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

November 9, 2001

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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

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

FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND FILING OF FINAL ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

The County of Hawaii (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 23, 2001.

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 November 23, 2001, 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 emailed to your office and hard copy enclosed).

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 Hawaii, Department of Water Supply

Identification of Accepting Authority

County of Hawaii, Department of Water Supply

Brief Description of Proposed Action

The County DWS is proposing the Pahala 0.5-MG Concrete Reservoir Project. This project involves the demolition and removal of the existing Pahala Reservoir's 500,000-gallon (0.5 MG) steel water tank, and the construction of a new concrete 0.5-MG water tank and accessory facilities. The project site is located at Tax Map Key 9-06-05:048 (per recent consolidation and resubdivision of parcels) in the Ka'u District of the Island of Hawaii.

The purpose for this project is to ensure the continued service of potable water to the residents of the Pahala community. The existing water tank is old and has deteriorated over time; therefore, a new concrete water tank is needed to replace this existing steel tank.

Determination

A Finding of No Significant Impact (FONSI) determination is warranted for the Pahala 0.5-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 project would not curtail the range of beneficial uses of the surrounding environment. The additional property acquired by the County was privately owned and used for large-scale sugar cane cultivation and, most recently, macadamia nut orchards.

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 344, HRS. A discussion of the project's consistency with applicable guidelines was 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 Pahala 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 occur on the project site or in the immediate surrounding area.

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 also replace the deteriorated existing steel water tank and help the County DWS provide continued reliable water service to Pahala 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 only involves replacement of the existing steel water tank with a new concrete water tank and other accessory utility improvements.

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 Draft 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 Pahala reservoir and, therefore, does not involve a commitment for larger actions.

9. Substantially affects a rare, threatened, or endangered species, or its habitat. There were no known endangered, threatened, or rare botanical resources within the reservoir project site, and the improvements would also not substantially affect such resources that may occur in the general vicinity.

10. Detrimentally 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.

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 essentially only involves the replacement of the existing steel water tank.

Should you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

Enc.

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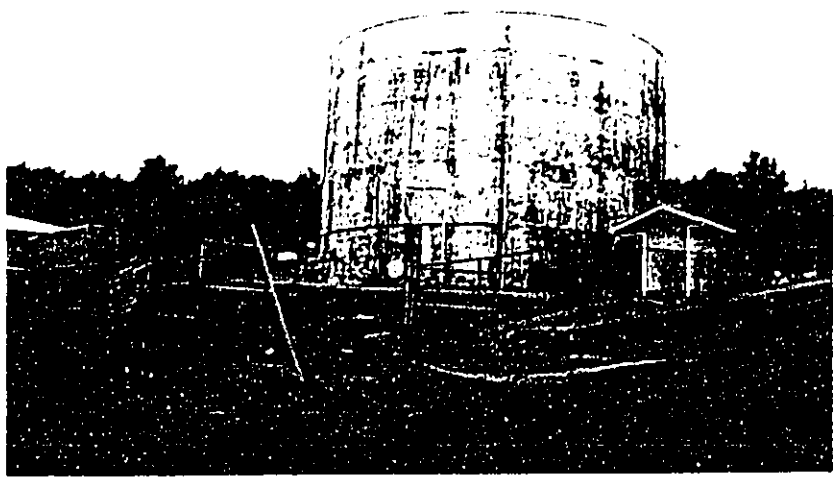
FINAL ENVIRONMENTAL ASSESSMENT

FOR

PAHALA 0.5 MG CONCRETE RESERVOIR PROJECT

T.M.K: (3) 9-06-05: 048
PAHALA, KA'U, HAWAII



NOVEMBER 2001

DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

FINAL ENVIRONMENTAL ASSESSMENT

FOR

PAHALA 0.5 MG CONCRETE RESERVOIR PROJECT

T.M.K: (3) 9-06-05: 048
PAHALA, KA'U, HAWAII

NOVEMBER 2001

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: 11/8/01

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

PREPARED BY:

SSFM INTERNATIONAL

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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 Pahala 0.5 Million Gallon (MG) Concrete Reservoir Project. This project involves the demolition and removal of the existing 0.5 MG steel water reservoir and the construction of a new concrete 0.5 MG water reservoir. The project site is located at TMK 9-06-05: 048 (per recent consolidation and resubdivision of parcels) in the Ka'u District of the Island of Hawaii.

The purpose for this project is to ensure the continued service of potable water to the residents of the Pahala community. The existing water tank is old and has deteriorated over time, therefore, a new concrete water tank is needed to replace this existing steel tank. Figure 1.1 shows the general location and vicinity of the project planned in the area of Pahala. Table 1.1 provides the summary of pertinent information associated with this project.

Proposing Agency And Accepting Authority

The Pahala Reservoir project would involve the use of County funds and land for the construction of a new concrete water tank along with the demolition and removal of the existing deteriorated steel water tank. 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) was published in the September 23, 2001 issue of *The Environmental Notice* in conformance with these regulatory requirements. This Draft EA addressed the probable impacts associated with this water reservoir project. Subsequently, this Final Environmental Assessment (Final EA) was prepared after review of the Draft EA and comments received during the 30-day comment period. A Finding of No Significant Impact (FONSI) is consequently being issued for this project.

The County Department of Water Supply will serve as the Proposing Agency for this Pahala 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 would be the County Department of Water Supply as the authorized representative for the Mayor of the County of Hawaii.

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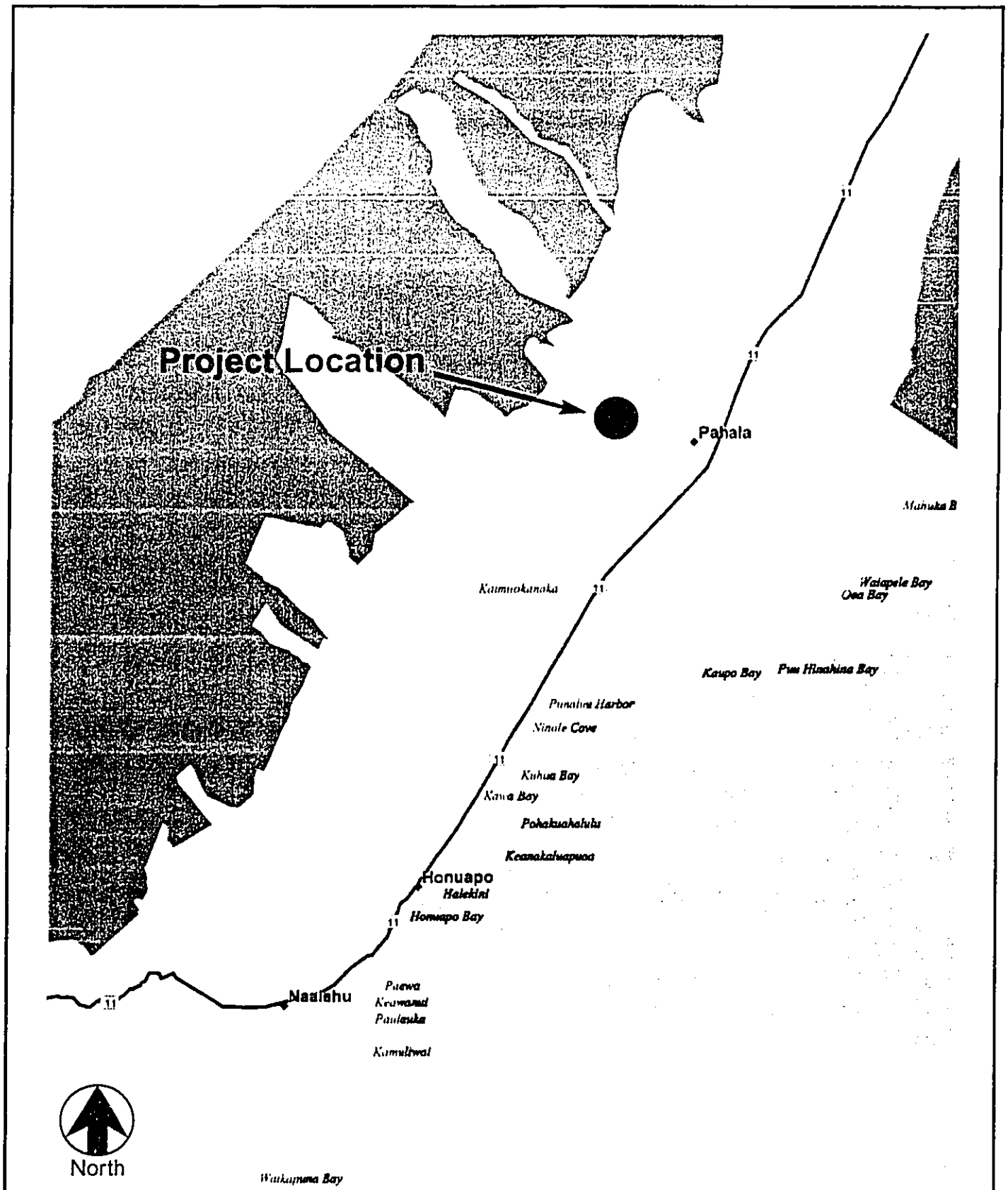


PROJECT LOCATION MAP

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

FIGURE 1.1

Source:
Delorme Street Atlas USA

Table 1.1 Summary Information

Project Name:	Pahala 0.5 MG Concrete Reservoir Project
Proposing Agency:	Department of Water Supply County of Hawaii 345 Kekuanaoa Street, Suite 25 Hilo, Hawaii 96720 Contact: Mr. Glenn Ahuna
Authorized Agent:	SSFM International, Inc. 501 Sumner Street, Suite 502 Honolulu, Hawaii 96817 Contact: Mr. Ronald A. Sato, AICP
Accepting Authority:	Department of Water Supply, County of Hawaii
Project Description:	This project involves the demolition and removal of a 0.5 MG steel water tank and construction of a new concrete 0.5 MG water tank. The purpose for this project is to ensure on-going water services to the Pahala area residents on the Island of Hawaii.
Project Location:	The proposed project is located in the Pahala District of the Island of Hawaii.
Land Ownership:	The existing water tank site is owned by the County of Hawaii, and the new property added to accommodate the new water tank site was recently acquired by the County. These parcels have been consolidated and re-subdivided into a new lot.
Tax Map Key:	9-06-05: 048
State Land Use:	Agricultural District
County General Plan:	Intensive Agricultural
County Zoning:	Agricultural District, Minimum 20-acre Lots (A-20a)
SMA Designation:	Project is not within 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 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) which are the Urban, Rural, Agricultural, and Conservation districts. The boundaries of these districts are shown on maps referred to as State Land Use District Boundary Maps.

The State Land Use Commission's (LUC) Land Use District Boundary Map for Pahala (Map H-51) 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. As shown on this figure, the only area situated within the "Urban District" in the general area is the Pahala community located below (west) the project site.

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

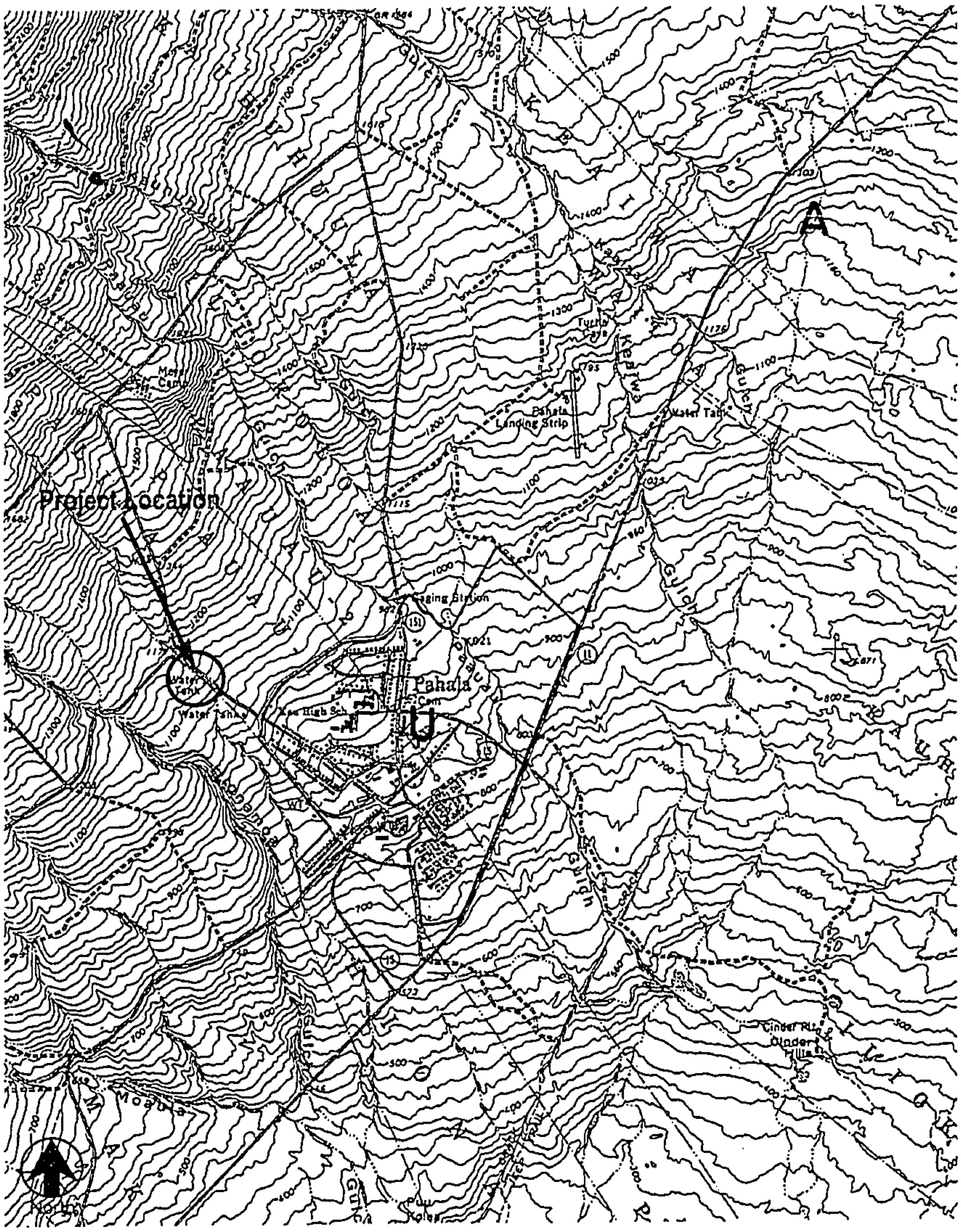
1.2.3 County of Hawaii Zoning District

The Pahala Reservoir project site, along with surrounding properties, is located within the Ka'u district of the island of Hawaii. Under this zoning map, the property site encompasses lands currently zoned A-20a, Agriculture District with a minimum building site lot (parcel) area of 20 acres. Surrounding lands in the immediate vicinity of the subject property are similarly zoned A-20a.

1.2.4 Special Management Area

Under Chapter 205A (Coastal Zone Management), HRS, the County is given authorization to regulate land uses located within the established Special Management Area for the island of Hawaii. Review of the County of Hawaii's Special Management Area map for the Pahala area determined that the SMA boundary generally follows the shape of the shoreline about 1,500 feet inland.

The project site is situated more than four (4) miles away from the shoreline and subsequently miles away from 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.



STATE LAND USE DISTRICT BOUNDARY MAP

FIGURE 1.2

Source:
State Land Use Commission
Map H-51

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

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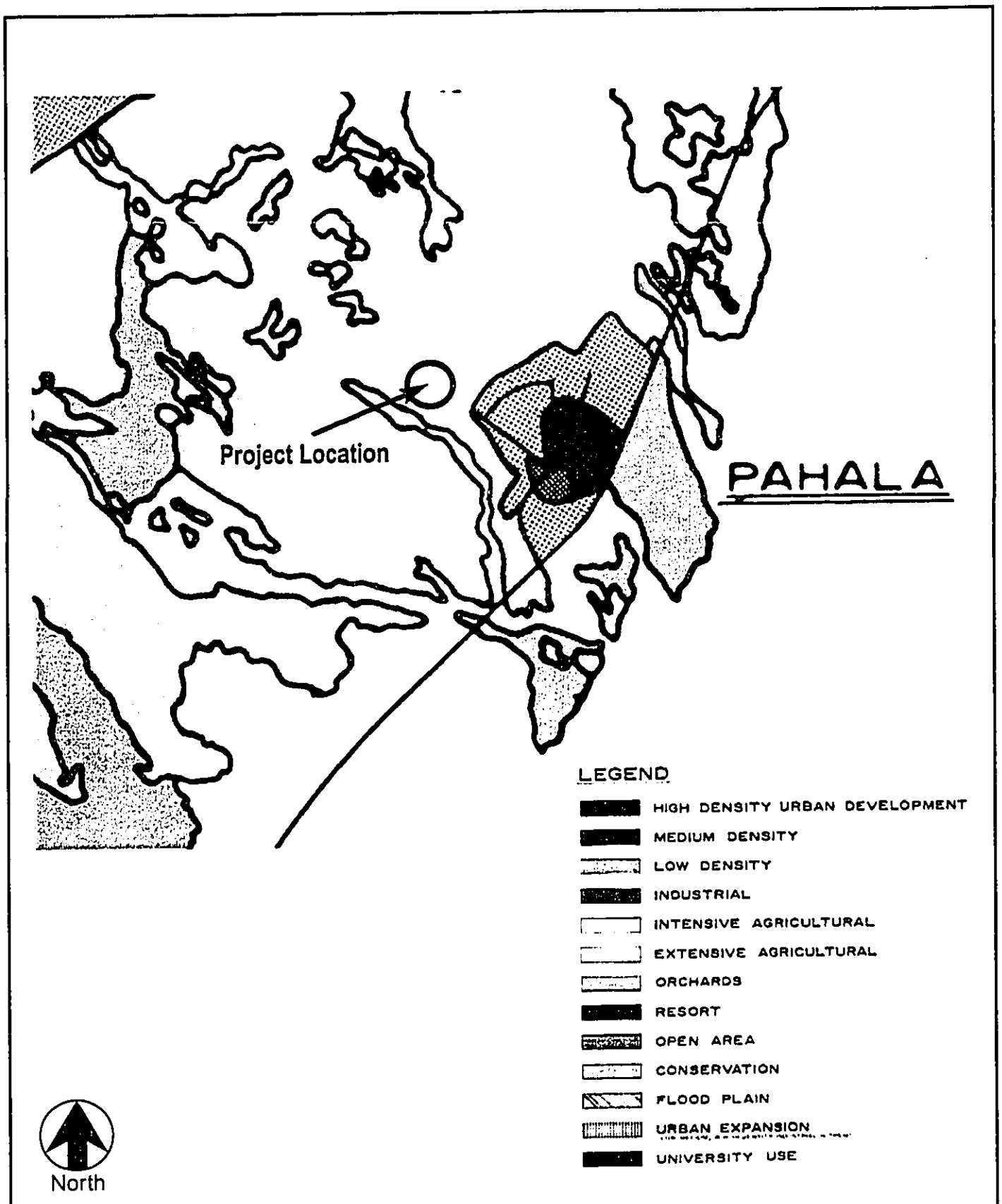

LAND USE PATTERN ALLOCATION GUIDE MAP

FIGURE 1.3

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Source: County Planning Department

CHAPTER 2
PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND VICINITY

The Pahala Reservoir project is located on the southeastern end of the Island of Hawaii in the Pahala community of the Ka'u District. The reservoir project site is situated mauka (northwest) of the urbanized community of Pahala, and is approximately 1 hour and 15 minutes away from downtown Hilo. Figure 2.1 shows the project site's location and vicinity in relation to the Pahala community in greater detail.

