

SEP 08 2003

✓ VAS

FILE COPY

FILE

Mr. Ronald A. Sato  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

Dear Mr. Sato:

This is in reply to your request dated September 3, 2003, for comments to be incorporated into an Environmental Assessment (EA) for the proposed Kulaimano Well Development Project, located north of Pepekeo (TMK 2-08-004: portions 1 & 3), Hawaii Island. Based on the information provided, I have determined that the entire project is in an upland area which contains no waters of the U.S. subject to our jurisdiction. Therefore a DA permit is not required.

File Number 200300577 has been assigned to this project. Please feel free to contact Mr. Farley Watanabe of my staff at 438-7701, if you have additional questions.

George P. Young, P.E.  
Chief, Regulatory Branch



SSFM INTERNATIONAL, INC.  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817  
Phone: (808) 531-1308  
Fax: (808) 521-7348  
Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. George P. Young, P.E.  
Chief, Regulatory Branch  
U.S. Army Engineer District, Honolulu  
Department of the Army  
Fort Shafter, Hawaii 96858-5440

Dear Mr. Young:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 5, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We confirm your determination that the project site is located within an upland area which contains no waters of the U.S. subject to your department's jurisdiction. The file number for this project has been noted in the event future consultation with your department is required during the project's design phase.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



U.S. Department  
of Transportation  
Federal Highway  
Administration

Hawaii Division  
Box 50206  
300 Ala Moana Boulevard, Room 3-306  
Honolulu, HI 96850

September 11, 2003

Ronald Sato, Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, HI 96817

Subject: Kulaimano Well development Project

Dear Mr. Sato:

Thank you for the information regarding the proposed subject project. Based on the provided information, the FHWA has no comments or concerns in reference to your letter dated September 3, 2003. However, please inform our office if the subject project directly or indirectly affects any highways other than local roads in urban areas or local roads and minor collectors in rural areas. If you should have any questions, please contact me at 541-2700 ext. 308.

Sincerely yours,

Clifford L. Chew  
Transportation Engineer

CLChew

SSFM INTERNATIONAL, INC.  
RECEIVED  
In Reply Refer To:  
HEC-HI  
550.000

SEP 12 2003

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FILE COPY

FILE



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Clifford Chew, Transportation Engineer  
Federal Highway Administration  
U.S. Department of Transportation  
P.O. Box 50206  
Honolulu, Hawaii 96850

Dear Mr. Chew:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 11, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note you department has no comments or concerns on this project at this time. The project is not expected to have significant impacts on highways or local roads in the area. However, a copy of the Draft Environmental Assessment will be provided for your review during the public comment period.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'R A Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



Natural Resources Conservation Service  
 P.O. Box 50004  
 Honolulu, HI 96850  
 808-541-2800

United States Department of Agriculture

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

September 10, 2003

Mr. Ronald A. Sato  
 SSFM International, Inc.  
 501 Sumner Street, Suite 502  
 Honolulu, HI 96817

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SEP 17 2003

VAS  
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**FILE COPY**

Subject: Kulaimano Well Development Project  
 PAE-Assessment Consultation of Draft Environmental Assessment

FILE \_\_\_\_\_

Dear Mr. Sato:

We do not anticipate any major flooding in the project area. Although nearby there was a sighting of an "Akiapola Au" (Honey Creeper) in 1940. There are no other threatened and/or endangered species sightings in the near vicinity. Some erosion may occur during the drilling and construction activities, i.e. road, reservoir and pipeline trenches. We recommend that ground cover be established as soon as possible to minimize future erosion.

Sincerely,

  
 LAWRENCE T. YAMAMOTO  
 State Conservationist

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Lawrence T. Yamamoto, State Conservationist  
Natural Resource Conservation Service  
U.S. Department of Agriculture  
P.O. Box 50004  
Honolulu, Hawaii 96850

Dear Mr. Yamamoto:

**Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment**

Thank you for your letter dated September 10, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We concur with your assessment that no major flooding is anticipated in the project area. Your information on the sighting of the *Akiapola Au* in 1940 is appreciated. This project site is not within an area designated as habitat for the recovery of Hawaiian forest birds by the Fish and Wildlife Service since such areas are situated above the 3,000-foot elevation.

To mitigate potential erosion during construction activities, best management practices will be incorporated into the project's design. One of the measures considered will be establishing ground cover as soon as possible to mitigate erosion.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR



RUSS K. SAITO  
COMPTROLLER  
KATHERINE H. THOMASON  
DEPUTY COMPTROLLER

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 119, HONOLULU, HAWAII 96810

(P)1287.3

SEP 15 2003

SSFM INTERNATIONAL, INC  
RECEIVED

SEP 17 2003

YAS

FILE COPY

FILE

Mr. Ronald A. Sato, AICP, Chief Project Planner  
SSFM International  
501 Summer Street, Suite 502  
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kulaimano Well Development Project  
Pre-Assessment Consultation for Draft Environmental Assessment  
South Hilo, Island of Hawaii, TMK: (3) 2-07-004:por. 001, 003

Thank you for the opportunity to review the information regarding the subject project. This project does not impact any of the Department of Accounting and General Services' projects or existing facilities. Therefore, we have no comments to offer.

If you have any questions, please call me at 586-0400 or have your staff call Mr. David DePonte of the Public Works Division at 586-0492.

Sincerely,

A handwritten signature in cursive script that reads "Russ K. Saito".

RUSS K. SAITO  
State Comptroller



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Russ K. Saito, State Comptroller  
Department of Accounting and General Services  
State of Hawaii  
P.O. Box 119  
Honolulu, Hawaii 96810

Dear Mr. Saito:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 15, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note your determination that this project does not impact any of your department's projects or existing facilities.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in cursive script that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR



PATRICIA HAMAMOTO  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2300  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

SSFM INTERNATIONAL, INC.  
RECEIVED

SEP 23 2003

VTS  
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**FILE COPY**  
FILE \_\_\_\_\_

September 22, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Manager  
SSFM International  
501 Sumner Street, Suite 502  
Honolulu, Hawai'i 96817

Dear Mr. Sato:

Subject: Kulaimano Well Development Project  
South Hilo, Hawai'i: TMK: 2-8-4: 1 (por) and 3

The Department of Education (DOE) has reviewed your letter seeking pre-assessment comments for a new water well west of Pepeekeo town. The Hawai'i County Department of Water Supply plans to develop a well, reservoir, and accessory facilities.

