



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

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December 11, 2003

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Department of Health  
State of Hawai'i  
235 South Beretania Street, Suite 702  
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OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND FILING OF FINAL  
ENVIRONMENTAL ASSESSMENT  
KOKOIKI 0.1-M.G. CONCRETE RESERVOIR  
HĀWĪ, NORTH KOHALA, HAWAII  
TAX MAP KEY 5-5-004:PORTION 051**

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 October 8, 2003.

Consequently, the County 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 December 23, 2003, issue of the OEQC *The Environmental Notice*.

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

1. One copy of the OEQC Publication Form with project summary (project summary e-mailed to your office and hard copy 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...*

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### **Brief Description of Proposed Action**

The Department of Water Supply (DWS), County of Hawai'i, is proposing to develop the Kokoiki 0.1 Million Gallon (MG) Concrete Reservoir Project in the town of Hāwī, within the North Kohalā District on the Island of Hawai'i. This project involves the acquisition of approximately 0.5 acre of State-owned land and the construction of a new 0.1 MG concrete water reservoir and appurtenances.

The purpose of this project is to minimize water pressure limitations currently experienced by some DWS customers in the Hāwī community served by the existing Hāwī-Kokoiki-Kynnersly-Kapa'au water system. This new concrete water tank and appurtenances would augment the existing DWS waterline to ensure adequate water pressure for emergency purposes in this area of the Hāwī community.

### **Determination**

A Finding of No Significant Impact (FONSI) determination is warranted for the Kokoiki 0.1 MG Concrete Reservoir 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 reservoir improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. There should be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, archaeological, or other natural resources since none are known to be present.
2. Curtails the range of beneficial uses of the environment. The reservoir improvements would not curtail the range of beneficial uses of the surrounding environment. The property that the County proposes to acquire from the State is part of a larger parcel that is currently leased to a private party for agricultural activities conducted thereon. However, no agricultural activities are conducted on the portion of land to be acquired and the development of the reservoir improvements should not curtail the existing agricultural activities taking place on other portions of the property.
3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. The reservoir improvements would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter

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344, HRS. A discussion of the project's consistency with applicable guidelines were provided in the Final EA.

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, the Hāwī community, or its rural character. This project is not expected to affect traditional native Hawaiian cultural practices other traditional cultural practices since there are none known to occurring on the project site or in the immediate surrounding area.
5. Substantially affects public health. The reservoir improvements are not expected to substantially affect public health since the project would only involve limited construction work. The project would help the County DWS to provide continued reliable water service to Hāwī 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 100,000-gallon capacity concrete water tank and other accessory utility improvements. The improvements do not include new housing units or visitor units that would affect the area's resident population and demand for public facilities.
7. Involves a substantial degradation of environmental quality. The reservoir 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 improvements described for the Kokoiki Reservoir and therefore does not involve a commitment for larger actions.
9. Substantially affects a rare, threatened, or endangered species, or its habitat. There are no known endangered, threatened, or rare botanical, faunal, or avifaunal species within the reservoir project site. Furthermore, the improvements would not substantially affect such resources that may occur in the general vicinity.
10. Detrimentially affects air or water quality or ambient noise levels. This project should not have a significant detrimental impact on air, water quality, or ambient noise levels in the immediate vicinity of the reservoir project site. Impacts associated with these factors would be limited to short-term construction activities.

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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 reservoir project site is not located within an environmentally sensitive area such as those identified.
12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies. The reservoir project would not affect scenic vistas or viewplanes since there are none located on the project site or in the immediate vicinity.
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 concrete water tank and apputenances.

Should you have any questions, please contact Ms. Shari Komata of our Water Resources and Planning Branch at (808) 961-8070.

Sincerely yours,



/ Milton D. Pavao, P.E.  
Manager

SHK:sco

2003-12-23-HA-FEA

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FINAL

ENVIRONMENTAL  
ASSESSMENT

( KOKOIKI 0.10 MG  
CONCRETE RESERVOIR )  
PROJECT

December 2003

Prepared For:



Dept. of Water Supply,  
County of Hawaii

Prepared By:



**FINAL  
ENVIRONMENTAL ASSESSMENT  
FOR  
KOKOIKI 0.10 MG  
CONCRETE RESERVOIR PROJECT**

**HAWAII, HAWAII**

**DECEMBER 2003**

***PROPOSING AGENCY:***

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

This environmental document was prepared pursuant to Chapter, 343 Hawaii Revised Statutes.

Responsible Official: \_\_\_\_\_

Date: 12/8/03

*for* Milton D. Pavao, P.E., Manager  
Department of Water Supply, County of Hawaii

***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 Kokoiki 0.1 Million Gallon (MG) Concrete Reservoir Project. This project involves the acquisition of approximately 0.5 acre of State-owned land and the construction of a new 0.1 MG concrete water reservoir and appurtenances. The project site is located at Tax Map Key: (3) 5-5-004:051 in the community of Hawi, within the North Kohala District of the Island of Hawaii.

The County plans to acquire the land from the State Department of Land and Natural Resources (DLNR) via Executive Order. Because this action involves State land, the DLNR has required that the County first satisfy the environmental documentation requirements of Chapter 343, HRS, relating to Environmental Impact Statements. Thus, this Environmental Assessment document has been prepared to fulfill these requirements.

The purpose of this project is to minimize water pressure limitations currently experienced by some DWS customers in the Hawi community. Figure 1.1 shows the general location and vicinity of the project planned in the area of Hawi. Table 1.1 provides the summary of pertinent information associated with this project.

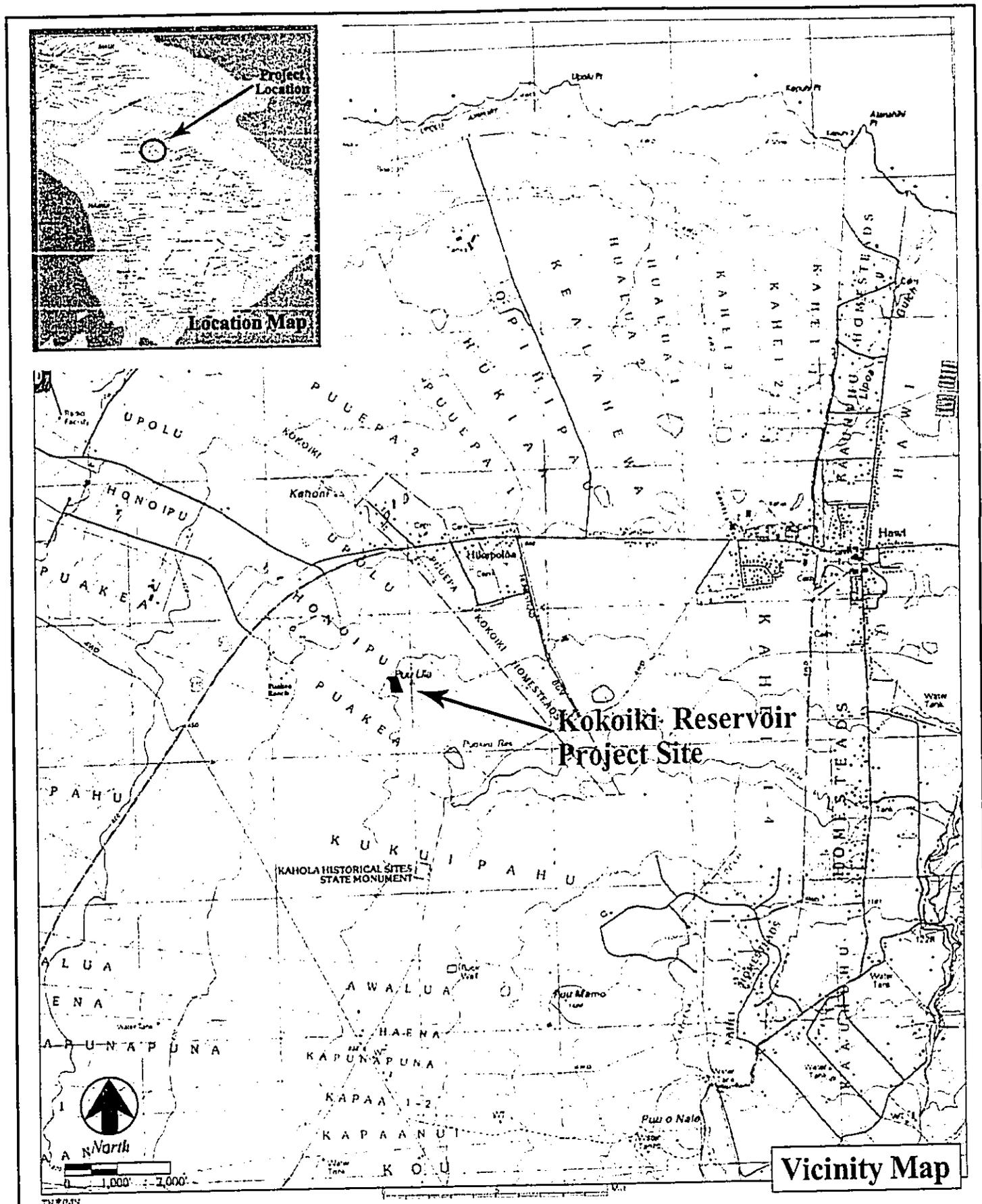
#### Proposing Agency and Accepting Authority

The Kokoiki Reservoir project would involve the acquisition of State land and the use of County funds for the construction of a new concrete water tank and related appurtenances. 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.

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 water reservoir project, was published in the September 8, 2003, issue of the State Office of Environmental Quality Control's *The Environmental Notice*. This Final Environmental Assessment (Final EA) has subsequently been prepared by incorporating and addressing public comments received on the published Draft EA. Based upon the assessment results documented in this Final EA, a Finding of No Significant Impact (FONSI) is warranted for this project.

The County DWS is the Proposing Agency for the Kokoiki Reservoir 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 is the County DWS as the authorized representative for the Mayor of the County of Hawaii.

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**KOKOIKI RESERVOIR PROJECT  
LOCATION AND VICINITY MAP**

*Kokoiki Reservoir  
Department of Water Supply, County of Hawaii*

**Figure 1.1**

Source:  
Delorme 3D Topo Quads:  
SSFM International, Inc.



**Table 1.1 Summary Information**

<b>Project Name:</b>	Kokoiki 0.1 MG Concrete Reservoir Project
<b>Proposing Agency:</b>	Department of Water Supply County of Hawaii 345 Kekuanaoa Street, Suite 20 Hilo, Hawaii 96720 Contact: Ms. Shari Komata
<b>Authorized Agent:</b>	SSFM International, Inc. 74-5620-A Palani Road, Suite 204 Kailua-Kona, Hawaii 96740 Contact: Ms. Pamela L. Harlow, Planner
<b>Accepting Authority:</b>	Department of Water Supply, County of Hawaii
<b>Project Description:</b>	This project involves the acquisition of approximately 0.5 acre of land and the construction of a new concrete 0.1 MG water tank and appurtenances. The purpose of developing this reservoir is to minimize water pressure limitations currently experienced by some DWS customers in the Hawi community of the Island of Hawaii.
<b>Project Location:</b>	The proposed project is located in the North Kohala District of the Island of Hawaii.
<b>Land Ownership:</b>	The subject property consists of approximately 5 acres and is currently owned by the State of Hawaii. The County of Hawaii intends to acquire approximately 0.5 acre of this property via Executive Order, which will then be subdivided from the existing parcel to create a new lot for the purpose of developing the new 0.1 MG water tank and appurtenances.
<b>Tax Map Key:</b>	(3) 5-5-004: Portion of 051
<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 is not within the County of Hawaii's Special Management Area.

## 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 Conformance with Plans and Policies chapter in 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): Urban, Rural, Agricultural, and Conservation. 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 Map for Hawi (Map H-66) indicates that the project site and immediate surrounding area are designated as "Agricultural District." Figure 1.2 shows this project area associated with this Land Use District Boundary Map.

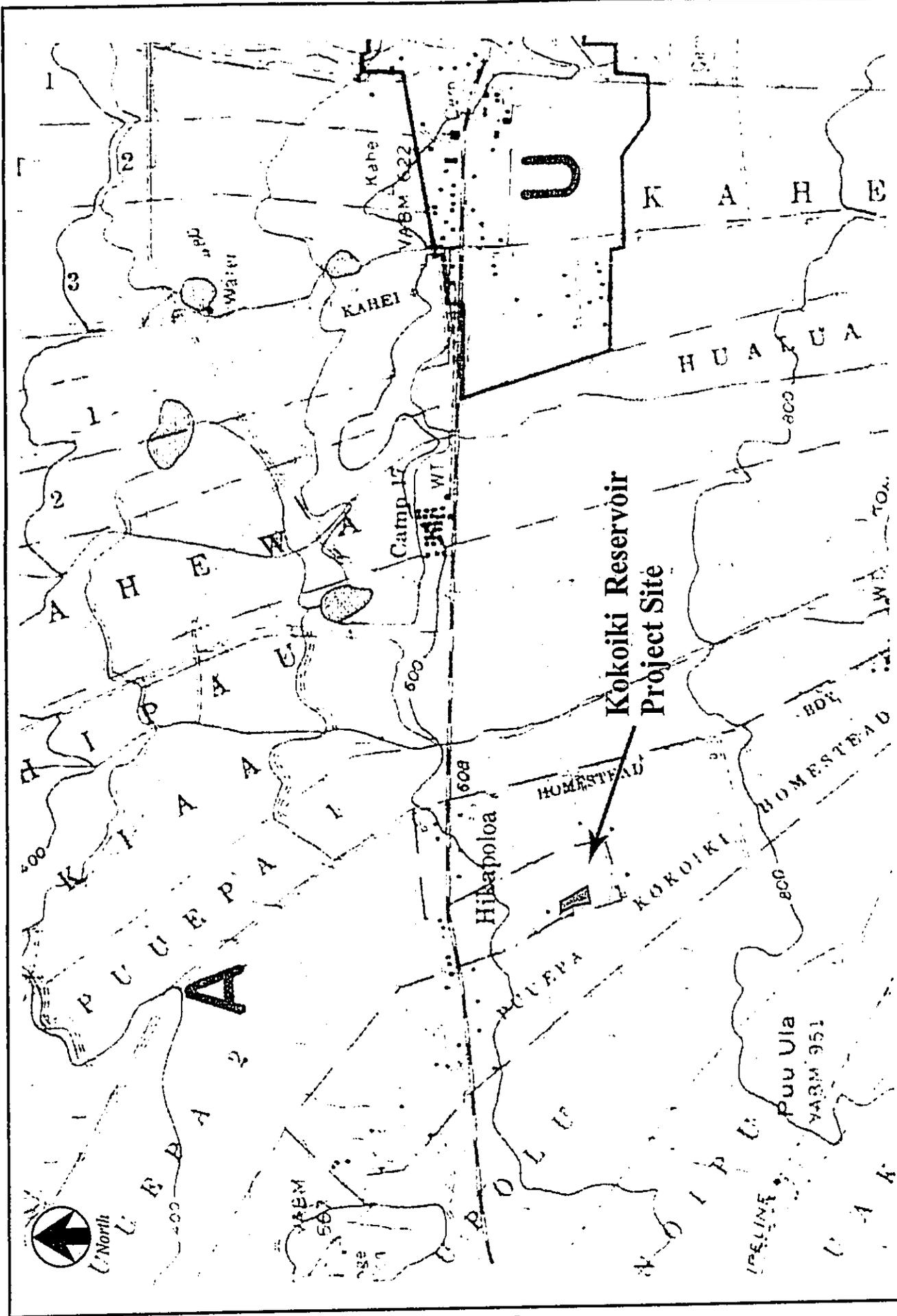
### 1.2.2 County of Hawaii General Plan

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 Kokoiki Reservoir project site and immediate surrounding area are identified as "Intensive Agricultural." Figure 1.3 shows the subject property in relation to the existing Land Use Pattern Allocation Guide Map for the area.

Over the past four years, as required by the County Charter, the *General Plan* has been updated. Based on input obtained from numerous public informational hearings, the Planning Director and Planning Commission have forwarded their recommendations to the County Council for action. Currently, proposed revisions to the *General Plan* and the associated Land Use Pattern Allocation Guide Map call for changing the Intensive Agriculture classification to that of Important Agricultural Lands. Thus, should this revision be adopted, the subject parcel would be designated Important Agricultural Lands.

### 1.2.3 County of Hawaii Zoning District

The Kokoiki Reservoir project site, along with its surrounding properties, is located within the North Kohala District of the Island of Hawaii. As a result, the County's Zone Map for the North and South Kohala Districts 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.



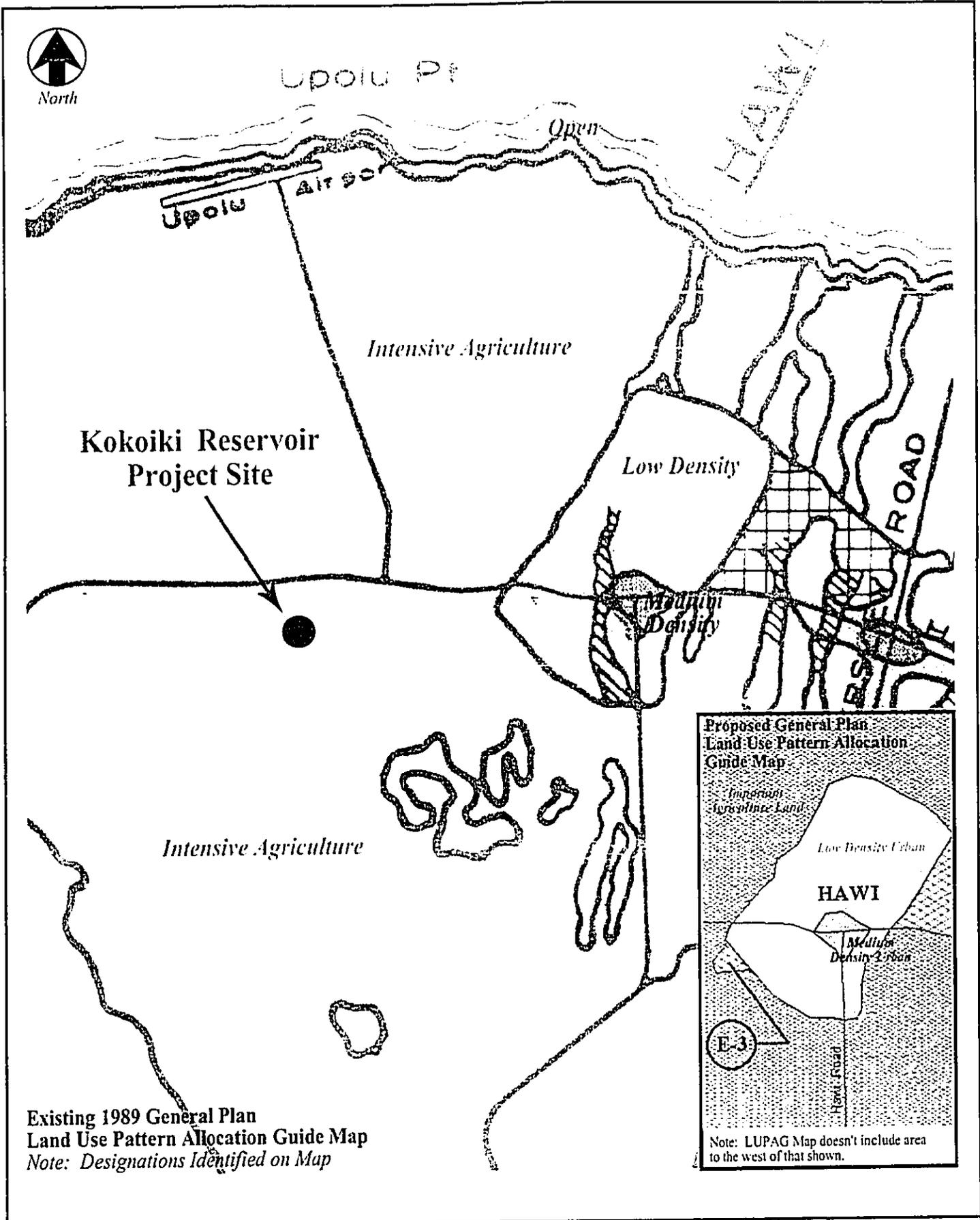
**STATE LAND USE DISTRICT BOUNDARY MAP**

