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GOVERNOR OF HAWAII



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WATER AND LAND DEVELOPMENT

Ref:LM-AT:SL

JAN 28 1993

RECORDED

'93 JAN 29 P1:30

Refer to:MA-93:619

Mr. Brian Choy, Director  
Office of Environmental  
Quality Control  
State of Hawaii  
220 S. King Street, 4th Floor  
Honolulu, HI 96813

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

Dear Mr. Choy:

Subject: New Camp Maluhia Water Tank, Kahakuloa, Maui,  
Hawaii, Tax Map Key: 3-1-01:por. 01

In accordance with the requirements of Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Administrative Rules, a Final Environmental Assessment has been prepared for the subject project.

Notice of availability of the Draft Environmental Assessment for the project was published in the December 23, 1992, OEQC Bulletin.

As the accepting agency, we are forwarding herewith one copy of the OEQC Bulletin Publication Form and four (4) copies of the Final Environmental Assessment. We have determined that there will be no significant impacts as a result of the project and, therefore, are filing the Final Environmental Assessment as a negative declaration.

Very truly yours,

*John P. Keppeler II*  
for WILLIAM W. PATY

Enc.  
cc Maui District Land Board Member  
Maui District Land Office

1993-02-23-MA-FEA-CAMP Maluhia Water Tank

FEB 23 1993

# New Camp Maluhia Water Tank

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## *Final Environmental Assessment*

Prepared for:

Boy Scouts of America

January 1993



Michael T. Munekiyo Consulting, Inc.

# **New Camp Maluhia Water Tank**

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## ***Final Environmental Assessment***

Prepared for:

January 1993

Boy Scouts of America



Michael T. Munekiyo Consulting, Inc.

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maluhia.001.ocb

# ***Chapter 1***

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## ***Project Overview***

## **I. PROJECT OVERVIEW**

### **A. PROPERTY LOCATION, EXISTING USE AND LAND OWNERSHIP**

The applicant, Maui County Council, Boy Scouts of America, proposes to construct a 23,000 gallon potable water tank at Camp Maluhia (TMK: 3-1-01:por. 01). The new tank site is located to the south of the camp at the 1,245-foot elevation. To the west side (mauka) of the project site is the West Maui Forest Reserve. To the east (makai) of the project site are open fields of grass, along with sparse patches of shrubs (e.g., guava and lantana) which in the past, were used for grazing of cattle.

The new tank site is located within the State Land Use "Agricultural" district and is designated "Agriculture", by the Wailuku-Kahului Community Plan. See Figure 1. The parcel is owned by the State of Hawaii and leased to the Maui County Council, Boy Scouts of America.

### **B. PROPOSED ACTION**

The Maui County Council, of the Boy Scouts of America proposes to construct a new corrugated metal water tank with a vinyl liner that will have a holding capacity of approximately 23,000 gallons. The tank, 10-ft. high and 20-ft. in diameter, will be built on a concrete pad approximately 25-ft. by 25-ft. in size.

Potable water will be trucked in via a water tanker and stored in the proposed 23,000 gallon storage tank. This water will be used for domestic purposes by camp users. An access roadway will be constructed to the 1,260-foot elevation, to allow filling of the tank by the tanker truck. See Figure 2. During peak use, the camp consumes approximately 4,000 gallons/day, thus requiring the tank to be filled about two times a week.