The DOE has no comment at this stage of the proposed project but will review the Draft Environmental Assessment when it is circulated.

Should you have any questions, please contact Ms. Rae M. Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Mr. Raynor M. Minami, Director of the Facilities and Support Services Branch, at 733-4860.

Very truly yours,

Patricia Hamamoto  
Superintendent

PH:hy

cc: Rae M. Loui, OBS  
Raynor M. Minami, FSSB



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Ms. Patricia Hamamoto, Superintendent  
Department of Education  
State of Hawaii  
P.O. Box 2360  
Honolulu, Hawaii 96804

Dear Ms. Hamamoto:

**Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment**

Thank you for your letter dated September 22, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note that your department has no comments on the project at this time. A copy of the Draft Environmental Assessment will be provided for your review during the public comment period.

If you have any questions on this matter, please give me a call at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
889 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

OCT - 8 2003

RODNEY K. HARAGA  
DIRECTOR

Deputy Director  
BRUCE Y. MATSUI

IN REPLY REFER TO:

HWY-PS  
2.1928

SSFM INTERNATIONAL, INC  
RECEIVED

OCT 10 2003

YRS

FILE COPY  
FILE

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kulaimano Well Development Project  
Pre-Assessment Consultation for Draft Environmental Assessment  
South Hilo, District, Island of Hawaii

Thank you for requesting our review and comments regarding the subject project.

The proposed Kulaimano Well Development Project will not adversely impact our State highway facilities.

If you have any questions, please contact Ronald F. Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

for RODNEY K. HARAGA  
Director of Transportation



**SSFM INTERNATIONAL, INC.**  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817  
Phone: (808) 531-1308  
Fax: (808) 521-7348  
Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Rodney K. Haraga, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

Dear Mr. Haraga:

**Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment**

Thank you for your letter dated October 8, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note your determination that the project will not adversely impact you State highway facilities.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
DOMENICO CATRINO  
GOVERNOR



ANTHONY J.H. CHING  
EXECUTIVE OFFICER

STATE OF HAWAII  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
LAND USE COMMISSION  
P.O. Box 2359  
Honolulu, HI 96804-2359  
Telephone: 808-587-3822  
Fax: 808-587-3827

September 17, 2003

SSFM INTERNATIONAL, INC  
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SEP 29 2003

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FILE COPY

FRE \_\_\_\_\_

Mr. Ronald A. Sato  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

Dear Mr. Sato:

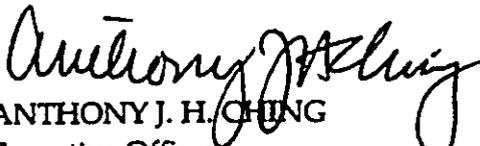
Subject: Kulaimano Well Development Project  
Pre-Assessment Consultation for Draft Environmental Assessment (DEA)

We are in receipt of your letter dated September 3, 2003, requesting our comments on the subject project. We have reviewed the information on the subject project and find that the project site, as generally represented on the Location Map, is designated within the boundary of the State Land Use Agricultural District. We suggest that the DEA include a map showing the project site in relation to the State land use districts.

We have no further comments to offer at this time. Thank you for the opportunity to provide these comments during this pre-assessment consultation phase.

Please feel free to contact Bert Saruwatari of my office at 587-3822, should you require clarification or any further assistance.

Sincerely,

  
ANTHONY J. H. CHING  
Executive Officer

c: Office of Environmental Quality Control



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 867-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Anthony J. H. Ching, Executive Officer  
Land Use Commission  
Department of Business, Economic Development & Tourism  
State of Hawaii  
P.O. Box 2359  
Honolulu, Hawaii 96804-2359

Dear Mr. Ching:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 17, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We confirm that the project is located within the State land use Agricultural District. A figure showing the project site in relation to the State land use districts will be included in the Draft Environmental Assessment.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

PHONE (808) 594-1888



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

FAX (808) 594-1885

SSFM INTERNATIONAL, INC.  
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NOV 10 2003

YAS

HRD03/14

FILE COPY

FILE

October 27, 2003

Ronald A. Sato  
Senior Project Planner  
SSFM International  
501 Sumner St., Ste 502  
Honolulu, HI 96817

RE: Kulaimano Well Development Project, Pre-Assessment Consultation

Dear Mr. Sato,

OHA is in receipt of your request for comments on the above referenced project. We offer the following comments.

**Archaeological and Cultural Assessment**

OHA expects that a full archaeological study of the area will be done prior to any ground excavation. Additionally, you should contact any groups that may hunt or gather Hawaiian plants in the area. We suggest that you contact Ululani Sherlock, at our Hilo office. She can be contacted at 920-6418. We also suggest that you contact Jenö Encencio regarding pig hunting in the area.

Thank you for this opportunity to comment. If you have further questions, please contact Pua Aiu at 594-1931 or e-mail her at [paiu@oha.org](mailto:paiu@oha.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Peter L. Yee".

Peter L. Yee  
Director  
Nationhood and Native Rights



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Peter L. Yee, Director  
Nationhood and Native Rights  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Dear Mr. Yee:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated October 27, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

Appropriate coordination will be conducted with the State Historic Preservation Division to address the potential effect of the project on historic sites and cultural resources. If necessary, appropriate studies and mitigative measures would be performed prior to construction activities.