The Ka'u district is rural area which encompasses most of southeastern land area 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 Pahala, Na'alehu, Wai'ohinu, and Discovery Harbour communities.

Mamalahoa Highway (Highway 11) is a State-operated highway providing vehicular access to the Kau District from other districts on the island. Mamalahoa Highway, also referred to as the Ka'u Belt Road in this district, is a two-laned rural highway providing vehicular access to the Pahala community along with other communities within the Ka'u district.

The existing Pahala reservoir site is located above (mauka or northwest) of the Pahala community and is accessible via a privately-owned plantation road. This road historically functioned as a cane haul road during the area's former sugarcane operations, and now continues to provide vehicular access to the area's agricultural land. The paved plantation road is about 20 feet in width providing two-lane vehicular access but is not stripped.

Existing Surrounding Uses

Existing land uses surrounding this reservoir project site consist of large scale agricultural land being cultivated with macadamia nut orchards. Prior to this, the surrounding land was cultivated with sugarcane until the 1990's. The reservoir site is located about 1,200 feet away from the nearest homes associated with the Pahala community. As a result, there are no urbanized land uses such as residences or commercial shops located in the immediate vicinity. Photos of the surrounding area is provided in Appendix A.

Vehicular traffic on the privately-owned plantation road near the project site is also sparse since traffic is predominantly associated with the large scale agricultural activities. During a recent site visit to the project site, only about four passenger vehicles and a couple diesel trucks traveled on this road within almost an hour period.

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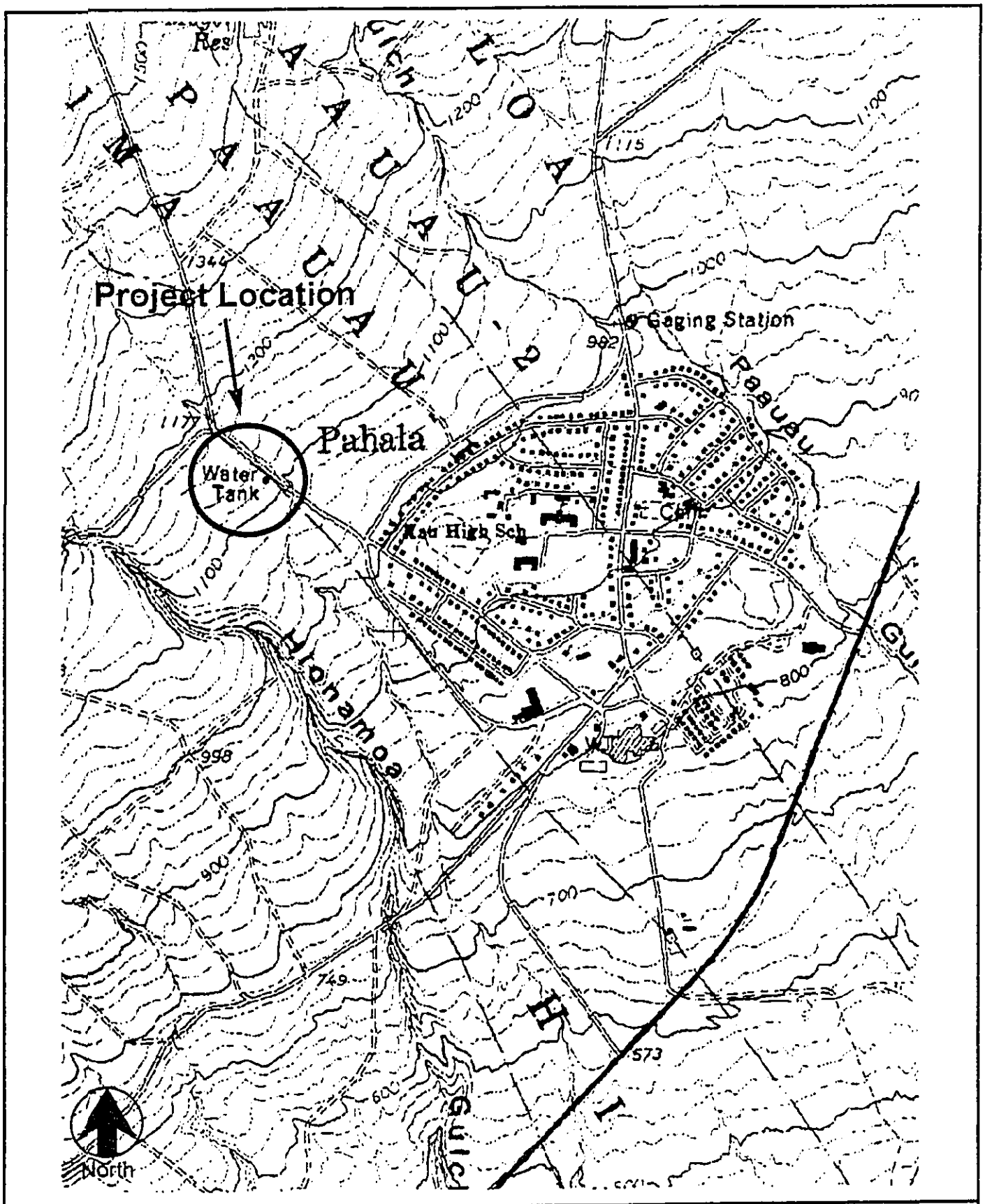


PROJECT VICINITY MAP

FIGURE 2.1

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Source:
Delorme 3-D Topo Quads (1999)

2.2 DESCRIPTION OF PROJECT

The County DWS is proposing to implement improvements to their existing Pahala Reservoir. The improvements would involve the construction of a new 500,000-gallon (0.5 MG) concrete water tank and accessory facilities to replace the existing 0.5 MG steel water tank.

Need For Project

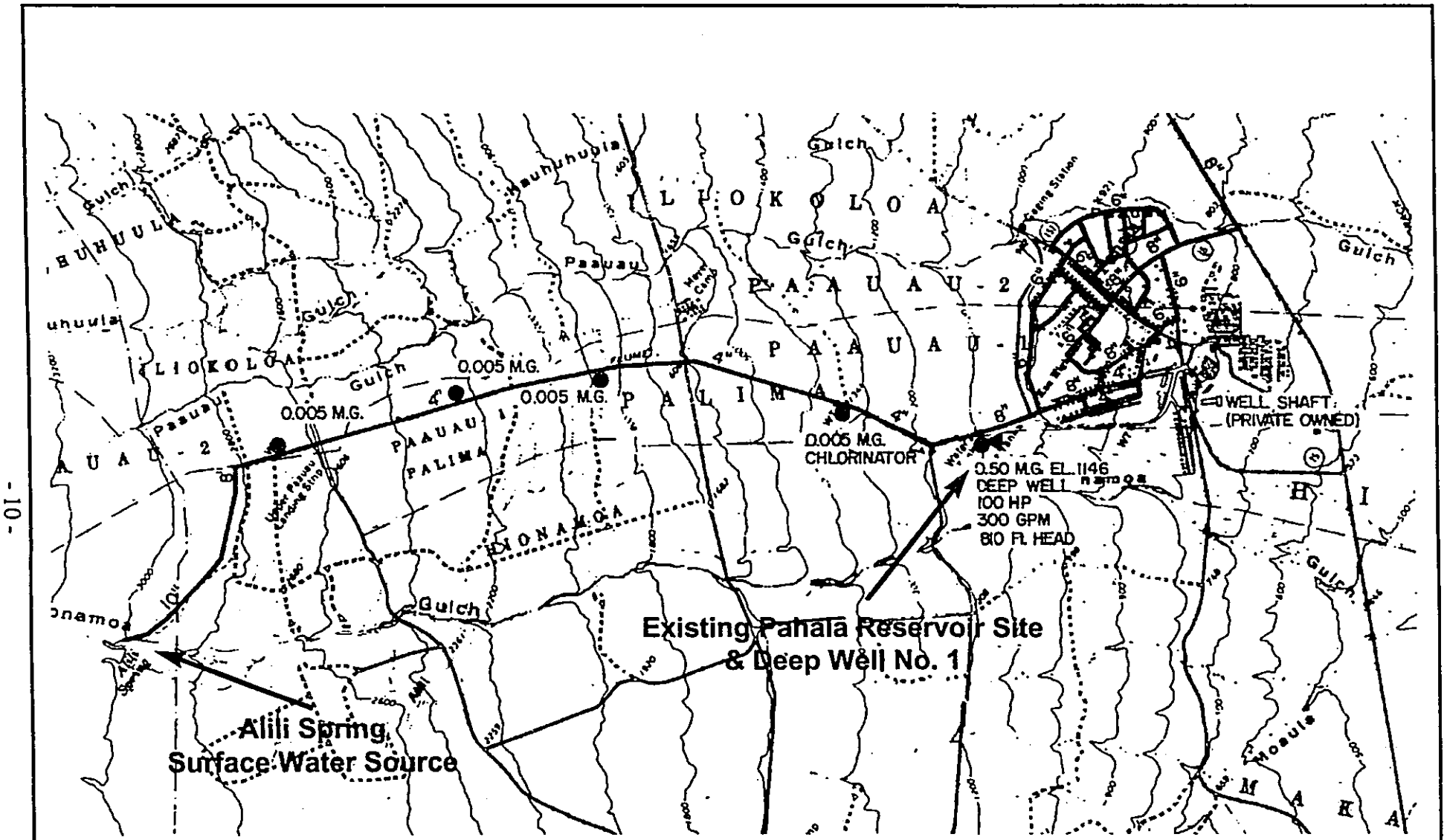
These improvements are needed because the existing 0.5 MG steel water tank has become deteriorated over time. The condition of the painted surface of this steel water tank is poor with the majority of the surface area showing paint failure revealing corroded metal substrate (Masa Fujioka & Associates 2001). Photographs of the deteriorating condition associated with this water tank are provided in Appendix A.

Given the condition of this existing steel water tank, the County DWS is proposing to replace this tank with a new concrete water tank. This new tank would support the County DWS's ability to provide a continued reliable supply of water to Pahala residents well into the future.

Existing Pahala Water System

The Pahala water system is comprised of the Pahala Reservoir and a series of water mains located within roadways. Figure 2.2 shows this existing water system. The water source for this reservoir comes from two sources which are surface water from the Alili Tunnel and the Pahala deep well No. 1 located at the existing reservoir site. The surface water draw from the Alili Tunnel is about 0.230 million gallons per day (mgd) while the ground water draw from the well is 0.147 mgd for a total water draw of 0.377 mgd (CWRM 1989). As shown on Figure 2.2, a 10-inch water main extends from the Alili Tunnel which eventually narrows to a 4-inch water main before connecting to an 8-inch water main at the reservoir site. From this reservoir, a series of 6- and 8-inch water mains serve the Pahala subdivision.

The existing Pahala reservoir consists of the steel water tank and accessory facilities on a site of 12,109 square feet (0.278 acres). This reservoir was constructed prior to 1965 based upon older aerial photographs (Masa Fujioka & Associates 2001). Figure 2.3 shows the Existing Plan of this site, and Appendix A includes photographs of this reservoir and facilities. This water tank has a diameter of 50 feet and height of 35 feet. A chain link fence surrounds this property and a locked gate secures the entrance to the site's driveway. There are also two electric transformers, water meters, the Pahala deep well No. 1, and a chlorination building present on the property as shown on this figure.

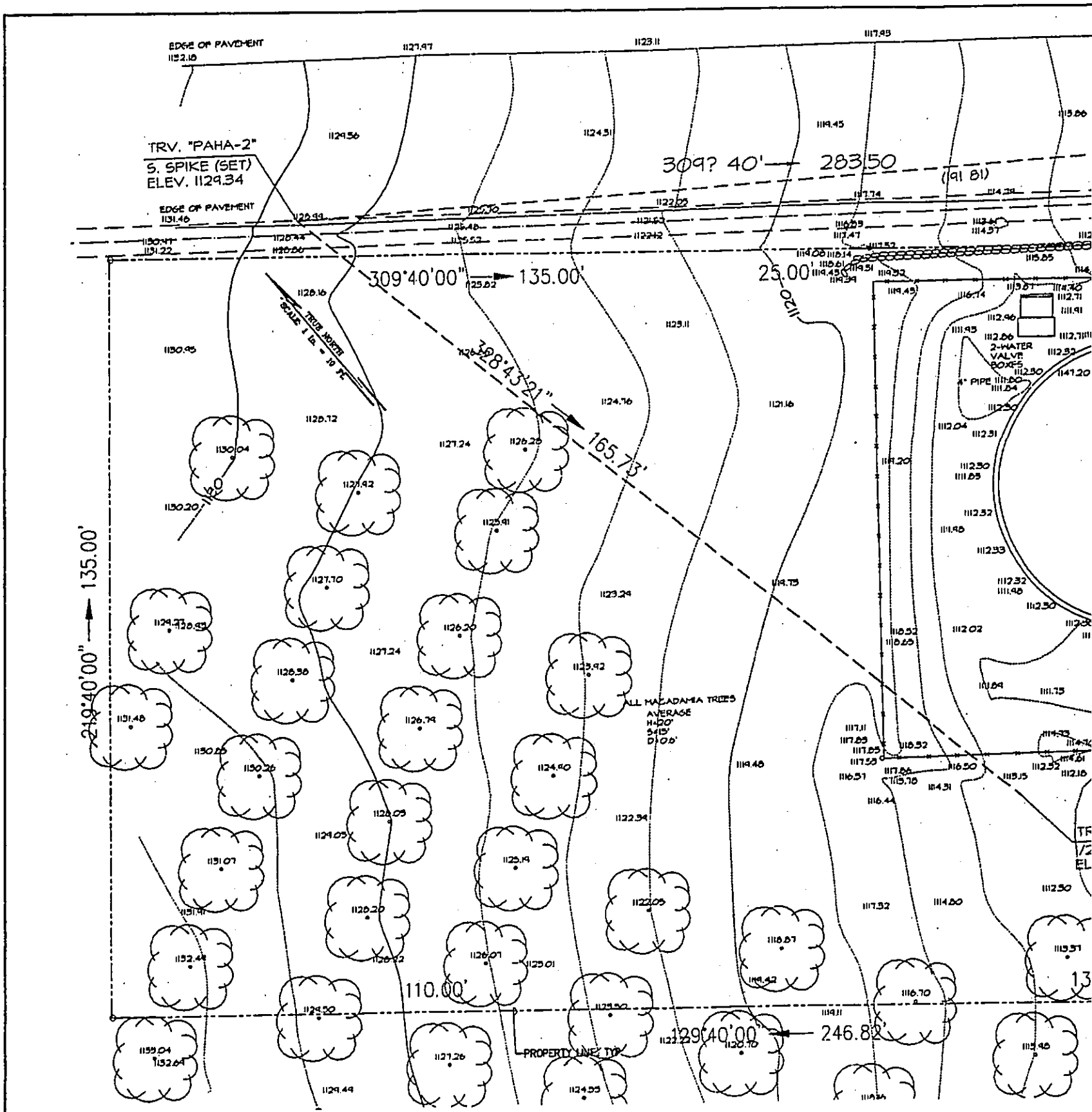


EXISTING PAHALA WATER SYSTEM

Figure 2.2

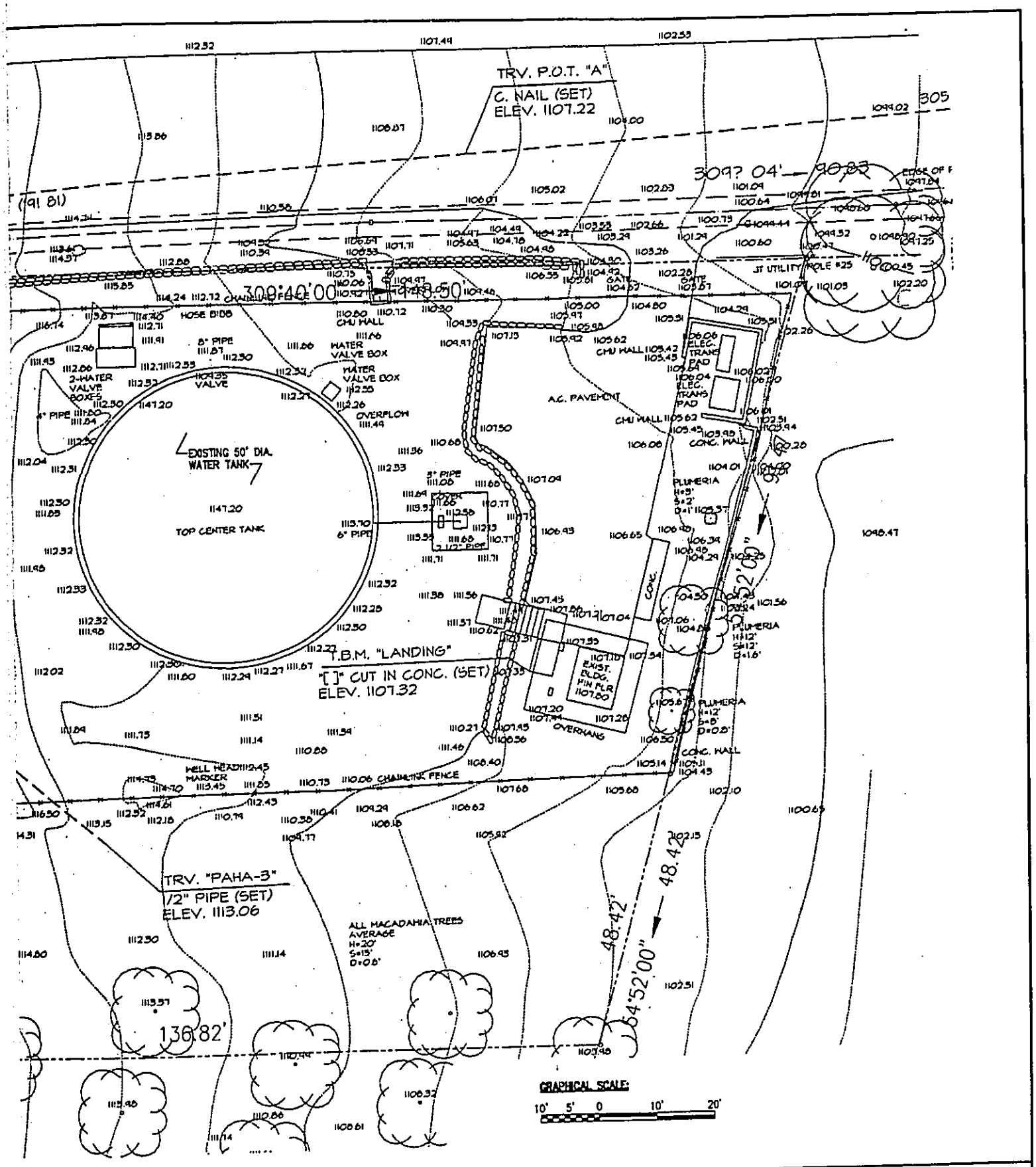
Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Source:
County of Hawaii
Department of Water Supply



EXISTING PAHALA RESERVOIR SITE PL

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply



IR SITE PLAN

FIGURE 2.3

Source:
SSFM International, Inc.