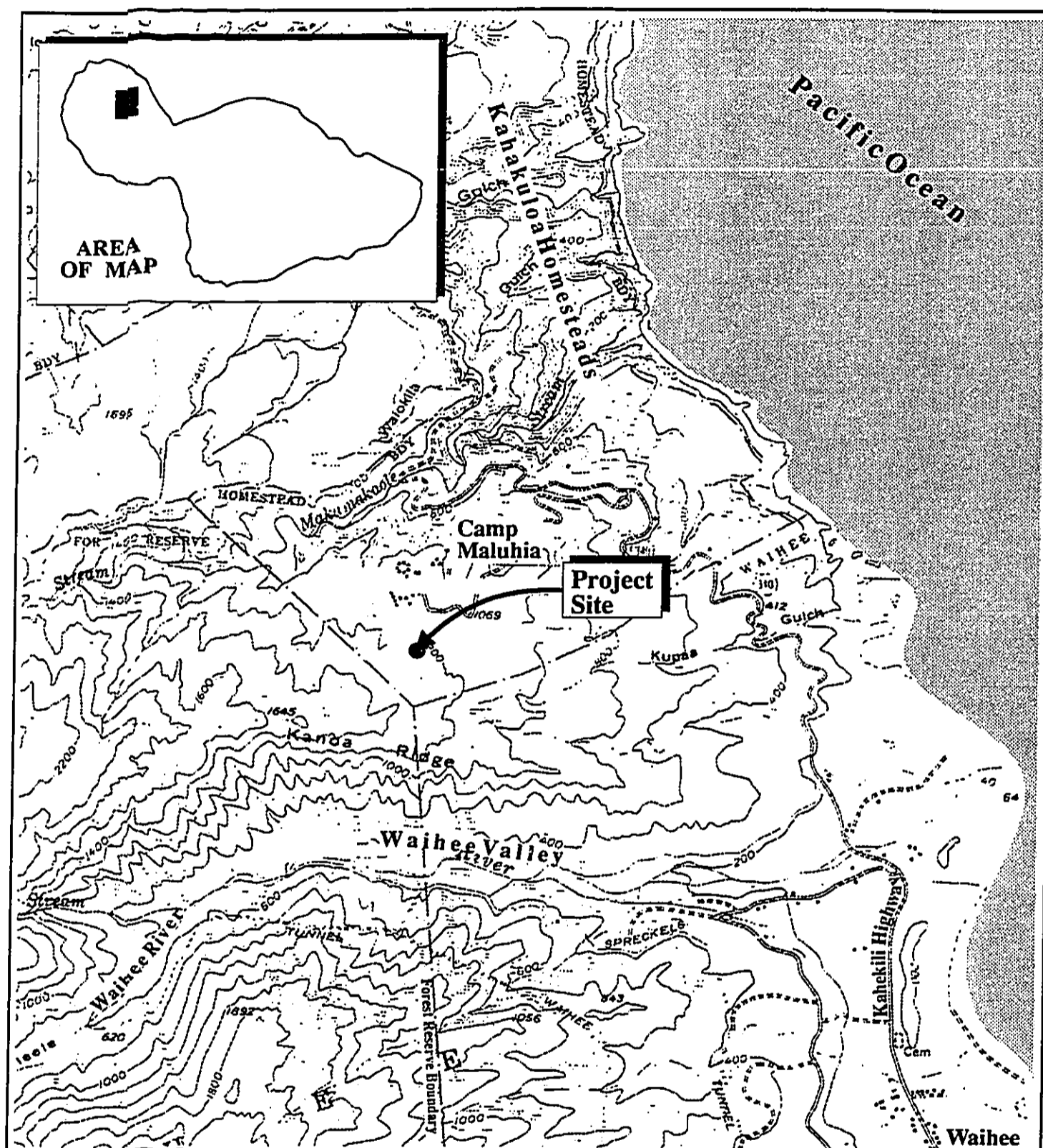


Figure 1 New Camp Maluhia Water Tank  
Regional Location Map



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Prepared for: Boy Scouts of America

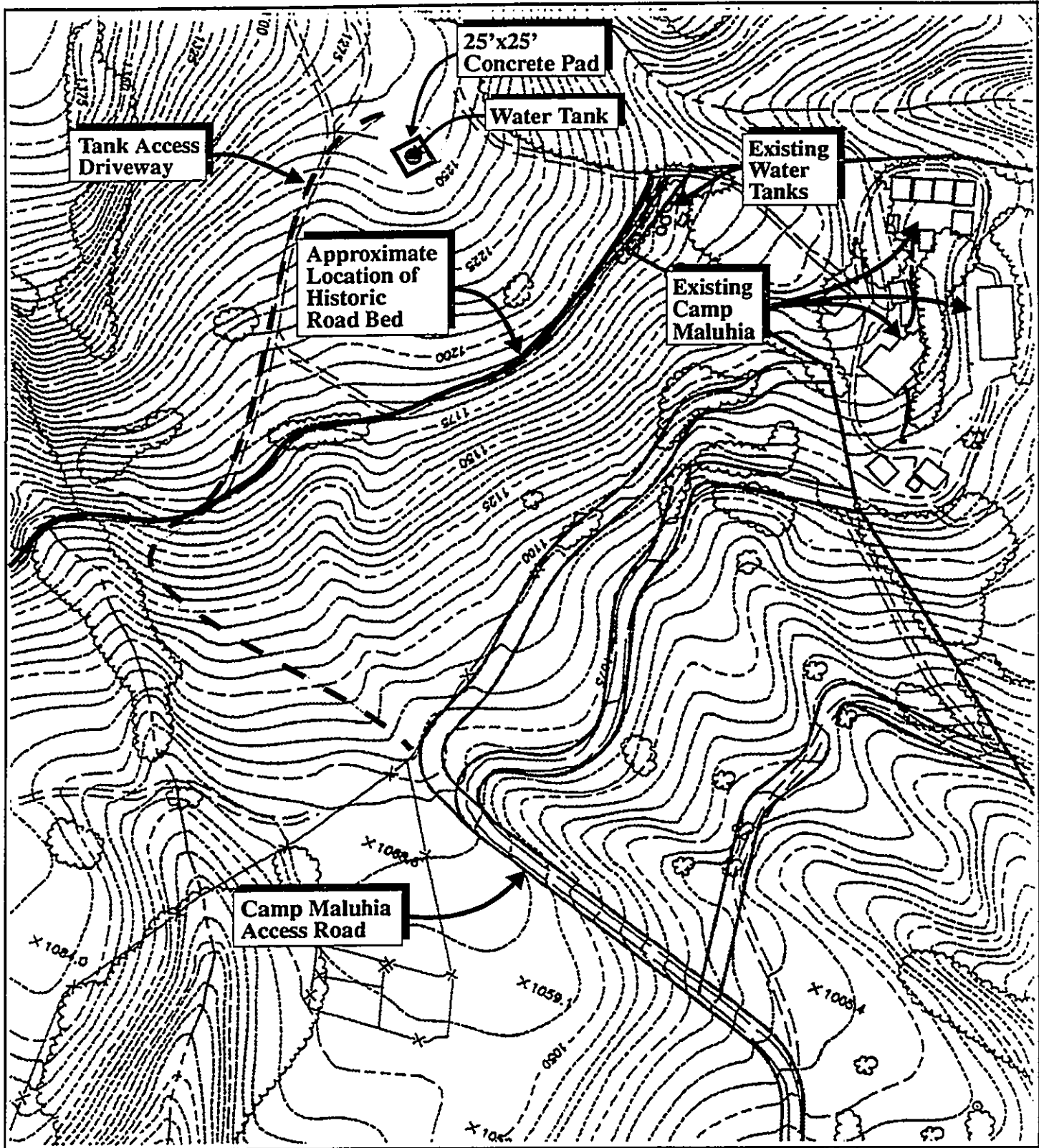
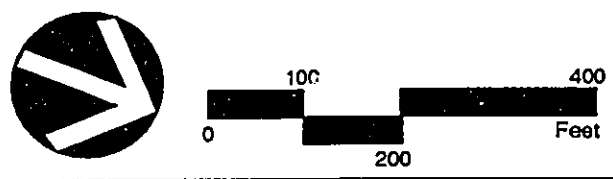