The 1-acre parcel proposed for the project is situated next to an existing County DWS reservoir site, and is surrounded by agricultural land used for banana cultivation. This parcel appears to have been used for sugar cane cultivation under the former Pepeekeo Sugar Company. As a result, this project is not expected to adversely impact hunting or other native Hawaiian gathering activities. Pertinent coordination with your contacts identified will be conducted as necessary.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'R.A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Dixie Kaetsu  
Managing Director

Peter L. Hendricks  
Deputy Managing Director

### County of Hawai'i

25 Aupuni Street, Room 215 • Hilo, Hawai'i 96720-4252 • (808) 961-8211 • Fax (808) 961-6553  
KONA: 75-5706 Kuakini Highway, Suite 103 • Kailua-Kona, Hawai'i 96740  
(808) 329-5226 • Fax (808) 326-5663

SSFM INTERNATIONAL, INC  
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SEP 10 2003

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September 7, 2003

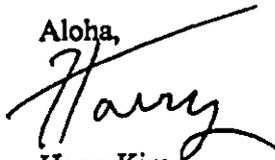
Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawai'i 96817

Re: Kulaimano Well Development Project

Dear Mr. Sato:

Thank you for your letter of September 3, 2003, soliciting comments regarding this project.

I have no comments other than I do support the Kulaimano Well Development Project. This project, like other water development projects, is important for the people of the Island of Hawai'i, because safe and adequate potable water is necessary for a decent quality of life. Within our resources, we must work to make this available to all our residents.

Aloha,  
  
Harry Kim  
MAYOR



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

The Honorable Harry Kim, Mayor  
County of Hawaii  
25 Aupuni Street, Room 215  
Hilo, Hawaii 96720-4252

Dear Mayor Kim:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 7, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

Thank you for your support of this well development project. We concur that this is an important project that will improve the water source and system reliability for the community.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Barbara Bell  
Director

**County of Hawaii**  
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
25 Aupuni Street, Room 208 • Hilo, Hawai'i 96720-4252  
(808) 961-8083 • Fax (808) 961-8086

September 23, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM INTERNATIONAL, INC.  
501 Sumner Street, Suite 502  
Honolulu, HI 96817

Re: Kulaimano Well Development Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Dear Mr. Sato,

We have no comments to offer on the subject project.

If I can be of further assistance, please don't hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Barbara Bell".

Barbara Bell  
DIRECTOR

cc: Christopher J. Yuen, Planning Director, County of Hawaii

SSFM INTERNATIONAL, INC  
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SEP 29 2003

RS

**FILE COPY**

FILE



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817  
Phone: (808) 531-1308  
Fax: (808) 521-7348  
Toll-free Fax: (866) 867-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Ms. Barbara Bell, Director  
Department of Environmental Management  
County of Hawaii  
25 Aupuni Street, Room 208  
Hilo, Hawaii 96720-4252

Dear Ms. Bell:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 23, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note your department has no comments on this project at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Jane H. Testa  
Director

## County of Hawaii

### DEPARTMENT OF RESEARCH AND DEVELOPMENT

25 Aupual Street, Room 219 • Hilo, Hawaii 96720-4252  
(808) 961-8366 • Fax (808) 935-1205  
E-mail: chredev@interpac.net

SSFM INTERNATIONAL, INC.  
RECEIVED

SEP 17 2003

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**FILE COPY**

FILE \_\_\_\_\_

September 15, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawai'i 96817

Dear Mr. Sato:

Subject: Kulaimano Well Development Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Thank you for the opportunity to provide comments on the above subject. As the Agriculture Specialist for the Department of Research and Development and on behalf of its director, I would like to provide a response to your letter dated September 3, 2003.

I am very interested to know if the existing reservoir will be replaced with the new reservoir. If so, what will happen to the existing reservoir and is there an opportunity to utilize it for agriculture? Kulaimano is a good agriculture area and a reliable water supply will encourage further expansion of agriculture activities in the area.

Sincerely,

A handwritten signature in black ink, appearing to read "Marganta L. Hopkins".

Marganta L. Hopkins  
Economic Development Specialist

cc: Jane Testa, Director



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Ms. Margarita L. Hopkins, Economic Development Specialist  
Department of Research and Development  
County of Hawaii  
25 Aupuni Street, Room 219  
Hilo, Hawaii 96720-4252

Dear Ms. Hopkins:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 15, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We appreciate your interest in supporting expansion of agricultural activities in this area. However, the County Department of Water Supply's (DWS) existing reservoir is planned to be used as part of their water service system at this time. The new reservoir planned in the future would be used to increase and improve water storage capacity for the system.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

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

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September 25, 2003

Ronald A. Sato, AICP, Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawai'i 96817

Subject: Kulaimano Well Development Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Dear Mr. Sato:

Thank you for allowing us the opportunity to review and provide comment on the subject project.

At this time we take no exceptions and have no comments on the proposed development.

Respectfully,

  
Patricia G. Engelhard  
Director



**SSFM INTERNATIONAL, INC.**  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817  
Phone: (808) 531-1308  
Fax: (808) 521-7348  
Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Ms. Patricia G. Engelhard, Director  
Department of Parks and Recreation  
County of Hawaii  
101 Pauahi Street, Suite 6  
Hilo, Hawaii 96720

Dear Ms. Engelhard:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 25, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note your department has no comments on this project at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'R A Sato'.

Ronald A. Sato, AICP  
Senior Project Planner





**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Galen M. Kuba, Division Chief  
Department of Public Works  
County of Hawaii  
Aupuni Center  
101 Pauahi Street, Suite 7  
Hilo, Hawaii 96720

Dear Mr. Kuba:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 25, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We confirm the information provided which addresses access to the project site via a 24-foot-wide road and pipeline easement present, and that the site is located within area designated Zone X under the Flood Insurance Rate Map.