**Figure 1.2**

Kokoiki Reservoir  
 Department of Water Supply, County of Hawaii

Source:  
 State Land Use Commission, Map H-13





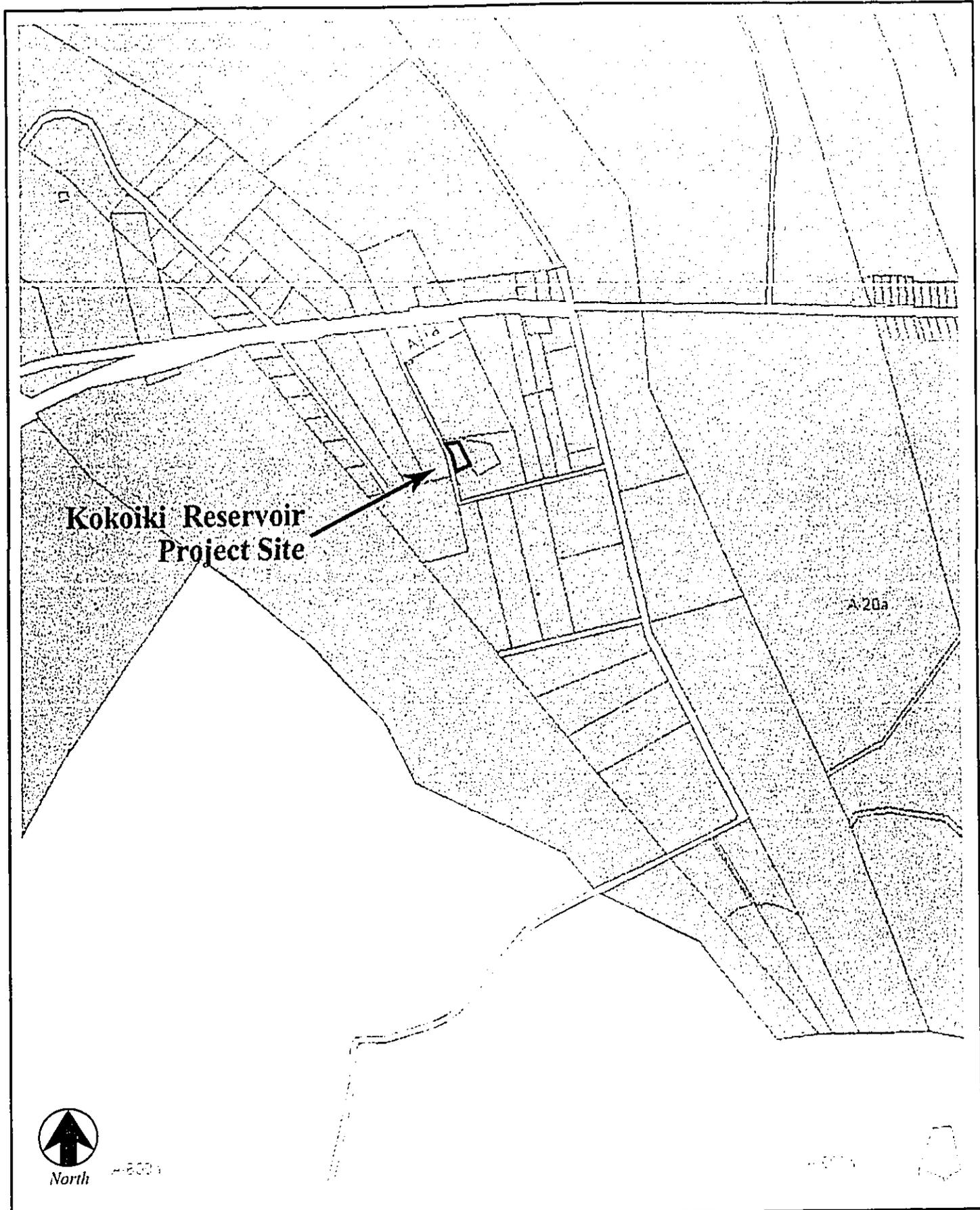
**COUNTY GENERAL PLAN  
LAND USE PATTERN ALLOCATION GUIDE MAP**

Kokoiki Reservoir  
Department of Water Supply, County of Hawaii

**Figure 1.3**

Source:  
County of Hawaii, Planning  
Department





**COUNTY ZONING DISTRICT BOUNDARY MAP**

*Kokoiki Reservoir  
Department of Water Supply, County of Hawaii*

**Figure 1.4**

Source:  
County of Hawaii, Planning  
Department



#### 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. A review of the County of Hawaii's Special Management Area map for the Hawi area determined that the SMA boundary generally follows the shape of the shoreline about 1,500 feet inland.

The project site is situated approximately two (2) miles away from the shoreline and 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.

## CHAPTER 2 PROJECT DESCRIPTION

### 2.1 PROJECT LOCATION AND VICINITY

The Kokoiki Reservoir project is located at the northern tip of the Island of Hawaii in the Hawi community of the North Kohala District. The reservoir project site is situated about one mile west of the urbanized portion of the Hawi community, and is approximately a 1-hour drive from downtown Kailua-Kona. Figure 1.1 previously showed the project site's location and vicinity in relation to the Hawi community.

The North Kohala District is a predominantly rural area that encompasses most of the land area at the northern tip of the Island of Hawaii. This district can be characterized as having a few smaller urbanized communities separated by large tracts of open and agricultural land areas. Some of the larger rural communities established within this district are the Hawi, Kapa'au, Halawa, Halaula, and Niuli'i communities.

Akoni Pule Highway is the only major public roadway facility in the immediate vicinity of the Kokoiki Reservoir project area. This two-lane highway was previously known as Mahukona-Niulii Road. This roadway is a State-operated highway that serves as the main roadway providing vehicular access from Kawaihae to its end at Pololu Valley Lookout.

The proposed Kokoiki Reservoir site is located approximately 1,000-feet above (mauka of) Akoni Pule Highway in an area identified as the Puuepa Kokoiki Homesteads. This area is approximately one-mile west of the more urbanized area of the Hawi community. The site is accessible via Ilikini Road, which is a predominantly unpaved roadway approximately 10 to 12-feet wide. The site is also accessible via Lincoln Avenue and Park Road. Lincoln Avenue is a paved, unstriped roadway approximately 10 to 12-feet wide located approximately .3 mile east of and parallel to Ilikini Road. Similarly, Park Road is a paved, unstriped roadway, approximately 10 to 12-feet wide that runs parallel to Akoni Pule Highway and connects Lincoln Avenue to Ilikini Road. Ilikini Road, Lincoln Avenue and Park Road are all County roadways.

#### Existing Surrounding Uses

Existing land uses surrounding this reservoir project site consist of small-scale agricultural activities such as livestock grazing pastures, macadamia nut and citrus orchards, and truck farms. The site is located west of the more urbanized area of Hawi and, thus, there are no commercial establishments or concentrated residential uses in the project area. Residences in the Puuepa Kokoiki Homesteads area are scattered amongst the surrounding properties located adjacent to Ilikini Road, Park Road, Lincoln Avenue, and Akoni Pule Highway, with the closest house

approximately 400 feet away from the project site. Photos of the surrounding area are provided in Appendix A.

Vehicular traffic on Ilikini Road, Park Road and Lincoln Avenue is sparse due to the low number of residences in the area. During a recent visit to the project site, in the course of a 45-minute period, no vehicles were observed traveling along either Ilikini Road or Park Road and only three passenger vehicles were observed using Lincoln Avenue. Photos of these roadways appear in Appendix A.

## **2.2 DESCRIPTION OF PROJECT**

The County DWS is proposing to acquire approximately 0.5 acre of State-owned land and to subsequently construct a new 0.1 MG concrete water reservoir and appurtenances.

### **Need for Project**

The purpose of this project is to minimize water pressure limitations currently experienced by some DWS customers in the Hawi community. This new concrete water tank and appurtenances would augment the existing DWS waterline to ensure adequate water pressure for emergency purposes in this area of the Hawi community.

### **Existing North Kohala Water Systems**

The DWS North Kohala water systems obtain water from either wells or high-level tunnels in the Kohala Mountains. The North Kohala water systems include Kaauhuhu, Hawi-Kokoiki-Kynnersley-Kapaau, Halaula and Makapala-Keokea. Of these four DWS municipal water systems, the Hawi-Kokoiki-Kynnersley-Kapaau system serves the urbanized area along Akoni Pule Highway between Kapaau and lower Kokoiki, and down to the Loran Station at Upolu Point. The principal source of water for this system is the County's Hawi Well that was constructed in 1975. This well source replaced a former system of surface ditch and water tunnel sources associated with the former plantation company.

The Hawi-Kokoiki-Kynnersley-Kapaau system that serves the project area consists of water lines routed within the rights-of-way of Akoni Pule Highway and other secondary roads. Along the highway, the DWS has an 8-inch waterline running from its intersection with Hawi Road westward to Lincoln Avenue, where it changes to a 6-inch line as it continues westward, until changing again to a 4-inch line at the Puakea Bay Ranch Subdivision. In the immediate area of the proposed Kokoiki Reservoir site, an 8-inch line runs along Lincoln Road, and connects to a 6-inch line in Park Road and Ilikini Road, that in turn connects with the 6-inch line in the Akoni Pule Highway right-of-way. Figure 2.1 shows the portion of this water system in the area of the proposed project.

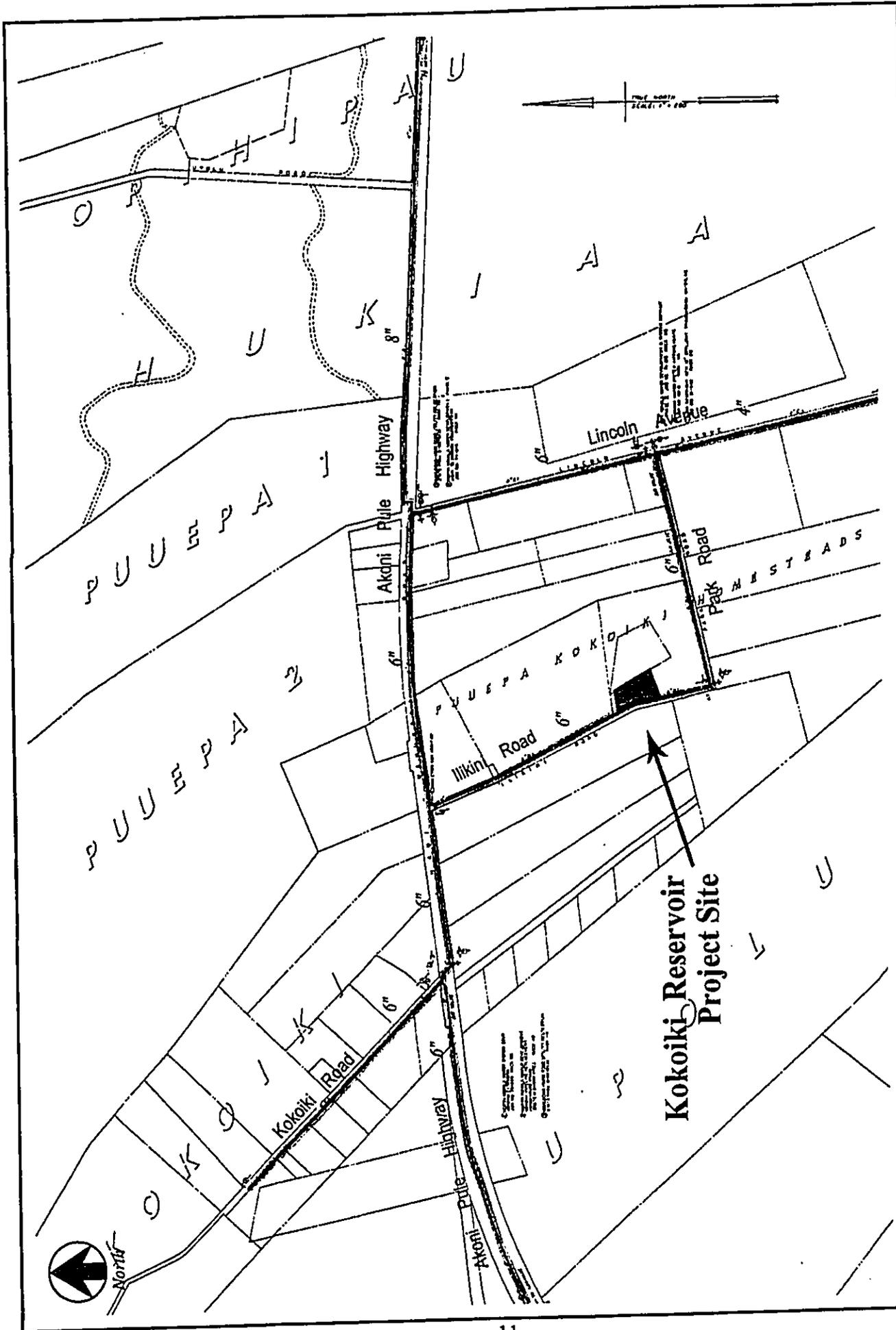


Figure 2.1



Source: County of Hawaii, Department of Water Supply  
Plat 15

**EXISTING WATER SYSTEM MAP**

Kokoiki Reservoir  
Department of Water Supply, County of Hawaii

### **Property Information and Site Conditions**

The proposed Kokoiki Reservoir is to be developed on a 0.5-acre portion of a 4.934-acre parcel of land currently owned by the State of Hawaii and identified as Tax Map Key (TMK) 5-5-004: 051. Figure 2.2 shows the project site in relation this parcel of land.

Jurisdiction for this parcel presently falls under the State Department of Land and Natural Resources (DLNR) as do most State-owned lands. Currently, the State DLNR leases this property to a private party for agricultural uses. DWS has secured the permission of this lessee to withdraw the 0.5-acre portion of the property from the State lease in preparation for the acquisition of the project site. Approximately 75 percent of the property is planted with a variety of citrus and noni trees, but no cultivation is occurring in the area of the proposed reservoir. In the area of the proposed reservoir site, the topography slopes down from Ilikini Road and in a mauka to makai direction. There is a rock outcropping in the approximate project area adjacent to Ilikini Road and vegetation in the area is comprised of a variety of grasses. The entire property is enclosed within a barbed-wire fence.

Located within the center of the State-owned parcel is a 1.467-acre parcel identified as TMK 5-5-004:009 and further identified as Land Court Award 8731. This parcel is accessed via a 15-foot wide access drive located at the northwest corner of the subject property at Ilikini Road. The access drive is gated and the property is fenced off from the subject property. This parcel is vacant of any improvements and overgrown with haole koa.

### **Proposed Improvements**

The County DWS is proposing to construct a new concrete water tank with a capacity of 100,000 gallons plus appurtenant structures, including gravity-fed influent and effluent lines to connect to its existing water system. The new concrete water tank would have a height of approximately 18-feet, 6-inches, and would have a diameter of about 39 feet. Other water quality appurtenances on the site are likely to include a chlorinator station and control valves. A paved, 15-foot wide, access road would also be provided around this tank to allow for access and maintenance activities conducted by the County DWS staff. The entire property would be enclosed within a 6-foot tall chain link fence for security. The driveway entrance would be gated with a chain link fence. Figure 2.3 shows a preliminary Site Plan for this project.

Utility line improvements would consist of connecting existing water supply lines to the new concrete tank. As shown on the preliminary Site Plan, a new 6-inch water line would connect to the existing 6-inch water line in Ilikini Road to supply the tank while a chlorine line would connect to the water supply line from the chlorinator station. Similarly, a new 6-inch water outlet line would connect the tank to the existing 6-inch line in Ilikini Road. If deemed necessary during the design phase of this project, a new effluent line that would connect to the existing 6-inch line in the Akoni Pule Highway right-of-way may replace the existing 6-inch line in Ilikini Road.

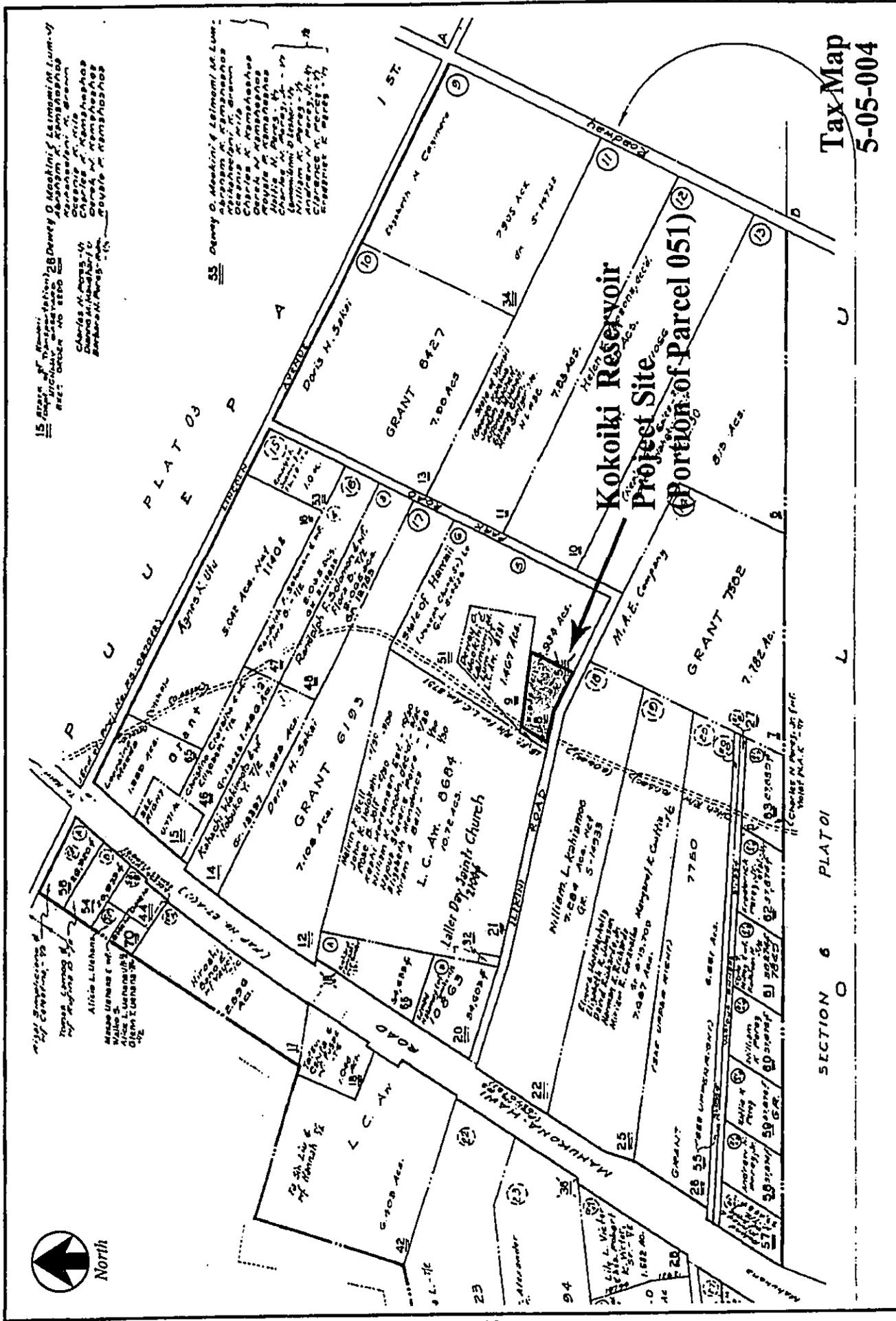
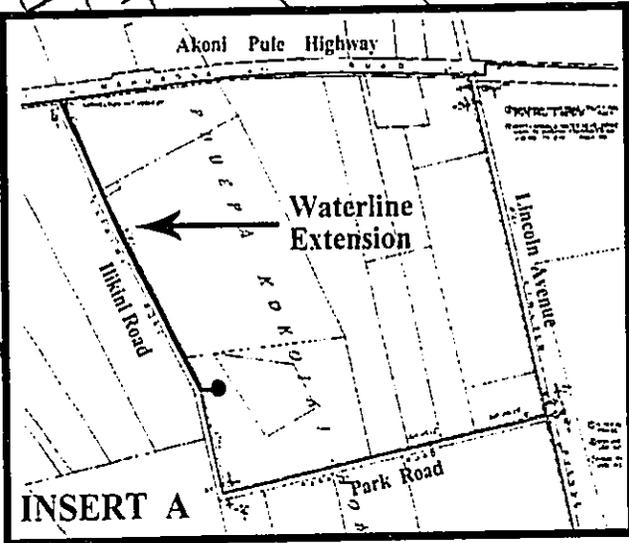
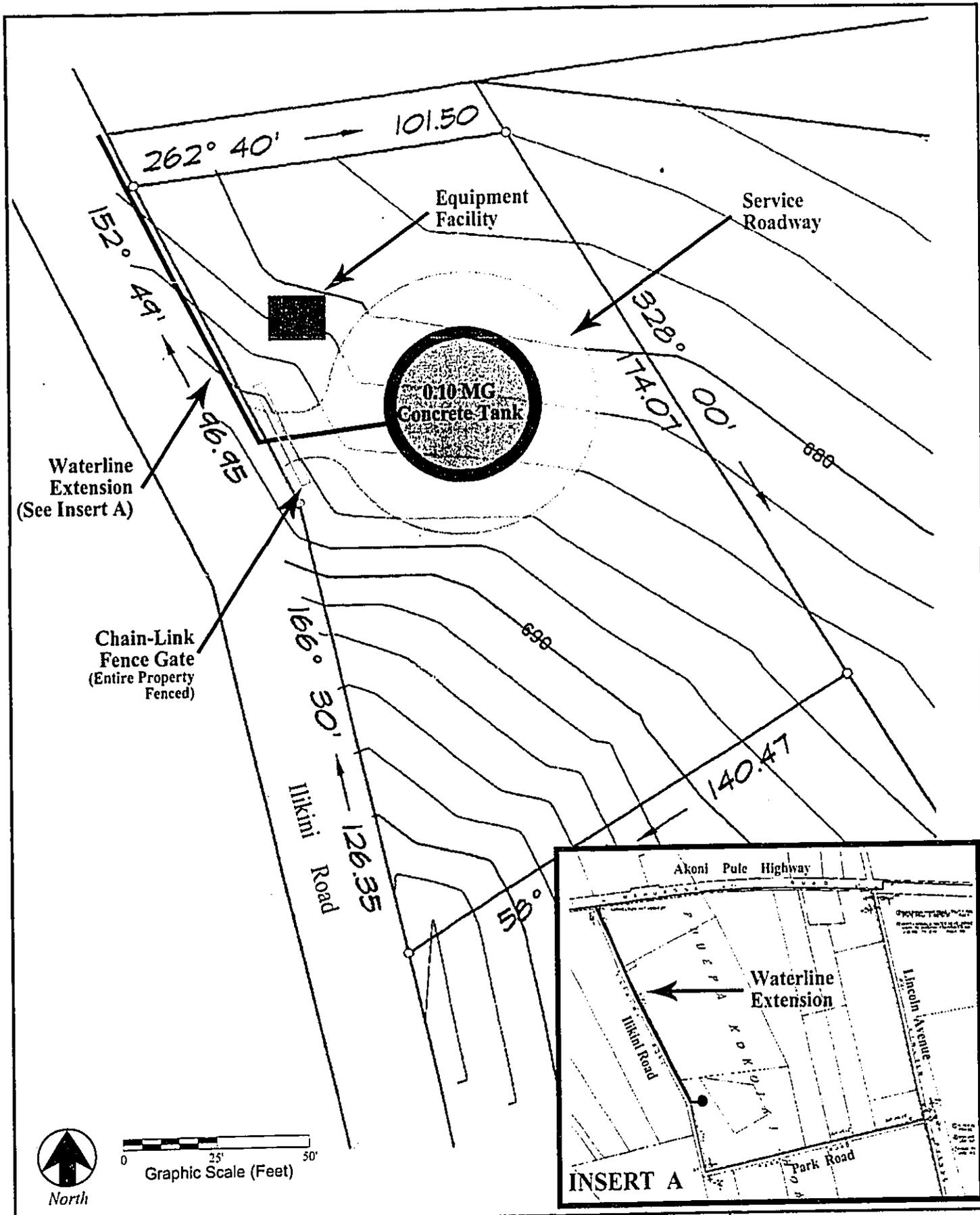