Property Information And Site Conditions

The existing Pahala reservoir site owned by the County consists of a parcel of 12,109 square feet in size, and is identified as Tax Map Key (TMK) 9-06-05: 048. To allow development of the new concrete water tank, the County pursued acquiring additional property adjacent to the reservoir site from the Ka'u Agribusiness Company. This additional property consisted of 23,688 square feet of area from a larger 11.72-acre parcel identified as TMK 9-06-05: 016.

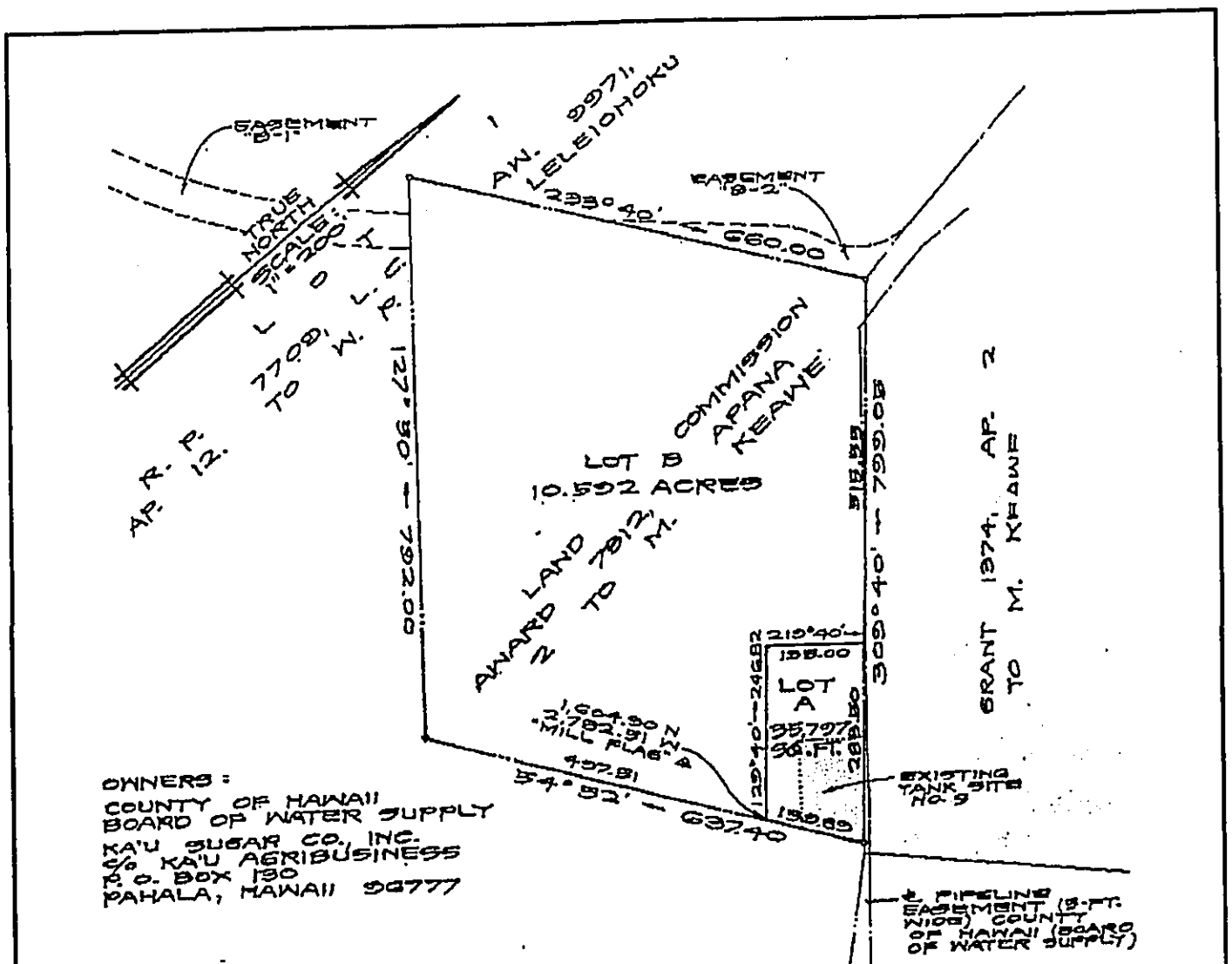
As a result, a consolidation and resubdivision application for this additional property was processed and approved by the County Planning Department in January 2001 under Final Subdivision Approval No. 7364. Figure 2.4 shows this consolidation and resubdivision map. This consolidation and resubdivision created the new proposed Pahala reservoir project site consisting of 35,797 square feet of area (0.822 acre), and identified this new parcel as Lot A. Based upon discussion with the County Planning Department, this Lot A is now identified as TMK 9-06-05: 048 with a new area of 35,797 square feet. Lot B consists of TMK 9-06-05: 016 with a new reduced area of 10.592 acres as shown on the figure. The additional area created for the reservoir project site was recently acquired by the County.

The Pahala reservoir project site thus consists of a 35,797 square foot parcel comprised of the existing reservoir site and the new additional property acquired by the County. This project site is located at elevations ranging from approximately 1,100 feet to 1,200 feet mean sea level. This parcel has a fairly level topography with a gradual slope of less than 10 percent proceeding inland (mauka). The additional property consists of an orchard of macadamia nut trees. Photographs of this property are included in Appendix A.

Proposed Improvements

The County DWS is proposing to construct a new concrete water tank with a capacity of 500,000 gallons to replace the existing steel water tank. Figure 2.5 shows a preliminary Site Plan for this project and Figure 2.6 shows a preliminary Section drawing of this tank. As shown on these figures, the new concrete water tank would be less than 24 feet in height which is lower than the steel tank. As a result, the tank would have a diameter of about 70 feet.

A paved access road 15 feet wide would also be provided around this tank to allow for access and maintenance activities conducted by the County DWS staff. A small retaining wall would also be constructed as part of this access road. The entire property would be enclosed with a 6-foot tall chain link fence for security, and the driveway entrance would be gated with a chain link fence.



OWNERS:
COUNTY OF HAWAII
BOARD OF WATER SUPPLY
KA'U SUGAR CO., INC.
C/O KA'U AGRIBUSINESS
P.O. BOX 130
PAHALA, HAWAII 96777

CONSOLIDATION AND RESUBDIVISION MAP

LAND SITUATED AT HIONAMOA, KA'U,
ISLAND OF HAWAII, HAWAII.

BEING LAND COMMISSION AWARD 7312,
APANA 2 TO M. KEAWE

CONSOLIDATION OF TANK SITE NO. 9 (TMK: 3RD DIV. 9-6-05: 48) AND PARCEL COVERED BY TMK: 3RD DIV. 9-6-05: 16

AND RESUBDIVISION OF SAID CONSOLIDATION INTO LOTS A AND B.

CLYDE KIYOMI MATSUNAGA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 4328
HAWAII, U.S.A.

PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET • HILO, HAWAII 96720

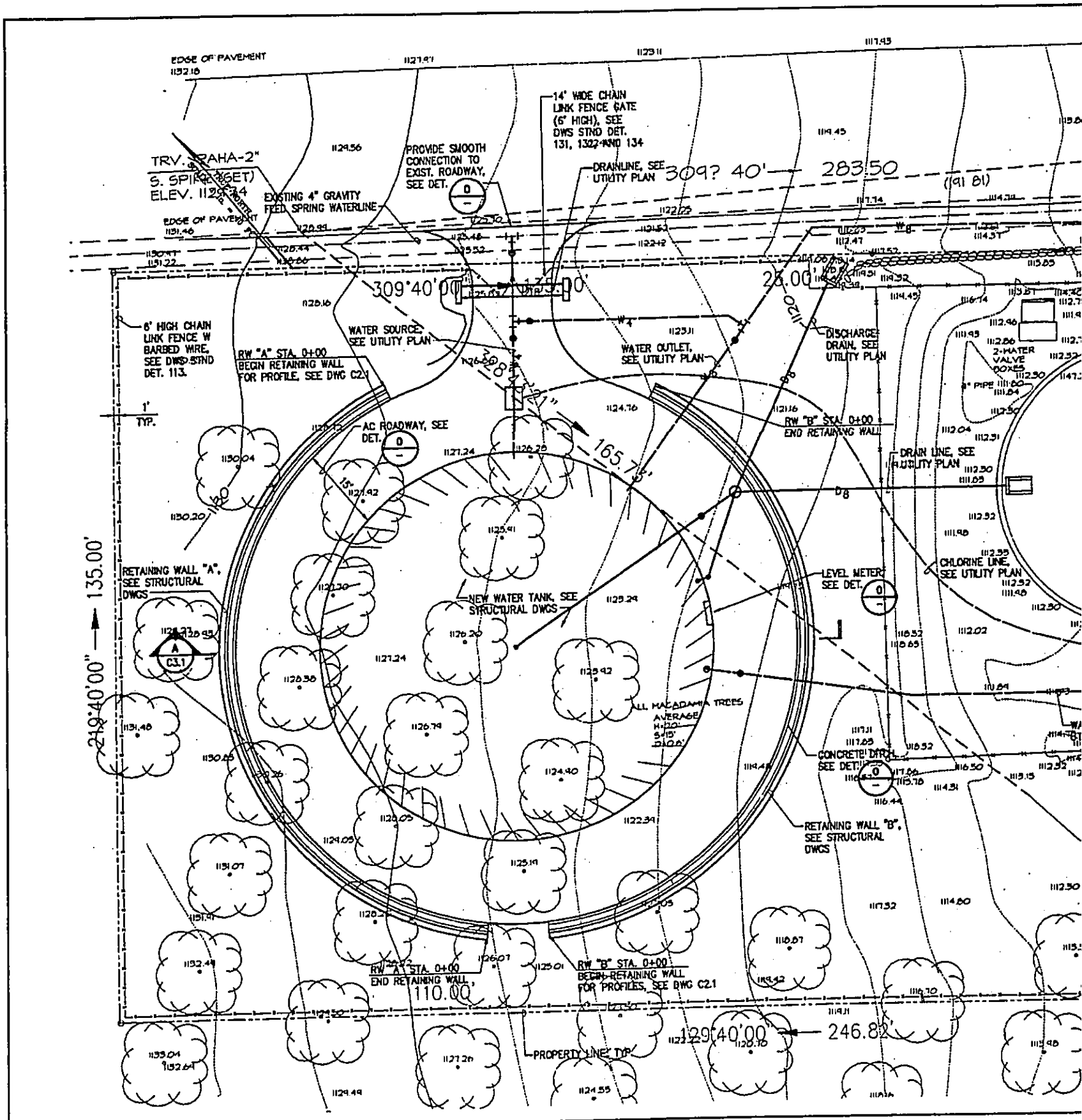
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

PAHALA RESERVOIR PARCEL CONSOLIDATION AND RESUBDIVISION MAP

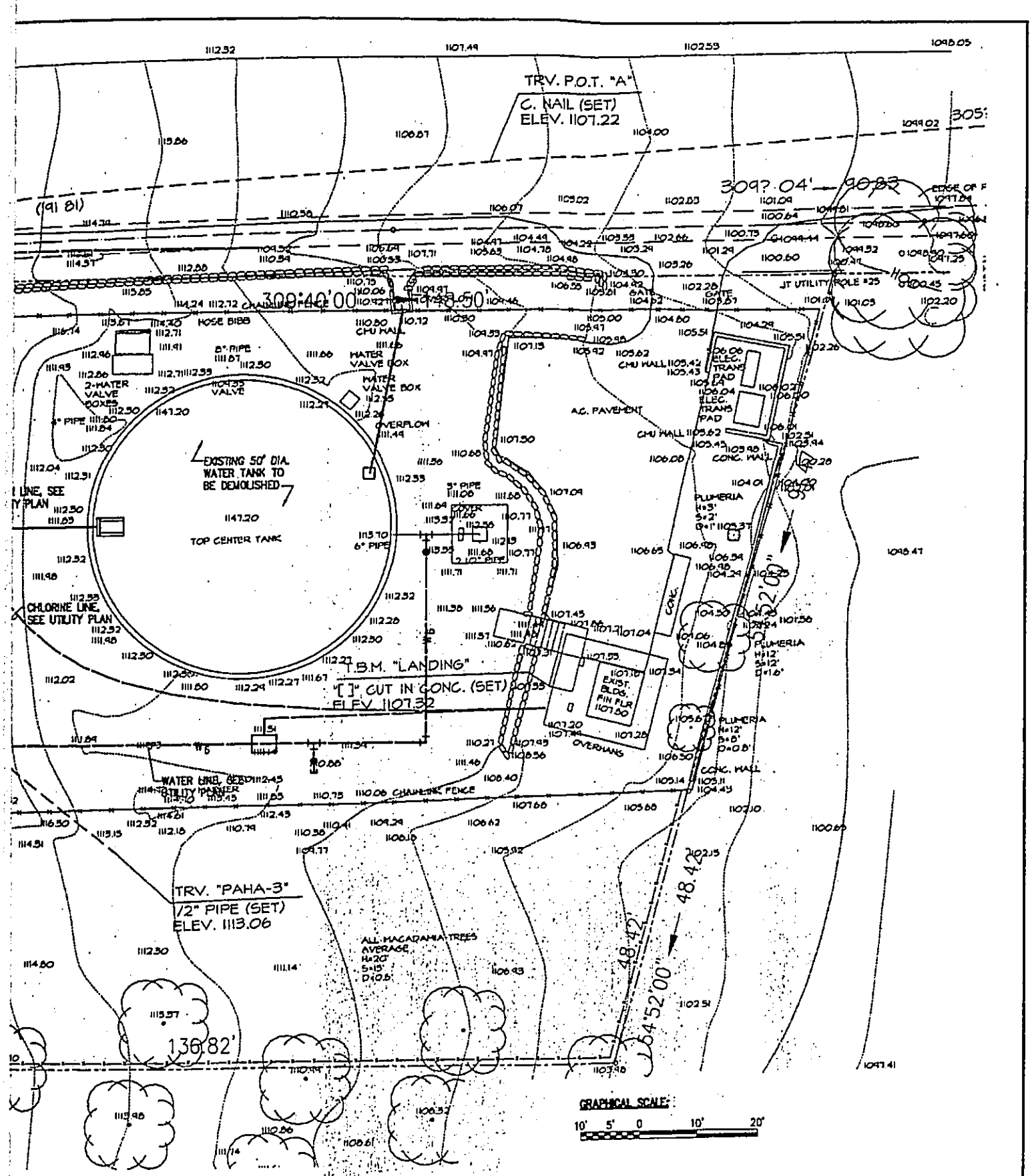
Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

FIGURE 2.4

Source: County Planning Department



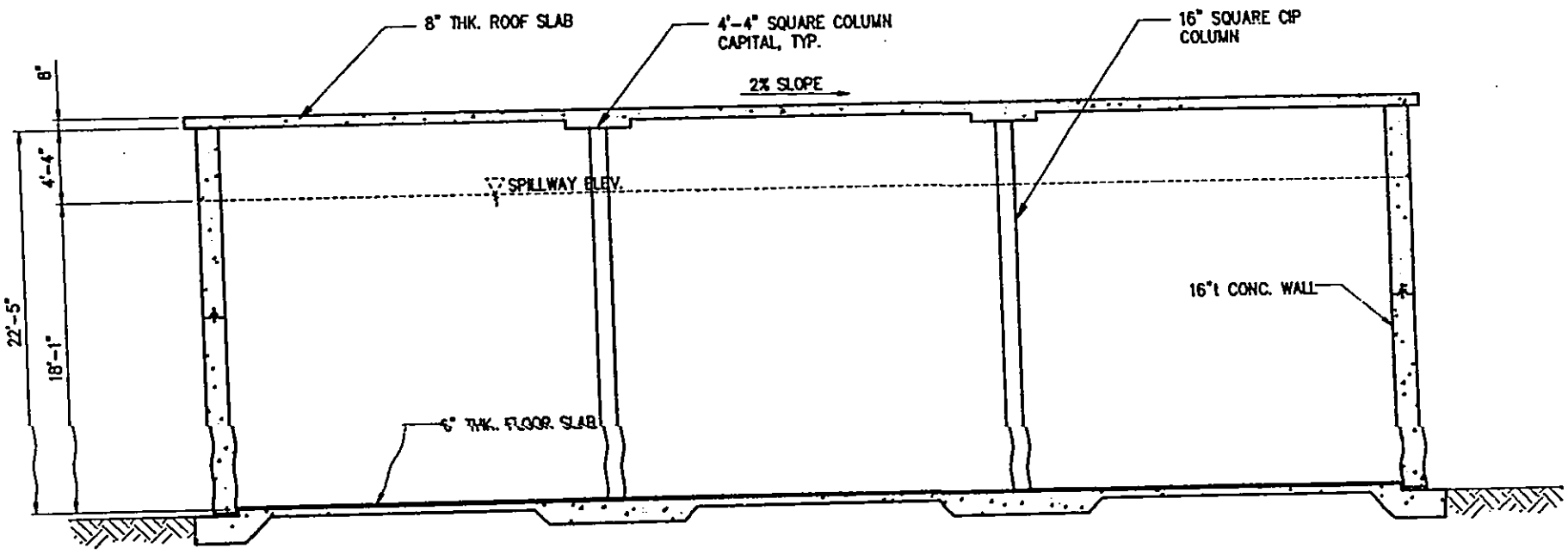
PAHALA RESERVOIR PRELIMINARY SITE



ARY SITE PLAN

FIGURE 2.5

Source:
SSFM International, Inc.



CONCRETE WATER TANK PRELIMINARY SECTION VIEW

Figure 2.6

Source: SSFM International, Inc.

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Utility line improvements would consist of connecting water supply lines to the new concrete tank and providing a new water distribution line to the existing 8-inch water main along the plantation road. As shown on the preliminary Site Plan, a 4-inch water line would connect the existing gravity feed spring water from the Alili Tunnel to supply the tank. A 6-inch water line would also connect the existing Pahala deep well No. 1 to the tank. A chlorine line would connect to these 4-inch and 6-inch water supply lines from the chlorination building. Finally, an 8-inch water outlet line would connect the tank to the 8-inch water main to provide the distribution of water to the Pahala community.

Existing Steel Water Tank Removal

Once the new concrete water tank and utility lines are completed, the existing steel water tank would be demolished and removed, and the area planted with grass. All the other existing reservoir facilities would remain. The open area created by the removal of the existing steel water tank would serve as a detention basin for surface water runoff as indicated by the drainage lines shown on the Site Plan.