All earthwork activities associated with this project will be designed to be conform to Chapter 10 of the Hawaii County Code.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Darryl J. Oliveira  
Fire Chief

Desmond K. Wery  
Deputy Fire Chief

# County of Hawai'i

## FIRE DEPARTMENT

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

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SEP 22 2003

VAS

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**FILE COPY**  
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September 18, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, HI 96817

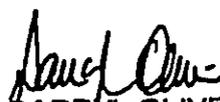
Dear Mr. Sato:

RE: KULAIMANO WELL DEVELOPMENT PROJECT  
PRE-ASSESSMENT CONSULTATION FOR DRAFT ENVIRONMENTAL  
ASSESSMENT

This responds to your request for comments on the above-referenced project. We have no comments to offer at this time regarding the Draft EA.

Thank you for the opportunity to comment.

Sincerely,

  
DARRYL OLIVEIRA  
Fire Chief

RK:ik





**SSFM INTERNATIONAL, INC.**  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817  
Phone: (808) 531-1308  
Fax: (808) 521-7348  
Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Darryl Oliveira, Fire Chief  
Fire Department  
County of Hawaii  
25 Aupuni Street, Suite 103  
Hilo, Hawaii 96720

Dear Mr. Oliveira:

**Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment**

Thank you for your letter dated September 18, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note your department has no comments on this project at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Christopher J. Yuen  
Director

Roy R. Takemoto  
Deputy Director

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

September 17, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu HI 96817

SSFM INTERNATIONAL, INC.  
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**FILE COPY**

FILE

Dear Mr. Sato:

**SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment**  
**Applicant: Department of Water Supply**  
**Project: Kulaimano Well Development Project**  
**Tax Map Key: 2-8-4:3**

This is to acknowledge receipt of your September 3, 2003 letter requesting our comments on the Kulaimano Well Development Project.

As a result of the consolidation and resubdivision of TMK: 2-8-4:1 and TMK: 2-8-4:3 (SUB 7559) on August 1, 2002, the 1.275 acre project site is now identified as TMK: 2-8-4:3.

The County Department of Water Supply plans to develop an exploratory well and determine its suitability as a new water source. A drywell will be used to accommodate the discharge of test water. Future phases would consist of a 500,000-gallon concrete reservoir and accessory facilities utilizing the new well.

This parcel is designated Agricultural by the State Land Use Commission and zoned Agricultural (A-20a) by the County. The General Plan designation is Intensive/Extensive Agriculture. It is not located in the County's Special Management Area.

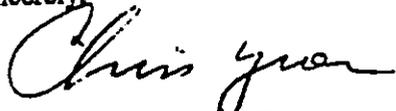
Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
Page 2  
September 17, 2003

According to Hawaii Revised Statutes, Section 205-4.5(a)(7), permitted uses within the agricultural districts includes *“Public, private, and quasi-public utility lines and roadways, transformer stations, communications equipment buildings, solid waste transfer stations, major water storage tanks, and appurtenant small buildings such as booster pumping stations, but not including offices or yards for equipment, material, vehicle storage, repair or maintenance, or treatment plants, or corporation yards, or other like structures.”* Therefore, the Kulaimano Well Development Project is considered to be a permitted use on the subject parcel.

However, the Hawaii County Code, Chapter 25, Section 25-4-11(b) states that *“Any substation used by a public utility for the purpose of furnishing telephone, gas, electricity, water, 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 is required from the Planning Director prior to obtaining a building permit for the proposed improvements.

If you have questions, please feel free to contact Esther Imamura or Larry Brown of our office at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

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**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Christopher J. Yuen, Planning Director  
Planning Department  
County of Hawaii  
Aupuni Center  
101 Pauahi Street, Suite 3  
Hilo, Hawaii 96720

Dear Mr. Yuen:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 17, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We confirm the Tax Map Key number 2-8-004: 003 established for the recently consolidated and resubdivided 1.275 acre project site.

Regarding the project improvements, we would like to clarify that a drywell may be used for the discharge of test water or that detention basins may be used instead. The design of the project will determine the most appropriate method.

We confirm the land use information provided associated with this project site, and that this project is a permitted use within the State land use Agricultural District. However, Plan Approval is required from the Planning Director, and necessary plans will be submitted in obtaining this approval prior to obtaining a building permit.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

Harry Kim  
Mayor



Lawrence K. Mahuna  
Police Chief

Harry S. Kubojiri  
Deputy Police Chief

County of Hawaii

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

SSFM INTERNATIONAL, INC.  
RECEIVED  
SEP 10 2003

VAS  
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FILE COPY

FILE \_\_\_\_\_

September 8, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: KULAIMANO WELL DEVELOPMENT PROJECT  
PRE-ASSESSMENT CONSULTATION FOR DRAFT ENVIRONMENTAL  
ASSESSMENT

Staff has reviewed the above-referenced project and has no comments with the planned development.

Thank you for the opportunity to comment.

Sincerely,

LAWRENCE K. MAHUNA  
POLICE CHIEF

DAVID A. KAWAUCHI  
ACTING ASSISTANT POLICE CHIEF  
AREA I OPERATIONS BUREAU



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 502

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Toll-free Fax: (866) 887-8885

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

November 24, 2003

SSFM 2002\_114.000

Mr. Lawrence K. Mahuna, Police Chief  
Police Department  
County of Hawaii  
349 Kapiolani Street  
Hilo, Hawaii 96720

Dear Mr. Mahuna:

Subject: Kulaimano Well Development Project  
Pre-Assessment Comments, Draft Environmental Assessment

Thank you for your letter dated September 8, 2003 providing comments on the pre-assessment consultation efforts used in preparing the Draft Environmental Assessment for the subject project.