Figure 2.2

TAX MAP OF PROJECT SITE

Kokoiki Reservoir  
Department of Water Supply, County of Hawaii



**KOKOIKI RESERVOIR PRELIMINARY  
PROJECT SITE PLAN**

*Kokoiki Reservoir  
Department of Water Supply, County of Hawaii*

**Figure 2.3**

*Source:  
Department of Water Supply,  
County of Hawaii*



### Development Schedule and Construction Cost Estimates

Upon completion of the environmental review process, the DWS proposes to acquire this 0.5-acre portion of this State-owned parcel via Executive Order. It is estimated that this acquisition would take place between January and April of 2004. Design work for this reservoir project would then be completed and submitted to pertinent agencies for review and approval. The estimated budget for the construction of this project is \$300,000.

It is further estimated that the process for completing the construction plan, obtaining necessary ministerial permits and constructing the improvements will take approximately 15 to 19 months following the County's acquisition of the property. Thus, completion could occur by the middle or end of the year 2005.

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

#### State of Hawaii Permits

1. Construction Noise Permit – Only if required

#### 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 reservoir improvement were considered and evaluated by the County DWS. However, these alternatives were eliminated from further consideration because they did not adequately address the need to provide improved water pressure to those areas of the Hawi community currently experiencing water pressure limitations.

#### No Action Alternative

The No Action Alternative would preclude the development of the Kokoiki reservoir and appurtenances. As a result, the portion of the Hawi community currently affected by water pressure limitations in this area would continue to experience water pressure limitations. This situation could pose serious risks in the event of a fire where adequate water pressure is essential to preventing property damage and loss of life. Consequently, this alternative was eliminated from further consideration.

**Delayed Action Alternative**

The Delayed Action Alternative would involve postponing the development of the Kokoiki Reservoir to some date in the future. As a result, some areas of the Hawi community served by the existing water system would continue to experience water pressure limitations. This alternative was also eliminated from further consideration because it would subject the water service to some Hawi residents to the same concerns expressed under the No Action Alternative. Delaying development of the reservoir into the future could increase the risk of property damage and loss of life in the event of a fire in this area because the limited water pressure situation would remain.

## 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 a 0.1 MG concrete water tank and accessory facilities. Mitigative measures, if necessary, are also 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 Kokoiki project site in the North Kohala District of the Island of Hawaii is generally cooler and wetter than other areas of West Hawaii. Average monthly temperatures recorded at Hawi in 2000 ranged from 69 and 74 degrees Fahrenheit with a recorded low of 55 degrees and high of 82 degrees. The annual rainfall recorded at Hawi in 2000 was 42.4 inches, about 9 inches less than the annual average of about 51 inches (NOAA 2000).

The prevailing trade winds in this area of North Kohala are from an east to west direction and are usually the dominant wind pattern 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, 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 northwestern end of the Kohala Mountain Range that forms the northern end of the island. The Kohala Mountain consists of an oval shield volcano built around two rift zones. The northern and western sides of this mountain range have experienced less erosion, essentially maintaining the original land surface created by the volcano with the deepest stream cut gullies about 100 feet deep. In contrast, the northeastern

side of this mountain range has been cut away and the shield has a series of great sea cliffs over 1,300 feet high and canyons up to 2,500 feet deep ((Macdonald, Abbott, and Peterson 1983).

The topographic features of this project site are generally typical of other undeveloped pasture and open space agricultural land areas in the surrounding vicinity. The property has a gentle slope of less than 10 percent from the southwestern end of the parcel towards the northeastern end as shown on Figure 3.1. The site is located at elevations ranging from a high of 704 feet mean sea level (MSL) in the southwestern corner down to 676 feet MSL in the northeastern corner.

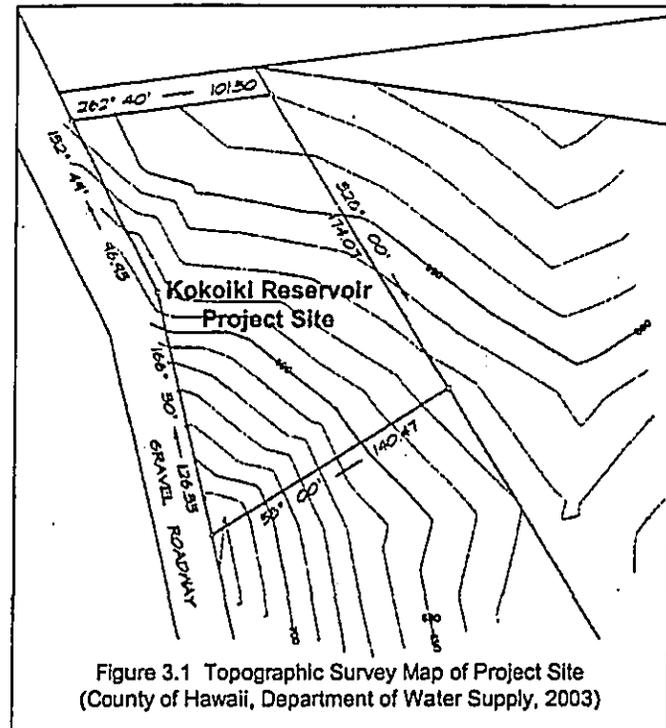


Figure 3.1 Topographic Survey Map of Project Site  
(County of Hawaii, Department of Water Supply, 2003)

### 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 Kohala Series. Soils present on the project site consist entirely of Kohala silty clay, 3 to 12 percent slopes (KhC).

The Kohala series of soils consist of well-drained silty clays that formed in material from basic igneous rock influenced by volcanic ash. These soils are present in nearly level to steep areas and occupy the coastal areas of the Kohala Mountains at an elevation ranging from near sea level to 1,500 feet. Kohala soils are described as being used mostly for sugarcane while small areas are used for pasture, orchards, and truck crops (SCS 1973).

Representative profiles of this soil type show a surface layer of very dark grayish-brown and dark brown silty clay about 14 inches thick. The subsoil is about 25 inches thick and consists of dark-brown to dark yellowish-brown silty clay loam and silty clay. The substratum is weathered basic igneous rock, and its profile is slightly acid in the surface layer, slightly acid and neutral in the subsoil, and neutral in the substratum.

The Kohala silty clay (KhC) soil type is described as having slow to medium runoff, and the erosion hazard is slight to moderate. This soil is described as being used mostly for irrigated sugarcane. Small areas are used for pasture, orchards, and truck crops (SCS 1973). Figure 3.2 shows these soil types in relation to the project site.

#### **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." Figure 3.3 shows these master productivity ratings for land areas in relation to the subject property. As shown on this figure, the soils within the subject property are given a productivity rating of C115. These ratings are described below.

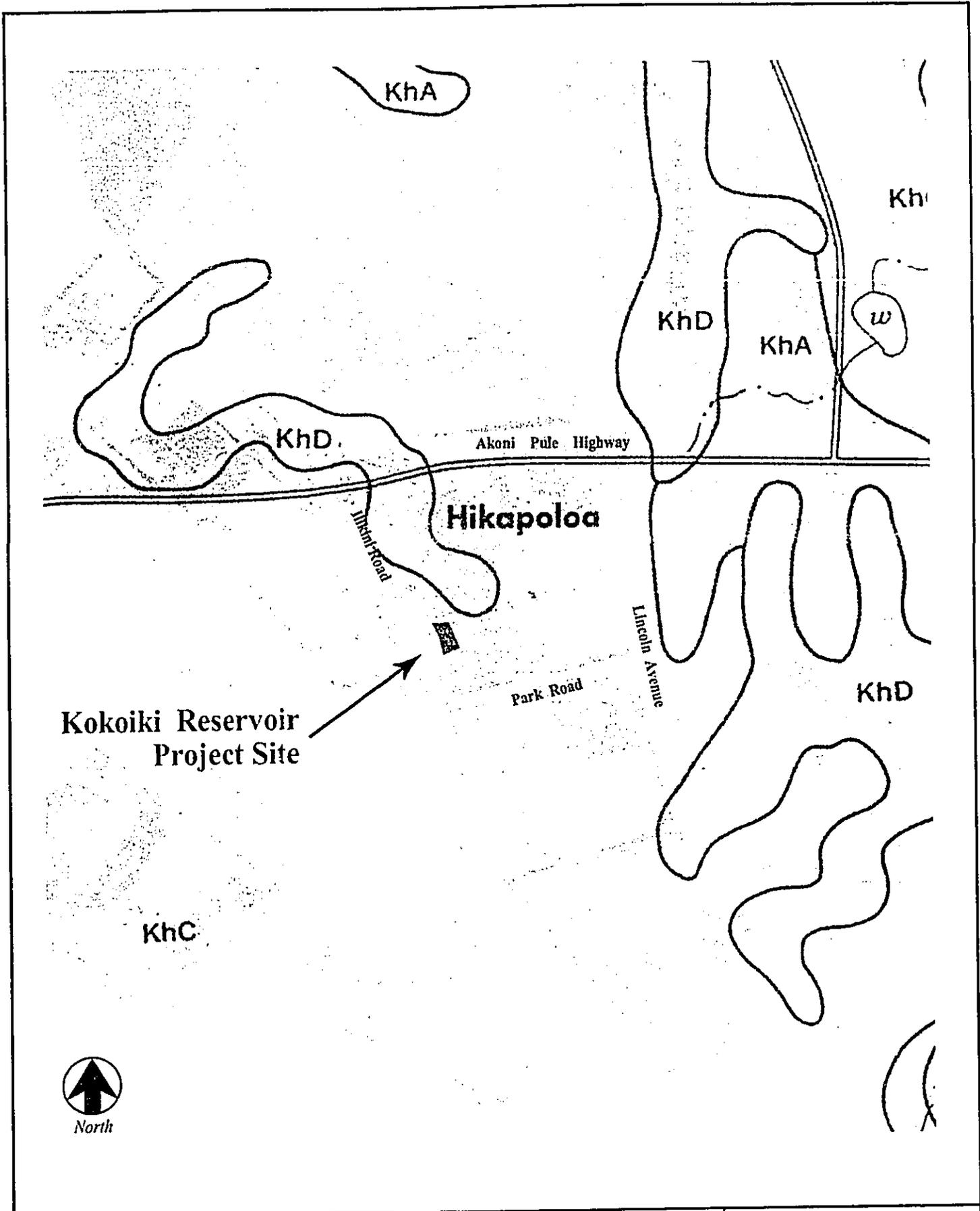
1. C115 - Kohala soil series having deep depth, moderately fine texture, dark brown color, volcanic ash as the parent material, non-stony character, is well-drained, and is moderately suited for machine tillability. Another comment under this classification is that winds may be a problem.

#### **3.1.3 Effects from Construction Activity**

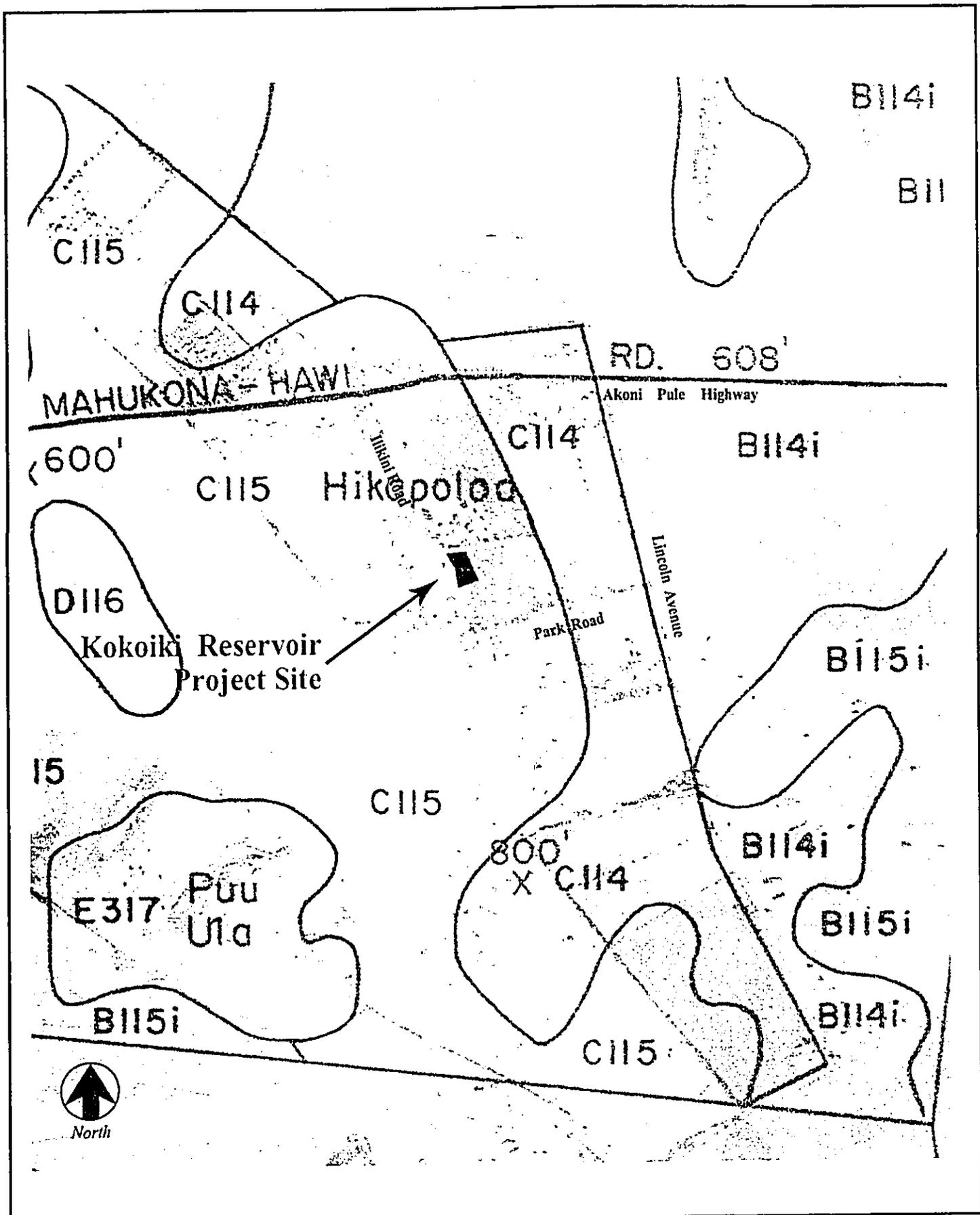
Construction of the new concrete water tank and accessory utilities are not expected to have a significant impact on the property's present topography or the physical character of the immediate area. As previously discussed, the topography of this project site is generally level with a slight slope of less than 10 percent, and does not include any physical conditions 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 around the water tank to allow County DWS 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 this reservoir tank to the County's existing system would be situated within the unpaved Ilikini Road. Installation of this underground effluent line would thus have minimal effect on the existing topography or condition of this roadway. A Grading Plan will be developed during the project's design, and submitted to pertinent County agencies for review and approval.

Construction of the new concrete water tank and accessories 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).



<p align="center"><b>SOIL CONSERVATION SERVICE SOILS MAP</b></p> <p><i>Kokoiki Reservoir Department of Water Supply, County of Hawaii</i></p>	<p align="center"><b>Figure 3.2</b></p> <p><small>Source: USDA Soil Conservation Service (1973)</small></p> 
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LAND STUDY BUREAU SOILS MAP

Figure 3.3

Kokoiki Reservoir  
 Department of Water Supply, County of Hawaii

Source:  
 Land Study Bureau (1965)



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 might include fugitive dust emissions, construction noise from equipment, and traffic disturbances from construction vehicles occurring along Ilikini Road and Akoni Pule Highway. However, since vehicular traffic along Ilikini Road and traffic volumes along Akoni Pule Highway are generally low, there should be minimal disturbances to traffic flow.

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, pastures and agricultural fields planted with citrus and noni trees. The nearest home is approximately 400 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. Such measures would be determined during the project's design and preparation of construction plans. Measures being considered include: the use of wind breaks or watering to reduce dust, planting slopes immediately after grading work has been completed, and other measures developed as part of the Grading Plan and best management practices (BMPs). The measures actually developed would be designed to make construction activities comply with pertinent Administrative Rules of the State Department of Health (DOH) such as Title 11: Chapter 46 (Community Noise Control), and Chapter 60 (Air Pollution Control).

### **3.2 NATURAL HAZARDS**

This section addresses those natural and urban-related hazards applicable to the project site. Of the potential natural hazards, earthquakes and lava flows, hurricane, and flooding hazards are addressed. 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 the earth's surface that results in a shifting of segments of the volcano (Macdonald, et. al. 1983). Although difficult to predict, an earthquake of sufficient magnitude causing structural or other damage to the Kokoiki 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 rated at Zone 4 (USGS 1997).

The Island of Hawaii experiences thousands of earthquakes each year, however, most are so small that they are only 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 close to the surface. A few of the island's earthquakes are directly related to volcanism, those that originate in the zones of structural weakness at the base of the volcanoes or deep within the earth beneath the island (USGS 1997).