The County DWS also plans to develop a second deep well for this Pahala reservoir in the future to supplement this municipal water system. An environmental assessment was completed for this future deep well in 1996 (Imata & Associates 1996). This possible well site would be situated in the open area located at the southeastern area of the project site. This future well would eventually provide another water source supplying the proposed concrete water tank.

Development Schedule And Construction Cost Estimates

Upon completion of the environmental review process, design work for this reservoir project would be completed and submitted to pertinent agencies for review and approval. The estimated budget for the construction of this project is $900,000.

Upon completion of construction plans and obtaining ministerial permits, construction work could begin in the year 2002 and be completed within 6 to 9 months. Thus, completion could occur by the end of 2002 or in the year 2003.

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. Plan Approval by the Planning Department may be required.
2. Building and grading 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 would not adequately address the need the replace the existing deteriorated steel water tank and provide continued reliable water service to the Pahala community.

No Action Alternative

The No Action Alternative would involve implementing no improvements to this Pahala reservoir. As a result, the existing steel water tank would continue to provide water storage as part of the municipal water system serving Pahala residents.

Given this steel water tank's deteriorating condition, there is increased probability that this tank would rupture or fail in some manner in the future. As discussed, the painted condition of this tank surface was poor with the majority of the surface area having paint failure revealing corroded metal substrate. Therefore, the probability of water service being disrupted to Pahala residents in the future is significant. Disruption of water service would have an adverse impact on Pahala residents and their community if improvements had to be implemented after such an incident occurs. The Pahala water system is the only available system serving residents. Consequently, this alternative was eliminated from further consideration.

Delayed Action Alternative

The Delayed Action Alternative would involve postponing improvements to this Pahala reservoir to some date in the future. As a result, the existing steel water tank would continue to provide water storage as part of the municipal water system serving Pahala residents.

This alternative was also eliminated from further consideration because it would subject the water reservoir and water service to Pahala residents to the same concerns expressed under the No Action Alternative. Delaying improvements into the future would increase the possibility of problems occurring with the steel tank due to the deteriorating conditions. Furthermore, funding for the design and construction of proposed improvements have been allocated under the County's capital improvement program. Therefore, this funding would be lost if improvements were not implemented at this time.

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 0.5 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 climate 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 general area in Pahala is typical of the climate in the Kau District which is predominantly dry and semi-arid. Average monthly temperatures recorded at Naalehu in 1998 generally averages between 75 and 85 degrees Fahrenheit throughout the year. The average annual rainfall recorded at Naalehu in 1998 was 17.6 inches which was about 33.3 inches less than their annual average of about 50.9 inches (NOAA 1998).

The prevailing trade winds in the Pahala area of this Kau District area are from the southeast direction and usually dominate from April to November. Wind speeds average about 15 miles per hour and vary between approximately 10 and 20 miles per hour. Winds from the southwest are less frequent occurring mainly during the winter associated with "Kona" storms (Dept. of Geography 1998).

3.1.1 Regional Geology And Topography

The Island of Hawaii is the largest island in the Hawaiian Archipelago, and covers an area of approximately 4,000 square miles which is about twice the size of all other Hawaiian Islands combined. This island was formed by the activity of five shield volcanoes which are: 1) Kohala (long extinct); 2) Mauna Kea (some activity during recent geologic times); 3) Hualalai (last erupted in 1801 and is considered dormant); 4) Mauna Loa (still active); and Kilauea (still active). The project site sits upon the slope that was formed by Mauna Loa. The surrounding area consists of a few inter – stratified beds of volcanic ash that sits upon the exposed bedrock.

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 within the project site consist of that associated with the Waiaha series. The Waiaha series consists of shallow, well-drained silt loams that formed in volcanic ash. These soils are at sites nearly level to moderately steep, and most areas are extremely stony. They are on uplands at an elevation ranging from near sea level to about 1,000 feet (SCS 1973). As shown on Figure 3.1, the reservoir project site is located primarily within the Waiaha silt loam, 0 to 10 percent slopes (WAC), and also appears to include a portion of Waiaha silt loam, 10 to 20 percent slopes (WAD).

1. Waiaha silt loam, 0 to 10 percent slopes (WAC). In a representative profile of this soil, the surface layer is very dark brown extremely stony silt loam about 4 inches thick. The subsoil is dark-brown very stony silt loam about 14 inches thick. The substratum is pahoehoe lava bedrock. The surface layer is slightly acid, and the subsoil is neutral to mildly alkaline. This Waiaha silt loam has a surface layer that is non-stony as compared to other Waiaha soil types, and receives more rain during the winter. This soil was used for pasture and orchards.

2. Waiaha silt loam, 10 to 20 percent slopes (WAD). This soil is similar to the WAC soil and is also nonstony. Runoff is medium and erosion hazard is moderate. This soil was also used for pasture and orchards (SCS 1973).

Land Study Bureau

Under the Land Study Bureau's *Detailed Land Classification – Island of Hawaii,* (LSB 1965), soils situated on the subject property consist of land given an overall master productivity rating of "C." Figure 3.2 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 were given a productivity rating of C153. These ratings are described below.

1. C153 – Naalehu, Kamaoa and Pahala soils having moderately deep depth, fine texture, dark brown in color, volcanic ash as the parent material, non – stony to slightly stony in character, is well drained, and is moderately suited for machine tillability.

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 existing topography or the physical character of the immediate area. As already discussed, the topography of this project site is generally level with a slight slope of less than 10 percent since it is covered with macadamia nut trees.

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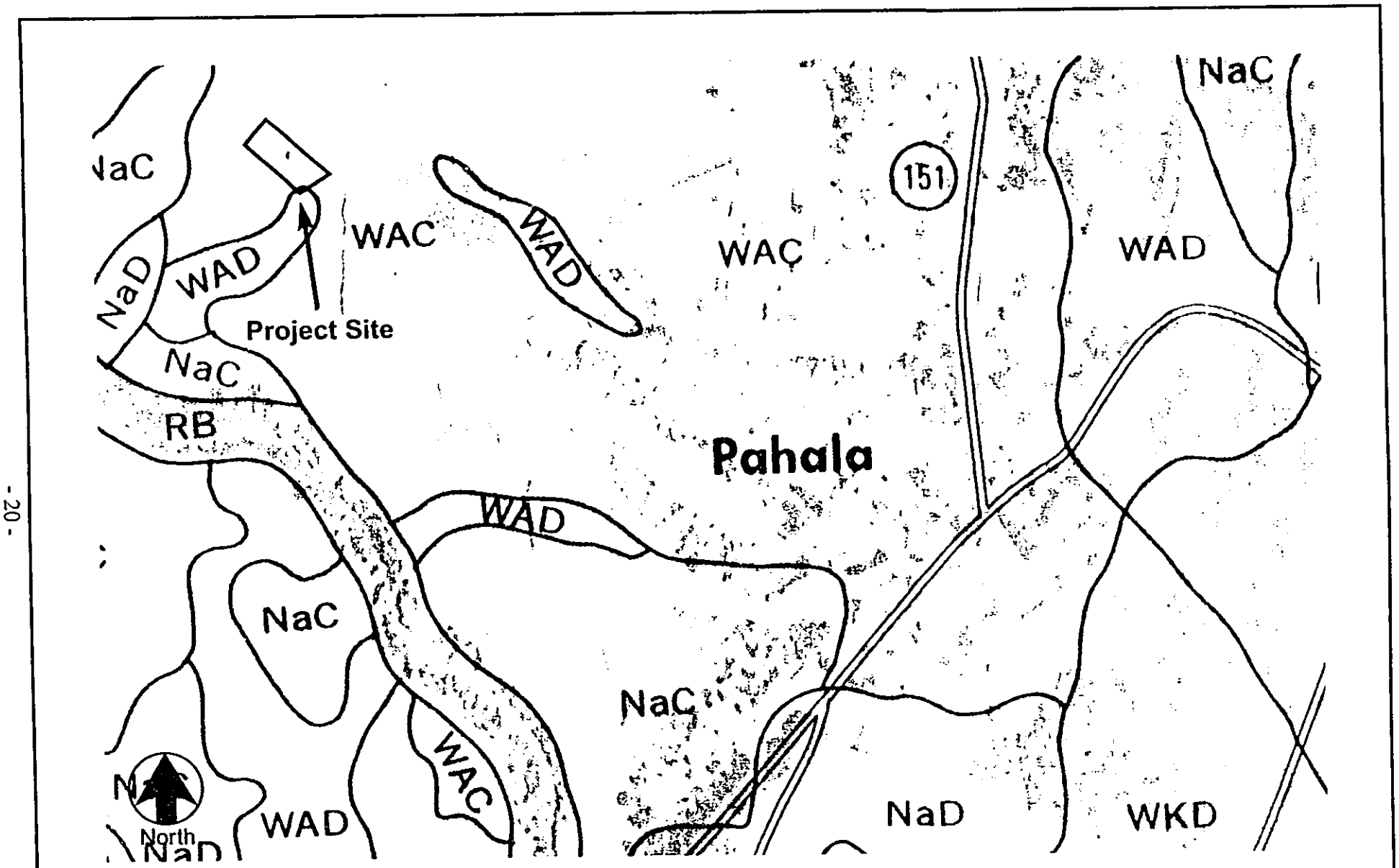


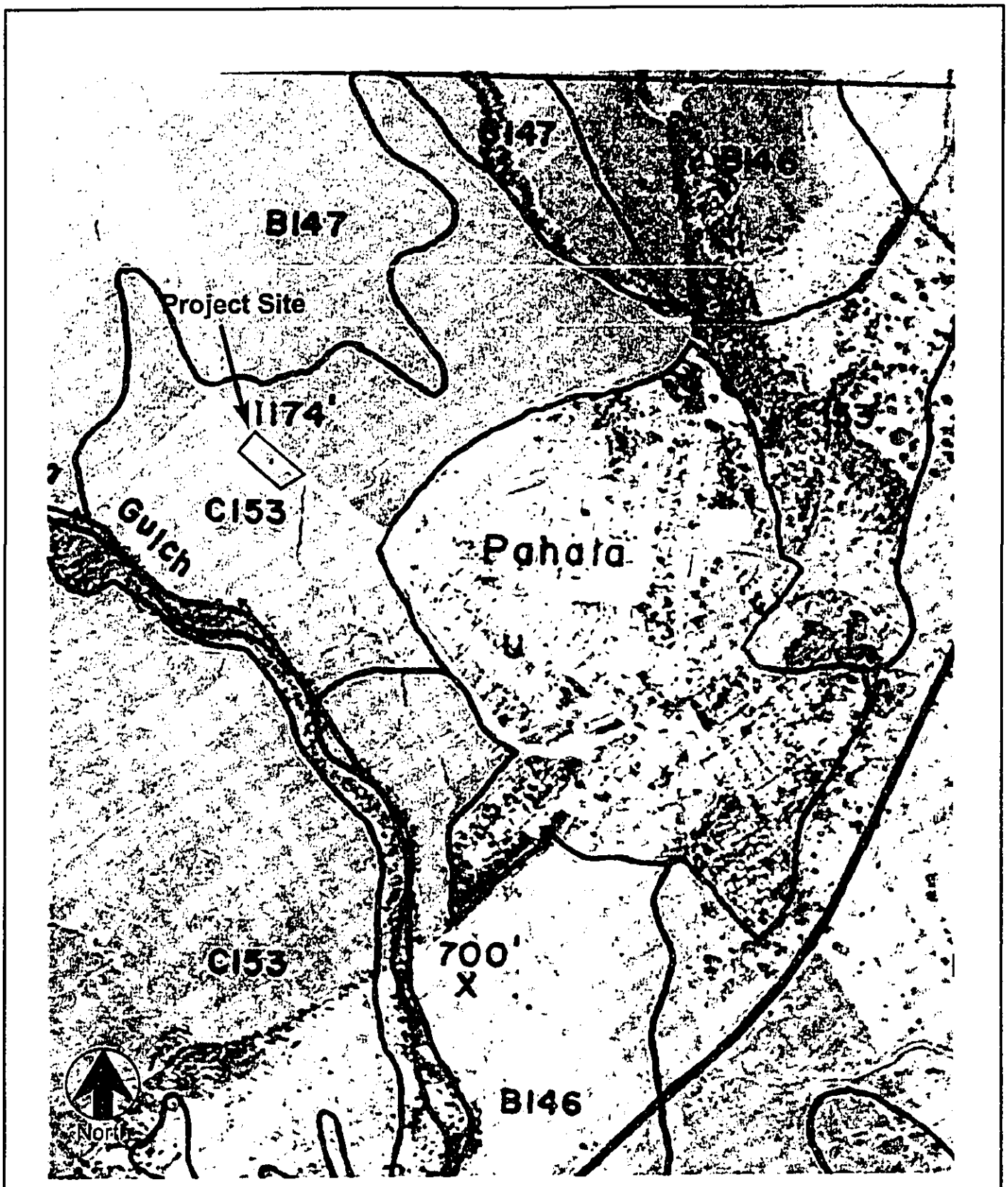
SOIL SURVEY MAP OF PAHALA RESERVOIR PROJECT SITE

Figure 3.1

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Source:
USDA Soil Conservation Service

DOCUMENT CAPTURED AS RECEIVED



LAND STUDY BUREAU SOILS CLASSIFICATION

FIGURE 3.2

Puhala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Source:
Land Study Bureau (1965)

SSFM INTERNATIONAL

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. A Grading Plan will be developed as part of the project's design, and submitted to pertinent County agencies for their review and approval.

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

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

Other Short-Term Construction Impacts

Other typical short-term impacts that are usually associated with construction related activities may include fugitive dust emissions, construction noise from equipment, and traffic disturbances from construction vehicles occurring along the plantation road. Fugitive dust emissions and construction noise are not expected to cause much disturbance or annoyance to surrounding properties or Pahala residents. The project site is situated over 1,200 feet away from the nearest homes associated with the Pahala community. Surrounding properties consist of orchards planted with macadamia nut trees as shown on photographs in Appendix A. Minimal vehicular traffic also occurs along this plantation road leading to the project site. Thus, there should be minimal disturbances to traffic flow along this road from construction related traffic.

Although these potential short-term effects should have minimal impacts, other possible mitigative measures would be considered for implementation during the project's design. Such measures would be determined during the project's design and preparation of construction plans. Measures being considered could include: the use of wind breaks or watering to reduce dust, and planting slopes immediately after grading work has been completed, and other measures

developed as part of the Grading Plan. The measures actually developed would be designed to make construction activities comply with pertinent Administrative Rules of the State Department of Health such as Title 11: Chapter 46 (Community Noise Control), and Chapter 60 (Air Pollution Control).

3.2 NATURAL HAZARDS

This section addresses 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 which shift segments of the volcano (Macdonald, Abbott, and Peterson 1983). Although difficult to predict, an earthquake of sufficient magnitude causing structural or other damage to the Pahala Reservoir may occur in the future. Most of the earthquakes that have occurred were volcanic earthquakes causing little or no damage. The seismic risk classification of the island of Hawaii is a rating of Zone IV (USGS 1997).

Recent Earthquakes On And Near Island Of Hawaii, 1962-1985 (USGS 1997)

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

Kilauea's east rift zone is continually being wedged apart by the injection of new magma, much of which is stored underground deep within the rift zone. The north flank of Kilauea is immobilized by the mass of Mauna Loa, thus the south flank facing the ocean must move outward to make room for additional magma. As a result, Kilauea's south flank abruptly shifts seaward from this pressure causing earthquakes (USGS 1997).

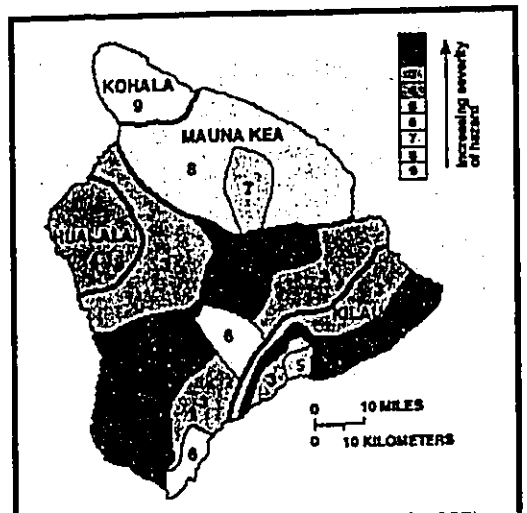
The locations of larger damaging earthquakes of magnitude 6 or greater since 1868 on the island of Hawaii have generally occurred on the southern half of the island primarily on the eastern end. The most recent large earthquake on this south flank occurred in June 1989 with a magnitude of 6.1 (USGS 1997).

Potential Impacts From Future Earthquakes

There is a possibility of future earthquakes occurring on the Island of Hawaii especially on the south flank of Kilauea. As a result, the new concrete water tank and accessory facilities may be subject to damage from an earthquake of sufficient magnitude occurring in the area. The susceptibility of being damaged from an earthquake would be no different from other homes and structures present in the Pahala community. To minimize potential damages, the water tank and facilities would be designed and constructed in accordance to appropriate County design standards for Zone IV areas. Thus, risk of potential damage to the facilities planned on the project site will not be more that other existing land uses in the Ka'u district.

Lava Flow Hazards

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



Lava Flow Hazard Zone Maps (USGS 1997)

Based upon this map, the Pahala project area in the Ka'u District was given a hazard zone rating of 3 indicating moderate hazard from lava flows. This rating reflects between 1 to 5 percent of area covered by lava since 1800, and 15 to 75 percent of area covered by lava in the last 750 years (USGS 1997). This rating corresponds to the activity associated with Kilauea Volcano affecting areas adjacent to and down slope of the volcano's active rift zones. Thus, the potential for damages to this project area is moderate since the Pahala site is a greater distance away from active vents.

3.2.2 Hurricane Hazards

The three major elements of a hurricane making it hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (FEMA 1993). Of these three, only strong winds and heavy rainfall could affect the project. The site is located well inland away from the shoreline and at an altitude of over 1,100 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 Island's coastlines between 1970 and 1992. Most hurricanes affecting the islands have focused on Kauai. Based upon a tracking of hurricanes since 1950, there appears to be no geographical or meteorological reasons why hurricanes miss the other islands but tend to steer toward Kauai (FEMA 1993).

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

The potential damage to the concrete water tank from high winds should be minimal due to the design and type of water tank being constructed which is concrete. Accessory facilities such as the water meter may sustain some damage, however, this probability should similarly be quite low since these facilities would be 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 Pahala community.

3.2.3 Flooding Hazards

The Flood Insurance Rate Map (FIRM), Community Panel Number 155166 1725 C, for the project area was reviewed. This FIRM showed that the Pahala Reservoir project site is located in Zone X which represents areas determined to be outside the 500-year flood plain (FEMA 1995).

A drainage ditch runs along the northern end of the paved plantation road in the area of the project site before crossing under the road via a culvert and heading in a southern direction. This drainage ditch appears to have been constructed as part of the development of the surrounding agricultural fields. A field survey conducted of the project site and surrounding area in July 2001 found this drainage ditch to be dry. Photographs of it are included in Appendix A.

The project site is not situated in an area that has been historically subject to flood inundation or other flood hazards. This property along with surrounding areas have been altered for large scale agricultural use which most recently involved macadamia nut production. Therefore, the project should not be adversely effected by flooding 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 infrastructure facilities.