We note your department has no comments on this project at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

**APPENDIX B-2**

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***DRAFT EA COMMENTS LETTERS  
AND RESPONSES***

**APPENDIX B-2**

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***DRAFT EA COMMENTS LETTERS  
AND RESPONSES***

LINDA LINGLE  
GOVERNOR



RUSS K. SAITO  
COMPTROLLER  
KATHERINE H. THOMASON  
DEPUTY COMPTROLLER

**STATE OF HAWAII**  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 119, HONOLULU, HAWAII 96810

(P)1016.4

JAN 22 2004

JAN 23 2004

*vas*

Mr. Ronald A. Sato, AICP, Chief Project Planner  
SSFM International  
501 Sumner Street, Suite 502  
Honolulu, Hawaii 96817

**FILE COPY**

Dear Mr. Sato:

Subject: Kulaimano Well Development Project  
Draft Environmental Assessment  
South Hilo, Island of Hawaii  
TMK: (3) 2-07-004:por. 001, 003

Thank you for the opportunity to review the information regarding the subject project. The project does not impact any of the Department of Accounting and General Services' projects or existing facilities, therefore we have no comments to offer.

If you have any questions regarding the above, please have your staff call Mr. David DePonte at 586-0492 of the Planning Branch.

Sincerely,

A handwritten signature in black ink, appearing to read "Harold Sonomura".  
HAROLD SONOMURA  
Acting Public Works Administrator

DD:mo

c: Ms. Shari Komata, Department of Water Supply  
Ms. Genevieve Salmonson, OEQC

**SCANNED**



**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**  
345 KEKOAANAŌ'A STREET, SUITE 20 • HILO, HAWAII 98720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

February 26, 2004

Mr. Harold Sonomura, Acting Public Works Administrator  
State of Hawai'i  
Department of Accounting and General Services  
P.O. Box 119  
Honolulu, HI 96810

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated January 22, 2004, providing comments on the Draft Environmental Assessment for the subject project.

We confirm that the project does not directly impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, please call Mr. Gerald Yorita of our staff at (808) 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy  Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

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

LINDA LINGLE  
GOVERNOR



PATRICIA HAMAMOTO  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

JAN 27 2004

January 23, 2004

Mr. Ronald Sato  
Senior Project Manager  
SSFM International, Inc.  
501 Sumner Street, Suite 502  
Honolulu, Hawai'i 96817

**FILE COPY**

Dear Mr. Sato:

Subject: Draft Environmental Assessment (DEA) for the  
Kulaimano Well Development Project  
South Hilo, Hawai'i: TMK: 2-8-004: 003

The Department of Education (DOE) has reviewed the DEA for a new water well, west of Pepeekeo Town. The Hawai'i County Department of Water Supply (DWS) plans to develop the well; and in the future, a reservoir and accessory facilities.

The DOE has no comment concerning the proposed project. If you have any questions, please call Rae M. Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

A handwritten signature in cursive script that reads "Patricia Hamamoto".

Patricia Hamamoto  
Superintendent

PH:hy

c: OBS  
CAS/Hawai'i District  
FSSB

**SCANNED**

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKĪDANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 981-8050 • FAX (808) 961-8657

March 3, 2004

Ms. Patricia Hamamoto, Superintendent  
State of Hawai'i  
Department of Education  
P.O. Box 2360  
Honolulu, HI 96804

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 23, 2004, concerning the subject project. We note that your department has no comments to offer regarding the Draft Environmental Assessment for this project.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at (808) 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy - Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

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



Mr. Ronald Sato  
January 15, 2004  
Page 2

If you have any questions or comments please contact Denise Dang  
of the Safe Drinking Water Branch at 586-4258.

Sincerely,



WILLIAM WONG, P.E., CHIEF  
Safe Drinking Water Branch  
Environmental Management Division

DD:gm

c: Wastewater Branch  
Milton Pavao, Hawaii Department of Water Supply



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 3, 2004

Mr. William Wong, P.E., Chief  
State of Hawai'i  
Department of Health  
Safe Drinking Water Branch  
Environmental Management Division  
P.O. Box 3378  
Honolulu, HI 96801-3378

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 15, 2004, concerning the subject project. We have the following response to your comments.

We appreciate your comment informing us that the Draft Environmental Assessment did adequately address the environmental review items required for DWSRF projects which included the appropriate review of Federal Cross Cutters.

The future announcement of the Final Environmental Assessment's publication in *The Environmental Notice* will indicate that federal monies may be used for this project.

A copy of the Final Environmental Assessment along with the County Department of Water Supply's findings and determination letter will be provided to your office when filed with the State Office of Environmental Quality Control.

Thank you for taking the time to review the Draft EA and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at (808) 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton Pavao, P.E.  
Manager

GY:sco

copy - Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

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LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

January 14, 2004

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

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU  
DEPUTY DIRECTOR - WATER

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

KULAIMANOSSFM.RCM

LD-NAV

Mr. Roland A. Sato  
SSFM International, Inc.  
501 Surfer Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: Draft Environment Assessment for Kulaimano Well Development  
TMK: (3) 7-3-29: 036 and 037

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

A copy of the Draft Environmental Assessment pertaining to the subject matter was made available or distributed to the to the following Department of Land and Natural Resources' Division for their review and comment:

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

Enclosed please find a copy of the Commission on Water Resource Management's comment.

The Department of Land and Natural Resources has no other comment to offer on the subject matter. Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0384.

Very truly yours,

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

DIERDRE S. MAMIYA  
Administrator

C: HDLO

LINDA LINGLE  
GOVERNOR OF HAWAII



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

DAH DAVIDSON  
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU  
DEPUTY DIRECTOR - WATER

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



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

December 23, 2003

LD/NAV

Ref.: KULAIMANOSSFM.CMT

Suspense Date: 1/12/04

MEMORANDUM:

TO: \*XXX Division of Aquatic Resources  
\*XXX Division of Forestry & Wildlife  
\*XXX Na Ala Hele Trails  
\*XXX Division of State Parks  
\*XXX Engineering Division  
Division of Boating and Ocean Recreation  
\*XXX Commission on Water Resource Management  
\*XXX Office of Conservation and Coastal Lands  
\*XXX Land-Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator  
Land Division

SUBJECT: Draft Environmental Assessment  
Project: Kulaimano Well Development  
Authority: County of Hawaii Department of Water Supply  
Consultant: SSFM International  
TMK: (3) 7-3-29: 036 and 037

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One copy of the DEA is available for your review in the Land Division Office, Room 220.