Since 1868, the larger, damaging earthquakes of magnitude 6 or greater have generally occurred in the southern half of the island, primarily on the eastern end. No large earthquake of this size or greater has occurred in the North Kohala District. Plots of recent earthquakes of magnitude 4.0 and greater from 1962 to 1985 also indicate that few have occurred in the North Kohala District, especially near the project area (see Figure 3.4). The great majority of earthquakes are centered on the southeastern end of the island (USGS 1997).



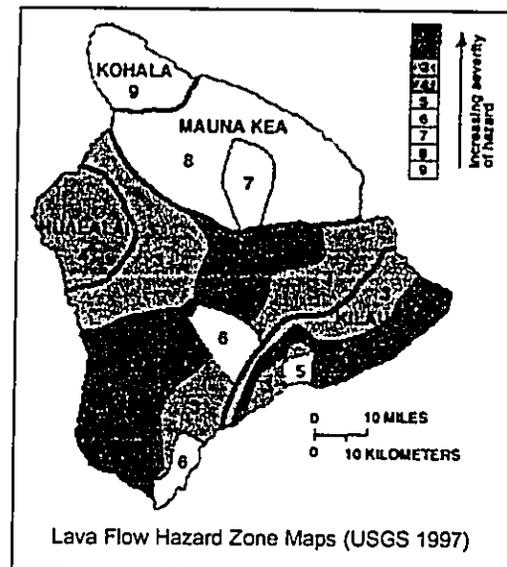
### Potential Impacts from Future Earthquakes

Because of the possibility of future earthquakes occurring on the Island of Hawaii, potential damage to building structures, infrastructure, and other facilities may result from an earthquake of sufficient magnitude. However, by following appropriate DWS building design and construction standards in compliance with County building codes and standards for this concrete water tank and accessories, damage to structures will be minimized. Thus, the risk of potential damage to the facilities planned on the project site will not exceed other existing land uses in the North Kohala region.

### Lava Flow Hazards

In 1987, the U.S. Geological Survey revised the volcanic hazard zone maps developed for the Island of Hawaii. The current map divides the island into zones ranked from 1 through 9 based on the probability of coverage by lava flows. Hazard zones from lava flows are determined mainly on the location and frequency of both historic and prehistoric eruptions. Additionally, the larger topographic features of the volcanoes that will affect the distribution of lava flows are also taken into account (USGS 1997).

Based upon this map, the Kohala district area was given a hazard zone rating of 9, the least severe rating, 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 no eruption occurring in the past 60,000 years (USGS 1997). Consequently, the potential for damages to the Kokoiki Reservoir and accessories from lava flow hazard is minimal.



### **3.2.2 Hurricane Hazards**

The three major hazardous elements of a hurricane 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 since the site is located over 2 miles inland from the shoreline and at an altitude of over 670 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 hurricanes are unpredictable, in comparison to Kauai, the Island of Hawaii has historically received less threat and damage from these severe storms. However, as with other existing and future developments in the North Kohala District and throughout 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 concrete water tank from high winds should be minimal due to the concrete design and type of water tank. While accessory facilities such as a water meter may sustain some damage, this probability should similarly be quite low since these facilities would be made of metal. 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 Kokoiki and Hawi communities.

### 3.2.3 Flooding Hazards

The Flood Insurance Rate Map (FIRM), Community Panel Number 155166 0100 C, for the project area was reviewed to identify floodways that may affect the project. This FIRM showed that the Kokoiki project site and surrounding area were located in Zone X, an area determined to be outside the 500-year flood plain (FEMA 1988). Based upon field inspections of the property and surrounding area, there were no streams or major drainage ways running through the site or immediate area. Runoff in the area appears to sheet flow across the entire area towards the highway and shoreline makai (northwest) of the property.

Figure 3.3 shows the subject property and project site in relation to this Flood Insurance Rate Map. Consequently, 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 are discussed 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 Kokoiki reservoir project site. Research of the State Historic Preservation Division's (SHPD) web site determined that there are no prior available archaeological studies conducted for the project site or in the immediate vicinity (SHPD June 2003). Furthermore, according to the national and state Registers of Historic Places, no historic sites are located on the project site or in the immediate vicinity (SHPD Jan 2003).

The Kokoiki Reservoir project site consists of undeveloped agricultural and pastureland as shown in the site photos in Appendix A. Based upon a field visit, there are no structures or other noticeable features on the property that may be associated with potential historic sites such as a heiau or historic plantation features. The project site and surrounding area appears to have been used for agricultural activities or pastureland. Existing roadways to be used for the effluent line extension from the new reservoir connecting to the existing water system similarly do not indicate the presence of any historic sites that may be affected.

Therefore, the reservoir project should not have a significant impact on historic sites since there do not appear to be any structures or sites present. The project site also does not consist of any sandy soils that may be associated with subsurface human remains. Therefore, the likelihood of encountering subsurface historic sites or human remains should be relatively low. Nevertheless, in the event subsurface human remains 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 or other traditional cultural practices occurring in the surrounding area. There are no known traditional cultural practices occurring within the project site itself since this property consists of undeveloped pastureland that may have been used for historic plantation agricultural activities. Adjacent areas surrounding this project site are similarly used for pasture or agricultural activities.

The project would also not restrict access to surrounding areas that may be potentially used for traditional native Hawaiian cultural practices since the entire reservoir site with the improvements would only be less than one acre in size. Thus, this project would not restrict access to other areas but to only this site for the Kokoiki Reservoir. This project would not prevent access to shoreline areas or surrounding mauka areas that may be used for traditional gathering or other cultural practices. Short-term 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 Kokoiki Reservoir project site is located at about the 700-foot elevation placing this project area within the dry land forest and shrub vegetation zone. This vegetation zone typically includes areas that have been used for cattle grazing and sugar and pineapple cultivation. Dry land forests typically range from the 650 to 1,000-foot elevation up to the 3,000-foot elevation (Sohmer and Gustafson 1987).

Botanical resources present on the project site and in the immediate surrounding area appear typical of the dry land forest and shrub vegetation zone. As shown in Appendix A, photographs taken on a recent site visit of the area indicate that the project site consists predominantly of a vacant pastureland and a small grove of citrus and noni trees. The surrounding areas in the immediate vicinity similarly consist of pastures and vacant land overgrown with molasses grass and haole koa. Ground vegetation on the property consists of a variety of grasses.

Development of the property for the new concrete water tank and accessory facilities is not expected to have a significant impact on botanical resources. No threatened or endangered species or other species of concern are known to be or are likely to be present on the project site due to the historic use of the area for large scale sugarcane cultivation.

### 3.5 AVIFAUNAL AND FERAL MAMMALS

Avian species listed as endangered, threatened, proposed or candidate species by the U.S. Fish and Wildlife Service or by the State of Hawaii under its endangered species program are not known to be present on the project site or in the immediate vicinity. Avian species present are likely to consist of introduced species such as various types of pigeons and doves, babblers, silvereyes, saltators, and cardinals. Vegetation on the project site reflects decades of disturbance as part of large-scale agricultural cultivation.

Mammals present on the project site are likely to consist of feral mammals typical of surrounding agricultural lands. Although no mammals were observed at the project site during a recent visit, numerous domesticated cows and horses were observed on surrounding pasturelands. 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 observed, 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*) are present in the surrounding agricultural land (van Viper 1982).

There are no federally listed endangered, threatened, proposed or candidate avian or mammalian species likely to be present on the project site or in the immediate vicinity. The project site consists of vacant pastureland and a small grove of citrus and noni trees that do not

provide important nesting or foraging habitat for endangered or threatened avian species such as those found in wetlands or forest reserves. Surrounding areas in the immediate vicinity similarly consist of pastures and vacant land overgrown with molasses grass and haole koa that would be similarly unsuited to nesting and foraging. Existing mammalian species present are introduced species, all of which are predators to avian populations. Consequently, construction of the reservoir project 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 Kokoiki Reservoir project site concern short-term construction related emissions such as fugitive dust. Vehicular emissions (carbon monoxide) from traffic occurring along Ilikini Road and Akoni Pule Highway are not considered to be a factor for 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	n/a	70
Carbon Monoxide	8-Hour	10	n/a	5
	1-Hour	40	n/a	10
Ozone	1-Hour	235	n/a	100
Hydrogen Sulfide	1-Hour	n/a	n/a	35
Lead	Quarter	1.5	n/a	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 reservoir project would be limited to short-term construction activities since, with the exception of periodic maintenance activities conducted by County DWS staff, there would essentially be no activities occurring on the property once construction is completed. 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 concrete water tank.

Grubbing and grading activities would be limited due to the size and nature of this type of project as well as the property's relatively gentle sloping topography. Grading activities should be limited primarily to creating a pad for the concrete water tank and an access driveway around it. These efforts would therefore minimize the amount of excavation required and limit fugitive dust emissions. Impacts of fugitive dust emissions on residences in the area 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 could be prepared and implemented to have the contractor comply with these regulations if necessary. Establishing a frequent watering program, and implementing additional measures to address grubbing and grading activities can usually accomplish adequate fugitive dust control. 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 reservoir project would be mainly associated with short-term construction activities. Due to the nature of this water reservoir project, no long-term noise impacts from project-related vehicular traffic or noise impacts from operation of this water reservoir are anticipated.

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

Noise from construction activities is 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, under this Class, the maximum permissible noise level 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.

The development of the 0.1 MG concrete water tank and accessories 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. 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 at property line limits, a noise permit would be obtained from the DOH by the contractor. This permit includes restrictions to help mitigate potential noise impacts resulting from short-term construction activities. The contractor would follow such restrictions. 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 landforms of significant or important visual character existing on the project site. As discussed in Chapter 2 and shown in the site photographs in Appendix A, the property consists of vacant pastureland and a grove of citrus and noni trees. There are also no public scenic views or viewing points present on the project site or in the immediate vicinity since the State-owned property is leased to a private party for agricultural activities and the entire parcel is gated and fenced. Although the ocean is partially visible from the project site, the ironwood trees and haole koa present on the parcel located immediately to the north currently obscure any significant coastal views that otherwise might occur.

The proposed reservoir is not expected to have a significant impact on important scenic views or negatively impact visual resources. The Natural Beauty section of the *Hawaii County General Plan* (1989) identifies two examples of natural beauty in the area of the proposed reservoir. One is Upolu Point (TMK: 5-5-006:007), which is located more than two miles makai of the project site. Due to its distance from the project site and the heavy vegetation surrounding the project site, Upolu Point cannot be viewed from the project site. Likewise, the project site cannot be viewed from Upolu Point. The other example of natural beauty cited in the *General Plan* is the coastline view plane from Akoni Pule Highway. As the project site is located approximately 1,000 feet mauka of Akoni Pule Highway, it has no impact on coastline views. Furthermore, the proposed reservoir will not be visible from Akoni Pule Highway due to the site's topography as well as heavy vegetation along the highway and on properties surrounding the site. This is demonstrated by photographs included in Appendix A taken from the site looking toward Akoni Pule Highway and at Akoni Pule Highway looking towards the project site.

As a result, construction of the new concrete water tank is not expected to have a significant impact on important scenic views or negatively impact visual resources. Furthermore, due to the water tank being located in the northwest corner of the property where the elevation is at its lowest point, the visual impact of the new concrete water tank from surrounding properties should be minimal. Upon acquisition and subdivision of the .5-acre parcel from the larger State-owned parcel, the entire project site will be owned by the County DWS and gated and fenced to prevent access by the general public for security reasons. In order to minimize the visual impact of the reservoir on surrounding properties, the tank will be constructed and painted to blend with its surroundings to the greatest extent practicable. Lastly, landscaping will be employed to minimize visual impacts of the tank, using Native Hawaiian plants to the extent practicable.

### 3.9 HYDROGEOLOGICAL RESOURCES

Under the State's Water Resource Protection Plan, aquifers of the Island of Hawaii have been classified according to a coding system that identifies and describes these aquifers. This system is comprised of Aquifer Sectors and Aquifer Systems that are located within these sectors.

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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 Kokoiki Reservoir project is located within the Kohala Aquifer Section (Sector 801) that includes most of North Kohala, generally from Kawaihae Bay north and east to Waipio Bay. Within this Kohala Aquifer Section, there are three Aquifer systems that are identified as the Mahukona, Hawi, and Waimanu Systems. The reservoir project site is situated within the Hawi Aquifer System (System 80101) (CWRM 1989).

It has been determined that the groundwater for this Kohala Aquifer is comprised of different types of resources. Brackish, basal water is generally located within the coastal areas from Kawaihae Bay to Upolu Point. The coastal areas from Hawi to Honokaa were identified as having basal water floating on salt water. Water confined dikes were identified in areas further inland. Based upon this information and the associated map, the project site is situated within this area of basal water floating on salt water (CWRM 1989).

The County's DWS has four municipal water systems within this Hawi Aquifer System. The Hawi-Kokoiki-Kynnersly-Kapaau system serves the urbanized area along Akoni Pule Highway between Kapaau and lower Kokoiki, and down to the Loran Station at Upolu. The principal source of water for this system is the County's Hawi Well that was constructed in 1975. This well source replaced a former system of surface ditch and water tunnel sources associated with the former plantation company.

#### Probable Project Impacts

In 1989, this municipal system had an estimated draw of 0.237 million gallons per day (mgd). The estimated pump capacity for this system was 0.576 mgd. Therefore, there was sufficient capacity to serve the community at that time. Since then, there has been little change to the overall Hawi and surrounding community in terms of population and growth. Census data in 1990 reported a resident population of 924 persons for the Hawi CDP that has increased to only 938 persons in the 2000 Census data. Similarly, the Kapaau CDP recorded 1,083 persons in 1990 and 1,159 in the recent 2000 Census data.

Therefore, this water system should not be negatively affected by the Kokoiki Reservoir project since the municipal system's source should continue to have adequate excess capacity. The reservoir project itself would not increase existing demand upon this water source since it would only create storage for providing more efficient water service and pressure to the community it serves. This project should not have a significant impact on the DWS's water system and aquifer system present in the area.

Construction of the new concrete water tank along with accessory facilities is 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. As a result, the project should not adversely impact the underlying aquifer system and contaminate water sources.

### **3.10 STREAMS AND AQUATIC RESOURCES**

Based upon the *Hawaii Stream Assessment* report, there are no perennial streams located in the immediate vicinity of the Kokoiki project area (HCPSU 1990). A field inspection of the site also found no major streams or drainage ways identified 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 reservoir project is not expected to have an adverse effect on streams or important aquatic resources since none are present on the site or immediate vicinity. The improvements proposed would be limited to the project site and roadway for the underground effluent line connection. 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. However, the additional increase in runoff due to the creation of impervious surfaces would be small and should not adversely affect surrounding properties.

## CHAPTER 4 ECONOMIC AND SOCIAL FACTORS

### 4.1 ECONOMIC AND FISCAL FACTORS

Construction of the Kokoiki Reservoir project should have a small positive economic impact mainly associated with the creation of short-term construction related jobs.

#### Construction Related Jobs

As discussed in Chapter 2, the preliminary estimated construction cost for this project is \$300,000. Therefore, construction of this reservoir project would create several beneficial short-term construction related jobs over several months (estimated 1 to 1.5 years).

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. Based upon the construction budget, it is estimated that a few (3 to 5) new direct 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. Estimates indicate that about another 10 indirect and induced jobs could be generated by this project for a total employment impact in the range of 15 jobs over a 6-month construction period.

These newly created jobs would also generate additional personal income for construction workers on the order of about \$100,000. Personal income is defined as the wages paid to the direct construction workers or operational employees associated with a development. It is anticipated that residents of the Island of Hawaii employed within the construction industry would likely fill these construction jobs. Indirect and induced income would also be generated on the order of about \$86,000 from this project. Thus, this project is estimate to generate a total of about \$186,000 in total (direct and indirect) construction income.

#### 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 \$300,000 construction budget expended by the County for construction of the Kokoiki Reservoir project would therefore generate a relatively small increase in tax revenue to the State.

County revenues are primarily limited to tax revenues on privately owned property and improvements. This reservoir project is expected to have minimal impact on the current or future levels of tax revenues generated for the County. The County's acquisition of the property for the new reservoir tank and accessory facilities would occur via an Executive Order from the State that transfers ownership to the County. Since this property is already State-owned, the project will not reduce the amount of privately owned agricultural lands that are presently subject to County property taxes. This change would only involve about a one-half acre piece of property that will have minimal impact on the overall amount of property tax revenue.

According to available County 2003 property data, the entire approximately 5-acre property has a market land value of \$149,200 based upon the Agricultural property class. County tax due for this entire property is \$100 annually. Acquisition of a portion of this parcel from the State to allow development of the new reservoir project would thus reduce this property by about one-half acre and consequently reduce County revenues by a few dollars.

This reservoir project is not expected to generate any new in-migrant residents to the Island of Hawaii to fill short-term construction related jobs. 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 Kokoiki Reservoir site is situated within the Puuepa Kokoiki Homesteads land tract located about 1 mile outside (west of) the more established town of Hawi. This small homestead area consists of residential lots along the Akoni Pule Highway with a few more homes located mauka (southeast) of this highway. This Kokoiki subdivision is characteristic of the rural nature of North Kohala where strings of small subdivisions and communities are predominantly located along the main highway.

Hawi is the northernmost developed town on the Island of Hawaii, and is the largest community in the rural North Kohala district. Hawi was once a booming sugar town when the Kohala Sugar Company cultivated thousands of surrounding acres until the company shut down operations in the 1970's. Since then, this town has since transformed from a plantation economy to one that is now filled with art galleries, shops and a few restaurants. Tourism, diversified agriculture, construction, and local small businesses have replaced sugar as the bases of the economy.

Several historic buildings dating to the mid-1800's still stand today. Upolu Airport is an infrequently used small plane airport located 3 miles west of Hawi along the shoreline. This general aviation airport has a single runway (without taxiways) and two aircraft parking areas south of the runway.

**Population, Housing, and Economic Characteristics**

According to the recent 2000 Census data, the population for the Hawi census designated place (CDP) is 938 persons. There are 298 households and the median age of residents is 37.7 years. Based on this information, there has not been much growth or change to this town over the last 10 years when the 1990 census data reflected a total of 924 persons, 290 households, and median age of 32.4. Given the increased median age with minimal change to population, it appears to reflect a stable small town community having experienced little change except for the aging of long-time residents.

Table 4.1 provides more data on the demography of the Hawi CDP in relation to both the County and State. Ethnically, Hawaii County's population is mixed, consistent with the rest of the State. However, persons with Asian and Caucasian ancestry are especially numerous representing 27.1 percent and 21.2 percent of the population, respectively.

The housing stock for the Hawi CDP has a total of 298 units. Of this total, about 66 percent are owner-occupied while the remaining 34 percent are renter-occupied units. The average household size is 3.15 persons and the average family size is 3.63 persons. This information is also summarized on Table 4.1.

Description	Hawi CDP		Hawaii County		State of Hawaii	
	No.	%	No.	%	No.	%
Total Population	938		148,677		1,211,537	
Age:						
0 - 5 years	58	6.2%	9,130	6.1%	78,163	6.5%
5 - 19 years	232	24.7%	11,089	7.5%	249,088	20.6%
20 - 64 years	531	56.6%	6,003	4.0%	723,685	59.7%
65 + years	117	12.5%	10,923	7.3%	160,601	13.3%
Median Age	37.7 years		38.6 years		36.2 years	
Number of Households	298		52,985		403,240	
Owner-occupied units	197 (66%)		34,175 (64.5%)		227,888 (56.5%)	
Renter-occupied units	101 (34%)		18,810 (35.5%)		175,352 (43.5%)	
Average Family Size	3.63		3.24		3.42	
Average Household Size	3.15		2.75		2.92	

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

The 2000 Census data indicate that 713 persons (about 76%) of the population in Hawi are of working age (16 years and over) while 480 persons are in the labor force. A majority (54%) of those who are working are either in service occupations, management, professional, or related fields. The median household income is \$46,606.

**Probable Impacts on Social Character**

Development of the Kokoiki Reservoir is not expected to cause a significant impact to the existing resident population in the Hawi community or the North Kohala District. This project would essentially only involve constructing a new 0.1 MG concrete water tank and appurtenances. As a result, there would be no increase in housing units or resident population growth associated with this project.

The new concrete water tank would assist the County DWS in resolving water pressure limitations currently experienced by some residents in the Hawi community. While there are scattered home sites in the area of the proposed reservoir project, the concrete tank and accessory facilities would be appropriately designed to be compatible with the existing environment and therefore would not change or negatively alter the existing rural character of the Puuepa Kokoiki Homesteads area. Furthermore, this reservoir project would not cause a nuisance or hazard to this community. Consequently, this community and surrounding area would continue to retain *its rural character*.