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 Pahala reservoir project site. Research of the State Historic Preservation Division's (SHPD) web site determined that were no prior available archaeological studies conducted for the project site nor were there any historic sites recorded on the project site or in the immediate vicinity. This included review of a listing of National and State Register of Historic Places, dated January 2000, published by the SHPD.

A letter dated November 22, 1995 from the SHPD (DOC NO. 9511PM27) associated with a Final Environmental Assessment for the proposed Pahala Deep Well No. 2 (Imata & Associates, Inc. 1996) indicated that they had no record of historic sites for the well site. This proposed well site is located adjacently south of the existing Pahala reservoir site on property formerly included under TMK 9-06-05: 016. Under the recent consolidation and resubdivision, this property is now included within this proposed reservoir project site.

This SHPD letter further stated that it was unlikely that any historic sites exist since the well area was now used for orchards and was probably cultivated for sugarcane prior to that. However, the possibility of historic sites cannot be completely eliminated since this Tax Map parcel was a Land Commission Award (LCA) and thus may have unmarked graves. However, the deep well project would probably have no effect on significant historic sites.

The current project site for the new Pahala reservoir has similar conditions as this deep well site in that the area is presently used for macadamia nut orchards. As shown on the photographs in Appendix A, the site is absent of surface features that may potentially be historic sites due to the macadamia nut trees. Therefore, the project should not have a significant impact on historic sites. Nevertheless, in the event subsurface human remains or other indications of human activity older than 50 years are encountered during construction activities, all work would stop immediately and the SHPD notified.

Cultural Resources

In terms of cultural resources, this project is not expected to significantly affect traditional native Hawaiian cultural practices other traditional cultural practices occurring in the surrounding area. There are no known traditional cultural practices occurring within the project site since this privately-owned property has been used for macadamia nut orchards and sugarcane cultivation prior to that. Adjacent areas surrounding this project site are similarly used for macadamia nut orchards and sugarcane cultivation previously.

The project would also not restrict access to surrounding areas which may be potentially used for traditional native Hawaiian cultural practices since the entire reservoir site with the improvements would be less than one acre. Thus, this project site would not restrict access to other areas but to only this site for the Pahala *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 Pahala reservoir project site is located at about the 1,100-foot elevation placing this project area within the dryland forest and shrub vegetation zone. This vegetation zone typically includes areas that have been used for cattle grazing and sugar and pineapple cultivation. Dryland forest typically ranged from the 650 to 1,000-foot elevation up to the 3,000-foot elevation (Sohmer and Gustafson).

Botanical resources present on the project site and in the immediate surrounding area appear typical of the dryland forest and shrub vegetation zone. As shown on the site photographs in Appendix A, the project site consists predominantly of macadamia nut trees based upon a site visit of the area. Surrounding areas in the immediate vicinity similarly consist of macadamia nut trees. These macadamia nut trees present appear fairly consistent in size averaging about 20 feet in height with a span of about 15 feet in cover. Consequently, ground vegetation on the property is absent consisting of bare dirt and rocks as shown on the photos in Appendix A.

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 species of concern are known to be or are likely to be present on the project site due to the presence of macadamia nut trees and historic use of the area for large scale agricultural cultivation.

3.5 AVIFAUNAL AND FERAL MAMMALS

No avian species listed as endangered, threatened, proposed or as a candidate species by the U.S. Fish and Wildlife Service or by the State of Hawaii under it's endangered species program are known to be present on the project site or in the immediate vicinity. Avian species present would likely 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 with macadamia nut cultivation being most recent.

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

There are no 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 Macadamia nut trees that do not provide important nesting or foraging habitat for endangered or threatened avian species such as wetlands or forest reserves. 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_{10}), 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 Pahala reservoir project site concern short-term construction related emissions such as fugitive dust. Vehicular emissions (carbon monoxide) from traffic occurring along this roadway is 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_{10})	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 ($\mu g/m^3$) except for carbon monoxide which is in milligrams per cubic meter (mg/m^3)

Impacts From Short-Term Construction Activities

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

Grubbing and grading activities would be limited due to the size of the project site, the nature of this type of project, and the property's relatively flat upward sloping topography. Grading activities occurring should thus be primarily limited to creating a pad for the concrete water tank and access driveway around it. These efforts would therefore minimize the amount of excavation required and limit fugitive dust emissions. There are no residences or other dust sensitive properties in the immediate vicinity of the property further reducing impacts from such activities. As discussed earlier, the nearest homes associated with the Pahala community is over 1,200 feet away.

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. Adequate fugitive dust control can usually be accomplished by establishing a frequent watering program, and implementing additional measures to address grubbing and grading activities. Some measures that could be considered during the project's design for implementation by the contractor may include:

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

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

3.7 NOISE

Potential noise impacts associated with this reservoir project would mainly be 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 is anticipated.

Short-Term Noise Impacts From Construction Activities

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

The development of the 0.5 MG concrete water tank and accessories will involve some grading activities along with the construction and the removal of the existing steel water tank. 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 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. The majority of nearest existing residences in the Pahala Village Subdivision are located along Huapala Street and Pakalana Street over 1,200 feet away from the project site. Surrounding properties consist of large scale agricultural land grown with Macadamia nut trees. Furthermore, construction equipment would be equipped with mufflers as required under DOH regulations.

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

- No permit shall allow construction activities generating noise levels beyond the maximum permissible sound level at the property line before 7:00 a.m. and after 6:00 p.m. of the same day, Mondays through Friday.
- No permit shall allow construction activities generating noise levels beyond the maximum permissible sound level at the property line before 9:00 a.m. and after 6:00 p.m. on Saturdays.
- No permit shall allow construction activities generating noise levels beyond the maximum permissible sound level at the property line on Sundays and holidays.

3.8 VISUAL RESOURCES

There are no unique natural or topographical features, landmarks, or other land forms of significant or important visual character existing on the project site. As discussed in Chapter 2 and shown on the site photographs in Appendix A, the property consists of large scale agricultural land presently grown with Macadamia nut trees. There are also no public scenic views or viewing points present on the project site or in the immediate vicinity since the property is privately-owned and the existing water reservoir is gated and owned by the County DWS.

As a result, construction of the new concrete water tank is not expected to have a significant impact on important scenic views and negatively impact visual resources. The entire project site will be owned by the County DWS and gated to prevent access from the general public for security reasons.

3.9 HYDROGEOLOGICAL RESOURCES

Under the State's Water Resource Protection Plan, aquifers of the island of Hawaii have been classified under an aquifer coding system to identify and describe these aquifers. This system is comprised of Aquifer Sectors, then Aquifer Systems located within these sectors. An Aquifer Sector reflects an area with broad hydrogeological (subsurface) similarities while maintaining traditional hydrographic (surface), topographic and historical boundaries. The Aquifer system is an area within a sector that is more specifically defined by hydrogeologic continuity, particularly hydraulic connections among aquifer types and units (CWRM 1989).

The existing Pahala reservoir is located within the Southeast Mauna Loa Aquifer Section (Sector 805). Within this Southeast Mauna Loa Aquifer Section, there are three Aquifer Systems which are the Olaa, Kapalapala, and Naalehu Systems. The Pahala Reservoir is situated within the Naalehu Aquifer System (80503) which is served by two water resources, the Pahala Well and the Alili Tunnel (CWRM 1989).

Within the Naalehu aquifer system, there are two aquifers (upper and lower) that have nearly identical characteristics. Both are high level aquifers (fresh water not in contact with seawater) that are unconfined (where the water table is the upper surface of the saturated aquifer), and have drinking water potential use. The differences between the two aquifers are in geology and vulnerability to contamination. The upper aquifer is geologically perched whereas the lower aquifer is impounded by volcanic flank/dike units which are indistinguishable from each other (MFA 2001).

Construction of the new concrete water tank to replace the existing steel water tank along with accessory facilities are not expected to have a significant impact on hydrogeological resources. Construction of these facilities should involve relatively minor grading and fill activities to establish the foundation for the reservoir tank and service road. 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.

Groundwater resources should also not be adversely impacted by hazardous materials associated with the project since the water tank would be concrete and absent of hazardous materials. Replacement of the existing steel water tank would further eliminate the potential for hazardous materials to affect groundwater resources.

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 Pahala project area (HCPSU 1990). The Paauau Gulch is located over 3,000 feet northeast of the project site and the Hionamoa Gulch is located over 1,500 feet southwest of the site.

A small gully runs along the western end of the plantation road past the reservoir site before crossing under the road and heading in a southwest direction. Near the project site, this unlined gully, or drainageway, is somewaht shallow (about 5 to 10 feet deep in areas) and about 15 to 20 feet wide. This drainageway narrows to about 5 to 10 feet wide as it crosses under the road and heads southwest of the project area. This drainageway was dry at the time of the field survey conducted of the project site, and photos of it are included in Appendix A. Portions of the banks associated with this drainageway appear to be made up of rocks and gravel established as part of the surrounding agricultural fields.

The reservoir project is not expected to have an adverse effect on this gully since the improvements proposed would not change or alter the bed or banks associated with this drainageway. This gully was dry and was absent of important aquatic resources. Therefore, the project would not impact important native aquatic resources associated with this drainageway. Runoff from the project site would be directed into the area of the steel water tank demolished and removed to serve as a detention basin along with the surrounding macadamia nut orchards.

3.11 URBAN AND OTHER POTENTIAL HAZARDOUS MATERIALS

Standard research was conducted to determine the potential presence of hazardous materials or waste associated with this existing reservoir tank. This search included the U.S. EPA's National Priorities List, RCRA TSD Facilities List, CERCLIS List, RCRA Generators List, and ERNS List, and the State DOH's Leaking UST List, UST Section Database Listing, Hazardous Waste Sites, and State Landfill/Solid Waste Disposal Sites. Based upon these results, it was determined that no incidents or facilities on these lists were found within 0.5 miles of the existing reservoir site, or would likely have affected this site (Masa Fujioka & Associates 2001).

The Final Environmental Assessment for the future planned Deep Well No. 2 reported that the existing well tested positively for atrazine, but at a concentration of 0.500 ppb (Imata & Associates 1996). This is well below the maximum contaminant level of 3.0 ppb established for Federal drinking water standards. The source of the atrazine was presumed to be herbicides applied to the region during the years of sugar cane cultivation which has since ended in 1996. It was reported that the practice of burying discarded herbicides and pesticides upon plantation property was common in the past, thus, a potential encounter with buried chemicals during future construction on the project site can't be ruled out (Imata & Associates 1996).

Chlorine is used to treat the Pahala public water supply, and is stored at the existing reservoir site only when the deep well is used as the main source for the water supply. The chlorination building at the site did not show any stains from the storage of chlorine, and small quantities are properly stored in the control room. Two ground-mounted transformers are present on the existing reservoir site which were in good condition and showed no signs of staining (Masa Fujioka & Associates 2001).

Sampling of paint chips from the water tank was conducted to determine the lead content since the painted condition of this tank was poor. As discussed in Chapter 2, the majority of the water tank's surface area had paint failure, revealing corroded metal substrate. Laboratory testing of these paint chip samples showed that it did not contain petroleum chemical concentrations, or PCBs in laboratory detectable concentrations. Petroleum hydrocarbons, lead, and cadmium concentrations were all far below the State DOH Tier 1 action levels, and less than the concentration level designating it as hazardous waste (Masa Fujioka & Associates 2001).

In summary, the research revealed no evidence of recognized environmental conditions in connection with the project site, although a slight potential does exist for encountering buried chemicals on the site due to past agricultural activities. Although low in concentration, lead was detected in paint samples from the existing water tank. Therefore, contractors that disturb such surfaces will comply with both applicable Federal and State regulations and requirements. Site specific lead control procedures will be developed during the project's design phase for implementation.

CHAPTER 4
ECONOMIC AND SOCIAL FACTORS

4.1 ECONOMIC AND FISCAL FACTORS

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

Construction Related Jobs

The preliminary estimated construction cost for this project was $900,000 as discussed in Chapter 2. Therefore, construction of this reservoir project would create several beneficial short-term construction related jobs over several months (estimated 6 to 9 months).

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. Based upon the construction budget, it was estimated that about seven (7) 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. It was estimated that another nine (9) indirect and induced jobs could be generated by this project for a total employment impact of 16 jobs.

These new jobs created would also generate additional personal income for construction workers on the order of between $320,000 to $345,000. Personal income is defined as the wages paid to the direct construction workers or operational employees associated with a development. It is anticipated that these construction jobs would likely be filled by residents from the Island of Hawaii employed within the construction industry. Indirect and induced income would also be generated on the order of between $250,000 and $300,000 from this project.

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 $900,000 construction budget expended by the County for construction of the Pahala Reservoir project would therefore generate increased 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 County tax revenues being generated. The County's acquisition of property for the new reservoir tank and accessory facilities would consequently reduce the amount of privately-owned

agricultural land that are presently subject to County property taxes. However, this change would only involve a 23,688 square foot (0.54 acre) piece of property which will have minimal impact on the overall amount of property tax revenue.

Based upon available 1999 property data, the current County reservoir property has a land value of $100 and improvement value of $300. No County taxes are paid for this property of about 12,100 square feet. The larger 11.72-acre property (TMK 9-06-05: 016) of which a portion of it will be acquired by the County for the new reservoir tank had a land value of $8,100 and tax of only $81.00 in 1999. Acquisition of property to allow development of the new reservoir project would thus reduce this property by 0.54 acres 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

Demographic information for the Pahala community was obtained from available data published by the U.S. Census Bureau. The Pahala census designated place (CDP) includes the entire Pahala community encompassing less than a square mile in area. In the year 2000, the resident population in Pahala was 1,378 persons and there were 487 homes identified. This most current demographic data reflects a slight decrease in resident population since 1990 which was 1,520 persons then. The number of homes in Pahala in 1990 was 482.

The Pahala reservoir project is not expected to have a significant impact on the existing resident population and housing units present within the Pahala community. This project would essentially involve only replacing the existing 0.5 MG steel water tank with a new 0.5 MG concrete water tank. As a result, there would be no increase in housing units or corresponding resident population growth associated with this project. The new concrete water tank would assist in the County DWS in ensuring a continued reliable water distribution system for Pahala residents. This reservoir project would also not change or negatively alter the existing character of the Pahala community since the new site is located adjacent to the existing reservoir tank about 1,200 feet away from community. Consequently, this Pahala 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 Pahala reservoir. Due to the nature of this reservoir project, impacts would be more related to short-term construction activities, and should thus not have a significant impact on infrastructure facilities.

5.1 WATER FACILITIES

The County DWS has two water systems serving the Kau District of which the Pahala System serving the Pahala community is one of them. This municipal water system normally relies on the Alili Tunnel for its supply and supplements this with water from the Pahala deep well located at the existing Pahala Reservoir site. The existing 0.5 MG steel water tank is part of this Pahala municipal water system. Figure 2.2 previously showed this existing water system serving the Pahala community and described it in greater detail.

This water system had a surface water draw from the Alili Tunnel of 0.230 million gallons per day (mgd) and ground water draw from the well of 0.147 mgd for a total water draw of 0.377 mgd. The average use in 1988 was reported to be 0.335 mgd (CWRM 1989). The County DWS also plans to develop a second deep well at a site adjacent to the existing Pahala Reservoir site in the future to supplement this municipal water system (Imata & Associates 1996).

The proposed project is not expected to have a significant adverse impact on the County's existing water system serving the Pahala community. The improvements would involve constructing a new concrete water tank to replace the aging and deteriorated steel water tank, and provide other accessory facilities at the new property being added to this reservoir site. There would be no change to the existing 8-inch water main along the plantation access road at the reservoir site. As a result, there would be no change to the existing water service provided to Pahala residents. The improvements would have a positive benefit for the County DWS by supporting their efforts to provide reliable water service.

5.2 WASTEWATER FACILITIES

There are no known County wastewater collection and treatment systems in the immediate area of the existing Pahala reservoir. There are also no wastewater facilities associated with this existing reservoir.

With the improvements planned for the Pahala reservoir, there would be no impact to wastewater collection and treatment systems. No wastewater facilities will be included as part of this reservoir project.

5.3 DRAINAGE FACILITIES

Surface runoff at the existing reservoir site generally flows in a makai direction (southeast to southwest) toward the surrounding macadamia nut orchards. Surface runoff from the approximately 0.54-acre property for the new tank similarly flows in a makai direction towards the existing reservoir and surrounding orchards. As shown on the photographs in Appendix A, this property is predominantly absent of any ground vegetation. Thus, there may be a moderate amount of soil erosion occurring during heavy rains in the area due to the exposed soils.

The project would create additional impervious areas associated with the new water tank and accessory facilities (service road, etc.). With the additional property being acquired for the new concrete water tank, surface runoff would to be directed in the makai direction toward a grassed detention basin created as a result of the existing water tank's removal. The use of dry wells will also be considered during the project's design to address increased runoff from impervious surfaces.

As a result, there should not be a substantial increase in runoff occurring from the newly established project site. The erosion of soil from the project site would also be reduced since the existing bare soils would be replaced with grassed area improving water quality. 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.

5.4 SOLID WASTE

The County Department of Water Supply, Wastewater/Solid Waste Division operates two County landfills, one in Kona (Puuanahulu Landfill) and the other in Hilo (Hilo Landfill). There are also several solid waste transfer stations located throughout the Island of Hawaii. In the Kau District, there are two transfer stations which are located in Pahala and Waiohinu. 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. No solid waste is expected to be generated as part of the operations of the water reservoir once completed. Construction-related solid wastes will be generated over a relatively short time period, and consist primarily of vegetation, rocks, and other debris resulting from the clearing and grading of the area. Demolition and removal of the existing steel water tank would be conducted in conformance with applicable Federal and State laws addressing hazardous materials. 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

Vehicular access to the Pahala community is provided by the State's Mamalahoa Highway (Highway 11) which serves as a "belt" road around this rural Kau District of the island. This highway consists of a rural two-laned roadway. Access into the Pahala subdivision from this highway is from Kamani Street near the Kau Hospital or from Maile Street located at the southern edge of this community.

Access to the Pahala Reservoir project site is provided by a privately-owned access road serving the macadamia nut orchards and other agricultural fields in the area. This former cane haul road extends from the intersection of Huapala Street with Pakalana Street in the Pahala Village subdivision. As shown on the photos in Appendix A, this paved access road is unmarked and in relatively good condition. There was periodic vehicular traffic occurring on this access road based upon the site visit. Such traffic generally consisted of trucks associated with agricultural activities.

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 traffic occurring along this former cane haul road which is very limited. Given the rural nature of Pahala and the Kau 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 through the Pahala community. 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 project's probable effect on existing public facilities and utilities associated with the Pahala reservoir. Due to the nature of this reservoir project, impacts would be more related to short-term construction activities, and should thus not have a significant impact on these facilities.

6.1 ELECTRICAL AND COMMUNICATION FACILITIES

Hawaii Electric Light Company, Inc. (HELCO) and Verizon Hawaii currently provide electrical and telephone service, respectively, to existing developments in the Kau District of the island. As shown on photographs in Appendix A, electrical power serving the existing Pahala Reservoir is provided by wooden overhead electrical poles routed along the plantation access road. These overhead lines terminate at the reservoir site. There are no communication lines known to serve the existing reservoir site.