If you have any questions, please contact Nicholas A. Vaccaro at ext.: 7-0384.

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

We have no comments.

Comments attached.

Division: \_\_\_\_\_

Signed: \_\_\_\_\_

MICHAEL G. BUCK, ADMINISTRATOR  
DIVISION OF FORESTRY AND WILDLIFE

Date: DEC 29 2003

Name:

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LAND DIVISION  
2003 DEC 30 P 5:11

LINDA LINGLE  
GOVERNOR OF HAWAII

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COMMISSION ON WATER  
RESOURCE MANAGEMENT

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU  
DEPUTY DIRECTOR - WATER

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

December 23, 2003

LD/NAV

Ref.: KULAIMANOSSFM.CMT

Suspense Date: 1/12/04

MEMORANDUM:

TO: \*XXX Division of Aquatic Resources  
\*XXX Division of Forestry & Wildlife  
\*XXX Na Ala Hele Trails  
\*XXX Division of State Parks  
\*XXX Engineering Division  
Division of Boating and Ocean Recreation  
\*XXX Commission on Water Resource Management  
\*XXX Office of Conservation and Coastal Lands  
\*XXX Land-Hawaii District Land Office

FROM: Dierdre S. Mamiya, Administrator  
Land Division

SUBJECT: Draft Environmental Assessment  
Project: Kulaimano Well Development  
Authority: County of Hawaii Department of Water Supply  
Consultant: SSFM International  
TMK: (3) 7-3-29: 036 and 037

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One copy of the DEA is available for your review in the Land Division Office, Room 220.

If you have any questions, please contact Nicholas A. Vaccaro at ext.: 7-0384.

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

( ) We have no comments.

(X) Comments attached.

Division: CWRM

Signed:

Date: 12/30/03

Name: Ryan Imata

LINDA LINGLE  
GOVERNOR OF HAWAII



PETER T. YOUNG  
CHAIRPERSON

MEREDITH J. CHING  
CLAYTON W. DELA CRUZ  
JAMES A. FRAZIER  
CHIYOME L. FUKINO, M.D.  
STEPHANIE A. WHALEN

ERNEST Y. W. LAU  
DEPUTY DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
P.O. BOX 621  
HONOLULU, HAWAII 96809

SSFM INTERNATIONAL INC  
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JAN 07 2004

vas

January 5, 2004

Mr. Roland A. Sato  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, HI 96817

Dear Mr. Sato:

SUBJECT: Draft EA for Kulaimano Well Development

**FILE COPY**  
FILE

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

In general, the CWRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWRM encourages the protection of water recharge areas, which are important for the maintenance of streams and the replenishment of aquifers.

- We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.
- We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- A Well Construction Permit and/or a Pump Installation Permit from the Commission would be required before ground water is developed as a source of supply for the project.
- The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the Commission would be required prior to use of this source.
- Groundwater withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- We are concerned about the potential for degradation of instream uses from development on highly erodible slopes adjacent to streams within or near the project. We recommend that approvals for this project be conditioned upon a review by the corresponding county's Building Department and the developer's acceptance of any resulting requirements related to erosion control.
- If the proposed project includes construction of a stream diversion, the project may require a stream diversion works permit and amend the instream flow standard for the affected stream(s).
- If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.
- OTHER:

If there are any questions, please contact Ryan Imata at 587-0255.

Sincerely,

*for W. Young*  
ERNEST Y. W. LAU  
Deputy Director

c: Land Division

**SCANNED**



**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8857

March 3, 2004

Ms. Dierdre S. Mamiya, Administrator  
Land Division  
State of Hawai'i  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

**KULAIMANU WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 14, 2004, which included division comments concerning the subject project. We received a separate letter from the DLNR Land Division (Hawai'i District Branch) indicating they had no comments, and we will correspondingly respond directly to them.

Division of Forestry and Wildlife

We note this division had no comments on the Draft Environmental Assessment for this project.

Commission on Water Resource Management

We confirm that a Well Construction Permit will be obtained before development of the project.

Thank you for taking the time to distribute and review the Draft Environmental Assessment and providing us with your letters.

If you have any questions, please call Mr. Gerald Yorita of our staff at (808) 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy - Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*



SSFM INTERNATIONAL, INC.  
 501 Sumner Street, Suite 620  
 Honolulu, Hawaii 96817  
 Phone: (808) 531-1308  
 Fax: (808) 521-7348  
 Project Managers, Planners, & Engineers  
 American Council of Engineering Companies, Member

JAN 13 2004  
 FAX

2003 DEC 23 P 2:27

SSFM 2002\_114.000

December 22, 2003

RECEIVED  
 LAND DIVISION  
 HILO, HAWAII

**FILE COPY**

Dear Participant:

Attached for your review is a Draft Environmental Assessment (Draft EA) for the Kulaimano Well Development Project being proposed by Department of Water Supply, County of Hawaii.

This Draft EA was prepared pursuant to Chapter 343, Hawaii Revised Statutes, and Title 11, Chapter 200 of the State Department of Health's Administrative Rules. A Finding of No Significant Impact (FONSI) determination is anticipated for this project. Information concerning review of this Draft EA is provided below.