## CHAPTER 5 INFRASTRUCTURE FACILITIES

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

### 5.1 WATER FACILITIES

The County DWS provides water service to the North Kohala District. The DWS's Hawi-Kokoiki-Kynnersly-Kapaau system serves the urbanized area along Akoni Pule Highway between Kapaau and lower Kokoiki, and down to the Loran Station at Upolu Point. This system serving the project area consists of water lines routed within the rights-of-way of Akoni Pule Highway and other secondary roads. Figure 2.1 previously showed the portion of this water system in the area of the proposed project.

Along Akoni Pule Highway, the DWS has an 8-inch waterline running from its intersection with Hawi Road westward to Lincoln Avenue, where it changes to a 6-inch water line as it continues traveling westward, until changing again to a 4-inch line at the Puakea Bay Ranch Subdivision. In the immediate area of the proposed Kokoiki Reservoir site, an 8-inch line runs along Lincoln Road, and connects to a 6-inch line in Park Road and Ilikini Road, which in turn connects with the 6-inch line in the Akoni Pule Highway right-of-way.

The proposed project is not expected to have an adverse impact on the County's existing water system that serves the Hawi community. Instead, the Kokoiki Reservoir is intended to improve the reliability of the existing system by addressing water pressure limitations currently experienced by some residents of the Hawi community.

### 5.2 WASTEWATER FACILITIES

There are no County wastewater collection and treatment systems in the North Kohala District. Domestic sewage in the district is disposed via individual wastewater systems.

The proposed Kokoiki Reservoir will not include wastewater facilities and therefore will not require the construction of an individual wastewater system to service the facility.

### 5.3 DRAINAGE FACILITIES

Surface runoff at the proposed reservoir site generally flows in a makai direction (southwest to northeast) toward the surrounding vacant pasturelands. As shown in the photographs in Appendix A, vegetation on this property consists of a variety of grasses that

should minimize erosion. A moderate amount of erosion may take place on the unpaved, dirt-packed, Ilikini Road during heavy rains in the area.

The construction of the new concrete water tank, service road and appurtenances would create impervious areas at the project site. However, surface runoff would continue to be directed in the makai direction toward the surrounding pasturelands that are thickly vegetated, thereby minimizing erosion.

As a result, there should not be a substantial increase in runoff occurring from the newly established project site. Therefore, the project should not have a significant adverse impact on drainage facilities and water quality in the area. Furthermore, design plans would be prepared and coordinated with the County Department of Public Works for review and approval prior to construction. Runoff from the project site would be directed either into injection wells or a detention basin established. However, the additional increase in runoff due to the creation of impervious surfaces would be small and should not adversely affect surrounding properties.

#### **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). There are a total of 21 solid waste transfer stations located throughout the Island of Hawaii. In the North Kohala District, there is single transfer station that is located in Kaauhuhu. Construction waste, junked cars, large white goods, and dead animals are delivered directly to the Hilo landfill.

Construction of the reservoir project will generate solid waste typical of normal construction related activities. The generation of solid waste is not expected to occur as part of the operations of the water reservoir. Construction-related solid wastes will be generated over a relatively short time period and will consist primarily of vegetation, rocks, and other debris resulting from the clearing 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. Such activities are expected to have minimal impact on County solid waste facilities.

#### **5.5 TRANSPORTATION FACILITIES**

The Akoni Pule Highway is the only major public roadway facility in the immediate vicinity of the Kokoiki Reservoir project area. This two-lane highway was previously known as Mahukona-Niulii Road. This roadway is a State-operated highway that serves as the main vehicular access from Kawaihae to its end at the Pololu Valley Lookout.

Ilikini Road, which provides access to the proposed Kokoiki Reservoir site, is a predominantly unpaved roadway approximately 10 to 12-feet wide. The site is also accessible via Lincoln Avenue and Park Road. Lincoln Avenue is a paved, unstriped roadway

approximately 10 to 12-foot wide that is located approximately .3 mile east of and parallel to Ilikini Road. Similarly, Park Road is a paved, unstriped roadway, approximately 10 to 12-foot wide that runs parallel to Akoni Pule Highway and connects Lincoln Avenue to Ilikini Road. Ilikini Road, Lincoln Avenue and Park Road are all County roadways. Traffic on all three roadways is very light. As described previously, only three passenger vehicles were witnessed traveling along Lincoln Avenue and no vehicles were observed on either Ilikini Road or Park Road during a recent 45-minute site visit.

Impacts on existing transportation facilities associated with this project would primarily be associated with construction related activities. Once completed, vehicular traffic to this reservoir 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 would not have a significant impact on the already limited traffic occurring along these roadways. Given the rural nature of Hawi and the North Kohala District, traffic flow along the highway is light. As a result, construction related traffic should not cause significant traffic congestion or adverse impacts along the highway or on the other affected roadways. 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 Kokoiki Reservoir 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 project vicinity. As a result, these utility companies would similarly provide electrical and telephone service to the Kokoiki Reservoir project. HELCO presently has overhead electrical lines situated on utility poles routed along Akoni Pule Highway and along Ilikini Road. Electrical power to service the Kokoiki Reservoir project would be provided by HELCO. Preliminary plans are to connect with the existing overhead lines that are located on Ilikini Road. Electrical lines to the project's facilities would be placed in underground conduits. The additional electricity needed to service the project is expected to have minimal impact on HELCO's ability to provide electrical service to existing customers.

Existing communication lines are similarly routed along Akoni Pule Highway and along Ilikini Road. As with the electrical lines, the preliminary plans are to connect to the existing Verizon communication lines to service the project site. The use of the existing communication lines is not expected to have a significant impact on Verizon's facilities or its ability to provide communication service to this area.

### 6.2 RECREATIONAL FACILITIES

There are no existing public recreational facilities present on the project site or immediately surrounding lands since these properties are privately owned and used for small-scale agricultural activities and residential uses. There are no public parks or other active or passive recreational facilities in the immediate vicinity of the project site.

Development of the Kokoiki Reservoir is expected to have minimal impact on existing recreational facilities since none are present on the project site or in the immediate vicinity.

### 6.3 MEDICAL FACILITIES

The only major medical facility in the vicinity of the project site is the State-operated Kohala Hospital located in the nearby town of Kapaau. Kohala Hospital has four beds for medical and surgical care, and 22 beds for skilled nursing and intermediate care facilities. This hospital had an average occupancy of about 17 percent for acute care services, and over 123

percent occupancy for skilled nursing and intermediate care facilities, indicative of a strong demand for such long-term care services (HSHPDA 1998).

The Kokoiki Reservoir project is expected to have minimal impact on the Kohala Hospital's facilities and its operations. As a result, the only potential need for medical services from this hospital would be associated with emergency or other types of outpatient medical care services that may arise.

#### **6.4 EDUCATIONAL FACILITIES**

The Kohala High and Intermediate School is operated by the State Department of Education that provides public education to students in grades 6 through 12. The school's enrollment count for the current school year is 426 students (DOE 2003). This school is presently divided into two differently located campus sites, but are operated under one administration.

The high school campus, which includes the school's administration, has students from the 9th to 12th grade and is located along Akoni Pule Highway between the towns of Hawi and Kapaau. The intermediate school campus has students from the 6th to 8th grade, and is referred to as the Halaula Annex. This campus is located further to the east, between the towns of Kapaau and Halaula.

The Kokoiki Reservoir project should have minimal, if any, impact on either the intermediate or high school campuses and operations. Staff personnel hired for this project are anticipated to be current residents from the Island of Hawaii. As a result, this project should not result in a large number of new students enrolling at the Kohala High and Intermediate School or the Kohala Elementary School. Existing school facilities along with teacher staffing requirements should thus not be affected.

Furthermore, the construction activities conducted at the Kokoiki Reservoir project site are not expected to interfere with or disrupt school activities given the distance of the property from these schools.

#### **6.5 POLICE PROTECTION**

The Hawaii County Police Department's Kapaau Police Station is situated in Kapaau Town on Kapaau Road. This police station services the County's North Kohala Police District, and is part of the department's Area II field operations bureau. The district boundaries for this Kapaau Police Station include the general area from Kaiopae Point on the west shore of the island around the northern tip to Honopue Stream on the east shore. The Kokoiki Reservoir project site is situated within the department's Beat 531 that generally extends from Kalalae Point to Honokaheka Point (HPD 1999).

Development of the reservoir project is not expected to create much demand for additional police protection and related services from the Kapaau Police Station. Kokoiki Reservoir Project personnel would be present on the property during its operation to address concerns and other operational matters. Activities to be conducted at the project site would also minimize the need for police protection. During periods of construction activities occurring at the Kokoiki Reservoir, there would continue to be staff on the property. As a result, daily patrols of the area along with the police department's other operational activities should not be disrupted or negatively impacted.

## **6.6 FIRE PROTECTION**

The Hawaii County Fire Department's Kapaau Fire Station is situated in Kapaau Town on Kapaau Road near the County's police station. This fire station services the County's North Kohala district, and would subsequently service the Kokoiki Reservoir Project Site.

The Kokoiki Reservoir should have minimal impact on the fire department's ability to provide fire protection services to the project site and surrounding area. Kokoiki 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. In addition, an emergency access road would be provided within the project site so that fire trucks have adequate access to necessary areas within the Kokoiki Reservoir. Finally, 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).

## **6.7 SECONDARY AND CUMULATIVE IMPACTS**

### **6.7.1 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 Kokoiki Reservoir project and appurtenances being considered are expected to have minimal secondary impacts on resident population, land use patterns, public facilities and infrastructure, and the natural environment.

Construction of this project is not expected to generate any new in-migrant residents to the Island of Hawaii to fill short-term construction related jobs. It is anticipated that a qualified local contractor on Hawaii or within the State of Hawaii would likely be used for the project's construction. Thus, construction of the project would have minimal, if any, effect on the County's residential population or housing demand.

Because this project involves limited improvements to the County DWS's existing Hawi-Kokoiki-Kynnersly-Kapaau water system, minimal secondary effects to the County's infrastructure are expected. The purpose of the Kokoiki Reservoir project is minimize water pressure limitations currently experienced by some DWS customers in the Hawi community. This project will improve the existing water system, and the new reservoir will augment it to ensure adequate water pressure for emergency purposes. There, this project should not significantly affect the County's residential population growth projected within the region, and thus have minimal potential to generate significant secondary effects on infrastructure, public facilities, and housing.

#### 6.7.2 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 the Kokoiki Reservoir project would include assessing the project itself, and evaluating any other known planned improvements within the project area that would effect or be affected by the project. Given the nature of this reservoir project, potential cumulative impacts would primarily be associated with construction related activities occurring at the same time and area.

There are no other known improvements planned by others for implementation adjacent to or in the immediate vicinity of the Kokoiki project site. The County Department of Parks and Recreation has indicated an interest in developing a park in Kahei, which is located approximately one mile to the west of the project site. However, the County has not yet selected or secured a site for such a park. Therefore, construction of this park should not occur concurrently with the reservoir project causing cumulative impacts.

Within the North Kohala District, the Hawaii Department of Transportation is proposing future improvements to the Kohala Mountain Road in the vicinity of the Kawaihae Uka Bridge, which is located over a mile away from the project site. While this project could occur at the same time as the subject project, the resulting cumulative impacts to the region should be minimal and limited to only short-term construction activities. The assessment results discussed in this document demonstrate that the Kokoiki Reservoir project itself will have minimal, if any, impact on the natural environment, the area surrounding the project site and the existing infrastructure servicing the site.

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## 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 State LUC's Land Use District Boundary Map for Hawi (Map H-66) indicates that 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 of class "C" under the Land Study Bureau's detailed land classification (LSB 1965). Consequently, the proposed reservoir project is a permitted use under §205-4.5 (7), HRS that specifies public water storage tanks and appurtenant small buildings.

### 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 new reservoir would ensure continued reliable water service 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 new reservoir, along with construction activities conducted, would be meeting all applicable Federal, State and County regulations to protect the environment. 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 reservoir project would be consistent with these environmental policies regarding the quality of life. The reservoir project would not adversely affect the existing or future resident population in Hawi or the establishment of new communities. The proposed project does not involve the development of any new homes or visitor units, and it is expected that short-term construction jobs will be filled by Hawaii residents and not result in any in-migration. Construction of the project would create additional short-term construction related jobs for island residents helping the County improve their quality of life and economic activity. This project would enhance the community by assisting the County DWS in providing continuous reliable water service to the Hawi community without adversely effecting the physical and social 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.*

The reservoir project would not affect the existing or future resident population in Hawi or the establishment of new communities. These improvements do not involve any new homes or visitor units, and it is expected that short-term construction jobs will be filled by Hawaii residents and not result 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 Kokoiki Reservoir project would be consistent with these guidelines because the improvements would not impact those natural resources identified as watersheds, forest preserves, wildlife preserves, or unique ecological preserves. The project would not impact an area that is valued as important open space area since it is currently used for pasture and small-scale 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 reservoir project would not impact endangered plants or animals since none are known to be present on the site. This project would not introduce new plants or animals to the area that may create an ecological hazard. Areas of the project site not used for the new reservoir and appurtenances would be landscaped 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.*

As discussed in Chapter 3, the reservoir project is not expected to impact significant historic properties or cultural resources and practices 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.

**5. *Economic development***

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

The reservoir project would be consistent with this guideline because it is not expected to significantly impact the agricultural industry. The property proposed for the reservoir site is partially cultivated with a small grove of citrus and noni trees. However, the small area removed (approximately 0.5 acres) from productivity should

have no effect on the overall agricultural operations occurring in the North Kohala District or the 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 for this project allows for public and government agency input to express concerns and comments associated with the project. Such opportunities include pre-assessment consultation and review of the Draft EA. Thus, the public consultation process incorporated within this environmental review process provides 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 pertinent goals, policies, and standards from the County's 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.*

**2. 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.*

**3. 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 reservoir 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 reservoir and related improvements are not

expected to have a significant impact on the environment. This project would assist the County DWS in providing continuous, reliable water service to the Hawi community without adversely effecting the physical and social environment.

**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.*

The project would be consistent with this policy and goal since the proposed reservoir project would ensure continued reliable water service in the future. This project would not have an adverse impact on the environment as discussed in this document. The new reservoir, along with construction activities conducted, would meet all applicable Federal, State and County regulations to protect the environment. This would include coordination of the review and approval of construction plans by 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 (less than 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 concrete water tank and maintenance driveway around it would meet County standards and requirements addressing runoff. 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.*

The reservoir project is not expected 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 reservoir 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 existing reservoir site because it

is restricted. 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 County and affected agencies.*

The Kokoiki Reservoir project would be consistent with these goals and policies. There are no rare or endangered species or significant habitats present in the project area that would be adversely affected by the reservoir improvements. As discussed in this document, the project is not expected to have a significant impact on the physical environment that 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 reservoir would ensure that adequate, efficient, and dependable water service is provided to a portion of the Hawi community that is currently experiencing water pressure limitations. The concrete water tank would fit into the surrounding area, which is predominantly comprised of pastures and small-scale agricultural activities, and would be situated away from public view to the greatest extent practicable. This project would not create adverse pollution or disturbances to surrounding residents since the nearest home is approximately 400-feet away and appropriate measures would be incorporated into the project's design to minimize noise and fugitive dust emissions during construction. Thus, the new reservoir would help the DWS meet the continued and highly depended upon water supply needs of the Hawi 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 Hawi residents. The design of the reservoir improvements would also meet DWS standards and requirements.

### North Kohala District

#### **5. Public Utilities**

- a. *Water (Courses of Action)*
  - 2) *Improve and replace inadequate distribution mains and storage facilities.*

This project would be consistent with this policy by providing a new reservoir to address water pressure limitations currently experienced by some areas of the Hawi community. The improvements would therefore provide continued, dependable water service to Hawi residents.

### **7.4 COUNTY ZONING DISTRICT**

The Kokoiki Reservoir 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 water tank and accessory utilities would serve a County government function for public benefit by providing continued and more reliable water service to the Hawi 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. According to §25-5-73 of the County's Zoning Code, the height limit in this zoning district is 45 feet. As discussed in Chapter 2, this new concrete water tank would be

approximately 18-feet, 6-inches, in height. 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 reservoir would be located on a property that is approximately five (5) acres in size and is thus considered a non-conforming parcel based upon discussion with County Planning Department staff. Following the County's acquisition of the approximately one-half acre portion of this parcel for the development of the reservoir, the County will subdivide the 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 width.
4. The minimum yard setbacks for this zoning district are 30 feet for front and rear yards, and 20 feet for side yards. However, since this project site is less than one acre, the applicable yard setbacks fall under the Residential and Agricultural District (RA) requirements which are 25 feet for front and rear yards, and 15 feet for side yards. The new concrete reservoir tank would meet these yard setbacks.

## CHAPTER 8 AGENCY AND PUBLIC CONSULTATION

Consultation with various government agencies has been conducted for this project as part of the pre-assessment consultation process in preparing this document. Such efforts consisted of distributing solicitation letters to several agencies to obtain their input and comments on the project in order to identify issues that should be addressed.

### 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 July 2003 to solicit their initial comments and concerns associated with the project as part of the preparation of the Draft EA. A listing of agencies and organizations that received consultation letters is provided below. Those providing written response are identified with a "»" symbol. Copies of written comments received from the agencies along with written responses provided by the applicant are included in Appendix B.

#### 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, Division of Boating and Ocean Recreation, Hawaii District Office

- Department of Land and Natural Resources, Forestry Division, Hawaii District Branch
- Department of Land and Natural Resources, Land Division, Hawaii District Branch
- Department of Land and Natural Resources, State Historic Preservation Division
- Department of Transportation
- Department of Transportation, Highways Division, Hawaii District Office
- » 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
- 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

**County of Hawaii Utilities**

- » Hawaii Electric Light Company, Inc.

**8.2 DRAFT EA COMMENTS**

The Draft EA for this concrete water reservoir project was published in the September 8, 2003, issue of the State Office of Environmental Quality Control's *The Environmental Notice*, initiating a 30-day public comment period that ended on October 8, 2003. Copies of the Draft EA were distributed to the following parties for review and comments. Those parties that submitted comments are indicated by a "»" 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, Energy, Resources and Technology Division
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- Department of Hawaiian Home Lands
- Department of Health
- » Department of Land and Natural Resources
- Department of Land and Natural Resources, Division of Boating and Ocean Recreation, Hawaii District Office
- Department of Land and Natural Resources, Forestry Division, Hawaii District Branch
- Department of Land and Natural Resources, Land Division, Hawaii District Branch
- » Department of Land and Natural Resources, State Historic Preservation Division
- » Department of Transportation
- Department of Transportation, Highways Division, Hawaii District Office
- » Land Use Commission, Department of Business, Economic Development and Tourism
- » Office of Environmental Quality Control
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- » Hawaii Fire Department
- Hawaii Mayor Harry Kim
- Hawaii Police Department
- Mass Transit Agency
- » Planning Department

**County of Hawaii Utilities**

- Hawaii Electric Light Company, Inc.

**Community Organizations**

- Kohala Hawaiian Civic Club
- Kohala Merchants' Association
- Kona-Kohala Chamber of Commerce
- North Kohala Community Resource Center

**Public Libraries**

- Bond Memorial Public Library
- Kailua-Kona Public Library

## CHAPTER 9 FINDINGS AND 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 of 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 Kokoiki Reservoir 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 that 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 FINDINGS

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

The proposed reservoir 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 concrete water tank is presently partially cultivated with a small grove of citrus and noni trees. 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 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 as an area used for any traditional native Hawaiian or other cultural practices. Development of the reservoir project would also not prevent access to mauka land areas that may be used for traditional gathering or other cultural practices.

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

The reservoir project would not curtail the range of beneficial uses of the surrounding environment. The property that the County proposes to acquire from the State is part of a larger parcel that is currently leased to a private party for the agricultural activities conducted thereon. Consequently, the present and historic use of the property was for agricultural production and not available to the public for use. The reservoir project would provide a needed improvement in reliable water service to the Hawi community.

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 reservoir 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>1</sup>*

As discussed in this document, the project would not have any significant negative impacts on economic factors, the Hawi community, 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 State-owned property has been leased to a private party for the cultivation of citrus and noni trees occurring there currently, and was used for sugarcane cultivation prior to that. Adjacent areas surrounding this project site are similarly used for small-scale agricultural activities including pastures, macadamia nut orchards and citrus orchards, previously for sugarcane cultivation. The project would also not restrict access to surrounding areas that may be potentially used for traditional native Hawaiian cultural practices since the entire reservoir site, with the improvements, would be less than one acre in size.