Figure 2 New Camp Maluhia Water Tank Site Plan



  
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 Prepared for: Boy Scouts of America

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A gravity transmission line from the water tank will be installed and connected to the camp's water distribution network. The existing surface-diverted water source and existing storage tanks (2) will be retained as a back-up system to meet non-domestic needs (e.g., water for the camp swimming pool).

The foregoing improvements are required to meet the U.S. Environmental Protection Agency's Surface Water Treatment Rule. The U.S. Environmental Protection Agency's (EPA) Surface Water Treatment Rule (SWTR) (40 CFR Part 141, Sub-part H) became effective on December 31, 1990, and is designed to regulate surface domestic water sources. Under the SWTR, all surface water sources, unfiltered or filtered, must meet the SWTR's filtration and disinfection criteria and monitoring and reporting requirements by June 29, 1993. In general, the filtration and disinfection criteria provide for the control of Giardia cysts, viruses, turbidity, heterotrophic plate count bacteria, and Legionella. The proposed project is intended to comply with these new federal regulations.

# ***Chapter II***

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## ***Description of the Existing Environment***

## **II. DESCRIPTION OF THE EXISTING ENVIRONMENT**

### **A. PHYSICAL ENVIRONMENT**

#### **1. Surrounding Land Use**

The project site, located approximately eight (8) miles north of the urbanized region of Kahului and Wailuku, is in the midst of vacant and undeveloped land. West (mauka) of the project area is the West Maui Forest Reserve. Lands to the south and east (makai) of the site is vacant and were once used for grazing of cattle. Below the proposed tank site, to the north, is Camp Maluhia. Further north is the Makamakaole Stream and the Kahakuloa Homesteads.

#### **2. Climate**

Like most areas of Hawaii, Maui's climate is relatively uniform year-round. Characteristic of Hawaii's climate, the project site experiences mild and uniform temperatures year round, moderate humidities and a consistent northeasterly tradewind. Variations in climate on the Island is largely left to local terrain.

Average temperatures at the project site range from lows in the 60's to highs in the 80's. August and September are historically the warmest months, while January and February are the coolest. Rainfall at the site averages approximately 50 inches per year. Winds in the region are predominantly from the northeast.

#### **3. Topography and Soil Characteristics**

The project site is located on the slopes of the West Maui Mountain range, which is characterized by deep valleys, steep cliffs and large mountain ridges. The slopes in the project vicinity vary from 15% to 30%. The slope at the project site is approximately 18%.

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Underlying the proposed site and surrounding lands are soils belonging to the Honolua-Olelo association. See Figure 3. This soil association is characteristically a well drained soil with a fine textured subsoil and is commonly found on intermediate uplands that are moderately steep. The soil type specific to the project site is of the Honolua silty clay series (HwD). This soil type, found on slopes ranging from 15-25%, are dark brown in color and have developed in material weathered from basic igneous rock. Runoff on this soil type is medium and erosion hazard is moderate. See Figure 4.

4. **Flood and Tsunami Hazard**

The project site is located on moderately sloping lands and is designated Zone "C" by the Flood Insurance Rate Map. Zone "C" defines an area of minimal flooding.