TITLE OF PROJECT: Kulaimano Well Development Project  
 PROJECT LOCATION ISLAND: Hawaii DISTRICT: South Hilo District  
 TAX MAP KEY: (3) 2-08-004: Parcel 003  
 AGENCY ACTION:  X  APPLICANT ACTION: \_\_\_\_\_

COMMENTS MUST BE RECEIVED OR POSTMARKED BY (30-day comment period):  January 22, 2004

PLEASE SEND ORIGINAL COMMENTS TO:

CONSULTANT: SSFM International, Inc.  
 501 Sumner Street, Suite 620  
 Honolulu, Hawaii 96817  
 Contact: Mr. Ronald A. Sato  
 Phone: (808) 356-1268

COPIES OF COMMENTS SHOULD BE SENT TO:

ACCEPTING AUTHORITY: Department of Water Supply  
 County of Hawaii  
 345 Kekuanaoa Street, Suite 20  
 Hilo, Hawaii 96720  
 Contact: Ms. Shari Komata  
 Phone: (808) 961-8070

Office of Environmental Quality and Control (OEQC)  
 Department of Health  
 State of Hawaii  
 235 South Beretania Street, Room 702  
 Honolulu, Hawaii 96813  
 Phone: (808) 586-4185

The DLNR Land Division (HI District Branch)  
 has no comments regarding this request.  
*[Signature]*  
 12/24/03

**SCANNED**



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKĪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 3, 2004

Mr. Harry M. Yada, District Land Agent  
Hawai'i District Branch, Land Division  
State of Hawai'i  
Department of Land and Natural Resources  
P.O. Box 936  
Hilo, HI 96721

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated December 24, 2003, concerning the subject project. We note that your department has no comments to offer regarding the Draft Environmental Assessment for this project.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy ✓ Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

LINDA LINGLE  
GOVERNOR OF HAWAII



January 15, 2004



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

SSFM INTERNATIONAL, INC  
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JAN 20 2004

was

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

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU  
DEPUTY DIRECTOR - WATER

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

FILE COPY

HAWAI'I HISTORIC PRESERVATION  
DIVISION REVIEW

LOG NO.: 2004.0137  
DOC NO.: 0401JK22

**Applicant/Agency:** SSFM International, Inc.  
**Address:** 501 Sumner Street, Suite 620  
Honolulu, HI 96817

**Project:** Chapter 6E-8 Review (County) Draft Environmental Assessment  
Kulaimano Well Development Project, Department of Water  
Supply, County of Hawai'i

**Location:** Kulaimano, South Hilo, Hawai'i Island  
**Tax Map Key:** (3) 2-8-004:003

1. We believe there are no historic properties present because:

- a. intensive cultivation has altered the land
- b. residential development /urbanization has altered the land
- c. previous grubbing/grading has altered land
- d. an acceptable archaeological assessment or inventory survey found no historic properties
- e. other:

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

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

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

Signed Jeanne M. Knapp Date 1-15-04  
Historic Preservation Division-Kona  
Jeanne M. Knapp

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 3, 2004

Ms. Jeanne M. Knapp  
Historic Preservation Division-Kona  
State of Hawai'i  
Department of Land and Natural Resources  
601 Kamokila Boulevard, Room 555  
Kapolei, HI 96707

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 15, 2004, concerning the subject project.

We confirm your determination that the project will have no effect on historic properties and that no historic properties should be present because prior intensive cultivation has altered the land.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at (808) 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy ✓ Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

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LINDA LINGLE  
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON  
DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

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

January 21, 2004

Mr. Milton D. Pavao, Manager  
Department of Water Supply  
345 Kekuanaoa Street, Suite 20  
Hilo, Hawai'i 96720

Dear Mr. Pavao:

Subject: Draft EA for the Kulaimano Well Development Project, Hawai'i

Thank you for the opportunity to review and comment on the subject project. We have the following comments.

1. For assistance in completing the environmental assessment, please review OEQC's well development guidelines available at <http://www.state.hi.us/health/oeqc/guidance/wells.html>
2. This project should comply with sections 103D-407 and 408 of Hawaii Revised Statutes concerning the use of indigenous plants and recycled glass.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

A handwritten signature in cursive script that reads "Genevieve Salmonson".  
Genevieve Salmonson  
Director

c: SSFM



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 3, 2004

Ms. Genevieve Salmonson, Director  
State of Hawai'i  
Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, HI 96813

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 21, 2004, concerning the subject project. We have the following response to your comments.

We appreciate your comment notifying us of the available informational guideline for assessing well development projects. The Draft Environmental Assessment did include the pertinent and applicable information suggested under the guidelines.

Design plans developed for this project will comply with §103D-407, HRS concerning the use of recycled glass as appropriate for the facility's construction along with roadway materials. Also, the project's design will comply with §103D-408, HRS, concerning the use of indigenous and Polynesian introduced plants for landscaping as appropriate.

Thank you for taking the time to review the Draft EA and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton Pavao, P.E.  
Manager

GY:sco

copy → Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

PHONE (808) 594-1888

FAX (808) 594-1865



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

NRCD 04-1149

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JAN 23 2004

VAS

January 21, 2004

Mr. Ronald A. Sato  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

**FILE COPY**

Dear Mr. Sato:

**Subject: Draft Environmental Assessment for  
Kulaimano Well Development Project  
Kulaimano, South Hilo, Hawaii  
TMK (3) 2-8-004:003**

Thank you for the opportunity to review and comment on the above referenced request. The Office of Hawaiian Affairs has no comment at this time. Should you have any questions, please feel free to contact Pomaialoha Cox at 594-1970 or by email at [pomaialohac@oha.org](mailto:pomaialohac@oha.org).

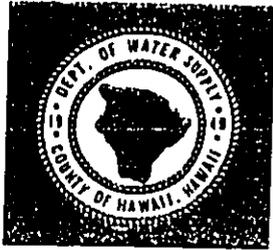
'O wau iho nō,

Clyde W. Nāmu'o  
Administrator

cc: Department of Water Supply  
County of Hawaii  
345 Kekuanaoa Street, Suite 20  
Hilo, Hawaii 96720

Office of Environmental Quality and Control (OEQC)  
Department of Health  
State of Hawaii  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKONAŌA STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8857

March 3, 2004

Mr. Clyde W. Namu'o  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, HI 96813

**KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 28, 2004, concerning the subject project. We note that your office has no comments regarding the Draft Environmental Assessment for this project.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at (808) 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

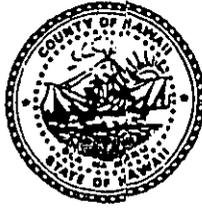
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copy ✓ Mr. Ronald Sato, SSFM International, Inc.