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<sup>1</sup> These significance criteria were modified to reflect the 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.*

The reservoir improvement is not expected to substantially affect public health since the project would only involve limited construction work. The project would help the County DWS provide continued reliable water service to Hawi 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 that 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 100,000-gallon capacity concrete water tank and other accessory utility improvements. As a result, the improvements do not include new housing units or visitor units that would affect the area's resident population and demand for public facilities.

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

The reservoir 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 and 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 Kokoiki Reservoir and therefore does not involve a commitment for larger actions. Impacts associated with these improvements were addressed in this document, and these assessment results 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 are no known endangered, threatened, or rare botanical resources within the reservoir project site. The improvements would also not substantially affect endangered or threatened faunal or avifaunal resources that 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 reservoir project site. Impacts associated with these factors would be limited to short-term construction activities. The immediate surrounding area is comprised of small-scale agricultural uses such as citrus and noni tree cultivation and livestock grazing pastures. There is scattered residential development in the surrounding area but the closest dwelling is approximately 400-feet away from the proposed 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 reservoir project site is not located within an environmentally sensitive area such as those identified. Construction of the new Kokoiki 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 reservoir 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 that 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 concrete water tank and appurtenances.

## 9.2 DETERMINATION

A Finding of No Significant Impact (FONSI) determination is warranted for the Kokoiki Reservoir project based upon the information provided in this Final EA document. The results of the assessments conducted have determined that the reservoir proposed should not have a significant impact on the surrounding environment. These assessment results are also based upon the agency and public comments received on the Draft EA published and distributed for public review. The findings supporting this 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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Photo 1  
East View of Park Road at its  
intersection with Ilikini Road



Photo 2  
East View of Project Site  
from Northwest Corner



Photo 3  
East View of Property;  
TMK 5-5-004:009  
in the Background

**PHOTOS OF PROPOSED KOKOIKI  
RESERVOIR SITE AND AREA**

**Figure A-1**

*Kokoiki Reservoir Project  
County of Hawaii, Department of Water Supply*

*Source:  
SSFM International, Inc.*





Photo 4  
 Access Right-of-Way for  
 TMK: 5-5-004:009

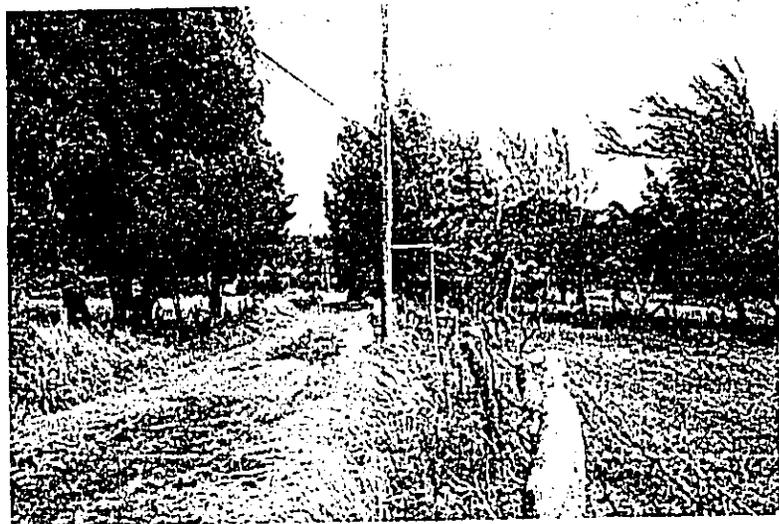


Photo 5  
 North View of Ilikini Road  
 Adjacent to Proposed Site

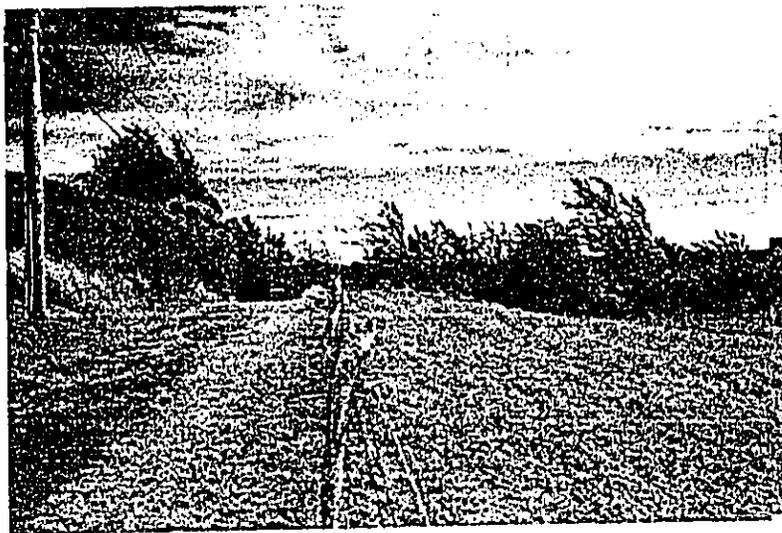


Photo 6  
 North View of Ilikini Road  
 and Property

**PHOTOS OF PROPOSED KOKOIKI  
 RESERVOIR SITE AND AREA**

**Figure A-2**

*Kokoiki Reservoir Project  
 County of Hawaii, Department of Water Supply*

Source:  
 SSFM International, Inc.



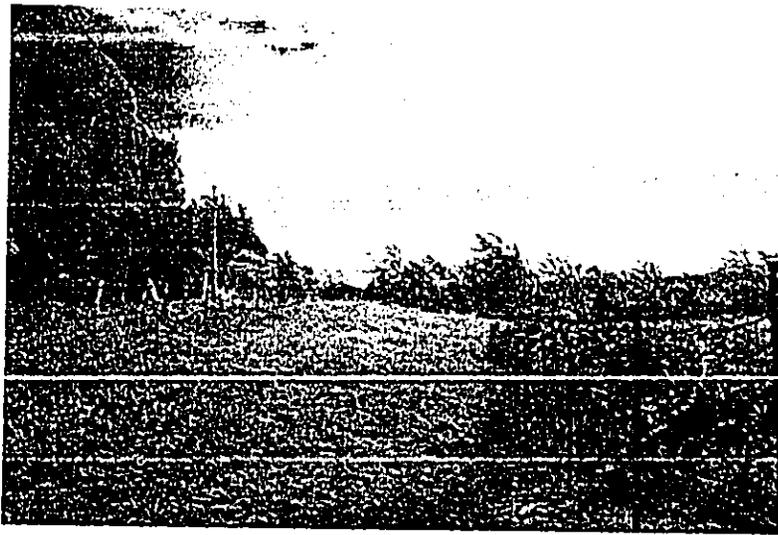


Photo 7  
North View of Property



Photo 8  
North View of Proposed  
Project Site

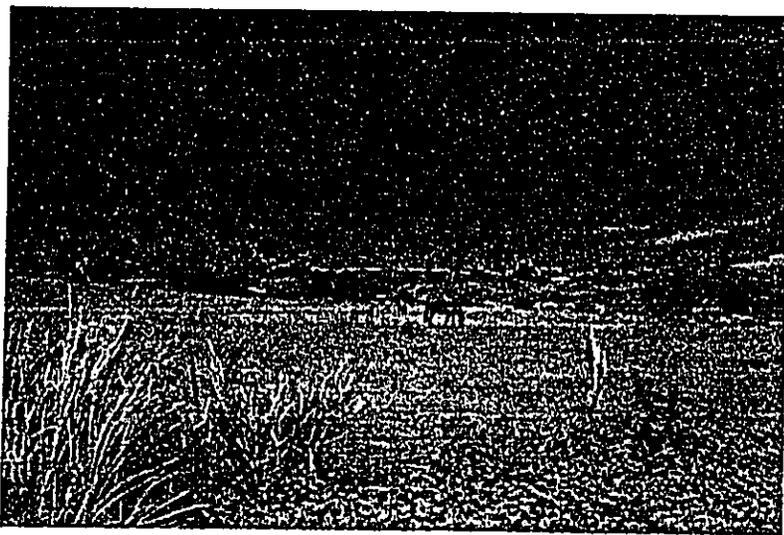


Photo 9  
Pasture Use Northwest of  
Project Site, West Side of  
Ilikini Road

**PHOTOS OF PROPOSED KOKOIKI  
RESERVOIR SITE AND AREA**

*Kokoiki Reservoir Project  
County of Hawaii, Department of Water Supply*

**Figure A-3**

*Source:  
SSFM International, Inc.*



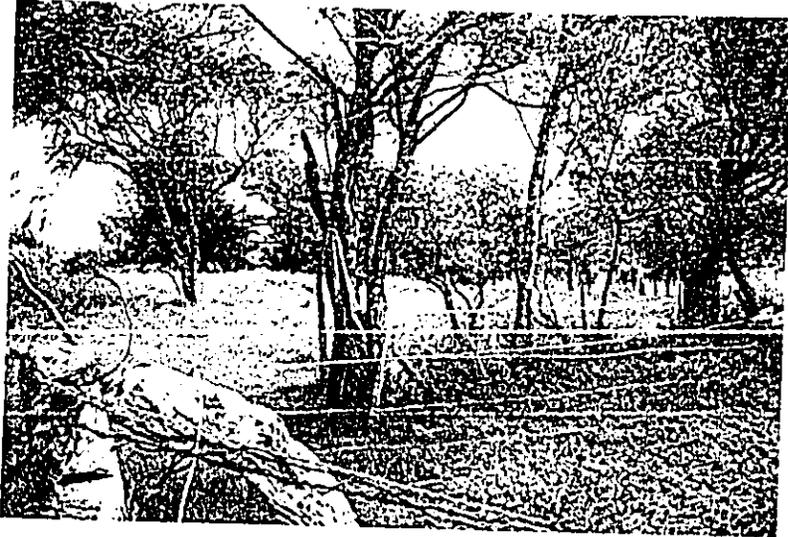


Photo 10  
TMK: 5-5-004:021  
North of Project Site



Photo 11  
Pasture Use on West Side  
of Ilikini Road



Photo 12  
Residence on Mauka Side of  
Park Road near Project Site

**PHOTOS OF PROPOSED KOKOIKI  
RESERVOIR SITE AND AREA**

*Kokoiki Reservoir Project  
County of Hawaii, Department of Water Supply*

**Figure A-4**

*Source:  
SSFM International, Inc.*





Photo 13  
Residence on South (Mauka)  
Side of Park Road, across  
from Property



Photo 14  
Rock Outcropping on  
Portion of Project Site

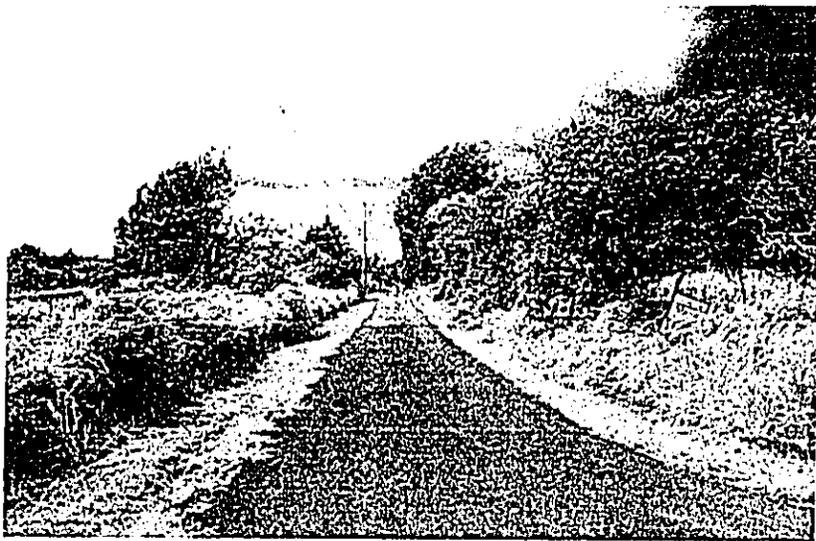


Photo 15  
South View of Lincoln Avenue,  
Mauka of its Intersection with  
Park Road

**PHOTOS OF PROPOSED KOKOIKI  
RESERVOIR SITE AND AREA**

*Kokoiki Reservoir Project  
County of Hawaii, Department of Water Supply*

**Figure A-5**

*Source:  
SSFM International, Inc.*





Photo 16  
 South View of Property,  
 Ilikini Road on Right

Photo 17  
 South View of Agricultural  
 Activity on Property,  
 Outside of Project Site Area

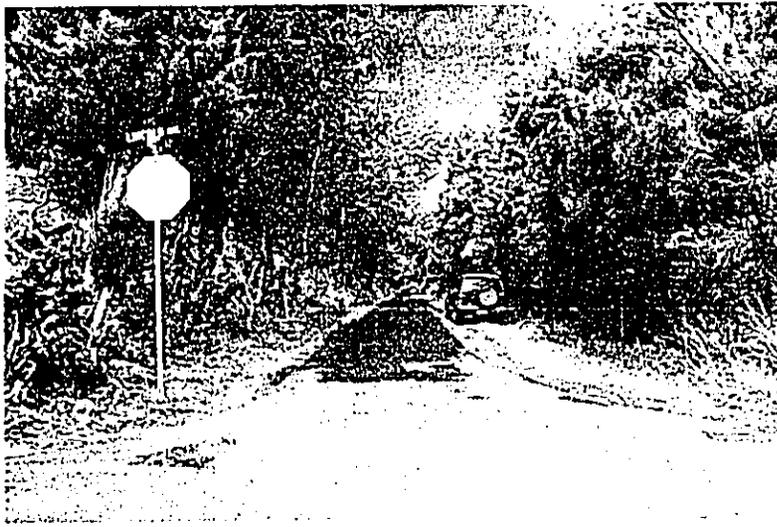


Photo 18  
 West View of Park Road at its  
 intersection with Lincoln Avenue

**PHOTOS OF PROPOSED KOKOIKI  
 RESERVOIR SITE AND AREA**

**Figure A-6**

*Kokoiki Reservoir Project  
 County of Hawaii, Department of Water Supply*

*Source:  
 SSFM International, Inc.*





Photo 19  
North View from Ilikini Road  
towards Akoni Pule Highway

Photo 20  
South View towards  
Project Site in Background



Photo 21  
South View from Intersection of  
Akoni Pule Highway and  
Ilikini Road

**PHOTOS OF PROPOSED KOKOIKI  
RESERVOIR SITE AND AREA**

**Figure A-7**

*Kokoiki Reservoir Project  
County of Hawaii, Department of Water Supply*

*Source:  
SSFM International, Inc.*



# APPENDIX B

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## *CONSULTATION EFFORTS*

**APPENDIX B-1**

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**DRAFT EA PRE-ASSESSMENT  
CONSULTATION**



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858-5440

REPLY TO  
ATTENTION OF

July 22, 2003

Regulatory Branch

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

This responds to your request for determination of Department of the Army (DA) permit requirements for the proposed Kokoiki 0.10 MG Concrete Reservoir Project to be constructed near Hawi, North Kohala District, County of Hawaii (TMK 3-5-5-004: por. 51). We have reviewed your Draft Environmental Assessment (DEA) preparation notice with respect to the Corps' authority to issue Department of the Army (DA) permits under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

The information accompanying your letter is not sufficient for us to make a determination of DA permit requirements. The maps indicate that the site of the proposed reservoir does not include any streams; however, the maps do not show the location of the proposed new effluent line, which would extend several thousand feet from the reservoir. The DEA should describe the complete project relative to any water bodies which may be present, including wetlands; we can provide a determination of DA permit requirements when we receive this information.

File No. 200300509 has been assigned to this project. Should you have questions concerning this response, please contact Mr. Peter Galloway of my staff by telephone at (808) 438-8416 or by fax at (808) 438-4060. Written correspondence concerning this project should be directed to: Regulatory Branch (CEPOH-EC-R/P. Galloway); U.S. Army Engineer District, Honolulu; Building 230; Fort Shafter, Hawaii 96858-5440.

Sincerely,

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



**SSFM INTERNATIONAL, INC.**  
74-5820-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 98740  
Phone: (808) 326-4733  
Fax: (866) 887-8885  
Email: [htsushima@ssfm.com](mailto:htsushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Peter Galloway  
Regulatory Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Building 230  
Fort Shafter, Hawaii 96858-5440

Dear Mr. Galloway:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment  
File No. 200300509

This letter is being sent in response to Mr. George P. Young's letter dated July 22, 2003, concerning the subject project. We acknowledge Mr. Young's comments that the information provided with our initial request for comments was insufficient for the purpose of determining DA permit requirements for the project.

The Draft Environmental Assessment (DEA) will include information addressing the project's affect on streams, wetlands and other water bodies present in the area. At this time, the project is not expected to affect waters of the U.S. since there are no streams, wetlands, or other water bodies present in the project area. The DEA will include a detailed description of the reservoir project, including the location of the new effluent line, on which to base a determination of DA permit requirements.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner



U.S. Department  
of Transportation  
Federal Highway  
Administration

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

July 31, 2003

In Reply Refer To:  
HDA-HI

Ms. Pamela L. Harlow  
SSFM International Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, HI 96740

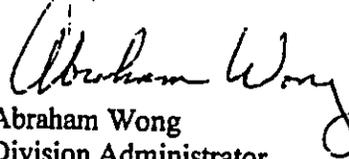
Dear Ms. Harlow:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Thank you for the opportunity to comment on your proposed development. To our knowledge, the nearest federal-aid roadway improvement to your project is the proposed improvement of the Kohala Mountain Road in the vicinity of the Kawaihae Uka bridge. We recommend you contact Mr. Glenn Yasui, Administrator, Highways Division, Hawaii Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813, for additional information on this and other improvements they may be proposing in the area.

If you have any questions or would like to discuss this further, please feel free to contact Bruce Turner, Assistant Division Administrator, at 541-2700, extension 309, or Michael Vanderhoof, Environmental Protection Specialist, at extension 328.

Sincerely,



Abraham Wong  
Division Administrator



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (866) 887-8885  
Email: [btushima@ssfm.com](mailto:btushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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American Council of Engineering Companies, Member

August 21, 2003

2003\_016.000

Mr. Abraham Wong, Division Administrator  
Federal Highway Administration  
U.S. Department of Transportation, Hawaii Division  
300 Ala Moana Boulevard, Room 3-306  
Honolulu, Hawaii 96850

Dear Mr. Wong:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 31, 2003, concerning the subject project.

We appreciate the information that the nearest federal-aid roadway improvement to the subject project is the proposed improvement of the Kohala Mountain Road in the vicinity of the Kawaihae Uka Bridge.

We will consult with the State of Hawaii, Department of Transportation's Highways Division, to solicit additional information on this and other improvements that they may be proposing in the area.

If necessary, appropriate coordination with the Hawaii Department of Transportation will be conducted to ensure that the subject project will not adversely impact any planned roadway improvements in the area.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

A handwritten signature in cursive script that reads 'Pamela L. Harlow'.

Pamela L. Harlow  
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)1262.3

AUG 12 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

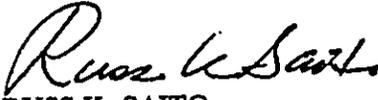
Dear Ms. Harlow:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

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

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

Sincerely,

  
RUSS K. SAITO  
State Comptroller



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (868) 887-8885  
Email: [btgushima@ssfm.com](mailto:btgushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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American Council of Engineering Companies, Member

August 22, 2003

2003\_016.000

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: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated August 12, 2003, concerning the subject project. We note that the project does not impact any of your department's projects or existing facilities. Furthermore, we acknowledge that your department does not have any comment on the proposed project at this time.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

A handwritten signature in cursive script that reads 'Pamela L. Harlow'.

Pamela L. Harlow  
Planner

LINDA LINGLE  
Governor



SANDRA LEE KUNIMOTO  
Chairperson, Board of Agriculture

DIANE LEY  
Deputy to the Chairperson

State of Hawaii  
DEPARTMENT OF AGRICULTURE  
1428 South King Street  
Honolulu, Hawaii 96814-2512

July 28, 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, HI 96740

Dear Ms. Harlow:

RE: Kokoiki 0.10 MG Reservoir

Thank you for the opportunity to review this project. At this time, the Department of Agriculture has no comment. We would appreciate more information regarding this project when it becomes available.

Sincerely,

A handwritten signature in black ink, appearing to read "Sandra Lee Kunimoto".