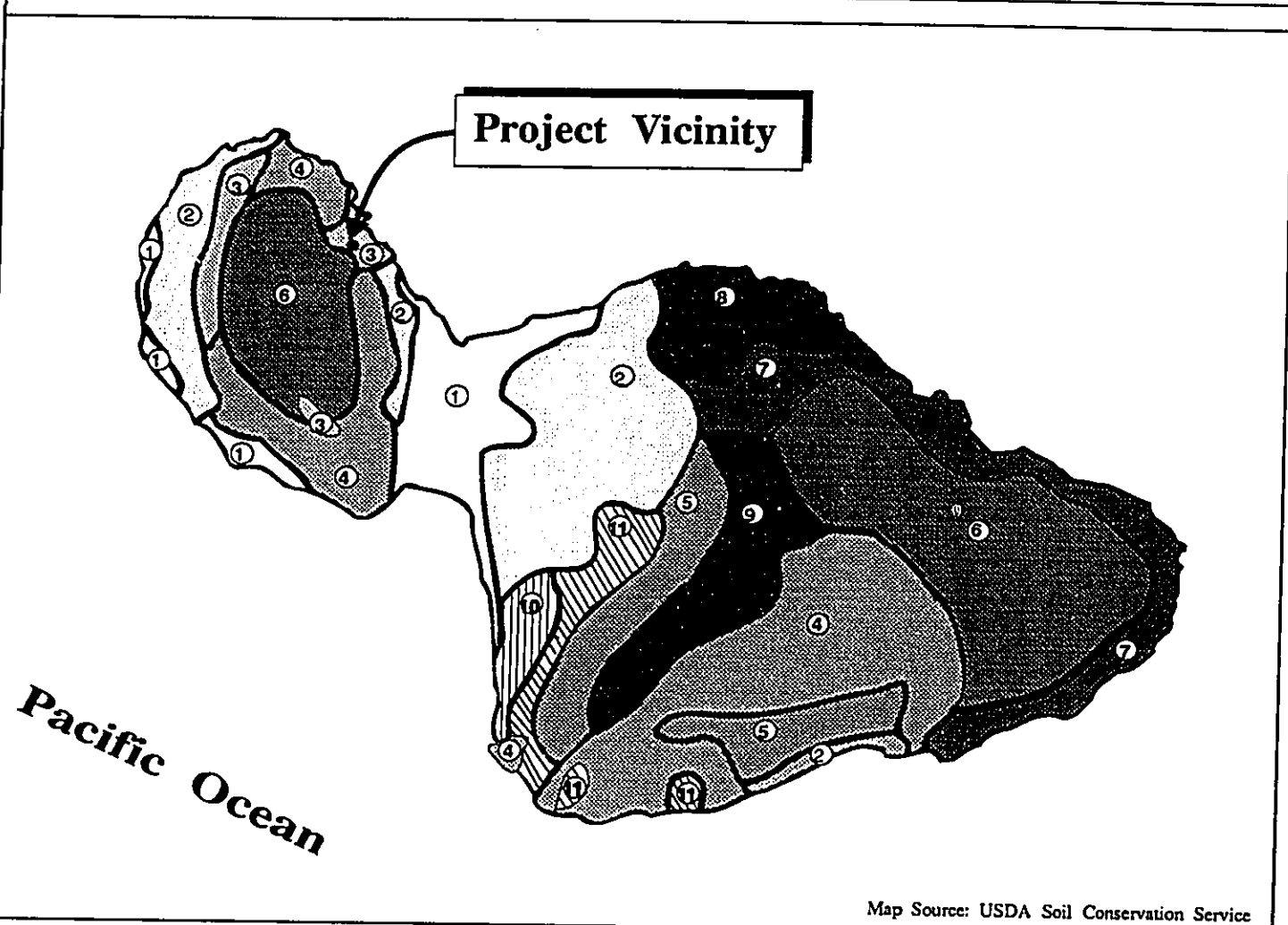
5. **Flora and Fauna**

The project site is located in undeveloped pasturelands on the north-facing slopes of the West Maui Mountains. Natural environmental features, such as plant and animal life, therefore, are reflective of this setting. Naturally occurring vegetation in this area include guava, Christmas berry, rice grass, Foxtail, lantana, Spanish clover and apple of Sodom. There are no known rare, endangered or threatened species of plants at the project site.

Animal life within the project vicinity similarly reflect the open pastureland character of the region. Avifauna typically found in this region include several species of dove, cardinal, ricebird, pueo and i'iwi. Mammals found in the area include rodents, mongoose and wild pigs. There are no known rare, endangered or threatened species of animals found in the vicinity of the project site.