Construction of the new reservoir is not expected to have an impact on existing electrical facilities operated by HELCO. Underground electrical lines from the existing reservoir site would be extended to serve the new adjacent reservoir and equipment. There should also be minimal change in the existing electrical demand resulting from this project. As a result, no off-site improvements would be necessary for existing HELCO electrical facilities. Appropriate design plans would be coordinated with HELCO as needed.

6.2 EDUCATIONAL FACILITIES

There is only a single school which serves students residing in the Pahala community. Kau High and Pahala Elementary are combined into a small, rural school located in the Pahala community about 52 miles from Hilo. The school is approximately 2,000 feet below (southeast) of the project site. The elementary school serves students from Kindergarten to 8th grade from Pahala. Kau High serves students from 9th to 12th grades from Pahala as well as the Naalehu and Ocean View areas (Department of Education 2000).

The reservoir project is not expected to have a significant impact on this school or its operations. The project would not affect the number of students enrolled or faculty requirements since it will not involve the development of new residences or increase the resident population. Thus, potential impacts would only be associated with short-term construction activities.

Potential construction related impacts on school activities would typically be associated with noise and fugitive dust emission. Such construction activities should not adversely impact school activities since the project site is located about 2,000 feet away from the school and would occur over a short-term period. If necessary, the contractor would obtain a noise permit and

comply with State DOH requirements which were discussed in more detail in the previous chapter. Best management practices would also be implemented during grubbing and grading activities to minimize fugitive dust emissions.

6.3 RECREATIONAL FACILITIES

Pahala has a variety of recreational facilities including a community center, a ballfield, courts, and a swimming pool. The Pahala Community Center is located approximately 4,000 feet below (southeast) of the project site. Pahala Ballfield is near Kau High and Pahala Elementary School, approximately 2,000 feet from the project site in the same direction. The Pahala Swimming Pool and Courts are also located nearby this school.

The reservoir project is not expected to have a significant impact on these recreational facilities or its operations. Potential impacts would only be associated with short-term construction activities which would typically be associated with noise and fugitive dust emission. Such construction activities should not adversely impact these recreational facilities since the project site is located over 2,000 feet away and would occur over a short-term period. If necessary, the contractor would obtain a noise permit and comply with State DOH requirements which were discussed in more detail in the previous chapter. Best management practices would also be implemented during grubbing and grading activities to minimize fugitive dust emissions.

6.4 MEDICAL FACILITIES

The Kau Hospital is a State-operated medical facility located approximately 5,000 feet below the project site near Mamalahoa Highway. Kau Hospital is a 21-bed rural general hospital which provides services, acute and long-term care, and 24-hour emergency care. The beds consist of primarily of skilled nursing and intermediate care beds and five acute care beds.

The reservoir project is not expected to have a significant impact on this medical facility or its operations. Potential impacts would only be associated with short-term construction activity which would typically be associated with noise and fugitive dust emission. Such construction activities should not adversely impact these recreational facilities since the project site is located about 5,000 feet away and would occur over a short-term period. If necessary, the contractor would obtain a noise permit and comply with State DOH requirements which were discussed in more detail in the previous chapter. Best management practices would also be implemented during grubbing and grading activities to minimize fugitive dust emissions.

6.5 POLICE AND FIRE PROTECTION

The Pahala Reservoir project site is located within the Hawaii County Police Department's Kau District. The only station serving the communities in this district is the Naalehu District Station.

The Hawaii County Fire Department's Pahala/Naalehu Fire Station is located within the Pahala community. The fire station services the County's Kau district, and would subsequently service the project area associated with the Pahala reservoir project.

The reservoir project is not expected to have a significant impact on the County's police and fire departments' facilities or the ability of staff to provide protection and related services in the Kau district. This project would not affect their operations nor require additional protection services because it doesn't increase the resident population or visitors to the area. Short-term construction activities are also not expected to require police staff to monitor traffic flow in the area because there is minimal traffic occurring along the plantation access road leading to the reservoir site.

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 Pahala (Map H-51) indicated 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 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 which 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 reservoir improvements would replace the existing deteriorated steel water tank to 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. Reservoir improvements along with construction activities conducted would be meet 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 qualify 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 affect the existing or future resident population in Pahala or the establishment of new communities. These improvements do not involve any new homes or visitor units, and short-term construction jobs is expected to be filled by Hawaii residents not resulting 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 Pahala residents 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 Pahala or the establishment of new communities. These improvements do not involve any new homes or visitor units, and short-term construction jobs is expected to be filled by Hawaii residents not resulting in any in-migration.

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

The Pahala reservoir project would be consistent with these guidelines because the improvements would not impact those natural resources identified such as watersheds, forest preserves, wildlife preserves, or unique ecological preserves. The project would not impact area that is valuable as important open space area since it is currently used for macadamia nut orchards. 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 which may have an ecological hazard. Areas of the project site not used for improvements would be landscaped with compatible trees, shrubs, or grasses as is present at the existing reservoir site. Thus, this project would be consistent with these guidelines.

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

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

The 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. 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 significantly impact the agricultural industry. The property added to the reservoir site for improvements is used for macadamia nut trees. However, this small area removed (0.54 acres) from productivity should have no effect on the overall agricultural operations occurring in the Ka'u 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 incorporate 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 standard 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 reservoir 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 Pahala 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 reservoir improvements would replace the existing deteriorated steel water tank to ensure continued reliable water service in the future. This project would not have an adverse impact on the environment as discussed in this document. Reservoir improvements along with construction activities conducted would be 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. The property being acquired by the County and surrounding areas are similarly privately-owned. In addition, the new concrete water tank would actually be lower in height than the present steel water tank. Finally, no public access or easement is necessary for this property since it is no 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 e County and affected agencies.

The Pahala 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 which 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 which includes natural resources, recreational amenities, and scenic resources. This project would not impact watersheds, forest reserves, or other important vegetation. Appropriate measures would be incorporated into the project's design to minimize erosion and address appropriate drainage requirements.

J. Public Utilities

1. Goals:

a. Ensure that adequate, efficient and dependable public utility services will be available to users.

b. Maximize efficiency and economy in the provision of public utility services.

c. To have public utility facilities which are designed to fit into their surroundings or concealed from public view.

2. Policies:

a. Public utility facilities shall be designed so as to complement adjacent land uses and shall be operated so as to minimize pollution or disturbance.

b. Provide utilities and service facilities which minimize total cost to the public and effectively service the needs of the community.

c. Utility facilities shall be designed to minimize conflict with the natural environment and natural resources.

d. Improvement of existing utility services shall be encouraged to meet the needs of users.

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

The project would be consistent with these goals and policies because the reservoir improvements would ensure that adequate, efficient, and dependable water service is provided to the Pahala community in the future. The concrete water tank would fit into the surrounding area which is comprised of macadamia nut orchards, would be lower in height than the existing steel water tank, and is situated well away from public view. This project would not create pollution or disturbances to residents since it is located within a large scale agricultural area. The concrete water tank would minimize future long-term maintenance and repairs as compared with the existing deteriorated steel water tank. Thus, the reservoir improvements would help the DWS meet the continued and dependable water supply needs of Pahala residents well into the future. This project was programmed by the County DWS as part of the capital improvements program, and is consistent with the General Plan.

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 Pahala residents which the existing water tank currently serves. The improvements would also address a need to replace the deteriorating steel water tank. Design of reservoir improvements would also meet DWS standards and requirements.

Ka'u District

5. Public Utilities

a. Water (Courses of Action)

1) Provide additional source and storage capacity for the currently serviced areas of Naalehu, Waiohinu and Pahala.

This project would be consistent with this policy by replacing the existing deteriorating steel water tank. The improvements would therefore provide continued dependable water service to Pahala residents.

7.4 COUNTY ZONING DISTRICT

The Pahala 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 Pahala community. As a result, public structures such as this water reservoir are permitted uses in any district, and may be subject to Plan Approval for this use by the County Planning Director (§25-4.11).

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

1. The height limit under this zoning district is 45 feet under §25-5-73 of the County's Zoning Code. As discussed in Chapter 2, this new concrete water tank would be less than 25 feet 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 existing water reservoir site was only 12,109 square feet in size and was thus considered a non-conforming parcel based upon discussion with County Planning Department staff. Under the recent consolidation and resubdivision, this project site was increased to 35,797 square feet, and has retained the same TMK parcel number (parcel 048). Thus, this new project site would continue to be a non-conforming parcel in terms of building site area.
3. The minimum building site average width is 200 feet for the first 5 acres of required area. Since the existing reservoir site was a non-conforming parcel, this new project site would continue to be non-conforming in terms of building site average.
4. The minimum yard setbacks for this zoning district is 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 Federal, State, and County government agencies was conducted to obtain their comments and concerns associated with the project as part of the environmental assessment process.

8.1 DRAFT EA PRE-ASSESSMENT CONSULTATION EFFORTS

Letters providing project information along with a preliminary site plan were sent to various consulted parties in June 2001 to solicit their initial comments and concerns associated with the project as part of the preparation of this Draft EA. A listing of agencies and organizations for which consultation letters were sent is provided below. Those providing written response are identified with a "»" symbol. Copies of written comments received along with written responses are included in Appendix B. Comments received have been addressed in the appropriate sections of this Final EA.

Federal Agencies

» U.S. Army Engineer Division, Department of the Army

State of Hawaii Agencies

» Department of Accounting and General Services
» Department of Education
• Department of Hawaiian Home Lands
» Department of Health
• Department of Land and Natural Resources
• Department of Land and Natural Resources, Historic Preservation Division
» Department of Transportation
» Land Use Commission, Dept. of Business, Economic Development & Tourism
• Office of Planning, Dept. of Business, Economic Development & Tourism

County of Hawaii Agencies

» Department of Parks and Recreation
» Department of Public Works
• Hawaii Fire Department
» Hawaii Police Department
• Mass Transit Agency
» Planning Department

8.2 DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

The Draft EA for this water reservoir project was published in the September 23, 2001 issue of the State Office of Environmental Quality Control's *The Environmental Notice* initiating a 30-day public comment period which ended on October 23, 2001. Copies of this Draft EA were distributed to the following parties for review and comments. Those parties which submitted comments are indicated by a "» " next to them. Comment letters received from these parties along with corresponding response letters are included in Appendix B.

Federal Agencies

» U.S. Army Engineer Division, Department of the Army
- Fish and Wildlife Service, U.S. Department of the Interior
- Natural Resources Conservation Service, U.S. Department of Agriculture

State of Hawaii Agencies

» Department of Accounting and General Services
» Department of Education
» Department of Health
- Department of Land and Natural Resources
- Department of Land and Natural Resources, Historic Preservation Division
» Department of Transportation
» Land Use Commission, Dept. of Business, Economic Development & Tourism
» Office of Environmental Quality Control
» Office of Hawaiian Affairs
- Office of Planning, Dept. of Business, Economic Development & Tourism

County of Hawaii Agencies

» Department of Parks and Recreation
- Department of Public Works
- Hawaii Fire Department
» Hawaii Police Department
» Planning Department

Community Organizations

- Pahala Public & School Library

CHAPTER 9
FINDINGS AND ANTICIPATED DETERMINATION

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

This chapter discusses the results of the assessment conducted for the proposed improvements associated with the Pahala 0.5 MG Concrete 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 which includes the sum of effects on the quality of the environment along with the overall and cumulative effects. The findings are discussed below for each criteria.

9.1 PRELIMINARY 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 additional property acquired for the new concrete water tank is presently part of an orchard for macadamia nut 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 present on the property due to its historical use for sugar cane production and most recently macadamia nut production. However, in the event any subsurface historic properties or burials are encountered during construction, all work would stop and the SHPD notified. Treatment of any findings would be conducted in compliance with Chapter 6E, HRS and the §13-300, HAR. The project site is not known to be used of any traditional native Hawaiian or other cultural practices. Development of the reservoir project would also not prevent access to mauka land areas which may be used for traditional gathering or other cultural practices.

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

The reservoir project would not curtail the range of beneficial uses of the surrounding environment. The additional property acquired by the County was privately-owned and used for large scale sugar cane cultivation and most recently macadamia nut cultivation. 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 providing continued reliable water service to the Pahala community which is a beneficial use.

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

The 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 were 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.*[1]

As discussed in this document, the project would not have any significant negative impacts on economic factors, the Pahala 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 privately-owned property has been used for macadamia nut orchards and sugarcane cultivation prior to that. Adjacent areas surrounding this project site are similarly used for macadamia nut orchards and sugarcane cultivation previously. The project would also not restrict access to surrounding areas which may be potentially used for traditional native Hawaiian cultural practices since the entire reservoir site with the improvements would be less than one acre.

[1] This significance criteria was modified to reflect the recent change to Chapter 343, HRS approved by the Governor as Act 50 on April 26, 2000. This Act added "cultural practices" as part of the factors considered in determining the significance of an effect.

5. *Substantially affects public health.*

The reservoir improvement is not expected to substantially affect public health since the project would only involve limited construction work. The project would also replace the deteriorated existing steel water tank and help the County DWS provide continued reliable water service to Pahala residents.

Construction activities are similarly not expected to cause significant air pollution in the form of fugitive dust or generate any other type of pollutants which may have an adverse affect on public health. Surrounding areas consist of large scale macadamia nut tree orchards so there are no residences or other sensitive land uses in the immediate vicinity. 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 only involves replacement of the existing steel water tank with a new concrete water tank and other accessory utility improvements. As a result, the improvements do no include new housing units or visitor unit which would affect the area's resident population and demand for public facilities.

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

The 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 which determined that there should not be an adverse impact on the quality of the existing environment.

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

This project only involves the improvements described for the Pahala 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 were 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 which may occur in the general vicinity. Necessary control measures and best management practices

would also be implemented to minimize runoff and other potential short-term impacts associated with construction activity. Thus, the project is not expected to substantially affect rare, threatened, or endangered species or potential habitat for such species.

10. Detrimentally 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 also comprised of macadamia nut tree orchards as part of large scale agricultural activities in the area. Such 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 improvements 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 which would be adversely affected by the project.

13. Requires substantial energy consumption.

The project would not require substantial energy consumption or increased electrical facilities because it essentially only involves the replacement of the existing steel water tank.

9.2 ANTICIPATED DETERMINATION

A Finding of No Significant Impact (FONSI) determination is warranted for the Pahala reservoir project based upon the information provided in this Final EA document. The results of the assessments conducted have determined that the reservoir improvements proposed should not have a significant impact on the surrounding environment. 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.

CHAPTER 10
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APPENDICES

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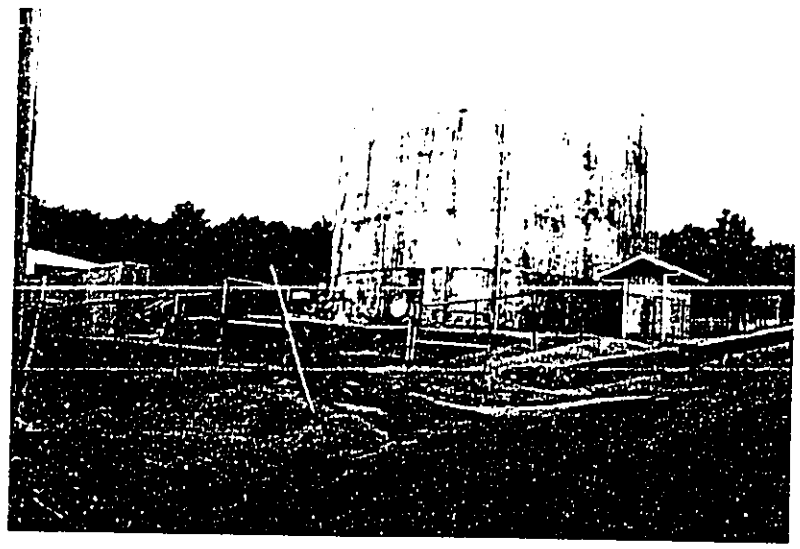

Photo 1
West View Of Existing
Pahala Reservoir Site

Photo 2
Northwest View Of Plantation
Access Road To Project Sitel

Photo 3
Southeast View Of Plantation
Access Road From Existing
Pahala Reservoir Site

PHOTOS OF EXISTING PAHALA RESERVOIR SITE AND AREA

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Figure A-1

Source:
SSFM International, Inc.