Sandra Lee Kunimoto  
Chairperson, Board of Agriculture





**SSFM INTERNATIONAL, INC.**  
74-5820-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (866) 887-8885  
Email: [blayshima@ssfm.com](mailto:blayshima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Ms. Sandra Lee Kunimoto, Chairperson  
Board of Agriculture  
Department of Agriculture  
State of Hawaii  
1428 South King Street  
Honolulu, Hawaii 96814-2512

Dear Ms. Kunimoto:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 28, 2003, concerning the subject project. We note that your department does not have any comment on the proposed project at this time.

In accordance with your request, we will furnish you with more information about the subject project when it becomes available.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
Planner

LINDA LINGLE  
Governor



ALFREDO A. LEE  
Executive Director

STATE OF HAWAII  
AGRIBUSINESS DEVELOPMENT CORPORATION  
235 S. Beretania Street, Room 205  
Honolulu, HI 96813  
Phone: (808) 586-0186 Fax: (808) 586-0189

July 31, 2003

Ms. Pamela L. Harlow  
Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

Re: Kokoiki 0.10 MG Reservoir Project

Thank you for the opportunity to review this project. At this time, the Agribusiness Development Corporation has no comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Jeffs".

Handwritten initials "LJ" in black ink.

Larry Jeffs, Chair  
Agribusiness Development Corporation



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 98740  
Phone: (808) 326-4733  
Fax: (808) 887-8885  
Email: [btushima@ssfm.com](mailto:btushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Larry Jefts, Chair  
Agribusiness Development Corporation  
Department of Agriculture  
State of Hawaii  
State Office Tower  
235 S. Beretania Street, Room 205  
Honolulu, Hawaii 96813

Dear Mr. Jefts:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 31, 2003, concerning the subject project. We note that the Agribusiness Development Corporation does not have any comment on the proposed project at this time.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner

LINDA LINDLE  
GOVERNOR OF HAWAII



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

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

In reply, please refer to:  
File:

August 14, 2003

03-884A CAB

Ms. Pamela Harlow  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

**SUBJECT:** Pre-Assessment Consultation for the Kokoiki Concrete Reservoir  
Project, Hawi, Hawaii; TMK: (3) 5-5-004: por 51

This letter is to transmit the following comments on the subject document:

**Control of Fugitive Dust:**

There is a significant potential for fugitive dust emissions during all phases of construction. Proposed construction activities will occur in proximity to existing residences, public areas and major thoroughfares, thereby exacerbating potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that have a potential to generate fugitive dust. Implementation of adequate dust control measures during all phases of development and construction activities is warranted.

Construction activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust.

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:





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74-5820-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (866) 887-8885  
Email: [blushma@ssfm.com](mailto:blushma@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 22, 2003

2003\_016.000

Mr. Wilfred K. Nagamine, Manager  
Clean Air Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

Dear Mr. Nagamine:

**Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment**

Thank you for your comment letter dated August 14, 2003, concerning the subject project. We appreciate your comments concerning the need to control fugitive dust emissions during all phases of construction of the subject project.

Grubbing and grading activities associated with this project would be limited due to the small size of the project site (less than one acre), the nature of this type of project, and the property's relatively gentle sloping topography. Grading activities should be primarily limited to creating a pad for the concrete water tank and an access driveway around it. The limited scope of grading should thus minimize the amount of excavation required and limit fugitive dust emissions.

The impacts of fugitive dust on residences, public areas, and major thoroughfares in the area would be mitigated through the implementation of a dust control management plan. Furthermore, construction activities conducted on the project site shall comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner

LINDA LINGLE  
GOVERNOR OF HAWAII



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

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

In reply, please refer to:  
END / CWB

08030PKP.03

August 12, 2003

Ms. Pamela L. Harlow  
Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

**Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment**

The Department of Health, Clean Water Branch (CWB) has reviewed the subject document and offers the following comments:

1. The Army Corps of Engineers should be contacted at (808) 438-9258 to identify whether a Federal license or permit (including a Department of Army permit) is required for this project. Pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act"), a Section 401 Water Quality Certification is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...."
2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following activities:
  - a. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).
  - b. Construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.**
  - c. Discharge of treated effluent from leaking underground storage tank remedial activities.
  - d. Discharge of once through cooling water less than one (1) million gallons per day;
  - e. Discharge of hydrotesting water.

Ms. Pamela L. Harlow  
August 12, 2003  
Page 2

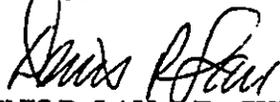
- f. Discharge of construction dewatering effluent.
- g. Discharge of treated effluent from petroleum bulk stations and terminals.
- h. Discharge of treated effluent from well drilling activities.
- i. Discharges of treated effluent from recycled water distribution systems.
- j. Discharges of storm water from a small municipal separate storm sewer system.
- k. Discharge of circulation water from decorative ponds or tanks.

The CWB requires that a Notice of Intent (NOI) to be covered by a NPDES general permit for any of the above activities be submitted at least 30 days before the commencement of the respective activities. The NOI forms may be picked up at our office or downloaded from our website at <http://www.state.hi.us/doh/eh/cwb/forms/genl-index.html>.

- 3. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters and/or coverage of the discharge(s) under the NPDES general permit(s) is not permissible. An application for the NPDES permit is to be submitted at least 180 days before the commencement of the respective activities. The NPDES application forms may also be picked up at our office or downloaded from our website at <http://www.state.hi.us/doh/eh/cwb/forms/indiv-index.html>.
- 4. Hawaii Administrative Rules, Section 11-55-38, also requires the owner to either submit a copy of the new NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD) or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD. Please submit a copy of the request for review by SHPD or SHPD's determination letter for the project.

If you have any questions, please contact the CWB at 586-4309.

Sincerely,



DENIS R. LAU, P.E., CHIEF  
Clean Water Branch

KP:cu



SSFM INTERNATIONAL, INC.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (808) 887-8885  
Email: [pbsushina@ssfm.com](mailto:pbsushina@ssfm.com)  
[charlow@ssfm.com](mailto:charlow@ssfm.com)

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

August 22, 2003

2003\_016.000

Mr. Denis R. Lau, P.E., Chief  
Clean Water Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

Dear Mr. Lau:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated August 12, 2003, concerning the subject project. We appreciate your comments concerning the need to contact the Army Corps of Engineers and the information regarding activities requiring NPDES general permit coverage and individual NPDES permits.

We will be coordinating with the Army Corps of Engineers as part of the pre-assessment consultation phase of this project and will be forwarding additional information to that agency in order to determine whether a Department of Army permit is required for this project.

The proposed project does not include any of the listed activities for which NPDES general permit coverage or an individual NPDES permit is required. The construction of the project will be limited to an area less than one (1) acre of total land area and is not part of a larger common plan of development or sale.

If you have any other questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF BOATING AND OCEAN RECREATION  
HAWAII DISTRICT OFFICE  
74-380 KEALAKEHE PARKWAY  
KAILUA-KONA, HAWAII 96740-2704

PHONE: (808) 329-4997 FACSIMILE: (808) 326-7896

July 28, 2003

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  
COMMISSION ON WATER RESOURCE MANAGEMENT

M. MASON YOUNG  
ACTING ADMINISTRATOR

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, HI 96740

Dear Ms. Harlow:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Thank you for your letter of July 17, 2003 concerning the above referenced project and we appreciate being given the opportunity to offer our comments.

While we have no comments at this time, we look forward to hearing from you in the future and your progress.

Mahalo!

Sincerely,

A handwritten signature in cursive script that reads "Nancy E. Murphy".

Nancy E. Murphy  
Hawaii District Manager



**SSFM INTERNATIONAL, INC.**  
74-5820-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (808) 887-8885  
Email: [btushima@ssfm.com](mailto:btushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Ms. Nancy E. Murphy, Hawaii District Manager  
Hawaii District Office  
Division of Boating and Ocean Recreation  
Department of Land and Natural Resources  
State of Hawaii  
74-380 Kealahou Parkway  
Kailua-Kona, Hawaii 96740-2704

Dear Ms. Murphy:

**Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment**

Thank you for your comment letter dated July 28, 2003, concerning the subject project. We note that your district office does not have any comment on the proposed project at this time.

In accordance with your request, we will furnish you with more information about the subject project when it becomes available.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
Planner

LINDA LINGLE  
BENJAMIN J. CAYETANO  
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

July 25, 2003

Ms. Pamela L. Harlow  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

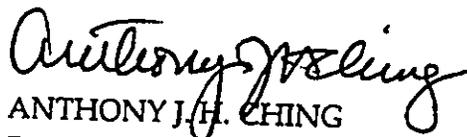
Subject: Pre-Assessment Consultation for Draft Environmental Assessment (DEA)  
Kokoiki 0.10 MG Concrete Reservoir Project

We are in receipt of your letter dated July 17, 2003, requesting our comments on the subject project. Based on the location of the proposed tank site on your Vicinity Map, we find that the site is designated within the State Land Use Agricultural District. We suggest that the DEA include a map showing the 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 comments during the 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.**

74-5620-A Palani Road, Suite 204

Kailua-Kona, Hawaii 96740

Phone: (808) 326-4733

Fax: (888) 887-8885

Email: [bitsushima@ssfm.com](mailto:bitsushima@ssfm.com)

[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Anthony J.H. Ching, Executive Officer  
Land Use Commission  
Department of Business, Economic Development and Tourism  
State of Hawaii  
1428 South Beretania Street, Room 406  
Honolulu, Hawaii 96813

Dear Mr. Ching:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 25, 2003, concerning the subject project. We note your comment that the proposed project site, as depicted on the location and vicinity map we provided, is designated with the State Land Use Agricultural District.

A map showing the State Land Use Districts in relation to the project site will be included in the Draft Environmental Assessment.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
Planner

Harry Kim  
Mayor



Troy M. Kindred  
Administrator

## County of Hawaii

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

July 22, 2003

Ms. Pamela L. Harlow  
Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow,

**SUBJECT: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment**

We thank you for the opportunity to comment.

The proposed site is outside the tsunami inundation zone, and a threat from a tsunami is unlikely.

The proposed site is in a lava threat area 9, and a threat from lava flow (volcanic damage) is unlikely.

The proposed site could possibly experience effects from "VOG" contamination in some circumstances with certain wind variables. Contamination of this type while possible is unlikely.

The proposed site presents a "target of opportunity" in a Critical Infrastructure/Homeland Security environment. I am concerned in that appropriate security measures (barriers/fencing, etc.) be emplaced to protect the quality / safety of this water source.

Sincerely,

A handwritten signature in black ink, appearing to read "Troy M. Kindred".

Troy M. Kindred  
Administrator





**SSFM INTERNATIONAL, INC.**  
74-6620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (866) 887-8885  
Email: [htsushima@ssfm.com](mailto:htsushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Troy A. Kindred, Administrator  
Civil Defense Agency  
County of Hawaii  
920 Ululani Street  
Hilo, Hawaii 96720-0031

Dear Mr. Kindred:

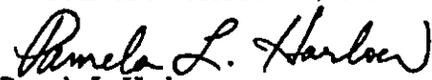
Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 22, 2003, concerning the subject project. We note your comments that the proposed project site is unlikely to be affected by threats from tsunamis, lava flow and contamination from volcanic smog, or VOG. The Draft Environmental Assessment (DEA) will include a detailed discussion of natural hazards in the project area, none of which are expected to adversely impact the proposed project.

In regard to your concern that appropriate security measures are taken to protect the quality and safety of this water source, the water reservoir project site will be secured with a 6-foot high chain link fence and gate. A detailed description of the proposed project and attendant security measures will be included in the DEA.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
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

August 12, 2003

Ms. Pamela L. Harlow  
Planner  
SSFM INTERNATIONAL, INC.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, HI 96740

Re: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Dear Ms. Harlow,

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.**

74-5820-A Palani Road, Suite 204

Kailua-Kona, Hawaii 96740

Phone: (808) 326-4733

Fax: (866) 887-8885

Email: [bitsushima@ssfm.com](mailto:bitsushima@ssfm.com)

[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 22, 2003

2003\_016.000

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

Dear Ms. Bell:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated August 12, 2003, concerning the subject project. We note that your department has no comments to offer on the proposed project at this time.

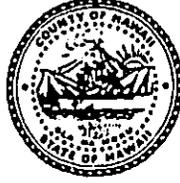
If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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

July 28, 2003

Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road  
Kailua-Kona, Hawai'i 96740

Subject: Kokoiki 0,10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Dear Ms. Harlow:

Thank you for allowing us the opportunity to review and provide comment on the proposed reservoir project at this early stage in the preparation of the draft Environmental Assessment "EA".

In the Kokoiki area of Hawi, North Kohala, the Department of Parks and Recreation is currently responsible for the Kahei (Hawi) Cemetery at TMK (#)5-5-011:001. There have been recent interests to develop a park in Kahei although a site has yet to be selected and secured. As such, we have no comment on the subject project at this time. However, we may have comments upon review of the final EA when it is prepared and distributed.

Please call our Staff Planner, James Komata at 961-8531 should you have any questions.

Respectfully,

  
\_\_\_\_\_  
Patricia G. Engelhard  
Director



**SSFM INTERNATIONAL, INC.**

74-5820-A Palani Road, Suite 204

Kailua-Kona, Hawaii 96740

Phone: (808) 326-4733

Fax: (866) 887-8885

Email: [blsushima@ssfm.com](mailto:blsushima@ssfm.com)

[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

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: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 28, 2003, concerning the subject project. We appreciate the information regarding your department's responsibility for maintaining the Kahei (Hawi) Cemetery. Also, we appreciate the information that there have been recent interests expressed to develop a park in Kahei, although a site has yet to be selected and secured.

Given that the proposed project site is located more than one mile west of the Kahei (Hawi) Cemetery, we do not anticipate that it will adversely impact your department's ability to maintain the cemetery or select and secure a new park site in the Kahei area.

A copy of the Draft Environmental Assessment will be provided to you during the public review period for your review and comments.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner

LENINGRAD ELARIONOFF  
*Councilmember*



PHONE: 961-8265  
FAX: 961-8912

**OFFICE OF THE COUNTY COUNCIL**

*County of Hawaii*  
*Hawaii County Building*  
*25 Aupuni Street*  
*Hilo, Hawaii 96720*

July 29, 2003

Pamela Harlow, Planner  
SSFM International, INC.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawai'i 96740

Dear Ms. Harlow,

Thank you for the opportunity to comment.

To increase the quality, capacity and efficiency of Kohala's water system is necessary for present and future growth. Kohala has the potential for growth as it still has affordable lands that can be transformed into home sites that are within reasonable proximity to jobs.

In developing this plan there may be a need to persuade a segment of the community that this project is not a part of the discarded idea of transporting Kohala's water to the gold coast for hotel and golf course consumption.

Sincerely,

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

Leningrad Elarionoff  
Council Member District 9  
Hawai'i County Council

**DISTRICT 9**  
*Waimea, Kohala, Kawaihae, Waikoloa, Puako*



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (866) 887-8885  
Email: [blsushima@ssfm.com](mailto:blsushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Leningrad Elarionoff  
Council Member, District 9  
Hawaii County Council  
County of Hawaii  
Hawaii County Building  
25 Aupuni Street  
Hilo, Hawaii 96720

Dear Mr. Elarionoff:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 29, 2003, concerning the subject project. In response to your comments, we offer the following information.

The proposed Kokoiki Reservoir is intended to improve water service and system reliability by addressing water pressure limitations currently experienced by a portion of the Hawi community.

We appreciate your comments regarding a segment of the community which may perceive this project as transporting water from North Kohala to the island's "Gold Coast" for hotel and golf course consumption. The Draft Environmental Assessment will clearly explain the purpose the proposed project and describe the geographical area to be served by the new reservoir.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
Planner

Aug. 3, 2003

Pamela L. Harlow, Planner  
SSFM International  
74-5620-A Palani Rd, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow

Re: Kokoiki 0,10 MG Concrete Reservoir Project

This letter is in reply to your letter dated 7/17/03, requesting comments on the Kokoiki project. Speaking with the engineers at the DWS this project will consist of one concrete reservoir with no additional buildings or structures, we at this time have no comments or requirements for this project.

Should you have any further questions pertaining to this project please contact me at 961-8350.

  
Richard H. Kihara  
Chief Inspector



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (868) 887-8885  
Email: [htsushima@ssfm.com](mailto:htsushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Richard H. Kihara, Chief Inspector  
Fire Department  
County of Hawaii  
25 Aupuni Street, Room 103  
Hilo, Hawaii 96720

Dear Mr. Kihara:

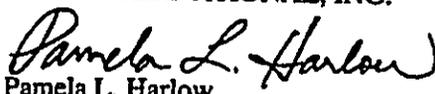
**Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment**

Thank you for your comment letter dated August 3, 2003, concerning the subject project. We note that you have spoken to engineers at the Department of Water Supply, who have confirmed that the project will consist of a concrete reservoir but no additional major buildings or structures. However, please note that the project may include accessory structures for equipment or other items.

A copy of the Draft Environmental Assessment will be provided for your review and comments during the public review period.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
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

July 31, 2003

Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawai'i 96740

Re: Kokoiki 0.10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Dear Ms. Harlow:

Thank you for your letter of July 17, 2003, soliciting written comments on this proposed project in Hawi.

It has been brought to my attention that one of the major problems with expansion of residential housing in this area is the shortage of water in North Kohala. Anything in the way of plans or programs to assist in addressing this shortage within the confines of environmental laws will be greatly supported.

I have no comments on this specific project except that I hope it will add to the sufficiency and quantity of water for this area.

Aloha,

A handwritten signature in cursive script that reads "Harry Kim".  
Harry Kim  
MAYOR

cc: Milton Pavao



**SSFM INTERNATIONAL, INC.**

74-5620-A Palani Road, Suite 204

Kailua-Kona, Hawaii 96740

Phone: (808) 326-4733

Fax: (866) 887-8885

Email: [btushima@ssfm.com](mailto:btushima@ssfm.com)

[pHarlow@ssfm.com](mailto:pHarlow@ssfm.com)

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

August 21, 2003

2003\_016.000

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

Dear Mayor Kim:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 31, 2003, concerning the subject project. In response to your letter, we offer the following information.

The proposed Kokoiki Reservoir is intended to improve water service and system reliability by addressing water pressure limitations currently experienced by a portion of the Hawi community.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
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) 961-2389

August 5, 2003

Ms. Pamela L. Harlow  
Planner  
SSFM International Inc.  
74-5620A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

**SUBJECT: KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
PRE-ASSESSMENT CONSULTATION FOR DRAFT ENVIRONMENTAL  
ASSESSMENT**

Our staff has reviewed the above-referenced draft environmental assessment and has no comments or objections to offer at this time.

Sincerely,

**LAWRENCE K. MAHUNA**  
**POLICE CHIEF**

  
**THOMAS J. HICKCOX**  
**ASSISTANT POLICE CHIEF**  
**AREA II OPERATIONS**

TJH:dmv



**SSFM INTERNATIONAL, INC.**

74-5620-A Palani Road, Suite 204

Kailua-Kona, Hawaii 96740

Phone: (808) 326-4733

Fax: (866) 887-8885

Email: [btsushima@ssfm.com](mailto:btsushima@ssfm.com)

[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Chief Lawrence K. Mahuna  
Police Department  
County of Hawaii  
349 Kapiolani Street  
Hilo, Hawaii 96720-3998

Dear Chief Mahuna:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated August 5, 2003, concerning the subject project. We note that your department has no comments on or objections to the proposed project at this time.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
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

July 22, 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

**Kokoiki 0.10 MG Concrete Reservoir Project**  
**Pre-Assessment Consultation for Draft Environmental Assessment**  
**Tax Map Key: (3) 5-5-004:por. 051**

We are in receipt of your letter, dated July 17, 2003, requesting comments from the Planning Department regarding your preparation of a Draft Environmental Assessment for the referenced 100,000 gallon concrete reservoir proposed by the County of Hawaii Department of Water Supply for location on approximately 0.5 acres of the subject parcel.

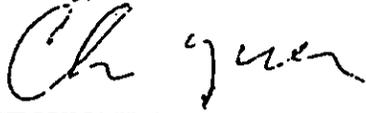
The subject 4.934-acre parcel is zoned Agricultural (A-20a) by the County and is situated within the State Land Use (SLU) Agricultural district. The proposed project location is not in the Special Management Area.

Pursuant to §205-4.5, Hawaii Revised Statutes and §25-5-72(a)(22), Hawaii County Code (Zoning Code), utility substations, including a public water storage facility is a permitted use in the Agricultural district. Therefore, the Planning Department has no comments regarding the proposed project.