## LEGEND

- |   |  |
|---|--|
| <p>① Pulehu-Ewa-Jaucas association</p> <p>② Waiakoa-Keahua-Molokai association</p> <p>③ Honolua-Olelo association</p> <p>④ Rock land-Rough mountainous land association</p> <p>⑤ Puu Pa-Kula-Pane association</p> <p>⑥ Hydrandepts-Tropaquods association</p> | <p>⑦ Hana-Makaala-Kailua association</p> <p>⑧ Pauwela-Haiku association</p> <p>⑨ Laumaia-Kaipoi-Olinda association</p> <p>⑩ Keawakapu-Makera association</p> <p>⑪ Kamaole-Oanapuka association</p> |
|---|--|



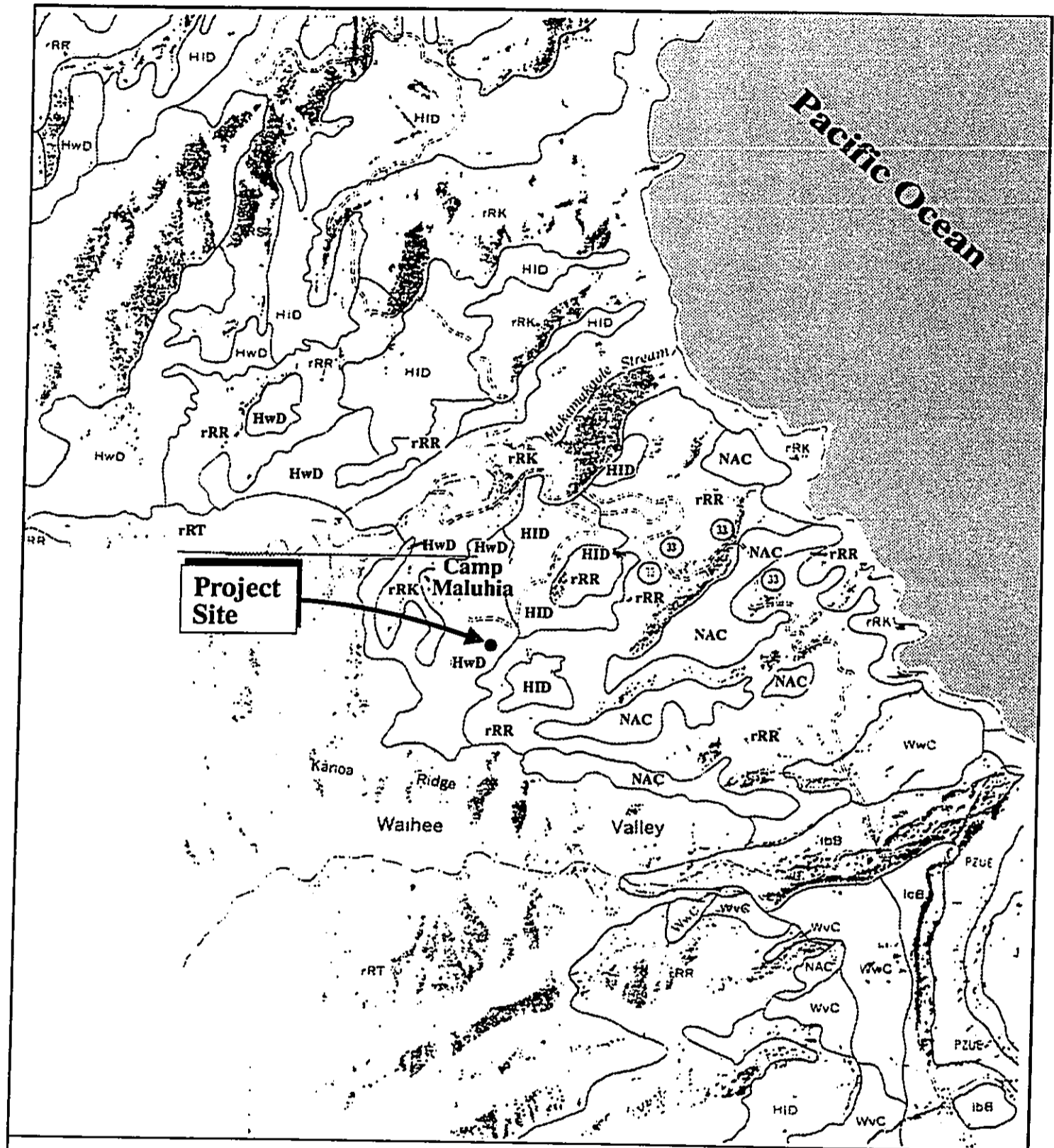
**Figure 3**      **New Camp Maluhia Water Tank**  
**Soil Association Map**



NOT TO SCALE



Michael T. Munekiyo Consulting, Inc.  
 Prepared for: Boy Scouts of America



**Figure 4** New Camp Maluhia Water Tank  
Soil Classifications



Michael T. Munekiyo Consulting, Inc.  
Prepared for: Boy Scouts of America



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6. **Air Quality**

Remote from any point and nonpoint sources of emission (e.g. urbanized Wailuku-Kahului region), the quality of air at the project site is considered excellent. This level of air quality can also be attributed to the area's constant exposure to the trade winds which quickly disperse emissions.