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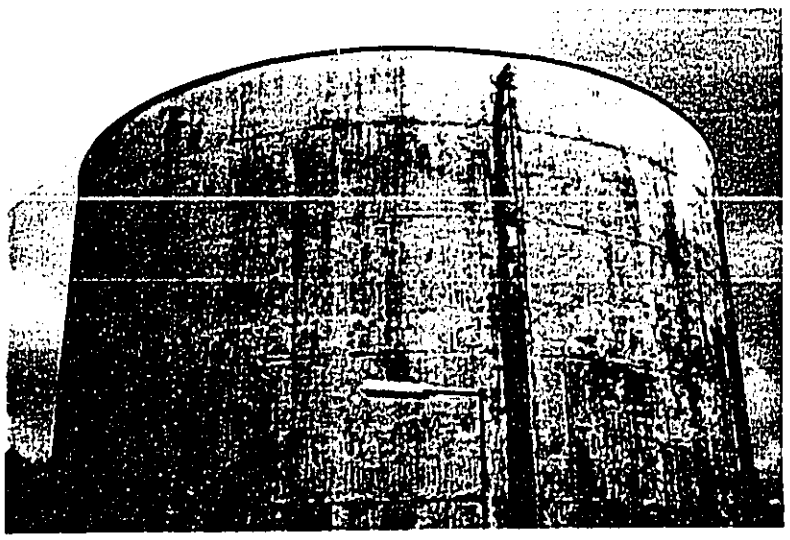

Photo 4
Northwest View Of Existing
Steel Water Tank

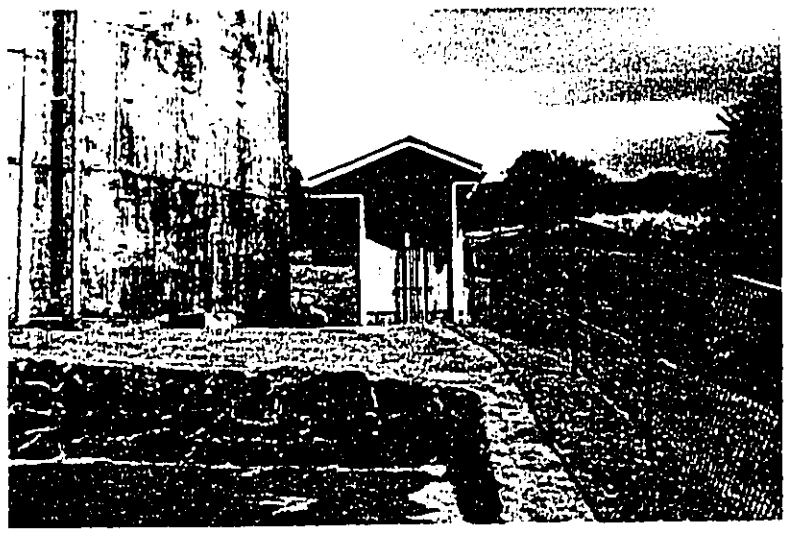

Photo 5
Northwest View Of Steel Water
Tank And Accessory Facility

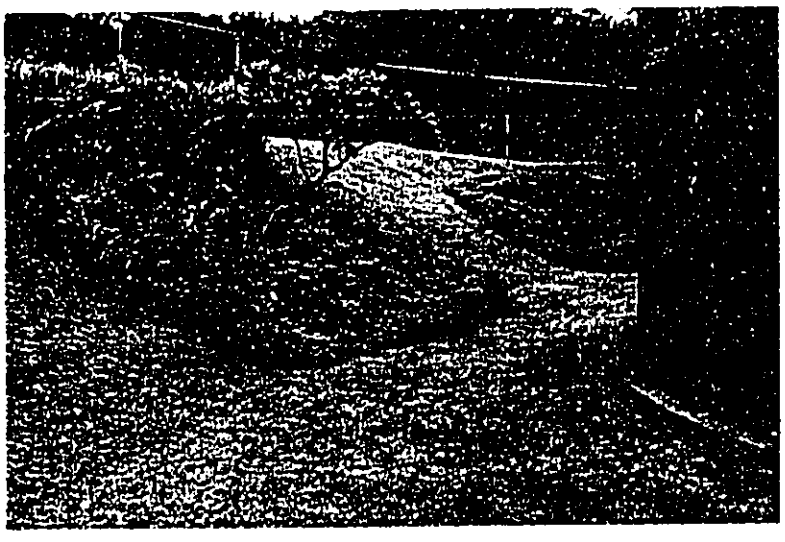

Photo 6
North View Of Steel Water Tank
Paint Failure And Corrosion

PHOTOS OF EXISTING PAHALA RESERVOIR WATER TANK CONDITION

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Figure A-2

Source:
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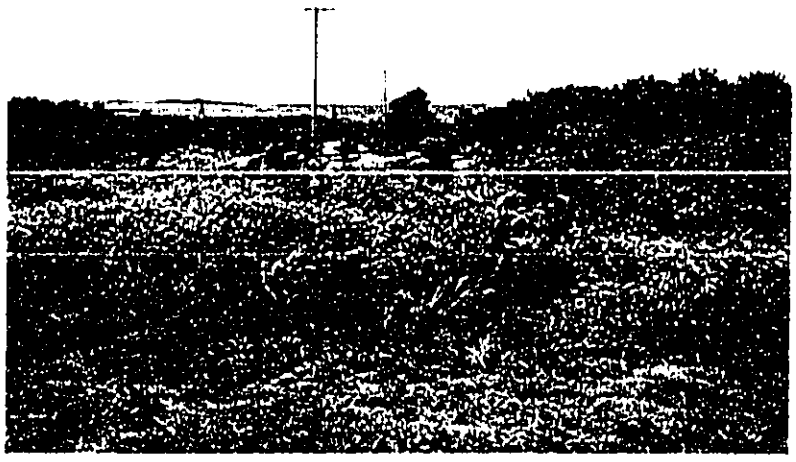

Photo 7
Southeast View Of Surrounding
Area Below Existing Reservoir

Photo 8
West View Of Project Site Area
Adjacent To Existing Reservoir

Photo 9
Northwest View Of Project Site
From Plantation Access Road

PHOTOS OF PAHALA RESERVOIR
PROJECT SITE AND SURROUNDING AREA

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Figure A-3

Source:
SSFM International, Inc.

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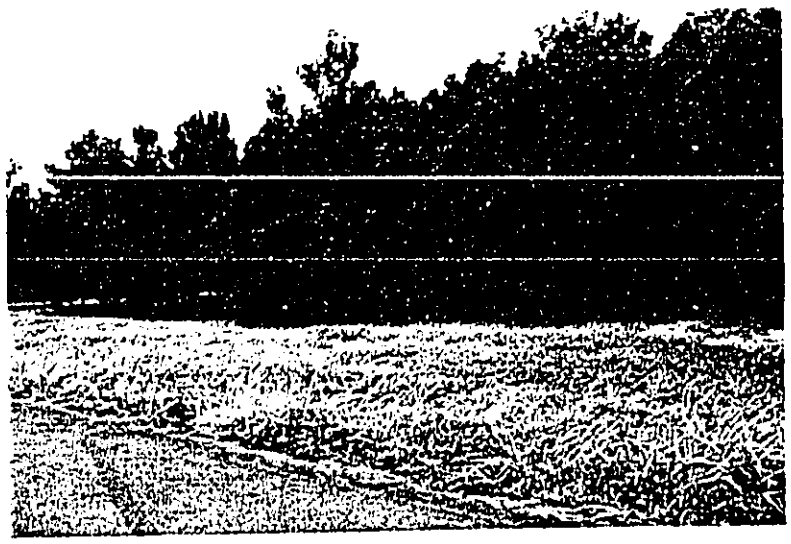

Photo 10
South View Of Pahala Project
Site From Plantation Access Road

Photo 11
West View Of Macadamia Nut Tree
Orchards Present On Project Site

Photo 12
East View Of Orchards On Project
Site Towards Existing Reservoir

PHOTOS OF PAHALA RESERVOIR
PROJECT SITE CONDITIONS

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Figure A-4

Source:
SSFM International, Inc.

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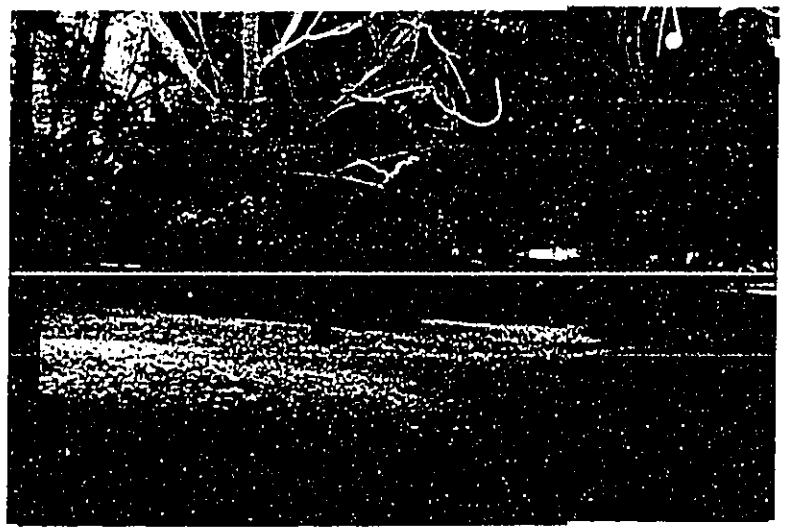

Photo 13
North View Of Macadamia Nut
Orchads On Project Site

Photo 14
South View Of Drainageway
Below Existing Pahala Reservoir Site

Photo 15
South View Of Orchards
On Project Site

PHOTOS OF PAHALA RESERVOIR PROJECT SITE CONDITIONS AND AREA

Pahala 0.5 MG Reservoir Project
County of Hawaii, Department of Water Supply

Figure A-5

Source:
SSFM International, Inc.

APPENDIX B

Agency And Public Consultation

APPENDIX B-1

Pre-Assessment Consultation
Comment Letter And Responses

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

REPLY TO
ATTENTION OF

June 13, 2001

SSFM INTERNATIONAL, INC.
RECEIVED
JUN 19 2001
JRAS
FILE

Regulatory Branch

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

Dear Mr. Sato:

This is in response to your letter regarding the proposal to replace the 0.5 million gallon water tank with a new modernized reservoir.

For your information, under Section 404 of the Clean Water Act, Department of the Army (DA) permits are required for the discharge of dredged or fill material in waters of the U.S., including wetlands. Based on the limited amount of information submitted, we would like the opportunity to review the draft Environmental Assessment in order to render a determination on whether a DA permit will be required. Please provide our office a copy of the EA when it is available.

File Number 200100377 is assigned to this project. Please refer to this number in any future correspondence with our office. Should you have any questions or need additional information, you may call Ms. Lolly Silva of my staff at (808) 438-7023 or by fax at (808)438-4060.

Sincerely,

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

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

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

Dear Mr. Young:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 13, 2001 (File Number 200100377) regarding the subject project.

This reservoir improvement project is not expected to have a discharge of dredged or fill material in waters of the U.S. since there are no wetlands or perennial streams present in the immediate vicinity. A copy of the Draft Environmental Assessment will be provided for your review and determination whether a Department of the Army permit is required. If necessary, appropriate coordination will be conducted with your department to obtain a permit.

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

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

BENJAMIN J. CAYETANO
GOVERNOR

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

LETTER NO. (P)1398.1

JUN 18 2001

SSFM INTERNATIONAL, INC.
RECEIVED
JUN 19 2001
FILE

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

Dear Mr. Sato:

Subject: Pahala Reservoir Project
Early Consultation Prior to Draft Environmental Assessment Preparation

We have reviewed your June 8, 2001, letter which described the proposed project and have no comments on the matter.

We suggest the project be coordinated with the Department of Education because of the project's close proximity to the Kau High & Pahala Elementary School.

Should there be any questions on this matter, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

BI:mo
Attachment
c: Mr. Ronald Furukawa, Kau High & Pahala Elementary School, Principal w/copy of SSFM letter
Mr. Raynor Minami, DOE w/copy of SSFM letter
Mr. Glenn Okada, DAGS-HI w/copy of SSFM letter

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

Mr. Gordon Matsuoka, Public Works Administrator
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Matsuoka:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 18, 2001 regarding the subject project. We note that your department has no comments to offer on the proposed project.

Consultation with the State Department of Education would be conducted as part of this environmental review process to address any concerns they may have with impacts on Ka'u High and Pahala Elementary School.

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

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

BENJAMIN J. CAYETANO
GOVERNOR

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

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

IN REPLY REFER TO:

STP 8.9927

June 18, 2001

SSFM INTERNATIONAL, INC.
RECEIVED
JUN 21 2001
JCS
FILE

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

Dear Mr. Sato:

Subject: Pahala Reservoir Project
Early Consultation For Draft Environmental Assessment

Thank you for your transmittal requesting our review of the subject project.

The proposed development will not impact our State transportation facilities.

We appreciate the opportunity to provide comments.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

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

Dear Mr. Minaai:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 18, 2001 regarding the subject project. We note your comment that the proposed project will not impact your State transportation facilities.

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

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

FILE COPY

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

In reply, please refer to:
File:

63/cpo

June 29, 2001

SSFM INTERNATIONAL, INC.
RECEIVED
JUL 6 2001

FILE

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

Dear Mr. Sato:

Subject: Pahala Reservoir Project.
TMK: 9-6-05:16 & 48

Thank you for allowing us to review and comment on the subject proposal. We do not have any comments to offer at this time.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

Mr. Gary Gill, Deputy Director
Environmental Health Administration
Department Of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Gill:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 19, 2001 regarding 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 531-1308.

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

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

SSFM INTERNATIONAL, INC.
RECEIVED
JUN 20 2001
FILE

June 18, 2001

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

Dear Mr. Sato:

Subject: Pahala Reservoir Project
Early Consultation for Draft Environmental Assessment (DEA)

We are in receipt of your letter dated June 8, 2001, soliciting comments, concerns, or regulatory requirements that our agency may have on the subject project. We have reviewed the information contained in your letter and the project location map and site plan, and find that the project is located within the boundary of the State Land Use Agricultural District.

We suggest that future drafts of the EA include a map showing the project location in relation to the State land use districts.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject project. Please feel free to contact Bert Saruwatari of my office at (808) 587-3822, should you require clarification or any further assistance.

Sincerely,

ANTHONY J.H. CHING
Executive Officer

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

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

Dear Mr. Ching:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 18, 2001 regarding the subject project.

We note your department's determination that the proposed reservoir improvement project is located with the State Land Use Agricultural District. A figure showing this project's location in relation to the State Land Use Districts will be included in the Draft Environmental Assessment.

Thank you for taking the time to review this project. If you have any questions, please give me a call at 531-1308.

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

BENJAMIN J. CAYETANO
GOVERNOR

PAUL G. LaMAHIEU, Ph.D.
SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF THE SUPERINTENDENT

SSFM INTERNATIONAL INC
RECEIVED
JUN 28 2001
FILE

FILE COPY

June 25, 2001

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

Dear Mr. Sato:

Subject: Pahala Reservoir Project – Early Consultation

The Department of Education has no comment on the subject project at this time.

Thank you for the opportunity to respond.

Very truly yours,

Paul G. LeMahieu, Ph.D.
Superintendent of Education

PLeM:hy

cc: A. Suga, DAS
HIDO

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

Paul G. LeMahieu, Ph.D., Superintendent of Education
Department Of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Dear Dr. LeMahieu:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 25, 2001 regarding 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) 531-1308.

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

Harry Kim
Mayor

Dennis K. W. Lee
Director

County of Hawaii

DEPARTMENT OF PUBLIC WORKS

25 Aupuni Street, Room 202 · Hilo, Hawaii 96720-4252
(808) 961-8321 · Fax (808) 961-8630

FILE COPY
SSFM INTERNATIONAL, INC.
RECEIVED
JUL 19 2001
JPS
FILE

July 18, 2001

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

SUBJECT : DRAFT ENVIRONMENTAL ASSESSMENT CONSULTATION
PAHALA 0.5 MG CONCRETE RESERVOIR PROJECT
TMK: 3 / 9-6-05: 16 & 48

We acknowledge receipt of your letter concerning the subject matter, and provide you with our comments as follows:

1. Any building construction shall conform to all requirements of code and statutes of the County of Hawaii.

2. All development generated runoff shall be disposed on site and shall not be directed toward any adjacent properties.

3. All earthwork and grading shall be in conformance with Chapter 10, Erosion and Sediment Control, of the Hawaii County Code.

4. The subject properties are found within Flood Zone "X", according to the Flood Insurance Rate Map dated September 16, 1988.

5. The road fronting the subject property is a private roadway and not maintained by the Department of Public Works.

Should there be any questions concerning this matter, please feel free to contact Mr. Casey Yanagihara in our Engineering Division at (808)961-8327.

Galen M. Kuba, Division Chief
Engineering Division

cky

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

Mr. Galen M. Kuba, Division Chief
Engineering Division
Department of Public Works
County of Hawaii
25 Aupuni Street, Room 202
Hilo, Hawaii 96720-4252

Dear Mr. Kuba:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated July 18, 2001 regarding the subject project. We have the following responses to your departments comments which are numbered for reference.

1. Building construction will conform to the requirements of the code and statutes of the County of Hawaii.
2. Drainage improvements for this reservoir project will be appropriately designed to direct development generated runoff within the project site. Appropriate coordination with your department will be conducted as part of the project's design and plan review phase.
3. All earthwork and grading will be in conformance to Chapter 10, Erosion and Sediment Control of the County Code.
4. We confirm that the project site is located within Flood Zone X according to the Flood Insurance Rate Map.
5. We confirm that the plantation road providing vehicular access to the reservoir project site is privately-owned, and note that your department does not maintain it.

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

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

Harry Kim
Mayor

Patricia G. Engelhard
Director

Pamela N. Mizuno
Deputy Director

County of Hawai`i
DEPARTMENT OF PARKS AND RECREATION
25 Aupuni Street, Room 210 • Hilo, Hawai'i 96720-4252
(808) 961-8311 • Fax (808) 961-8411

SSFM INTERNATIONAL, INC.
RECEIVED
JUN 19 2001
FILE

June 15, 2001

Ronald Sato, AICP
SSFM International, Inc.
501 Sumner St., Suite 502
Honolulu, HI 96817

Re: Pahala Reservoir Project, Ka'u, Hawaii
Consultation for Draft EA

Dear Mr. Sato:

The reservoir project will not adversely impact any of our facilities or programs.

Thank you for informing us of the project.

Sincerely,

Patricia G. Engelhard
Director

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

Ms. Patricia G. Engelhard, Director
Department of Parks and Recreation
County of Hawaii
25 Aupuni Street, Room 210
Hilo, Hawaii 96720-4252

Dear Ms. Engelhard:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 15, 2001 regarding the subject project.

We note your department's determination that the proposed project will not adversely impact your park facilities or programs.

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

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

Harry Kim
Mayor

James S. Correa
Police Chief

County of Hawaii

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

SSFM INTERNATIONAL, INC.
RECEIVED
JUL 3 2001
FILE

FILE COPY

June 28, 2001

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

Dear Mr. Sato:

SUBJECT: PAHALA RESERVOIR PROJECT
EARLY CONSULTATION FOR DRAFT ENVIRONMENTAL ASSESSMENT

Staff has completed its assessment of the proposed Pahala Reservoir Project and has no comments or objections to offer at this time on the implementation of the project.

Thank you for the opportunity to comment.

Sincerely,

JAMES S. CORREA
POLICE CHIEF

THOMAS J. HICKCOX
ASSISTANT POLICE CHIEF
FIELD OPERATIONS BUREAU

RN:lk

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

Project Managers, Planners, & Engineers
American Consulting Engineers Council, Member

September 11, 2001

SSFM 2001_004

Mr. Thomas J. Hickcox, Assistant Police Chief
Field Operations Bureau
Police Department
County of Hawaii
349 Kapiolani Street
Hilo, Hawaii 96720-3998

Dear Mr. Hickcox:

Subject: Pahala 0.5 MG Reservoir Project
Draft EA Pre-Assessment Consultation

Thank you for your letter dated June 28, 2001 regarding the subject project. We note that your department has no objections or comments to offer on the proposed project at this time.

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

SSFM INTERNATIONAL, INC.

Ronald A. Sato, AICP
Senior Project Planner
Email: rsato@ssfm.com

APPENDIX B-2

Draft Environmental Assessment
Comments

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

REPLY TO ATTENTION OF

September 26, 2001

FILE COPY

SSFM INTERNATIONAL, INC.
RECEIVED
SEP 28 2001
FILE

Regulatory Branch

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

Dear Mr. Sato:

Thank you for sending the draft Environmental Assessment (dEA) on the proposed project to replace the 0.5 million gallon water tank with a new modernized reservoir located in Pahala, Hilo.

Based on the information in the dEA and office reference materials, the project will not have any impact to waters of the U.S. to include wetlands. Therefore, a Department of the Army permit will not be required.

File number 200100377 is assigned to this project. If you have any questions, you may call Ms. Lolly Silva of my staff at 438-7023 or by FAX at 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 5, 2001

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

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated September 26, 2001, (File Number 200100377) providing comments on the Draft Environmental Assessment for the subject project.

We note your response that the project will not have any impact to waters of the United States and, therefore, a Department of the Army permit will not be required.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

BENJAMIN J. CAYETANO
GOVERNOR

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

WAYNE H. KIMURA
COMPTROLLER

MARY ALICE EVANS
DEPUTY COMPTROLLER

LETTER NO. (P)1640.1

OCT - 5 2001

SSFM INTERNATIONAL, I
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RAS
FILE

FILE COPY

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

Dear Mr. Sato:

Subject: Pahala 0.5 MG Reservoir Project
Draft Environmental Assessment

We have reviewed the Draft Environmental Assessment for the subject project and have no comments to offer at this time.