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Harry Kim  
Mayor



Troy M. Kindred  
Administrator

Lanny Nakano  
Assistant Administrator

**County of Hawaii**  
**CIVIL DEFENSE AGENCY**  
920 Ululani Street • Hilo, Hawaii 96720-3958  
(808) 935-0031 • Fax (808) 935-6460

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JAN - 2 - 2004

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FILE

December 30, 2003

Mr. Ronald A. Sato  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato,

The Environmental Assessment of the Kulaimano Well Development Project adequately addresses all issues of concern to the Hawaii County Civil Defense Agency.

One area not mentioned in the plan is the hazard of terrorism. Although this was not mentioned, I did see that the site appears to have plans for an adequate fence to be erected. In addition, I also have information that the Hawaii County Department of Water Supply is addressing this concern.

For further questions please call 935-0031.

Sincerely,

Troy M. Kindred  
Administrator

Enclosure

cc: Department of Water Supply, County of Hawaii  
Office of Environmental Quality and Control, State Department of Health

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**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**

345 KEKONAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8857

March 3, 2004

TO: Mr. Troy M. Kindred, Administrator  
Hawai'i County Civil Defense Agency

FROM: Milton D. Pavao, Manager

SUBJECT: **KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated December 30, 2003, concerning the subject project. We note your comment indicating that the project adequately addresses all issues of concern of your department.

Development plans for the site will include a fence to be erected to secure the facility. The Department of Water Supply is addressing this concern, and will appropriately coordinate design plans with your department.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

A handwritten signature in black ink, appearing to read "M. Pavao", is written over a horizontal line.

Milton D. Pavao, P.E.  
Manager

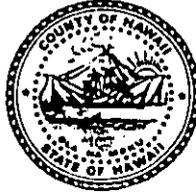
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copy ✓ Mr. Ronald Sato, SSFM International, Inc.

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Harry Kim  
Mayor



Barbara Bell  
Director

County of Hawaii  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
25 Aupuni Street, Room 208 • Hilo, Hawai'i 96720-4252  
(808) 961-8083 • Fax (808) 961-8086

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JAN 07 2004

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FILE

January 2, 2004

Mr. Ronald A. Sato  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, HI 96817

Re: Draft Environmental Assessment  
Kulaimano Well Development Project

Dear Mr. Sato,

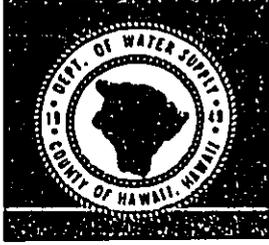
We have no comments at this time regarding the proposed project.

Thank you for allowing us the opportunity to offer input on this project and if we can be of further assistance, please don't hesitate to contact us.

Barbara Bell  
DIRECTOR

cc: Ms. Shari Komata, Department of Water Supply  
State of Hawai'i OEQC

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKĪDANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 3, 2004

TO: Ms. Barbara Bell, Director  
Department of Environmental Management

FROM: Milton D. Pavao, Manager

SUBJECT: KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT

Thank you for your comment letter dated January 2, 2004, concerning the subject project. We note that your office has no comments on the Draft Environmental Assessment for this project.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy → Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

Harry Kim  
Mayor



Lawrence K. Mahuna  
Police Chief

Harry S. Kubojiri  
Deputy Police Chief

County of Hawaii

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

SSFM INTERNATIONAL, INC.  
RECEIVED  
JAN 2 2004

✓ yks  
FILE

FILE COPY

December 29, 2003

Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Summer Street, Suite 502  
Honolulu, HI. 96817

Dear Mr. Sato:

Re: Kulaimano Well Development Project  
Draft Environmental Assessment

Staff has reviewed the draft environmental assessment for the above-referenced project and has no comments to offer with the planned project.

Thank you for the opportunity to comment.

Sincerely,

LAWRENCE K. MAHUNA  
POLICE CHIEF

  
CHARLES M. CHAI, JR.  
ASSISTANT POLICE CHIEF  
AREA I OPERATIONS

SCANNED



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
345 KEKĀNANĀO'A STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 3, 2004

TO: Mr. Charles M. Chai, Jr., Assistant Police Chief, Area 1 Operations  
Hawai'i County Police Department

FROM: Milton D. Pavao, Manager

SUBJECT: KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT

Thank you for your comment letter dated December 29, 2003, concerning the subject project. We note that your office has no comments on the Draft Environmental Assessment for this project.

Thank you for taking the time to review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yorita of our staff at 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GY:sco

copy - Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

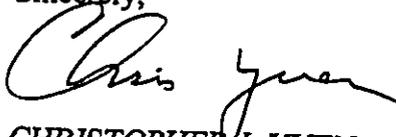
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Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
Page 2  
January 16, 2004

If you have questions, please feel free to contact Esther Imamura or Larry Brown of our office at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
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TELEPHONE (808) 961-8050 • FAX (808) 961-8857

March 3, 2004

TO: Mr. Christopher J. Yuen, Director  
Planning Department

FROM: Milton D. Pavao, Manager

SUBJECT: **KULAIMANO WELL DEVELOPMENT PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your comment letter dated January 16, 2004, providing comments on the Draft Environmental Assessment for the subject project.

We confirm that Plan Approval will be required for this project. Design plans will be appropriately submitted to your department for review during the project's design phase.

The Draft Environmental Assessment will be revised to indicate the parcel has no front or rear yards since all property lines are considered sides. In addition, the minimum yard setback from all property lines is 20 feet.

Thank you for taking the time to distribute and review the Draft Environmental Assessment and providing us with your letter.

If you have any questions, please call Mr. Gerald Yonita of our staff at 961-8070, extension 250, or Mr. Ronald Sato of SSFM International, Inc., at (808) 356-1268.

Sincerely yours,

  
Milton D. Pavao, P.E.  
Manager

GY:sco

copy - Mr. Ronald Sato, SSFM International, Inc.

*... Water brings progress...*

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