7. **Noise Characteristics**

Noise levels in the vicinity of the project site, due to its relatively remote setting, are very low. The primary source of background noise in the project area is attributed to natural conditions (e.g., wind).

8. **Visual Resources**

Located at the 1,245-foot elevation, the tank site has a scenic view to the north and northeast (makai) of the Pacific Ocean and the West Maui's rugged coastline. Looking to the east from the site is a scenic view of the northwest facing slopes of Haleakala and shoreline.

The project site is not within a scenic view corridor and is not visible from Kahekili Highway, the primary coastal roadway in the vicinity.

9. **Archaeological Resources**

A field inspection of the project vicinity was conducted by the Department of Land and Natural Resources on September 28, 1992. See Appendix A. The remains of an old roadbed, estimated to be at least 50 years old, was observed downslope of the proposed tank site. The roadbed has been assigned a permanent site number, 50-04-2929, and has been entered in the Department of Land and

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Natural Resources inventory of historic places. The roadbed follows the contour of the slope running in a north-south direction. Intact rock retaining walls were found on the downhill side along portions of the historic roadbed, while along other sections the rock retaining walls have been previously disturbed or have been eroded away. No traces of paving material was observed through the grass cover nor was any evidence of historical remains found at the water tank site or the truck turn-around area.

**B. PUBLIC SERVICES**

**1. Recreational Facilities**

The Wailuku-Kahului region, located east-southeast of the site, offers a full range of recreational opportunities, including beaches, public pools, public parks, community centers and the War Memorial Complex. Camp Maluhia offers camping, hiking, swimming, and related outdoor recreational opportunities.

**2. Police and Fire Protection**

Police protection for Camp Maluhia is provided by the County Police Department headquartered at the Wailuku Station, located approximately ten (10) miles from the camp.

Fire prevention, suppression and protection services for this area of the island is provided by the County Department of Fire Control's Wailuku Station, located in old Wailuku Town, approximately eight (8) miles from the project site.

**3. Solid Waste**

Single-family residential solid waste collection service is provided by the County of Maui on a once-a-week basis. Residential solid waste

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collected by County crews are disposed of at the County's 55-acre Central Maui Landfill, located four miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies.

4. **Health Care**

Maui Memorial Hospital, the only major medical facility on the island, services the Wailuku-Kahului region. Acute, general and emergency care services are provided by the 145-bed facility. In addition, numerous privately operated medical/dental clinics and offices are located in the area to serve the region's residents.

5. **Schools**

The Wailuku-Kahului region is served by the State Department of Education's public school system as well as several privately operated schools accommodating elementary, intermediate and high school students. Department of Education facilities in the vicinity of Camp Maluhia include Waihee School (Grades K to 5), Iao School (Grades 6 to 8), and Baldwin High School (Grades 9 to 12).

C. **INFRASTRUCTURE**

1. **Roadways**

Kahekili Highway serves as the single public roadway between the Wailuku-Kahului region and Camp Maluhia. Access to the camp is via a paved roadway (approximately 10-feet in width).

2. **Wastewater**

There are no municipal wastewater collection works in the Camp Maluhia vicinity. Wastewater disposal is accommodated through cesspools and individual wastewater systems.

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3. **Water**

Camp Maluhia currently receives its water from a surface water system which diverts flow from the left branch of Makamakaole Stream. Water is conveyed to two existing storage tanks located southwest of the camp. The existing storage tanks have holding capacities of 10,000 gallons and 12,000 gallons, respectively.

4. **Drainage**

There are no drainage improvements in the vicinity of the proposed project site. Surface runoff percolates naturally into the ground or sheet flows in a northerly direction to an existing natural drainage gulch.

# *Chapter III*

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## *Project Impact Assessment*

### **III. PROJECT IMPACT ASSESSMENT**

#### **A. PHYSICAL ENVIRONMENT**

##### **1. Surrounding Uses**

The project site is situated in the midst of undeveloped pasturelands. The installation of a water tank at this locale will not affect surrounding land uses.

##### **2. Topography**

A 40-ft. by 40-ft. pad will be cut into the existing slope to accommodate the construction of the tank facility. Side slopes will be stabilized with vegetation. The tank improvements will not significantly alter the topographical character of the area.

##### **3. Flora and Fauna**

There are no known significant habitats or rare, endangered, or threatened species of flora and fauna located in the vicinity of the project site. The proposed construction, therefore, is not considered an adverse impact upon these environmental features.

##### **4. Air Quality**

Air quality impacts attributed to the project will include dust generated by short-term, construction-related activities. Site work such as grading and utilities and driveway construction, for example, will generate airborne particulates. Dust control measures such as regular watering and sprinkling will be implemented as needed to minimize wind-blown emissions.