As stated in our June 18, 2001, response letter to the project's early consultation notice, we suggest that the project be coordinated with the Department of Education.

Should there be any questions on this matter, please have your staff contact Mr. Tyler Fujiyama of the Planning Branch at 586-0492.

Sincerely,

LAWRENCE UYEHARA
Acting Public Works Administrator

TF:mo
c: Mr. Glenn Ahuna, County of Hawaii Department of Water Supply
Mr. Ronald Furukawa, Kau High & Pahala Elementary School
Mr. Raynor Minami, DOE Facilities and Support Services Branch
Mr. Glenn Okada, DAGS Hawaii District Engineer
Department of Health
Office of Environmental Quality Control

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

November 5, 2001

Mr. Lawrence Uyehara, Acting Public Works Administrator
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 5, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We note your Department did not have any comments on the Draft Environmental Assessment document at this time. Appropriate coordination will be conducted with your Department on the project's status and construction.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

BENJAMIN J. CAYETANO
GOVERNOR

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

PAUL G. LeMAHIEU, Ph.D.
SUPERINTENDENT

DIVISION OF ADMINISTRATIVE SERVICES

[redacted]

FILE COPY

October 3, 2001

SSFM INTERNATIONAL, INC.
RECEIVED
OCT 05 2001
JRAS
FILE

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hawai`i 96817

Dear Mr. Sato:

Subject: Pahala Reservoir Project - Draft EA

The Department of Education has no comment on the subject draft environmental assessment.

Thank you for the opportunity to respond.

Sincerely,

Raynor M. Minami, Director
Facilities and Support Services Branch

RMM:hy

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

November 5, 2001

Ms. Raynor M. Minami, Director
Facilities and Support Services Branch
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 3, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We note your Department did not have any comments on the document at this time.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

FILE COPY

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

In reply, please refer to.
File:

01-123/cpo

October 18, 2001

SSFM INTERNATIONAL, INC
RECEIVED
OCT 23 20
JRHS
FILE

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

Dear Mr. Sato:

Subject: Pahala .5MG Concrete Reservoir

Thank you for allowing us to review and comment on the subject proposal. We have no comments to offer at this time.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

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

November 5, 2001

Mr. Gary Gill, Deputy Director
Environmental Health Administration
Department Of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 18, 2001, providing comments on the Draft Environmental Assessment for the subject project.

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

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

BENJAMIN J. CAYETANO
GOVERNOR

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

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

IN REPLY REFER TO:

STP 8.0050

October 2, 2001

SSFM INTERNATIONAL, INC.
RECEIVED
OCT 11 2001
RAS
FILE

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Pahala Reservoir Project
Draft Environmental Assessment (DEA)
TMK: (3) 9-06-05: 048

Thank you for your transmittal requesting our review of the subject project.

The proposed development will not impact our State transportation facilities.

We appreciate the opportunity to provide comments.

Very truly yours,

Brian K. Minaai
BRIAN K. MINAAI
Director of Transportation

c: Mr. Glenn Ahuna, Department of Water Supply
Ms. Genevieve Salmonson, Office of Environmental Quality Control

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

November 5, 2001

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

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 2, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We note your Department determined that the project will not impact State transportation facilities.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

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

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SSFM INTERNATIONAL, INC.
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October 17, 2001

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

Dear Mr. Sato:

Subject: Draft Environmental Assessment (DEA)
Pahala Concrete Reservoir Project
TMK No: (3) 9-06-005:048
Pahala, Kau, Hawaii

We have reviewed the subject draft environmental assessment as transmitted by your letter dated September 21, 2001.

Based upon our review of the subject DEA, we have the following comments:

1. It appears that the proposed project area is within the State Land Use Agricultural District.

2. Regarding Section 3.3 Cultural Resources, we recommend the submittal of documentation, if available, in the Final Environmental Assessment verifying there are no significant cultural resources.

Thank you for the opportunity to provide comment on the subject application. Should you require clarification or further assistance in this matter, please contact Russell Kumabe of my staff at 587-3822.

Sincerely,

ANTHONY J. H. CHING
Executive Officer

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

November 5, 2001

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

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 17, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We confirm that the project site is located within the State Land Use Agricultural District.

Regarding cultural resources present on the site, the Draft Environmental Assessment included figures of the project site in Appendix A documenting that the site is being used for macadamia nut cultivation. Furthermore, Section 3.3 included discussion of a State Historic Preservation Division (SHPD) letter indicating that it was unlikely any historic sites exist in the area due to its current use for orchard production and historic use for sugarcane cultivation. In the event subsurface sites are encountered, appropriate coordination will be conducted with the SHPD and Hawaii Island Burial Council.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

BENJAMIN J. CAYETANO
GOVERNOR

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

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SSFM INTERNATIONAL, INC.
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GENEVIEVE SALMONSON
DIRECTOR
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October 23, 2001

Mr. Ronald A. Sato, A.I.C.P.
SSFM International Inc.
501 Summer Street, Suite 502
Honolulu, Hawai'i 96817

Mr. Glenn Ahuna
County of Hawai'i Department of Water Supply
345 Kekuanao'a Street, Suite 25
Hilo, Hawai'i 96720

Dear Messrs. Ahuna and Sato:

We have reviewed your draft environmental assessment (DEA) to construct a 0.5 million gallon concrete reservoir at Pahala, Tax Map Key 3rd 9-06-05, parcel 48, in the district of Ka'u on the island of Hawai'i. We offer the following comments for your consideration and response.

1. **VISUAL CONSIDERATIONS:** The DEA should discuss the visual impact of the proposed tank and possible mitigative measures. Will the tank tank require painting in earth-tones or require landscaping to blend in with the existing landscape? Please provide photographs of the site as well as visual impact analyses which include overlays of what the site would look like from the Hawai'i Belt Road and points seaward looking mauka.
2. **CULTURAL IMPACTS.** Although the document discusses historic and archaeological cultural considerations, it is not clear as to whether cultural practicioners and residents in the area were interviewed in obtaining this information. What impacts (if any) will the proposed action have on cultural practices and resources in the area? Do people gather near the area or are there areas nearby use for contemporary cultural and religious practices. Chapter 343, Hawai'i Revised Statutes now requires that cultural impacts be assessed (see enclosed copy of Act 50, SLH 2000). A copy of the Environmental Council's guidelines for assessing cultural impacts using interviews as the primary information gathering method is enclosed for your use.
3. **USE OF RECYCLED GLASS:** To promote the use of recycled materials in-state as found in section 103D-407, Hawai'i Revised Statutes, we ask that you consider using materials with minimum recycled glass content in the design.
4. **INDIGENOUS AND POLYNESIAN INTRODUCED PLANTS FOR USE IN PUBLIC LANDSCAPING:** We ask that you consider the use of native, indigenous and polynesian introduced plants in your landscaping

Thank you for the opportunity to comment. If there are questions, please call Les Segundo at 586-4185.

Sincerely,

GENEVIEVE SALMONSON, Director

Enclosures

State of Hawaii
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
Guidelines for Assessing Cultural Impacts

Adopted by the Environmental Council, State of Hawaii
November 19, 1997

I. INTRODUCTION

It is the policy of the State of Hawaii under Chapter 343, HRS, to alert decision makers, through the environmental assessment process, about significant environmental effects which may result from the implementation of certain actions. An environmental assessment of cultural impacts gathers information about cultural practices and cultural features that may be affected by actions subject to Chapter 343, and promotes responsible decision making.

Articles IX and XII of the State Constitution, other state laws, and the courts of the state require government agencies to promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups. Chapter 343 also requires environmental assessment of cultural resources, in determining the significance of a proposed project.

The Environmental Council encourages preparers of environmental assessments and environmental impact statements to analyze the impact of a proposed action on cultural practices and features associated with the project area. The Council provides the following methodology and content protocol as guidance for any assessment of a project that may significantly affect cultural resources.

II. CULTURAL IMPACT ASSESSMENT METHODOLOGY

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

Such information may be obtained through scoping, community meetings, ethnographic interviews and oral histories. Information provided by knowledgeable informants, including traditional cultural practitioners, can be applied to the analysis of cultural impacts in conjunction with information concerning cultural practices and features obtained through consultation and from documentary research.

In scoping the cultural portion of an environmental assessment, the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment. Thus, for example, a proposed action that may not physically alter gathering practices, but may affect access

to gathering areas would be included in the assessment. An ahupua'a is usually the appropriate geographical unit to begin an assessment of cultural impacts of a proposed action, particularly if it includes all of the types of cultural practices associated with the project area. In some cases, cultural practices are likely to extend beyond the ahupua'a and the geographical extent of the study area should take into account those cultural practices.

The historical period studied in a cultural impact assessment should commence with the initial presence in the area of the particular group whose cultural practices and features are being assessed. The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs.

The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, including submerged cultural resources, which support such cultural practices and beliefs.

If the subject area is in a developed urban setting, cultural impacts must still be assessed. Many incorrectly assume that the presence of urban infrastructure effectively precludes consideration of current cultural factors. For example, persons are known to gather kauna''oa, ''ilima, ''uhaloa, noni or ki on the grassy slopes and ramps of the H-1 freeway and some state highways on the neighbor islands. Certain landmarks and physical features are used by Hawaiian navigators for sailing, and the lines of sight from landmarks to the coast by fisherman to locate certain fishing spots. Blocking these features by the construction of buildings or tanks may constitute an adverse cultural impact.

The Environmental Council recommends that preparers of assessments analyzing cultural impacts adopt the following protocol:

(1) identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua`a;

(2) identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;

(3) receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;

(4) conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;

(5) identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and

(6) assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

Interviews and oral histories with knowledgeable individuals may be recorded, if consent is given, and field visits by preparers accompanied by informants are encouraged. Persons interviewed

should be afforded an opportunity to review the record of the interview, and consent to publish the record should be obtained whenever possible. For example, the precise location of human burials are likely to be withheld from a cultural impact assessment, but it is important that the document identify the impact a project would have on the burials. At times an informant may provide information only on the condition that it remain in confidence. The wishes of the informant should be respected.

Primary source materials reviewed and analyzed may include, as appropriate: Mahele, land court, census and tax records, including testimonies; vital statistics records; family histories and genealogies; previously published or recorded ethnographic interviews and oral histories; community studies, old maps and photographs; and other archival documents, including correspondence, newspaper or almanac articles, and visitor journals. Secondary source materials such as historical, sociological, and anthropological texts, manuscripts, and similar materials, published and unpublished, should also be consulted. Other materials which should be examined include prior land use proposals, decisions, and rulings which pertain to the study area.

III. CULTURAL IMPACT ASSESSMENT CONTENTS

In addition to the content requirements for environmental assessments and environmental impact statements, which are set out in HAR §§§§ 11-200-10 and 16 through 18, the portion of the assessment concerning cultural impacts should address, but not necessarily be limited to, the following matters:

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.

2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.

3. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.

4. Biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.

5. A discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.

6. A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the

proposed action is located, as well as their direct or indirect significance or connection to the project site.

7. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project.

8. An explanation of confidential information that has been withheld from public disclosure in the assessment.

9. A discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.

10. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

11. A bibliography of references, and attached records of interviews which were allowed to be disclosed.

The inclusion of this information will help make environmental assessments and environmental impact statements complete and meet the requirements of Chapter 343, HRS. If you have any questions, please call 586-4185.

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

November 5, 2001

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
236 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 23, 2001, providing comments on the Draft Environmental Assessment for the subject project.

1. Visual Considerations. The Draft Environmental Assessment did include discussion assessing the potential visual impacts associated with this project. The new tank will be painted in earth tones in accordance with Department of Water Supply standard specifications. No landscaping will be required to screen the tank from the surrounding environment, which consists of macadamia nut orchards. However, grassed areas would be provided for graded areas along with the existing tank that is removed.

   Costly visual overlays or simulations are not necessary to adequately assess the visual impact associated with the new concrete reservoir tank. This project involves the replacement of the existing water tank due to its deteriorated condition. Consequently, the project would not adversely impact the visual character of this area since the existing tank is already present. Furthermore, the new concrete water tank would be about 24 feet tall, which is considerably lower in height than the existing tank, which is 35 feet tall. Thus, the new tank's visibility would be significantly reduced. Therefore, the assessment conducted in the Draft Environmental Assessment is sufficient in assessing visual considerations associated with this project.

2. Cultural Impacts. The Draft Environmental Assessment did consider and assess whether the project will have a significant adverse impact on cultural resources or traditional cultural practices. A field inspection of the property and information obtained from a State Historic Preservation Division (SHPD) letter indicated that it was unlikely any historic sites exist in the area.

The property is privately owned, not open to the general public, is currently used for large-scale orchard production, and was historically used for sugarcane cultivation. Thus, this site is not used for cultural practices nor does it have existing subsurface resources. The project only involves less than 1 acre of property that will not adversely restrict access to other surrounding privately owned lands or other properties further mauka, which may be used for cultural practices. In addition, this project will not restrict access to the shoreline. As a result, costly interviews are not necessary for this particular project to provide additional information to adequately assess the potential for significant impacts on cultural practices or resources. In the event subsurface sites are encountered, appropriate coordination will be conducted with the SHPD and Hawaii Island Burial Council.

3. Use of Recycled Glass. The use of recycled materials will be considered if appropriate for this project.

4. Indigenous and Polynesian Introduced Plants. The use of native, indigenous, and Polynesian introduced plants will be considered, if necessary. However, most landscaping anticipated would consist of grassing graded and other applicable areas.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

PHONE (808) 594-1888

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

FAX (808) 594-1865

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October 2, 2001

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

Subject: Draft Environmental Assessment for the Pahala 0.5 MG Concrete Reservoir Project

Dear Mr. Sato:

Thank you for the opportunity to review the above-referenced environmental assessment.

At this time, the Office of Hawaiian Affairs has no comments on the proposed project. If you have any questions, please call Sharla Manley, Policy Analyst, at 594-1944.

Sincerely,

Colin C. Kippen Jr.

Colin C. Kippen, Jr.
Deputy Administrator, Hawaiian Rights Division

cc: BOT
Clyde Namu'o, Administrator
Hilo CAC
Glenn Ahuna, Department of Water Supply
Office of Environmental Quality and Control

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

November 5, 2001

Mr. Colin C. Kippen, Jr., Deputy Administrator
Hawaiian Rights Division
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 2, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We note your Department did not have any comments at this time.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

Harry Kim
Mayor

County of Hawaii

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

Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

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SSFM INTERNATIONAL, INC.
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October 19, 2001

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

Dear Mr. Sato:

Draft Environmental Assessment (DEA)
County of Hawaii Department of Water Supply
Pahala 0.5 MG Concrete Water Reservoir Project
TMK: 9-6-005:048 Pahala, Hionamoa Ka'u, Hawaii

This is to acknowledge your letter dated September 21, 2001 and attached Draft Environmental Assessment. We offer the following comments for your information.

The State Land Use designation for the property is Agricultural, and the County zoning is Agricultural-20 acres (A-20a). The County's General Plan (GP) land use designation is Intensive Agricultural, and the parcel is not in the County's Special Management Area (SMA). Pursuant to Subdivision No. 7364 (Final Approval January 11, 2001), the property has been consolidated and resubdivided into a 35,797-square foot parcel

We concur that this project is a permitted public use or structure according to the Hawaii County Zoning Code, and is consistent with Sections 25-4-11(c) and 25-5-72(a)(17) and (22). Please note that accessory uses or buildings to the project are also permitted uses, pursuant to Section 25-5-72(e). Hawaii Revised Statutes Section 205-4.5(a)(10) also provides for buildings and uses normally considered accessory to the permitted use of a major water storage tank and appurtenant small buildings.

Thank you for the opportunity to provide comments on the Draft Environmental Assessment. If you have any questions, please call Earl Lucero of my staff at 961-8288.

Sincerely,

CHRISTOPHER J. YUEN
Planning Director

EML:cps
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cc: Long Range Planning Division
Planning Dept. - Kona
Glenn Ahuna, Department of Water Supply

State Department of Health
Office of Environmental Quality Control
235 South Beretania St., Rm. 702
Honolulu, HI

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

November 5, 2001

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

FROM: Milton D. Pavao, Manager

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 19, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We confirm the land use information associated with the property provided in your letter along with approval of the consolidation and resubdivision of the project site.

We note your confirmation that the project along with accessory uses or buildings are a permitted public use in accordance with the Hawaii County Zoning Code. In addition, the project is considered a permitted use under the Hawaii Revised Statutes.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...

Harry Kim
Mayor

Patricia G. Engelhard
Director

Pamela N. Mizuno
Deputy Director

County of Hawai'i

DEPARTMENT OF PARKS AND RECREATION

25 Aupuni Street, Room 210 • Hilo, Hawai'i 96720-4252
(808) 961-8311 • Fax (808) 961-8411

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SSFM INTERNATIONAL, INC.
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October 11, 2001

SSFM International, Inc.
501 Sumner St., Suite 502
Honolulu, HI 96817

Attn: Ronald Sato, AICP

Re: Pahala 0.5 MG Concrete Reservoir Project-Draft EA
Pahala, Ka'u, Hawaii

Dear Mr. Sato:

We have reviewed the Draft Environmental Assessment for the subject project and have determined that the project will not adversely impact any of the County's recreational facilities or programs.

Thank you for the opportunity to review the document.

Sincerely,

Pat Engelhard

Patricia G. Engelhard
Director

Cc Department of Water Supply, County of Hawaii
Office of Environmental Quality Control

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

November 5, 2001

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

FROM: Milton D. Pavao, Manager

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: *9-006-005:048*
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 11, 2001, providing comments on the Draft Environmental Assessment for the subject project.

We note your Department determined that the project would not adversely impact any of the County's recreational facilities or programs.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

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...Water brings progress...

Harry Kim
Mayor

James S. Correa
Police Chief

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

October 5, 2001

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

Dear Mr. Sato:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DRAFT EA)
PAHALA 0.5 MG CONCRETE RESERVOIR PROJECT

Upon review of the submitted draft and page 14, Figure 2.5, Pahala Reservoir Preliminary Site Plan, staff requests that sufficient distance is provided for any vehicle stopped between the proposed gate and edge of the roadway.

We have no other comments or objections to offer.

Thank you for the opportunity to comment.

Sincerely,

JAMES S. CORREA
POLICE CHIEF

DAVID A. KAWAUCHI
MAJOR
FIELD OPERATIONS BUREAU, AREA I

RN:lk

cc: Mr. Glenn Ahuna, Department of Water Supply
Office of Environmental Quality and Control

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

November 5, 2001

Major David A. Kawauchi
Field Operations Bureau, Area I
Police Department
County of Hawaii
349 Kapiolani Street
Hilo, Hawaii 96720-3998

DRAFT ENVIRONMENTAL ASSESSMENT
PAHALA 0.5-MG CONCRETE RESERVOIR
TAX MAP KEY: 9-006-005:048
PAHALA, KA'U, HAWAII

Thank you for your letter dated October 5, 2001, providing comments on the Draft Environmental Assessment for the subject project.

Final design plans will provide sufficient distance for any vehicle stopped between the edge of the roadway and facility gate.

If you have any questions, please contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:jkh

...Water brings progress...