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
Page 2  
July 22, 2003

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

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

LMB:pak  
P:\WP\WIN60\Larry\EA Comments\SSFM-Kokoiki5-5-4-51 Dra\EA\PreCmnts.doc



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (868) 887-8885  
Email: [btzushima@ssfm.com](mailto:btzushima@ssfm.com)  
[pharlow@ssfm.com](mailto:pharlow@ssfm.com)

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

August 21, 2003

2003\_016.000

Mr. Christopher J. Yuen, Director  
Planning Department  
County of Hawaii  
101 Pauahi Street, Suite 3  
Hilo, Hawaii 96720-3043

Dear Mr. Yuen:

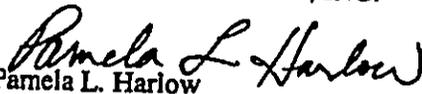
Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

Thank you for your comment letter dated July 22, 2003, concerning the subject project. We note your comment that the subject property is zoned Agricultural (A-20a) by the County and situated within the State Land Use Agricultural District. Furthermore, we acknowledge your comment that, pursuant to §205-4.5, Hawaii Revised Statutes, and §25-5-72(a)(22), Hawaii County Code, utility substations, including public water storage facilities, are permitted uses in the Agricultural District.

The Draft Environmental Assessment will include a complete analysis of the proposed project's conformance with applicable State and County plans and policies.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

  
Pamela L. Harlow  
Planner



Warren H. W. Lee, P.E.  
President

August 21, 2003

Ms. Pamela L. Harlow, Planner  
SSFM International  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, HI 96740

Dear Ms. Harlow:

Subject: Kokoiki 1.10 MG Concrete Reservoir Project Comments

HELCO has reviewed your letter of July 17, 2003 and as requested, our comments follow:

1. HELCO has no specific comments regarding the proposed land acquisition of State Land at Kokoiki.
2. HELCO will require more information as to the need for any electrical service at the proposed site. The information should include service voltage, ampere size, estimated demand, etc. If well pumps or booster pumps are to be installed, we will need its rating, use pattern and starting characteristics.
3. HELCO's nearest substation is our Hawi substation with a limited transformer capacity. We will need to ensure that the transformer does not overload with the proposed additional load and perform an engineering analysis for resulting voltage, flicker, and power draw.
4. HELCO recommends having your electrical consultant provide the information noted above to HELCO's Engineering Department so we could determine what infrastructure additions/improvements would be necessary to accommodate the proposed load.
5. HELCO requires easements for the distribution lines and also for right-of-entry access.

Please provide the Draft Environmental Assessment to HELCO's Engineering Department, attention Clyde H. Nagata, PE, Manager of Engineering for review and comments.

Sincerely,

Warren H.W. Lee, PE  
President of HELCO

WHWL:CHN:ln

An HEI Company

---



**SSFM INTERNATIONAL, INC.**  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740  
Phone: (808) 326-4733  
Fax: (888) 887-8885  
Email: [htsushima@ssfm.com](mailto:htsushima@ssfm.com)  
[phardow@ssfm.com](mailto:phardow@ssfm.com)

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

August 25, 2003

2003\_016.000

Mr. Warren H.W. Lee, P.E., President  
Hawaii Electric Light Company, Inc.  
P.O. Box 1027  
Hilo, Hawaii 96721-1027

Dear Mr. Lee:

**Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment**

Thank you for your comment letter dated August 21, 2003, concerning the subject project. We note you have no comment on the proposed land acquisition at Kokoiki. We do offer the following responses to your other comments.

The need for additional information regarding the extent of electrical service required by the Kokoiki Reservoir will be provided to HELCO during the design phase of the project. Such plans and information will include service voltage, ampere size, estimated demand, and the rating, use patterns and starting characteristics of any pumps associated with the project.

Furthermore, DWS or its electrical design consultant will coordinate such plans and information with your staff to help evaluate the project's effect on your transformer, and to determine whether infrastructure additions or improvements to HELCO's system would be necessary to accommodate the proposed load. Plans will be submitted to your Engineering Department for its review and approval as requested.

HELCO's requirement for easements for distribution lines and right-of-entry access will be addressed by DWS once the County has acquired the State-owned land sought for the project.

If you have any questions, please give me a call at (808) 326-4733. Thank you.

SSFM INTERNATIONAL, INC.

*Pamela L. Harlow*  
Pamela L. Harlow  
Planner

# **APPENDIX B-2**

---

## ***DRAFT EA COMMENT LETTERS AND RESPONSES***



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96856-5440

September 9, 2003

REPLY TO  
ATTENTION OF

Regulatory Branch

Ms. Pamela L. Harlow  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

This letter is written regarding comments to the Draft Environmental Assessment for the Kokoiki 0.10 MG Concrete Reservoir Project proposed by the Department of Water Supply, County of Hawaii. The project involves the construction of a new concrete water tank on a parcel identified as TMK: (3) 5-5-004:51 located in the community of Hawi, North Kohala District, Island of Hawaii.

It does not appear that the construction of the new tank and any related appurtenances will impact waters of the U.S. to include wetlands. Therefore a Department of the Army permit will not be required for this project.

Thank you for the opportunity to review a copy of the draft EA. File Number 200300509 is assigned to this project. Please refer to this number in any future correspondence with our office. Should you need additional information, you may contact Ms. Lolly Silva at (808) 438-7023, or FAX (808) 438-4060.

Sincerely,

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



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

345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720  
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

November 21, 2003

Mr. George P. Young, P.E.  
Chief, Regulatory Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Building 230  
Fort Shafter, Hawai'i 96858-5440

**KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT  
FILE NO. 200300509**

Thank you for your letter dated September 9, 2003. We confirm your determination that construction of the new tank and related appurtenances will not impact waters of the United States and that a Department of the Army permit will not be required for this project.

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

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

---

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)1305.3

OCT - 3 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

Subject: Kokoiki 0.10 MG Concrete Reservoir Project  
Draft Environmental Assessment

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 have your staff call Mr. David DePonte of the Public Works Division at 586-0492.

Sincerely,

  
RUSS K. SAITO  
State Comptroller

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



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

345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720

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

November 21, 2003

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

**KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated October 3, 2003, concerning the subject project. We note that the project does not impact any of your department's projects or existing facilities, and that your department does not have any further comment on the proposed project at this time.

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

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

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

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

---

LINDA LINGLE  
GOVERNOR



PATRICIA HAMAMOTO  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2380  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

September 29, 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawai'i 96740

Dear Ms. Harlow:

Subject: Kokoiki Reservoir Project  
Draft Environmental Assessment (DEA)  
Hawi, Hawai'i, TMK: 5-5-004: por. 51

The Department of Education has no comment on the DEA for half an acre of state land to be acquired by the County of Hawai'i for a water reservoir and appurtenances.

Should you have any questions, please call 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.

Thank you for the opportunity to review your plans.

Very truly yours,

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

Patricia Hamamoto  
Superintendent

PH:hy

cc: Rae M. Loui, Office of Business Services  
Raynor M. Minami, Facilities and Support Services Branch  
Shari Komata, Department of Water Supply, County of Hawai'i  
Genevieve K.Y. Salmonson, Office of Environmental Quality Control

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER



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

345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720

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

November 21, 2003

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

**KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated September 29, 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 EA and providing us with your input.

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809  
October 3, 2003

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

KOKOIKISSEM.RCM  
LD-NAV

SSEM International, Inc.  
Pamela L. Harlow  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

Subject: Draft Environmental Assessment (DEA)  
Project: Kokoiki 0.10 MG Concrete Reservoir  
Authority: County of Hawaii Planning Department  
Applicant: County of Hawaii Department of Water Supply  
TMK: 3rd/ 5-5-004: Portion of 051

Thank you for the opportunity to review and comment on the subject  
Draft Environmental Assessment.

A copy of the DEA was distributed to the following Department of  
Land and Natural Resources' Divisions for their review and comment:

- Division of Forestry and Wildlife
- Engineering Division
- Commission on Water Resource Management
- Land-Hawaii District Land Office

Attached is a copy of the Engineering Division comment.

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

Should you have any questions, please feel free to contact  
Nicholas A. Vaccaro of the Land Division Support Services Branch at 1-  
808-587-0384.

Very truly yours,

DIERDRE S. MAMIYA  
Administrator

C: HDLO

LINDA LINGLE  
GOVERNOR OF HAWAII

RECEIVED  
LAND DIVISION



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



2003 SEP 12 P 3 35

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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

September 10, 2003

LD/NAV  
Ref.: KOKOIKISSFM.CMT

Suspense Date: 9/26/03

MEMORANDUM:

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

FROM: Dierdre S. Mamiya, Administrator *[Signature]*  
Land Division

SUBJECT: Draft Environmental Assessment  
Project: Kokoiki 0.10 MG Concrete Reservoir  
Authority: County of Hawaii Department of Water Supply  
Consultant: SSFM International  
TMK: (3) 5-5-004: Portion of 051

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.

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: *[Signature]*

Date: SEP 11 2003

Name: MICHAEL G. BUCK, ADMINISTRATOR  
DIVISION OF FORESTRY AND WILDLIFE

LINDY LINGLE  
GOVERNOR OF HAWAII

RECEIVED  
LAND DIVISION



2003 SEP 12 P 2:25



DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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

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 RESOURCE ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

September 10, 2003

LD/NAV

Ref.: KOKOIKISSEFM.CMT

Suspense Date: 9/26/03

MEMORANDUM:

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

FROM: Dierdre S. Mamiya, Administrator  
Land Division

SUBJECT: Draft Environmental Assessment  
Project: Kokoiki 0.10 MG Concrete Reservoir  
Authority: County of Hawaii Department of Water Supply  
Consultant: SSFM International  
TMK: (3) 5-5-004: Portion of 051

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.

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: Engineering

Signed:

Date: 9/12/03

Name:

Eric Hirano  
ERIC T. HIRANO, CHIEF ENGINEER

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/NAV

Ref: Koikoikissfm.cmt

COMMENTS

- We confirm that the project site is located in Zone X.
- Please note that the project site is located in Zone \_\_\_\_\_.
- Please note that the correct Flood Zone designation for the project site is \_\_\_\_\_.
- Please note that the project must comply with rules and regulations of the National Flood Insurance Program (NFIP), whenever work is required within a flood zone. If there are questions regarding the NFIP, please contact the State Coordinator, Mr. Sterling Yong, of the Department of Land and Natural Resources at 587-0248. If there are questions regarding flood ordinances, please call the applicable County coordinators below:
- Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
- Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
- Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning..
- Mr. Wallace Kudo at (808) 241-6620 of the County of Kauai, Department of Public Works
- The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- The applicant should provide the water demands and calculations to the Engineering Division the water demands will be included in the State Water Projects Plan update.
- Additional Comments: \_\_\_\_\_

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

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

ERIC T. HIRANO, CHIEF ENGINEER

Date: \_\_\_\_\_

9/12/03

LINDA LINGOLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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

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 RESOURCE ENFORCEMENT  
ENGINEERING

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

September 10, 2003

LD/NAV

Ref.: KOKOIKISSFM.CMT

Suspense Date: 9/26/03

MEMORANDUM:

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

FROM: Dierdre S. Mamiya, Administrator  
Land Division

SUBJECT: Draft Environmental Assessment  
Project: Kokoiki 0.10 MG Concrete Reservoir  
Authority: County of Hawaii Department of  
Consultant: SSFM International  
TMK: (3) 5-5-004: Portion of 051

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

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: Water Resource Management

Signed:

Date: 9/11/03

Name:

Edwin T. Sakoda  
Edwin T. Sakoda

COMMISSION ON WATER  
RESOURCE MANAGEMENT

03 SEP 10 P4:13

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DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

2003 SEP 12 AM 9:17

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LAND DIVISION



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

345 KEKUAOAO STREET, SUITE 20 • HILO, HAWAII 96720

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

November 21, 2003

SSFM INTERNATIONAL, INC.  
RECEIVED

DEC 01 2003

*plh*  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**FILE COPY**

FILE \_\_\_\_\_

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

**KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated October 3, 2003, which included your division's comments concerning the subject project.

We note that the Division of Forestry and Wildlife, as well as the Commission on Water Resource Management, responded that they had no comments on the proposed project.

We are confirming the Engineering Division's comment that the project site is located in Zone X, or outside the 500-year flood area.

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 Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

October 22, 2003

HAWAI'I HISTORIC PRESERVATION  
DIVISION REVIEW

LOG NO.: 2003.2083  
DOC NO.: 0310JK16

**Applicant/Agency:** SSFM International, Inc.  
**Address:** 74-562-A Palani Road, Suite 204  
Kailua-Kona, HI 96740

**Project:** Chapter 6E-42 Review (County) Draft Environmental Assessment  
Kokoiki 0.1 MG Concrete Reservoir Project

**Location:** Puuepa-Kokoiki Homesteads, North Kohala, Hawai'i Island  
**Tax Map Key:** (3) 5-5-004: Por. 51

---

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 10-22-03  
Historic Preservation Division-Kona  
Jeanne M. Knapp

Cc: Department of Water Supply, County of Hawai'i  
Office of Environmental Quality and Control (OEQC), Dept. Of Health

---



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

345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720

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

November 21, 2003

Ms. Holly McEldowney, Acting Administrator  
State of Hawai'i  
State Historic Preservation Department  
Department of Land and Natural Resources  
Kakuhihewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, Hawai'i 96707

**KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated October 22, 2003 for 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 intensive cultivation has altered the land.

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton Pavao  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

LINDA LINGLE  
GOVERNOR



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

RODNEY K. HARAGA  
DIRECTOR

Deputy Director  
BRUCE Y. MATSUI

IN REPLY REFER TO:

HWY-PS  
2.1886

OCT - 6 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

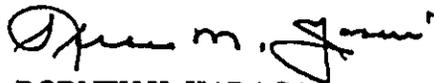
Dear Ms. Harlow:

Subject: Draft Environmental Assessment for Kokoiki 0.1 MG Concrete Reservoir Project,  
Hawaii, TMK: 5-5-004: por. 51

Thank you for consulting us. The proposed reservoir will not affect State highway facilities. If any utility work is proposed within the State highway right-of-way, plans should be referred to our Highways Division, Hawaii District Office, for their review and approval.

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

Very truly yours,

  
RODNEY K. HARAGA  
Director of Transportation

c: Ms. Sheri Komata  
Department of Water Supply



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

October 7, 2003

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 Kokoiki 0.1 MG Concrete Reservoir, Hawai'i

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

1. Please illustrate the visual impacts of the proposed water tank from public places such as Akoni Pule Highway. Photos of existing conditions taken from public viewpoints are helpful in evaluating visual impacts. Provide renderings of future structures superimposed on photos of existing views. We recommend constructing and painting the tank with materials and colors that blend with the surroundings. We also recommend landscaping with Native Hawaiian plants to reduce the visual impacts.
2. Please consult with the immediate neighbors of this project and any nearby community associations.
3. 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 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720

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

December 2, 2003

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

**KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated October 7, 2003, concerning the subject project. In response to your comments, we offer the following information.

1. The proposed reservoir is not expected to have a significant impact on important scenic views or negatively impact visual resources. The reservoir structure would not be visible from Akoni Pule Highway since existing vegetation blocks mauka views of the project site. Therefore, renderings superimposing the project on photographs would not be useful or practicable. To demonstrate this, photos taken towards the site from Akoni Pule Highway will be included in the Final Environmental Assessment along with an expanded discussion of the project's visual impacts.

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

2. Copies of the Draft Environmental Assessment were provided to the Kohala Hawaiian Civic Club, the Kohala Merchants' Association, the North Kohala Community Resource Center, the Kona-Kohala Chamber of Commerce, and the Kailua-Kona Public Library and the Bond Memorial Library for the general public. The Department of Water Supply staff and/or representatives have been and will continue to consult with the immediate neighbors of the project site during the design and construction phases of the reservoir project.
3. The project will comply with §103D-407, HRS, concerning the use of recycled glass as appropriate for construction projects and roadway materials. Also, the project will comply with §103D-408, HRS, concerning the use of indigenous and Polynesian introduced plants for landscaping as appropriate.

*... Water brings progress...*

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Ms. Genevieve Salmonson, Director  
Page 2  
December 2, 2003

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

Should you have any questions, please contact Ms. Shari Komata, of our Water Resources and Planning Branch at (808) 961-8070, extension 252, or Ms. Pamela Harlow of SSFM International, Inc., at (808) 326-4733.

Sincerely yours,



Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.





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

345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720

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

November 21, 2003

**TO:** Ms. Barbara Bell, Director  
Department of Environmental Management

**FROM:** Milton D. Pavao, Manager

**SUBJECT:** **KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT**  
**DRAFT ENVIRONMENTAL ASSESSMENT**

Thank you for your letter dated September 26, 2003, concerning the subject project.

During construction of the reservoir and appurtenances, appropriate construction wastes will be disposed of at the Pu'uana'hulu Landfill in accordance with all applicable regulations.

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

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

---

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

October 8, 2003

Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawai'i 96740

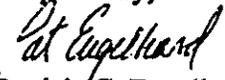
Subject: Kokoiki 0,10 MG Concrete Reservoir Project  
Pre-Assessment Consultation for Draft Environmental Assessment

Dear Ms. Harlow:

Thank you for allowing us the opportunity to review and provide comment on the Draft Environmental Assessment "Draft EA".

We take no exceptions and have no comments on the proposed reservoir project.

Respectfully,

  
Patricia G. Engelhard  
Director

Cc: Shari Komata, Department of Water Supply  
Office of Environmental Quality Control



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

345 KEKUAOAO STREET, SUITE 20 • HILO, HAWAII 96720

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

November 21, 2003

**TO:** Ms. Patricia G. Engelhard, Director  
Department of Parks and Recreation

**FROM:** Milton D. Pavao, Manager

**SUBJECT:** KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT

Thank you for your letter dated October 8, 2003, concerning the subject project. We note that your department has no comments on the proposed project.

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

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

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

September 18, 2003

Ms. Pamela L. Harlow  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua, Kona, HI 96740

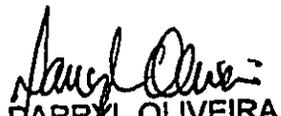
Dear Ms. Harlow:

RE: KOKOIKI 0.1 MG CONCRETE RESERVOIR PROJECT  
NORTH KOHALA DISTRICT, HAWAII  
TAX MAP KEY (3) 5-5-004: POR. 051

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

Thank you for the opportunity to comment.

Sincerely,

  
DARRYL OLIVEIRA  
Fire Chief

RK:lk

cc: Department of Water Supply  
Office of Environmental Quality and Control





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

345 KEKUAŌAOA STREET, SUITE 20 • HILO, HAWAII 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8667

November 21, 2003

SSFM INTERNATIONAL, INC.  
RECEIVED  
NOV 25 2003

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TO: Mr. Darryl Oliveira, Fire Chief  
Fire Department

FROM: Milton D. Pavao, Manager

SUBJECT: KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT

**FILE COPY**

FILE \_\_\_\_\_

Thank you for your letter dated September 18, 2003, concerning the subject project. We note that you have no comments to offer at this time regarding the Draft Environmental Assessment.

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

If you have any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

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 15, 2003

Ms. Pamela L. Harlow, Planner  
SSFM International, Inc.  
74-5620-A Palani Road, Suite 204  
Kailua-Kona, Hawaii 96740

Dear Ms. Harlow:

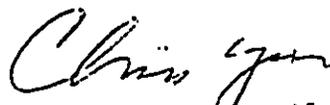
**Kokoiki 0.10 MG Concrete Reservoir Project**  
**Draft Environmental Assessment Comments**  
**Tax Map Key: (3) 5-5-004:por. 051**

This is in response to your letter, dated September 5, 2003, requesting comments on the Draft Environmental Assessment for the referenced 100,000 gallon concrete reservoir proposed by the County of Hawaii Department of Water Supply for location on approximately 0.5 acres of the subject parcel.

The Planning Department has no additional comments to offer regarding the Draft EA for this project.

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

Sincerely,

  
CHRISTOPHER J. YUEN  
Planning Director

LMB:pak  
P:\WPWIN60\Larry\EA Comments\SSFM-Kokoiki5-5-4-51 DraftEACmmts.doc



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

345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8667

November 21, 2003

**TO:** Mr. Christopher J. Yuen, Planning Director  
Planning Department

**FROM:** Milton D. Pavao, Manager

**SUBJECT:** KOKOIKI 0.10 MG CONCRETE RESERVOIR PROJECT  
DRAFT ENVIRONMENTAL ASSESSMENT

Thank you for your letter dated September 15, 2003, concerning the subject project. We note that your department has no additional 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 Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, ext. 252, or Ms. Pamela Harlow of SSFM International, Inc., at 326-4733.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:dfg

cc: Ms. Pamela Harlow, SSFM International, Inc.

*... Water brings progress...*

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