In the long-term, the proposed project will not alter existing air quality conditions as there will be no direct sources of emissions from the water tank.

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5. **Noise**

As with air quality, ambient noise conditions will be impacted by construction activities. Construction equipment, such as bulldozers, front end loaders and materials-carrying trucks, would be the dominant source of noise during the site construction period. All construction activities will be limited to normal, daylight working hours. Given the site's remote location, temporary construction noise is not considered a significant issue.

As a permanent installation, the proposed tank will not add ambient noise levels.

6. **Visual Resources**

The proposed water tank will not have an adverse impact upon the visual character of the surrounding area.

7. **Archaeological Resources**

As currently proposed, the project will not directly affect the remains of the historic roadbed or its retaining walls. The access driveway to the water tank site will cross the historic roadbed. However, since it will cross through a previously disturbed and eroded section, it is not considered an adverse impact and will not affect the intact sections of the roadbed. No evidence of other historic sites were found within the water tank site or the truck turn-around area. Accordingly, the construction of the new water tank is not anticipated to have an affect on archaeological resources.

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**B. PUBLIC SERVICES**

The proposed project will not result in any adverse impacts to the public services. The project will not affect requirements for recreational facilities, police and fire protection, medical facilities and schools.

**C. INFRASTRUCTURE**

As with public services, the proposed water tank will not have any negative impacts on public infrastructure systems. The proposed tank will replace existing water storage facilities which now service Camp Maluhia.



# ***Chapter IV***

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## ***Findings and Conclusions***

#### **IV. FINDINGS AND CONCLUSIONS**

The proposed New Camp Maluhia Water Tank is intended to address the U.S. Environmental Protection Agency's (EPA) Surface Water treatment Rule (40 CFR Part 141, Sub-part H) (1990). Camp Maluhia's current surface water system would not meet the June 29, 1993 Surface Water Treatment Rule's filtration and disinfection criteria, and monitoring and reporting requirements. To comply with these new federal regulations, the Boy Scouts of America proposes to construct a 23,000 gallon potable water tank. The new water tank will be used for domestic consumption, while the existing surface-diverted water source and existing water tanks (2) will be retained as a back up system to meet non-domestic needs (e.g., water for the camp swimming pool).

The proposed project will involve earthwork, transmission lines, and building construction activities. In the short-term, these activities may create temporary nuisances normally associated with construction activities. However, in the context of the surrounding agricultural land uses, their impacts of construction are not considered significant.

From a long-term perspective, the use of the site for the proposed new water tank is not anticipated to result in adverse environmental impacts. A historic roadbed was found downslope of the site. The water tank's access driveway will cross this roadbed. However, since it will cross through a previously disturbed and eroded section, it is not considered an adverse impact and will not affect the intact sections of the roadbed. There are no known rare or threatened species of flora and fauna found in the vicinity of the site. Ambient air and noise characteristics will not be altered as a result of the proposed new water tank.

The project is not considered significant in terms of impacts to public services and other infrastructure systems.

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In light of the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

# ***Chapter V***

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## ***Agencies Contacted in the Preparation of the Environmental Assessment***

**V. AGENCIES CONTACTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT**

1. State of Hawaii  
Department of Land and Natural Resources  
1151 Punchbowl Street  
Honolulu, Hawaii 96813
2. State of Hawaii  
Department of Health  
Safe Drinking Water Branch  
Five Waterfront Plaza, Suite 250  
500 Ala Moana Boulevard  
Honolulu, Hawaii 96813
3. Mr. George Kaya  
County of Maui  
Department of Public Works  
200 S. High Street  
Wailuku, Hawaii 96793
4. Mr. David Craddick  
County of Maui  
Department of Water Supply  
200 S. High Street  
Wailuku, Hawaii 96793
5. Mr. Brian Miskae  
County of Maui  
Department of Planning  
250 S. High Street  
Wailuku, Hawaii 96793

# References

**REFERENCES**

Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel Number 150003 0160 B (Waihee-Kahakuloa), June 1, 1981.

University of Hawaii, Department of Geography, Atlas of Hawaii, Second Edition, 1983.

U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, 1972.

# ***Appendix A***

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***Letter and Report  
of the DLNR - Historic  
Preservation Division***



JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

October 15, 1992

WILLIAM W. PATY, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCE

DEPUTIES

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DONA L. HANAIAKE

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ENVIRONMENTAL AFFAIRS  
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RESOURCES ENFORCEMENT  
CONVEYANCES

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
DIVISION

LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

LOG NO.: 6509  
DOC NO.: 9210AG04

Mr. Bill Frampton  
Munekiyo Consulting  
2035 Main St.  
Wailuku, Hawaii 96720

Dear Mr. Frampton:


SUBJECT: Historic Preservation Review of a Proposed  
Access Road and Water Tank Site at Camp Maluhia  
Kahakuloa, Wailuku, Maui  
TMK: 3-1-01: 01

A field inspection of a portion of this State-owned land to be impacted by the construction of the proposed water tank and access road was conducted by our staff archaeologist Ms. Theresa Donham. Attached is a copy of her memorandum reporting the findings of this inspection for your information.

The remains of an old roadbed which appears to be more than 50 years old was observed downslope of the tank site. The roadbed has been assigned a permanent site number, 50-04-2929 and has been entered in our inventory of historic places. The roadbed follows the contour of the hill and a retaining wall occurs on the downhill side. The area where the proposed access road crosses this roadbed has been eroded and there is no evidence of the retaining wall left. If the route shown on the map that you provided to Ms. Donham would be used, then it appears that the road will have "no effect" on site 2929. Intact retaining walls still remain on the north and south of this route so we recommend that the proposed route be used. No evidence of historic sites were observed on the water tank site and the truck turn-around area. Therefore, construction activities on these areas will have "no effect" on historic sites.

Should you have any questions, please contact Ms. Annie Griffin at 587-0013.

Sincerely,

  
DON HIBBARD, Administrator  
State Historic Preservation Division

AG:aal

Attachment

JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
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HISTORIC PRESERVATION  
DIVISION

LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

September 29, 1992

MEMORANDUM

TO: Annie E. Griffin

FROM: Theresa K. Donham

SUBJECT: Field Inspection of a Proposed Water Tank Construction Site at Camp Maluhia, Kahakuloa, Maui (TMK 3-1-01:1)

On Thursday, September 24, I received a phone call from Mike Munekiyo, Planning Consultant, regarding a proposed water storage tank for Camp Maluhia. The proposed tank location is on an upland ridge knoll, above the existing camp buildings, and above two existing water tanks; elevation is c. 1,245 ft (Maps 1 and 2). The proposed project will be impacting State land, and Munekiyo indicated that an EIS is being prepared for the project. He requested a field inspection of the area.

I was met at Camp Maluhia Monday, September 28, by Bill Frampton of Munekiyo's office. He took me to the proposed construction site and gave me a copy of a schematic plan (Map 3).

The proposed project calls for construction of a new road up the hill from the gate used for existing roads. The existing roads follow the right-of-way route for the Waihee Ridge Trail access across State lease land to the Forest Reserve. The new road would be located a short distance to the north of the existing roads. The tank would be constructed on a 25 by 25 ft cement pad, and water would be trucked up to the tank as needed. The side of the hill would be cut, in order to permit construction of a flat pad for the tank. A turn-around area for the truck would be located uphill from the tank, on top of the knoll. The road and turn-around area are proposed to be graveled, not paved.

The proposed access route, tank location, and turn-around areas were examined in order to determine if any historic sites were in the area and if they would be affected by the project. The area is presently in open grass pasture, with scattered thickets of Christmasberry and lantana scattered about. At least three grass

varieties are present, including rice grass, smutgrass and foxtail. Also observed were lambsquarters, Japanese tea, Spanish clover, cayenne vervain, and apple of sodom. Two lantana thickets are present on the north upper slopes of the knoll. The only surface stones observed in the tank and turn-around area were on the upper eastern slope, near the center of the proposed tank location. Eight cobbles were observed in a loosely oval ring-like formation 0.80 m by 0.64 m. Two additional cobbles were scattered to the east, downhill from the ring. Only one of the ten stones was partially buried; all others were lying loosely on the surface. A few pebbles were inside the oval formation of rocks.

A short distance downslope from the tank site is an old roadbed which follows the contour of the hill, circling it in a north-south orientation. The road was first noticed to the south of the Waihee trail right-of-way, where a substantial rock retaining wall was observed in a thicket of Christmasberry. The wall, which is on the downhill side of the roadbed, is quite massive in this area, where it crosses a shallow drainage gully. There is no trace of the retaining wall or roadbed in the area of the existing or proposed roads that go up the hill. This section has apparently eroded away, or was pushed away when the E-W road was constructed. The roadbed and retaining wall are present on the north side of the disturbed section. The road can be followed north to the edge of the gulch, where it may have turned northward toward the camp, or crossed the gulch. To the south, it ends at the edge of a steep, narrow ravine that must have had a bridge crossing at one time.

The retaining wall is constructed from weathered field stones, most likely gathered from the nearby gulches. The stones are dry-laid, with massive boulders at the base and smaller boulders at the top. The wall angles inward slightly from base to top. The roadbed surface is generally level, except where it has been disturbed or eroded. No traces of a paving material were observed through the grass cover.

As currently proposed, the project will not directly affect the remains of this rather impressive roadwork. If the tank access road is moved to the north or south of its projected path, it will affect a portion of the intact retaining wall.

The road is very likely over 50 years old and has been assigned SIHP Site number 50-04-2929. Additional information will be recorded for this site when the area is revisited to record Site 2919, a large enclosure located on a nearby hilltop (see Map 2). To date, no archival research has been conducted; some historic background would probably be desirable for the EIS, and could be researched by the consulting planners.